

**Application for Air Emission
Construction Permit**

for

**Two 19.77 MW
Combustion Turbines
at Stock Island Power Plant**

**Florida Municipal Power Agency
Utility Board of Key West**

September 1997



FLORIDA MUNICIPAL POWER AGENCY

UTILITY BOARD OF THE CITY OF KEY WEST CITY ELECTRIC SYSTEM

APPLICATION FOR AIR EMISSION CONSTRUCTION PERMIT FOR TWO 19.77 MW COMBUSTION TURBINES AT STOCK ISLAND POWER PLANT

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BUREAU OF
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IV. MODEL RUNS

This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to R. W. Beck, Inc. constitute the opinions of R. W. Beck, Inc.. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, R. W. Beck, Inc. has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. R. W. Beck, Inc. makes no certification and gives no assurances except as explicitly set forth in this report.

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SECTION I
LETTER OF AUTHORIZATION



7201 Lake Ellenor Drive
Orlando, Florida 32809-5769
(407) 859-7310 Fax (407) 856-6553
1 800 859-0744

VIA FAX
September 8, 1997

Mr. Al Linero
Florida Department of Environmental Protection
New Source Review Section
Division of Air Resources Management
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road, MS #5505
Tallahassee, fl 32399-2400

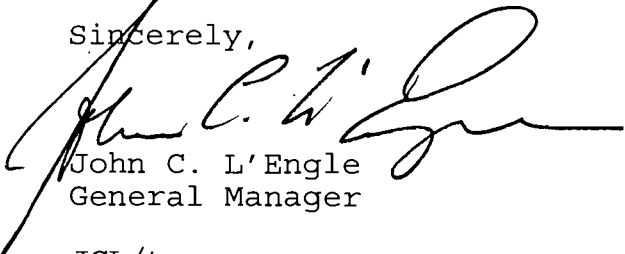
Dear Mr. Linero:

Subject: Proposed Installation of Combustion Turbines at Stock
Island Power Plant, Utility Board of Key West

Florida Municipal Power Agency (FMPA) is proposing to purchase and install two used combustion turbines (CT's) at the Utility Board of Key West's (Utility Board) Stock Island Power Plant site. These CT's will be used for peaking electric generating capacity to support the electric system of the Utility Board. FMPA will own these units and the Utility Board's staff will operate and maintain the units under contract to FMPA.

Since these units will be located at the existing Stock Island Power Plant site and operated/maintained by the Utility Board's staff, FMPA hereby authorizes the Utility Board as its authorized representative for permit application approval and permit correspondence. Mr. Larry Thompson, General Manager of the Utility Board, will be the signatory as the authorized responsible official on the permit application.

Sincerely,



John C. L'Engle
General Manager

JCL/tmc

**Department of
Environmental Protection**

**DIVISION OF AIR RESOURCES MANAGEMENT
APPLICATION FOR AIR PERMIT - LONG FORM**

I. APPLICATION INFORMATION

Identification of Facility Addressed in This Application

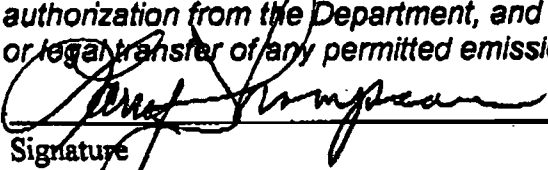
1. Facility Owner/Company Name : Utility Board of the City of Key West	
2. Site Name : Stock Island Power Plant	
3. Facility Identification Number : 0870003	[] Unknown
4. Facility Location : Utility Board of the City of Key West - City Electric System Stock Island Power Plant 6900 Front Street Stock Island, Florida Monroe County AIRS ID: 0870003 Street Address or Other Locator : 6900 Front Street City : Stock Island County : Monroe Zip Code : 33041-6100	
5. Relocatable Facility? [] Yes [X] No	6. Existing Permitted Facility? [X] Yes [] No

Rec'd - 9/11/97

AIRS - ID : 0870003-003-AC

I. Part 1 - 1

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official :	
Name :	Larry Thompson
Title :	General Manager
2. Owner or Authorized Representative or Responsible Official Mailing Address :	
Organization/Firm :	Utility Board of the City of Key West
Street Address :	1001 James Street
City :	Key West
State :	FL
Zip Code :	33040-_____
3. Owner/Authorized Representative or Responsible Official Telephone Numbers :	
Telephone :	(305)295-1140
Fax :	(305)295-1145
4. Owner/Authorized Representative or Responsible Official Statement :	
<p><i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions units.</i></p>	
Signature	
Date	<u>9-8-97</u>

* Attach letter of authorization if not currently on file.

I. Part 2 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
001	37 MW Steam Electric Generator (Ralph Garcia Steam Plant)	
008	19.77 MW Combustion Turbine Electric Generating Unit #1	AC1D
009	19.77 MW Combustion Turbine Electric Generating Unit #2	AC1D

Purpose of Application and Category

Category I : All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.

This Application for Air Permit is submitted to obtain :

-] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

-] Initial air operation permit under Chapter 62-213, F.A.C., for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number :

-] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed :

-] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number :

Operation permit to be revised :

-] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application.

Operation permit to be revised/corrected :

-] Air operation permit revision for a Title V source for reasons other than construction or

I. Part 4 - 1

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modification of an emissions unit.

Operation permit to be revised :

Reason for revision :

Category II : All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.

This Application for Air Permit is submitted to obtain :

[] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s) :

[] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed :

[] Air operation permit revision for a synthetic non-Title V source.

Operation permit to be revised :

Reason for revision :

Category III : All Air Construction Permit Applications for All Facilities and Emissions Units

This Application for Air Permit is submitted to obtain :

[X] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any :

I. Part 4 - 2

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- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Current operation permit number(s) :

- Air construction permit for one or more existing, but unpermitted, emissions units.

Application Processing Fee

Check one :

Attached - Amount : \$2000.00 Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations :	
Proposed construction of two used 19.77 MW Combustion Turbine Electric Generating Units upon the approval of the retirement of the existing 37 MW Steam Electric Generator (Ralph Garcia Steam Plant).	
2. Projected or Actual Date of Commencement of Construction :	01-Dec-1997
3. Projected Date of Completion of Construction :	31-May-1998

Professional Engineer Certification

1. Professional Engineer Name : Ivan L. Clark Registration Number : 0049777	
2. Professional Engineer Mailing Address :	
Organization/Firm : R.W. Beck Street Address : 1125 17th Street, Suite 1900 City : Denver	State : CO Zip Code : 80202-2615
3. Professional Engineer Telephone Numbers :	
Telephone : (303)299-5247	Fax : (303)297-2811

4. Professional Engineer Statement :

I, the undersigned, hereby certified, except as particularly noted herein, that :*

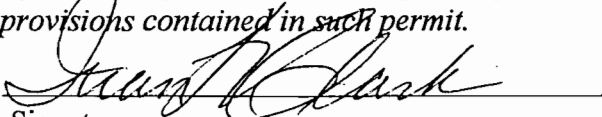
(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.


Signature

September 10, 1997
Date

* Attach any exception to certification statement.

I. Part 6 - 1

Application Processing Fee

Check one :

[X] Attached - Amount : \$2000.00 [] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations :	
Proposed construction of two used 19.77 MW Combustion Turbine Electric Generating Units upon the approval of the retirement of the existing 37 MW Steam Electric Generator (Ralph Garcia Steam Plant).	
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3. Professional Engineer Telephone Numbers :	
Telephone : (303)299-5247	Fax : (303)297-2811

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(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Date

* Attach any exception to certification statement.

I. Part 6 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

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Check one :

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Telephone : (303)299-5247	Fax : (303)297-2811

4. Professional Engineer Statement :

I, the undersigned, hereby certified, except as particularly noted herein, that :*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollutant control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [] if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [] if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [] if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

Date

* Attach any exception to certification statement.

I. Part 6 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Application Contact

1. Name and Title of Application Contact :
Name : Joe Stone Title : Environmental Supervisor
2. Application Contact Mailing Address :
Organization/Firm : Utility Board - City of Key West Street Address : P.O. Drawer 6100 City : Key West State : FL Zip Code : 33041-6100
3. Application Contact Telephone Numbers :
Telephone : (305)294-5272 Fax : (305)294-3685

Application Comment

Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.

The proposed combustion turbines will be permitted as a minor source addition to the Stock Island Plant site utilizing: a) emission off-sets from the retired steam unit; and b) operating hour and/or fuel usage limitations such that new emissions do not exceed 40 tons/yr for any of the criteria pollutants (NOx, SO2, CO, PM). This approach will avoid the rigors of having to secure a Prevention of Significant Deterioration (PSD) approval for the two used combustion turbines.

Nitrogen oxide (NOx) emissions will be the pollutant of most concern in permitting the CT's. The actual NOx emissions from the Stock Island Steam Unit averaged 134 tpy for 1993 and 1994. FDEP has determined that the average of these two years of operation will be the applicable emission off-set.

The NOx emissions from the proposed combustion turbines will be limited to 75 ppm each. At these levels the anticipated operating hour limitations on the two CT's will be approximately 2000 hours per year per unit (resulting in approximately 174 tpy).

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility, Location, and Type

1. Facility UTM Coordinates :			
Zone : 17	East (km) : 425.65	North (km) :	2716.67
2. Facility Latitude/Longitude :			
Latitude (DD/MM/SS) : 24 33 49		Longitude (DD/MM/SS) : 81 44 3	
3. Governmental Facility Code :	4. Facility Status Code :	5. Facility Major Group SIC Code :	6. Facility SIC(s) :
4	A	49	4211
7. Facility Comment :			
<p>The Facility is an electric power plant. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), it is proposed that two used 19.77 MW Combustion Turbine Electric Generating Units will be constructed.</p>			

Facility Contact

1. Name and Title of Facility Contact :	
Joe Stone Environmental Supervisor	
2. Facility Contact Mailing Address :	
Organization/Firm :	Utility Board - City of Key West
Street Address :	P.O. Drawer 6100
City :	Key West
State :	FL
Zip Code :	33041-6100
3. Facility Contact Telephone Numbers :	
Telephone :	(305)294-5272
Fax :	(305)294-3685

Facility Regulatory Classifications

1. Small Business Stationary Source?	N
2. Title V Source?	Y
3. Synthetic Non-Title V Source?	N
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	Y
5. Synthetic Minor Source of Pollutants Other than HAPs?	N
6. Major Source of Hazardous Air Pollutants (HAPs)?	N
7. Synthetic Minor Source of HAPs?	N
8. One or More Emissions Units Subject to NSPS?	Y
9. One or More Emission Units Subject to NESHAP?	N
10. Title V Source by EPA Designation?	N
11. Facility Regulatory Classifications Comment :	

B. FACILITY REGULATIONS

Rule Applicability Analysis

--

B. FACILITY REGULATIONS

List of Applicable Regulations

40 CFR 70 - State Operating Permits

40 CFR 72 - Regulations on Permits

40 CFR 73 - SO₂ Allowance System

40 CFR 60.7 - Notification and Recordkeeping (NSPS)

40 CFR 60.8 - Performance Tests (NSPS)

40 CFR 60.11 - Compliance with Standards and Maintenance Requirements (NSPS)

40 CFR 60.12 - Circumvention (NSPS)

40 CFR 60.13 - Monitoring Requirements (NSPS)

40 CFR 60.19 - General Notification and Reporting Requirements (NSPS)

40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines (NSPS)

62-4.001 through 62-4.160, FAC - Permits Part I General

62-4.210, FAC - Construction Permits

62-103.150, FAC - Public Notice of Application and Proposed Agency Action

62-210, FAC - Stationary Sources

II. Part 3b - 1

DEP Form No. 62-210.900(1) - Form

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B. FACILITY REGULATIONS

List of Applicable Regulations

62-212.300, FAC - General Preconstruction Review Requirements

62-212.400, FAC - Prevention of Significant Deterioration

62-204.240, FAC - Ambient Air Quality Standards

62-296.320(4)(b), FAC - General Visible Emission Standards

62-296.320(2), FAC - General Pollutant Emission Limiting Standards, Objectionable Odor

62-297.310, FAC - General Test Requirements

62-297.620, FAC - Exceptions and Approvals of Alternative Procedures and Requirements

62-296.320(4)(c), FAC - Unconfined Emissions of Particulate Matter

62-297.401, FAC - Compliance Test Methods

62-212.500(5), FAC - Emission Offsets

62-4.220, FAC - Operating Permits

62-213, FAC - Operation Permits for Major Sources of Air Pollution (Title V)

62-281, FAC - Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling

40 CFR 82 - Servicing of Motor Vehicle Air Conditioners

II. Part 3b - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

C. FACILITY POLLUTANTS

Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
SO2	A
VOC	A
NOX	A
CO	A
PM	A
H021	B
H2S	B
PB	B
PM10	A

II. Part 4 - 1

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 1

1. Pollutant Emitted :	SO2	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 1

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 2

1. Pollutant Emitted :	VOC	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 2

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 3

1. Pollutant Emitted :	NOX	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 3

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 4

1. Pollutant Emitted :	CO	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 5

1. Pollutant Emitted :	PM	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 6

1. Pollutant Emitted :	H021	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 7

1. Pollutant Emitted :	H2S	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :	<p>The 37 MW Steam Electric Generator (Ralph Garcia Steam Plant) and the two 8.8 MW Medium Speed Diesel Units use once-through groundwater cooling water containing H2S, which is released from the plant to the on-site discharge canal. The potential and actual H2S emissions are estimated to be 97.7 tpy and 19 tons respectively. With the retirement of the the Steam Unit, H2S emissions will decrease. The potential H2S emissions will then be 18.67 tpy. The actual H2S emissions are estimated to be approximately 3.63 tons.</p>	

II. Part 4b - 7

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 8

1. Pollutant Emitted :	PB	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 8

D. FACILITY POLLUTANT DETAIL INFORMATION

Facility Pollutant Information

Pollutant 9

1. Pollutant Emitted :	PM10	
2. Requested Emissions Cap :	(lbs/hour)	(tons/year)
3. Basis for Emissions Cap Code :		
4. Facility Pollutant Comment :		

II. Part 4b - 9

D. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	Figure 1
2. Facility Plot Plan :	Figure 2
3. Process Flow Diagram(s) :	Figures 3 and 4
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	NA
5. Fugitive Emissions Identification :	NA
6. Supplemental Information for Construction Permit Application :	Attachment A

Additional Supplemental Requirements for Category I Applications Only

7. List of Proposed Exempt Activities :	NA
8. List of Equipment/Activities Regulated under Title VI :	NA
9. Alternative Methods of Operation :	NA
10. Alternative Modes of Operation (Emissions Trading) :	NA
11. Identification of Additional Applicable Requirements :	NA
12. Compliance Assurance Monitoring Plan :	NA
13. Risk Management Plan Verification :	NA
14. Compliance Report and Plan :	NA
15. Compliance Certification (Hard-copy Required) :	NA

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : 37 MW Steam Electric Generator (Ralph Garcia Steam Plant)		
2. Emissions Unit Identification Number : 001 <input type="checkbox"/> No Corresponding ID <input type="checkbox"/> Unknown		
3. Emissions Unit Status Code : C	4. Acid Rain Unit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Emissions Unit Major Group SIC Code : 49
6. Emissions Unit Comment : Upon approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.		

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : 19.77 MW Combustion Turbine Electric Generating Unit #1		
2. Emissions Unit Identification Number : 008 <input type="checkbox"/> No Corresponding ID <input type="checkbox"/> Unknown		
3. Emissions Unit Status Code : C	4. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Emissions Unit Major Group SIC Code : 49
6. Emissions Unit Comment : Upon approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.		

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : 19.77 MW Combustion Turbine Electric Generating Unit #2		
2. Emissions Unit Identification Number : 009 [] No Corresponding ID [] Unknown		
3. Emissions Unit Status Code : C	4. Acid Rain Unit? [] Yes [X] No	5. Emissions Unit Major Group SIC Code : 49
6. Emissions Unit Comment : Upon approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.		

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Emissions Unit Control Equipment 1

1. Description :	
Multiple Cyclone	
2. Control Device or Method Code :	76

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Emissions Unit Control Equipment 1

1. Description :	
Water Injection	
2. Control Device or Method Code :	28

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Emissions Unit Control Equipment 1

1. Description :

Water Injection

2. Control Device or Method Code : 28

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Emissions Unit Details

1. Initial Startup Date :	01-Dec-1972	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer : Zurn	Model Number : 17995	
4. Generator Nameplate Rating :	37	MW
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	515	mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	hours/day	days/week
	weeks/year	hours/year

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Emissions Unit Details

1. Initial Startup Date :	31-May-1998	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer : Stewart & Stevenson	Model Number : MS5001L	
4. Generator Nameplate Rating :	20	MW
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	347	mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :		
Maximum heat input of 347 MMBtu/hr is based on Higher Heating Value (HHV) at 40F ambient air temperature. Maximum heat input at 85F is 303.2 MMBtu/hr, based on HHV.		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	4,000 hours/year

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Emissions Unit Details

1. Initial Startup Date :	31-May-1998	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer :	Stewart & Stevenson	Model Number : MS5001L
4. Generator Nameplate Rating :	20	MW
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	347	mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :	Maximum heat input of 347 MMBtu/hr is based on Higher Heating Value (HHV) at 40F ambient air temperature. Maximum heat input at 85F is 303.2 MMBtu/hr, based on HHV.	

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	4,000 hours/year

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Rule Applicability Analysis

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III. Part 6a - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Rule Applicability Analysis

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III. Part 6a - 1

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Rule Applicability Analysis

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III. Part 6a - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

List of Applicable Regulations

40 CFR 72 - Regulations of Permits

62-4.001 through 62-4.160, FAC - Permits Part I General

62-4.210, FAC - Construction Permits

62-103.150, FAC - Public Notice of Application and Proposed Agency Action

62-204.240, FAC - Ambient Air Quality Standards

62-212.500(5), FAC - Emission Offsets

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

List of Applicable Regulations

40 CFR 70 - State Operating Permits

40 CFR 60.7 - Notification and Recordkeeping (NSPS)

40 CFR 60.8 - Performance Tests (NSPS)

40 CFR 60.11 - Compliance with Standards and Maintenance Requirements (NSPS)

40 CFR 60.12 - Circumvention (NSPS)

40 CFR 60.13 - Monitoring Requirements (NSPS)

40 CFR 60.19 - General Notification and Reporting Requirements (NSPS)

40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines (NSPS)

62-4.001 through 62-4.160, FAC - Permits Part I General

62-4.210, FAC - Construction Permits

62-4.220, FAC - Operating Permits

62-103.150, FAC - Public Notice of Application and Proposed Agency Action

62-210, FAC - Stationary Sources

62-212.300, FAC - General Preconstruction Review Requirements

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

List of Applicable Regulations

40 CFR 70 - State Operating Permits

40 CFR 60.7 - Notification and Recordkeeping (NSPS)

40 CFR 60.8 - Performance Tests (NSPS)

40 CFR 60.11 - Compliance with Standards and Maintenance Requirements (NSPS)

40 CFR 60.12 - Circumvention (NSPS)

40 CFR 60.13 - Monitoring Requirements (NSPS)

40 CFR 60.19 - General Notification and Reporting Requirements (NSPS)

40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines (NSPS)

62-4.001 through 62-4.160, FAC - Permits Part I General

62-4.210, FAC - Construction Permits

62-4.220, FAC - Operating Permits

62-103.150, FAC - Public Notice of Application and Proposed Agency Action

62-210, FAC - Stationary Sources

62-212.300, FAC - General Preconstruction Review Requirements

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

List of Applicable Regulations

62-212.500(5), FAC - Emission Offsets

62-213, FAC - Operation Permits for Major Sources of Air Pollution (Title V)

62-204.240, FAC - Ambient Air Quality Standards

62-296.320(4)(b), FAC - General Visible Emission Standards

62-296.320(2), FAC - General Pollutant Emission Limiting Standards, Objectionable Odor

62-297.310, FAC - General Test Requirements

62-297.620, FAC - Exceptions and Approvals of Alternative Procedures and Requirements

62-296.320(4)(c), FAC - Unconfined Emissions of Particulate Matter

62-297.401, FAC - Compliance Test Methods

III. Part 6b - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

List of Applicable Regulations

62-212.500(5), FAC - Emission Offsets

62-213, FAC - Operation Permits for Major Sources of Air Pollution (Title V)

62-204.240, FAC - Ambient Air Quality Standards

62-296.320(4)(b), FAC - General Visible Emission Standards

62-296.320(2), FAC - General Pollutant Emission Limiting Standards, Objectionable Odor

62-297.310, FAC - General Test Requirements

62-297.620, FAC - Exceptions and Approvals of Alternative Procedures and Requirements

62-296.320(4)(c), FAC - Unconfined Emissions of Particulate Matter

62-297.401, FAC - Compliance Test Methods

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 1		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	104	feet	
7. Exit Diameter :	5.0	feet	
8. Exit Temperature :	369	°F	
9. Actual Volumetric Flow Rate :	172112	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.590
		North (km) :	2716.770
14. Emission Point Comment :			
Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.			

III. Part 7a - 1

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 7		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	43	feet	
7. Exit Diameter :	12.6	feet	
8. Exit Temperature :	890	°F	
9. Actual Volumetric Flow Rate :	647245	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.687
		North (km) :	2716.610
14. Emission Point Comment :			
Exit Diameter of 12.6 feet is an equivalent diameter. The stack is actually rectangular with exit dimensions of 10' x 12.5'. Exit Temperature and Actual Volumetric Flow Rate are based on 40F ambient air temperature and 100% load. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric			

III. Part 7a - 1

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 8		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	43	feet	
7. Exit Diameter :	12.6	feet	
8. Exit Temperature :	890	°F	
9. Actual Volumetric Flow Rate :	647245	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.694
		North (km) :	2716.610
14. Emission Point Comment :			
Exit Diameter of 12.6 feet is an equivalent diameter. The stack is actually rectangular with exit dimensions of 10' x 12.5'. Exit Temperature and Actual Volumetric Flow Rate are based on 40F ambient air temperature and 100% load. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric			

III. Part 7a - 1

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Generating Units are proposed for construction.

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Generating Units are proposed for construction.

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Boiler burns residual fuel oil #6.	
2. Source Classification Code (SCC) : 1-01-004-01	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 3.41	5. Maximum Annual Rate : 29,877.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 2.50	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 151	
10. Segment Comment :	

III. Part 8 - 1

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : No. 2 fuel oil fired gas turbine.	
2. Source Classification Code (SCC) : 2-01-001-01	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 2.51	5. Maximum Annual Rate : 3,096.44
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.05	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 138	
10. Segment Comment : Maximum hourly and annual fuel rates are at 40F ambient temperature. The unit will burn fuel oil with a maximum of 0.05% sulfur by weight.	

III. Part 8 - 1

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : No. 2 fuel oil fired gas turbine.	
2. Source Classification Code (SCC) : 2-01-001-01	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 2.51	5. Maximum Annual Rate : 3,096.44
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.05	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 138	
10. Segment Comment : Maximum hourly and annual fuel rates are at 40F ambient temperature. The unit will burn fuel oil with a maximum of 0.05% sulfur by weight.	

III. Part 8 - 1

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Segment Description and Rate : Segment 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Boiler burns distillate fuel oil #2	
2. Source Classification Code (SCC) : 1-01-005-01	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 3.73	5. Maximum Annual Rate : 32,691.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 2.50	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 138	
10. Segment Comment :	

III. Part 8 - 2

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Segment Description and Rate : Segment 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Boiler burns propane	
2. Source Classification Code (SCC) : 1-01-010-02	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 5.69	5. Maximum Annual Rate : 49,850.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.00	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 90	
10. Segment Comment :	

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - CO			NS
2 - NOX			NS
3 - PM	076		EL
4 - PM10	076		NS
5 - SO2			EL
6 - VOC			NS

III. Part 9a - 1

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - CO			EL
2 - NOX	028		EL
3 - PM			EL
4 - PM10			EL
5 - SO2			EL
6 - VOC			NS

III. Part 9a - 1

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - CO			EL
2 - NOX	028		EL
3 - PM			EL
4 - PM10			EL
5 - SO2			EL
6 - VOC			NS

III. Part 9a - 1

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : CO			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	18.66	lb/hour	81.73 tons/year
4. Synthetically Limited? [] Yes [X] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : AIRS			
7. Emissions Method Code : 5			
8. Calculations of Emissions : 5.0 lbs/1000gal x 1000gal/138 MMBtu x 515 MMBtu/hr = 18.66 lbs/hr 18.66 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 81.73 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment :			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2
 19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : CO			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	67.25	lb/hour	134.50 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : $0.1938 \text{ lbs/MMBtu} \times 347 \text{ MMBtu/hr} = 67.25 \text{ lbs/hr};$ $67.25 \text{ lbs/hr} \times 4000 \text{ hr/yr} \times \text{ton}/2000 \text{ lbs} = 134.5 \text{ tons/yr}.$			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input of 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : CO			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	67.25	lb/hour	134.50 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.1938 lbs/MMBtu x 347 MMBtu/hr = 67.25 lbs/hr; 67.25 lbs/hr x 4000 hr/yr x ton/2000 lbs = 134.5 tons/yr.			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input of 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr			

III. Part 9b - 1

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
 37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	227.80	lb/hour	997.77 tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : AP-42			
7. Emissions Method Code : 3			
8. Calculations of Emissions : $67 \text{ lbs}/1000 \text{ gal} \times 1000 \text{ gal}/151 \text{ MMBtu} \times 515 \text{ MMBtu}/\text{hr} = 227.8 \text{ lbs}/\text{hr}$ $227.8 \text{ lbs}/\text{hr} \times 8760 \text{ hrs}/\text{yr} \times \text{ton}/2000 \text{ lbs} = 997.77 \text{ tons}/\text{yr}$			
9. Pollutant Potential/Estimated Emissions Comment :			

III. Part 9b - 2

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2
 19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX			
2. Total Percent Efficiency of Control :	64.30	%	
3. Potential Emissions :	100.90	lb/hour	174.00 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions: <div style="text-align: right;">to tons/year</div>			
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : $0.8144 \text{ lbs/MMBtu} \times 347 \text{ MMBtu/hr} \times (100\% - 64.3\%)/100 = 100.9 \text{ lbs/hr};$ $134 \text{ tpy} + 40 \text{ tpy} = 174 \text{ tpy}$			
9. Pollutant Potential/Estimated Emissions Comment : <p align="center">Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr and 174 tpy of NOx.</p>			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX			
2. Total Percent Efficiency of Control :	64.30		%
3. Potential Emissions :	100.90	lb/hour	174.00 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.8144 lbs/MMBtu x 347 MMBtu/hr x (100% - 64.3%)/100 = 100.9 lbs/hr; 134 tpy + 40 tpy = 174 tpy			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr and 174 tpy of NOx.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : PM			
2. Total Percent Efficiency of Control :	46.00	%	
3. Potential Emissions :	154.50	lb/hour	281.96 tons/year
4. Synthetically Limited? [] Yes [X] No			
5. Range of Estimated Fugitive/Other Emissions: to tons/year			
6. Emissions Factor : Reference : Current Permit Limit			
7. Emissions Method Code : 5			
8. Calculations of Emissions : Current permit limits PM emissions to 0.1 lbs/MMBtu (normal operation) and 0.3 lbs/MMBtu (max. 3 hrs/24 hrs). Therefore, potential emissions = 0.3 lbs/MMBtu x 515 MMBtu/hr = 154.5 lbs/hr; (0.1 lbs/MMBtu x 515 MMBtu/hr x 21 hrs/24 hrs + 154.5 lbs/hr x 3 hrs/24 hrs) x 8760 hrs/yr x ton/2000 lbs = 281.96 tons/yr Potential hourly emissions rate during normal operations = 0.1 lbs/MMBtu; Using AP-42 PM emissions factor of 10S + 3 lbs/1000 gal gives; (10 x 2.50 + 3) lbs/1000 gal x 1000 gal/151 MMBtu x 515 MMBtu/hr x (1 - 46%) = 51.5 lbs/hr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on compliance with current permit limits, whereas actual emissions are based on actual fuel usage and emissions factor based on annual stack testing.			

III. Part 9b - 3

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : PM			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
18.90	lb/hour	37.80	tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:			
		to	tons/year
6. Emissions Factor :			
Reference :	Mfr data-simlr units		
7. Emissions Method Code : 2			
8. Calculations of Emissions :			
<p>0.0545 lbs/MMBtu x 347 MMBtu/hr = 18.9 lbs/hr 18.9 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 37.8 tons/yr</p>			
9. Pollutant Potential/Estimated Emissions Comment :			
<p>Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.</p>			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : PM			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	18.90	lb/hour	37.80 tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0545 lbs/MMBtu x 347 MMBtu/hr = 18.9 lbs/hr 18.9 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 37.8 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.			

III. Part 9b - 3

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

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DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
18.90	lb/hour	37.80	tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0545 lbs/MMBtu x 347 MMBtu/hr = 18.9 lbs/hr 18.9 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 37.8 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions based on a proposed operating limit of 4000 hrs/yr.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	18.90	lb/hour	37.80 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : $0.0545 \text{ lbs/MMBtu} \times 347 \text{ MMBtu/hr} = 18.9 \text{ lbs/hr}$ $18.9 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 37.8 \text{ tons/yr}$			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions based on a proposed operating limit of 4000 hrs/yr.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10			
2. Total Percent Efficiency of Control :	37.00	%	
3. Potential Emissions :	154.50	lb/hour	281.96 tons/year
4. Synthetically Limited? [] Yes [X] No			
5. Range of Estimated Fugitive/Other Emissions: to tons/year			
6. Emissions Factor : Reference : Engr Judgement			
7. Emissions Method Code : 5			
8. Calculations of Emissions : Current permit limits PM emissions to 0.1 lbs/MMBtu (normal operation) and 0.3 lbs/MMBtu (max. 3 hrs/24 hrs). Therefore, potential emissions = 0.3 lbs/MMBtu x 515 MMBtu/hr = 154.5 lbs/hr; (0.1 lbs/MMBtu x 515 MMBtu/hr x 21 hrs/24 hrs + 154.5 lbs/hr x 3 hrs/24 hrs) x 8760 hrs/yr x ton/2000 lbs = 281.96 tons/yr All PM emissions are assumed to be PM10. Potential hourly emissions rate during normal operations = 0.1 lbs/MMBtu; Using AIRS PM10 emissions factor of 9.6S lbs/1000 gal gives: (9.6 x 2.50) lbs/1000 gal x 1000 gal/151 MMBtu x 515 MMBtu/hr x (1 - 37%) = 51.5 lbs/hr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on compliance with current permit limits, whereas actual emissions are based on actual fuel usage and emissions factor based on annual stack testing for PM emissions.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : SO ₂			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	18.11	lb/hour	36.30 tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mass Balance			
7. Emissions Method Code : 2			
8. Calculations of Emissions : $1000 \text{ gal}/138 \text{ MMBtu} \times 7.2 \text{ lbs/gal} \times 0.05\%S \times 2 = 0.0522 \text{ lbs/MMBtu}$ $0.0522 \text{ lbs/MMBtu} \times 347 \text{ MMBtu/hr} = 18.11 \text{ lbs/hr}$ $18.11 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 36.3 \text{ tons/yr}$			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
 19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : SO2			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
18.11	lb/hour	36.30	tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mass Balance			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 1000 gal/138 MMBtu x 7.2 lbs/gal x 0.05%S x 2 = 0.0522 lbs/MMBtu 0.0522 lbs/MMBtu x 347 MMBtu/hr = 18.11 lbs/hr 18.11 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 36.3 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

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DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	6.32	lb/hour	12.63 tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0182 lbs/MMBtu x 347 MMBtu/hr = 6.32 lbs/hr 6.32 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 12.63 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input of 40F ambient temperature. Allowable annual emission are based on a proposed operating limit of 4000 hrs/yr.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :		6.32	lb/hour
		12.63	tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0182 lbs/MMBtu x 347 MMBtu/hr = 6.32 lbs/hr 6.32 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 12.63 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input of 40F ambient temperature. Allowable annual emission are based on a proposed operating limit of 4000 hrs/yr.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : SO ₂			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
1,416.25	lb/hour	6,203.18	tons/year
4. Synthetically Limited? [] Yes [X] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Current Permit Limit			
7. Emissions Method Code : 5			
8. Calculations of Emissions : 2.75 lbs/MMBtu x 515 MMBtu/hr = 1416.25 lbs/hr 1416.25 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 6203.18 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on compliance with current permit limits, whereas actual emissions will be based on continuous emissions monitoring data.			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	2.58	lb/hour	11.32 tons/year
4. Synthetically Limited? [] Yes [X] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : AP-42			
7. Emissions Method Code : 3			
8. Calculations of Emissions : 0.76 lbs/1000 gal x 1000 gal/151 MMBtu x 515 MMBtu/hr = 2.58 lbs/hr 2.58 lbs/hr x 8760 hrs/yr x ton/2000 lbs = 11.32 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment :			

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Information Section 3

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	RULE		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.10	lbs/MMBtu	
4. Equivalent Allowable Emissions :	51.50	lb/hour	281.96 tons/year
5. Method of Compliance :	Annual testing in accordance with EPA Method 5 or 17.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Allowable emissions request of 0.1 lbs/MMBtu during normal operation based on current permit conditions and Rule 62-296.405(1), FAC.		

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Emissions Unit Information Section 2
 19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 1

Allowable Emissions 1

1. Basis for Allowable Emissions Code :		OTHER	
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :		20.00	ppmvd @ 15% O2
4. Equivalent Allowable Emissions :			
	15.90	lb/hour	31.80 tons/year
5. Method of Compliance :			
Fuel consumption, power output monitoring and load curve.			
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			
Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 20 ppmvd @ 15% O2 (15.9 lbs/hr), with the exception that they may increase to 136 ppmvd @ 15% O2 (67.25 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.			

III. Part 9c - 1

Emissions Unit Information Section 3
 19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 1

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	20.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	15.90	lb/hour	31.80 tons/year
5. Method of Compliance :	Fuel consumption, power output monitoring and load curve.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	<p>Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 20 ppmvd @ 15% O2 (15.9 lbs/hr), with the exception that they may increase to 136 ppmvd @ 15% O2 (67.25 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.</p>		

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Information Section 3

Allowable Emissions 2

1. Basis for Allowable Emissions Code :	RULE		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.30	lbs/MMBtu	
4. Equivalent Allowable Emissions :	154.50	lb/hour	281.96 tons/year
5. Method of Compliance :	Annual testing in accordance with EPA Method 5 or 17.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Allowable emissions request of 0.3 lbs/MMBtu (max. 3 hrs/24 hrs) during soot blowing and load changes based on current permit conditions and Rule 62-210.700(3), FAC.		

III. Part 9c - 2

Emissions Unit Information Section 2
 19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 1

Allowable Emissions 2

1. Basis for Allowable Emissions Code :		OTHER	
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :		136.00	ppmvd @ 15% O2
4. Equivalent Allowable Emissions :		67.25	lb/hour
		134.50	tons/year
5. Method of Compliance :			
Fuel consumption, power output monitoring and load curve.			
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			
Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 20 ppmvd @ 15% O2 (15.9 lbs/hr), with the exception that they may increase to 136 ppmvd @ 15% O2 (67.25 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.			

III. Part 9c - 2

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 1

Allowable Emissions 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	136.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	67.25	lb/hour	134.50 tons/year
5. Method of Compliance :	Fuel consumption, power output monitoring and load curve.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 20 ppmvd @ 15% O2 (15.9 lbs/hr), with the exception that they may increase to 136 ppmvd @ 15% O2 (67.25 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr.		

III. Part 9c - 2

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Pollutant Information Section 5

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	RULE		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	2.75	lbs/MMBtu	
4. Equivalent Allowable Emissions :	1,416.25	lb/hour	6,203.18 tons/year
5. Method of Compliance :	Continuous emissions monitoring and complying with 40 CFR 75		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Allowable emissions request of 2.75 lbs/MMBtu during normal operation based on current permit condition and Rule 62-296.405(1)(c), FAC.		

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 2

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	75.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	100.90	lb/hour	174.00 tons/year
5. Method of Compliance :	Initial stack testing, comparing the ratio of water to fuel.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr and 174 tpy of NOx.		

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 2

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	75.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	100.90	lb/hour	174.00 tons/year
5. Method of Compliance :	Initial stack testing, comparing the ratio of water to fuel.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr and 174 tpy of NOx.		

III. Part 9c - 3

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 3

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	18.90	lbs/hr	
4. Equivalent Allowable Emissions :	18.90	lb/hour	37.80 tons/year
5. Method of Compliance :	Fuel consumption monitoring and mft data for similar units.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable emissions are based on a proposed operating limit of 4000 hrs/yr.		

III. Part 9c - 4

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 3

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	18.90	lbs/hr	
4. Equivalent Allowable Emissions :	18.90	lb/hour	37.80 tons/year
5. Method of Compliance :	Fuel consumption monitoring and mft data for similar units.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable emissions are based on a proposed operating limit of 4000 hrs/yr.		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	20
2. Basis for Allowable Opacity :	RULE
3. Requested Allowable Opacity :	
	Normal Conditions : 20 %
	Exceptional Conditions : 40 %
	Maximum Period of Excess Opacity Allowed : 2 min/hour
4. Method of Compliance :	
	Continuous emissions monitoring and complying with 40 CFR 75
5. Visible Emissions Comment :	
	Opacity based on Rule 62-296.405(1)(a).

III. Part 10 - 1

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	20
2. Basis for Allowable Opacity :	RULE
3. Requested Allowable Opacity :	Normal Conditions : 20 % Exceptional Conditions : 100 % Maximum Period of Excess Opacity Allowed : 10 min/hour
4. Method of Compliance :	Annual testing using EPA Method 9 or a State approved method
5. Visible Emissions Comment :	General emission standard under 62-296.310(2)(a), FAC. Exceptional conditions opacity limit requested is to allow for excess emissions during startup. As per 62-210.700(1), FAC excess emissions during startup, shutdown or malfunction shall be permitted but in no case exceed two hours in any 24 hour period.

**I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	20									
2. Basis for Allowable Opacity :	RULE									
3. Requested Allowable Opacity :	<table> <tr> <td>Normal Conditions :</td> <td>20</td> <td>%</td> </tr> <tr> <td>Exceptional Conditions :</td> <td>100</td> <td>%</td> </tr> <tr> <td>Maximum Period of Excess Opacity Allowed :</td> <td>10</td> <td>min/hour</td> </tr> </table>	Normal Conditions :	20	%	Exceptional Conditions :	100	%	Maximum Period of Excess Opacity Allowed :	10	min/hour
Normal Conditions :	20	%								
Exceptional Conditions :	100	%								
Maximum Period of Excess Opacity Allowed :	10	min/hour								
4. Method of Compliance :	Annual testing using EPA Method 9 or a State approved method									
5. Visible Emissions Comment :	General emission standard under 62-296.310(2)(a), FAC. Exceptional conditions opacity limit requested is to allow for excess emissions during startup. As per 62-210.700(1), FAC excess emissions during startup, shutdown or malfunction shall be permitted but in no case exceed two hours in any 24 hour period.									

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Visible Emissions Limitation : Visible Emissions Limitation 2

1. Visible Emissions Subtype : 60									
2. Basis for Allowable Opacity :									
3. Requested Allowable Opacity : <table style="margin-left: auto; margin-right: auto;"><tr><td style="padding-right: 20px;">Normal Conditions :</td><td style="padding-right: 20px;">60</td><td style="padding-right: 20px;">%</td></tr><tr><td style="padding-right: 20px;">Exceptional Conditions :</td><td style="padding-right: 20px;">100</td><td style="padding-right: 20px;">%</td></tr><tr><td style="padding-right: 20px;">Maximum Period of Excess Opacity Allowed :</td><td style="padding-right: 20px;">6</td><td style="padding-right: 20px;">min/hour</td></tr></table>	Normal Conditions :	60	%	Exceptional Conditions :	100	%	Maximum Period of Excess Opacity Allowed :	6	min/hour
Normal Conditions :	60	%							
Exceptional Conditions :	100	%							
Maximum Period of Excess Opacity Allowed :	6	min/hour							
4. Method of Compliance : Continuous emissions monitoring and complying with 40 CFR 75									
5. Visible Emissions Comment : 60% opacity for up to 3 hrs in 24 hrs, with up to four 6-minute periods of up to 100%. Rule 62-210.700(3).									

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Continuous Monitoring System : Continuous Monitor 1

1. Parameter Code : VE	2. Pollutant :
3. CMS Requirement : RULE	
4. Monitor Information : Manufacturer : United Sciences, Inc. Model Number : 500C Serial Number : 0993634	
5. Installation Date :	01-Nov-1994
6. Performance Specification Test Date :	
7. Continuous Monitor Comment : Opacity CEM required under 62-297.500(1)(a)1, FAC - Continuous Emissions Monitoring Requirements and 40 CFR 75.14 - Regulations for CEMs under Acid Rain Requirements. Performance Specification Test Data: NONE	

**J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Continuous Monitoring System : Continuous Monitor 1

1. Parameter Code :	2. Pollutant :
3. CMS Requirement :	
4. Monitor Information : Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment :	

III. Part 11 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Continuous Monitoring System : Continuous Monitor 1

1. Parameter Code :	2. Pollutant :
3. CMS Requirement :	
4. Monitor Information : Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment :	

III. Part 11 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Continuous Monitoring System : Continuous Monitor 2

1. Parameter Code : CO2	2. Pollutant :
3. CMS Requirement : RULE	
4. Monitor Information : Manufacturer : Thermo Environmental Instruments, Inc. Model Number : 41H Serial Number : 41H-47934-279	
5. Installation Date :	01-Nov-1994
6. Performance Specification Test Date :	01-Dec-1994
7. Continuous Monitor Comment : CO2 CEM required under 40 CFR 75.13 - Regulations for CEMs under Acid Rain Requirements.	

III. Part 11 - 2

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Continuous Monitoring System : Continuous Monitor 3

1. Parameter Code : FLOW	2. Pollutant :
3. CMS Requirement : RULE	
4. Monitor Information : Manufacturer : United Sciences, Inc. Model Number : Ultraflow 100 (top) Serial Number : 9401768	
5. Installation Date :	01-Nov-1994
6. Performance Specification Test Date :	01-Dec-1994
7. Continuous Monitor Comment : Flow CEM required under 40 CFR 75.11 - Regulations for CEMs under Acid Rain Requirements. There are two flow monitors. This is the top unit.	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Continuous Monitoring System : Continuous Monitor 4

1. Parameter Code : FLOW	2. Pollutant :
3. CMS Requirement : RULE	
4. Monitor Information : Manufacturer : United Sciences, Inc. Model Number : Ultraflow 100 (btm) Serial Number : 9303444	
5. Installation Date :	01-Nov-1994
6. Performance Specification Test Date :	01-Dec-1994
7. Continuous Monitor Comment : Flow CEM required under 40 CFR 75.11 - Regulations for CEMs under Acid Rain Requirements. There are two flow monitors. This is the bottom unit.	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Continuous Monitoring System : Continuous Monitor 5

1. Parameter Code : EM	2. Pollutant : NOX
3. CMS Requirement : RULE	
4. Monitor Information : Manufacturer : Thermo Environmental Instruments, Inc. Model Number : 42D Serial Number : 42D-49716-284	
5. Installation Date :	01-Nov-1994
6. Performance Specification Test Date :	01-Dec-1994
7. Continuous Monitor Comment : NOx CEM required under 40 CFR 75.12 - Regulations for EMs under Acid Rain Requirements.	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Continuous Monitoring System : Continuous Monitor 6

1. Parameter Code : EM	2. Pollutant : SO2
3. CMS Requirement : RULE	
4. Monitor Information : Manufacturer : Thermo Environmental Instruments, Inc. Model Number : 43B Serial Number : 43B-48659-281	
5. Installation Date :	01-Nov-1994
6. Performance Specification Test Date :	01-Dec-1994
7. Continuous Monitor Comment : SO2 CEM required under 40 CFR 75.11 - Regulations for CEMs under Acid Rain Requirements.	

III. Part 11 - 6

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emission unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emission unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

III. Part 12 - 2

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emission unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1

37 MW Steam Electric Generator (Ralph Garcia Steam Plant)

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Waived
2. Fuel Analysis or Specification :	Waived
3. Detailed Description of Control Equipment :	Waived
4. Description of Stack Sampling Facilities :	Waived
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attachment A
9. Other Information Required by Rule or Statute :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alternative Modes of Operation (Emissions Trading) :	NA

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section

2

19.77 MW Combustion Turbine Electric Generating Unit #1

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Figure 3
2. Fuel Analysis or Specification :	Attachment B
3. Detailed Description of Control Equipment :	Attachment C
4. Description of Stack Sampling Facilities :	Attachment D
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	Attachemnt E
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attachment A
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

III. Part 13 - 1

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Figure 4
2. Fuel Analysis or Specification :	Attachment B
3. Detailed Description of Control Equipment :	Attachment C
4. Description of Stack Sampling Facilities :	Attachment D
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	Attachemnt E
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attachment A
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

III. Part 13 - 1

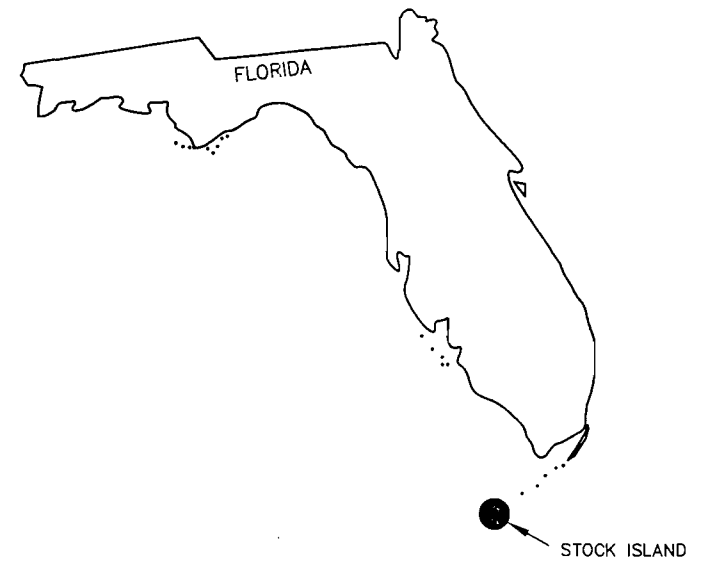
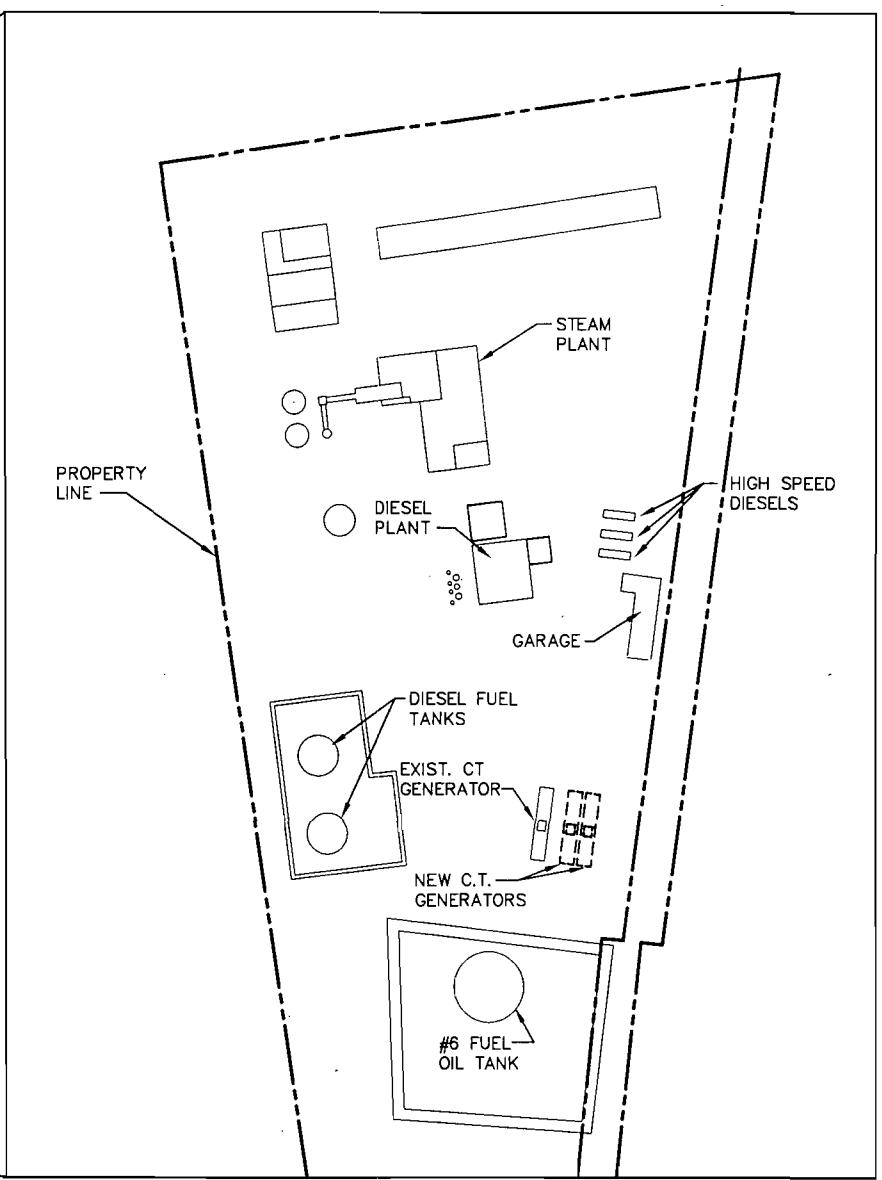
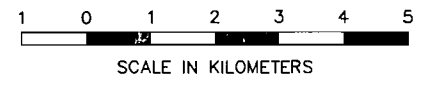
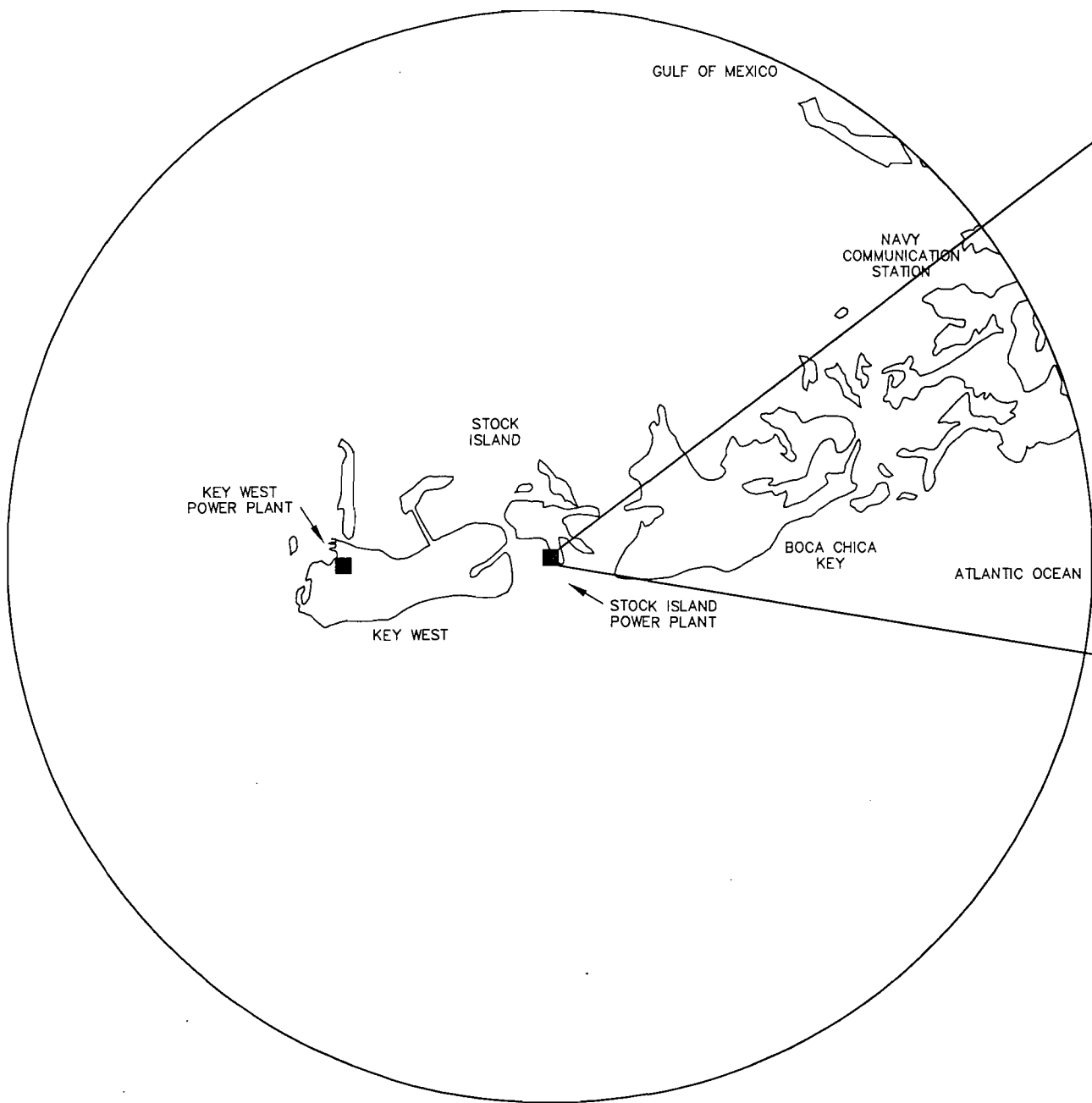
12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2



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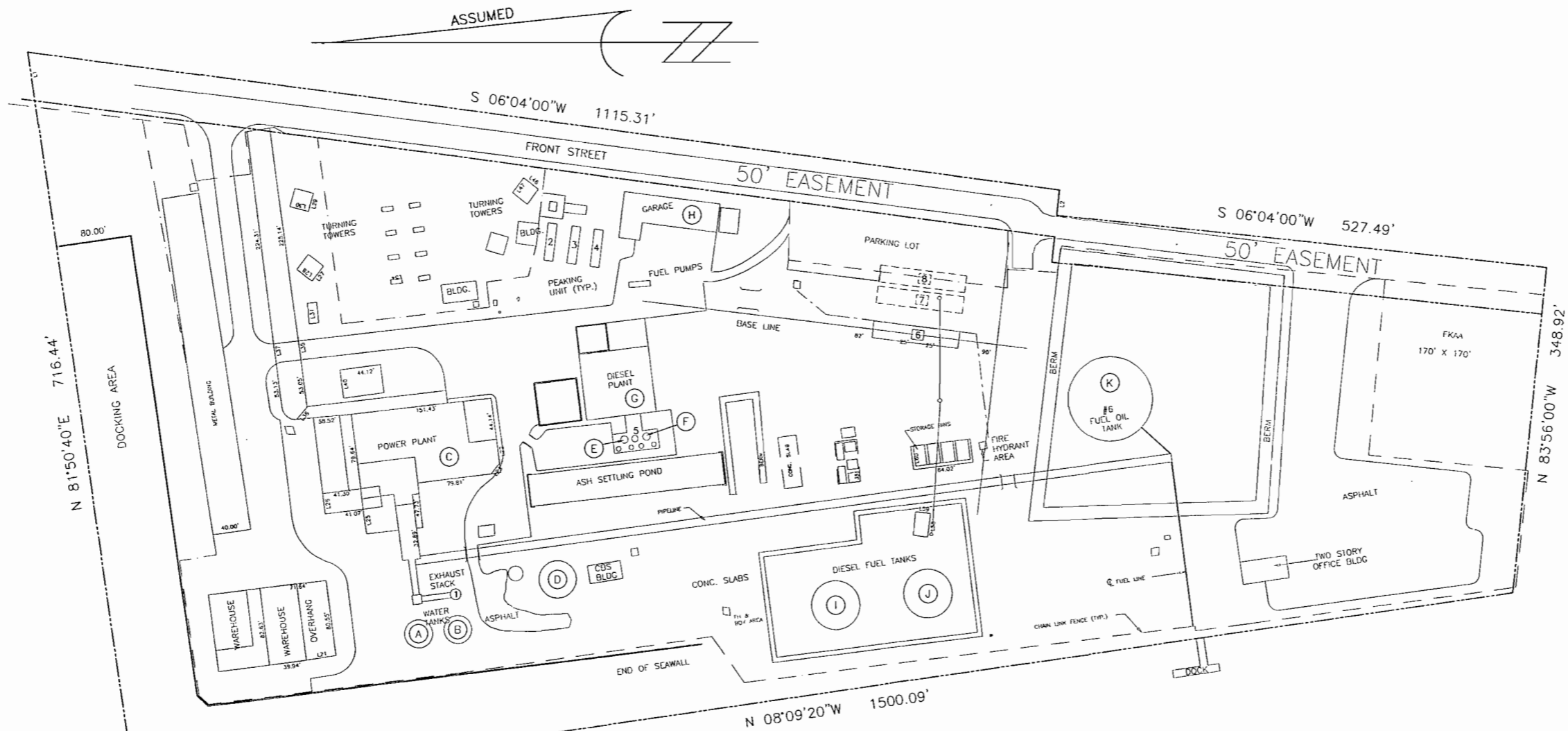
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DWN	MECH REV	STRUC REV
CK'D	APPD	DATE



FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
 FIGURE 1
 PROXIMITY MAP AND SITE PLAN

FILE NO	
W/O	
DWG NO	SK-2



- BUILDINGS**
- A. DEMINERALIZATION TANK No. 1
 - B. DEMINERALIZATION TANK No. 2
 - C. WATER ELECTRIC GENERATOR BUILDING (RALF GARCIA STEAM PLANT)
 - D. WATER TANK
 - E. MEDIUM SPEED DIESEL MUFFLER No. 1
 - F. MEDIUM SPEED DIESEL MUFFLER No. 2
 - G. MEDIUM SPEED DIESEL PLANT BUILDING
 - H. GARAGE
 - I. DIESEL FUEL TANK No. 1
 - J. DIESEL FUEL TANK No. 2
 - K. No. 5 FUEL OIL TANK

- STACKS**
- 1. STEAM ELECTRIC GENERATOR
 - 2. HIGH SPEED DIESEL No. 1
 - 3. HIGH SPEED DIESEL No. 2
 - 4. HIGH SPEED DIESEL No. 3
 - 5. MEDIUM SPEED DIESEL
 - 6. EXISTING COMBUSTION TURBINE
 - 7. PROPOSED COMBUSTION TURBINE No. 1
 - 8. PROPOSED COMBUSTION TURBINE No. 2

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REV	DATE	DES	CK'D	APPROVALS	REVISION DESCRIPTION	DCS	O/M/REV	E/L/C/REV	FILE NO
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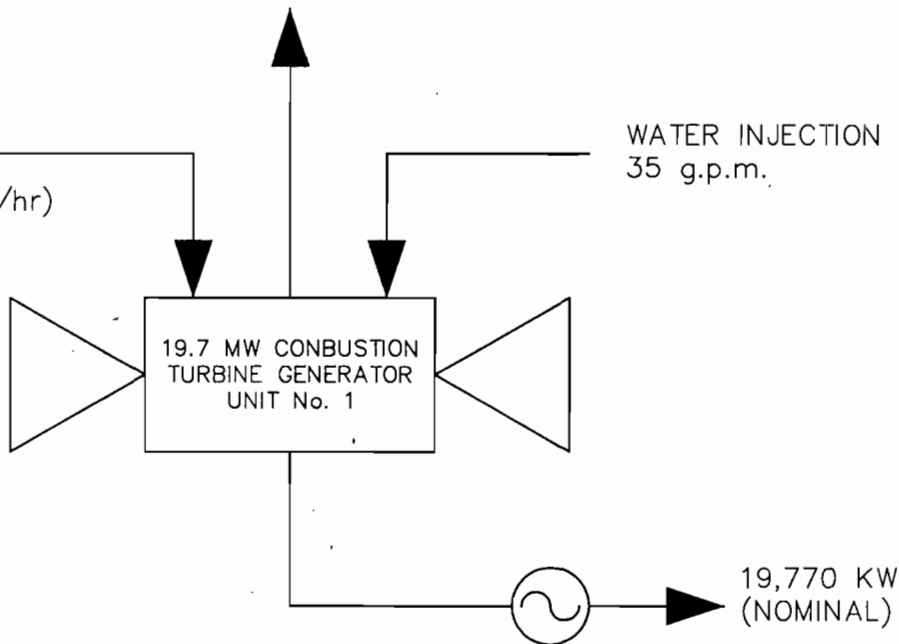


FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 2
 BOUNDARY AND LIMITED TOPTGRAPHICAL SURVEY

EXHAUST FLOW 648,245 a.c.f.m. @ 890° F

#2 FUEL
2514.5 gal/hr
(347 mm btu/hr)
(HHV)

WATER INJECTION
35 g.p.m.



NOTE:
ABOVE CONDITIONS ARE AT AMBIENT TEMPERATURE OF 40°F.
HEAT INPUT (HHV) WILL DECREASE TO 303.16 mm btu/hr AT 85°F.

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DWN	MECH REV	STRUC REV
CK'D	APPD	DATE

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FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 3

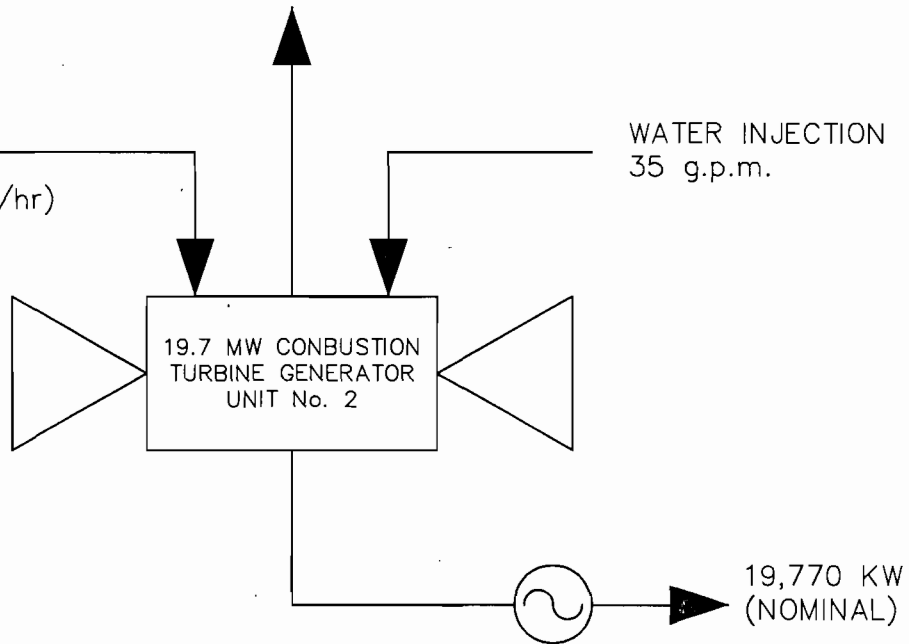
UNIT No. 1 PROCESS FLOW DIAGRAM

FILE NO 005186 W/O
DWG NO SK-3.

EXHAUST FLOW 648,245 a.c.f.m. @ 890° F

#2 FUEL
2514.5 gal/hr
(347 mm btu/hr)
(HHV)

WATER INJECTION
35 g.p.m.



NOTE:
ABOVE CONDITIONS ARE AT AMBIENT TEMPERATURE OF 40°F.
HEAT INPUT (HHV) WILL DECREASE TO 303.16 mm btu/hr AT 85°F.

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DES	CIVL REV	ELEC REV
DWN	MECH REV	STRUC REV
CK'D	APPD	DATE

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FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 4

UNIT No. 2 PROCESS FLOW DIAGRAM

FILE NO 005186
W/G
DWG NO
SK-4.

ATTACHMENT B
FUEL OIL ANALYSIS



PANAIR LABORATORY, INC.

4301 N.W. 72 AVE., MIAMI, FL 33166 (305) 594-9055 FAX (305) 477-9137

LABORATORY NO.

29809T

AWB NO

UPS I.D. 4360

FUEL OIL ANALYSIS

ORIGIN Key West	FUEL TYPE Fuel Oil	CUSTOMER City Electric System
DATE SAMPLED 2/15/95	RECEIVED AT LAB 2/17/95	TEST COMPLETED 2/23/95
REFINER -	REFINER'S DESIGNATION No. 2 Diesel	SAMPLED FROM No. 2 Diesel; P.O. 930675

This report relates to the sample tested and does not guarantee the bulk of the material to be of equal quality.

ANILINE POINT F (D611)	
APPEARANCE, VISUAL	
ASH, % WGT. (D482)	
ASPHALTENES, % WGT. (IP 143/82)	
CARBON RESIDUE CONRADSON (ON 10% B), % WGT (D189)	
CETANE INDEX (D976)	
CETANE NUMBER (D613)	
CLOUD POINT °F (D2500)	
COPPER CORROSION (3 HRS 122 °F/212 °F) (D 130)	
COLOR, ASTM (D1500)	
FIRE POINT °F COC (D92)	
FLASH POINT °F COC (D92)	
FLASH POINT PENSKY-MARTENS °F (D93)	
GROSS CALORIFIC VALUE BTU/LB (D240)	
GROSS CALORIFIC VALUE (CALCULATED)	
GRAVITY, API @ 60 F (D287)	
SPECIFIC GRAVITY @ 60 F /60 F	
DENSITY @ 15° C	
POUNDS PER GALLON @ 60 F	
NEUTRALIZATION NUMBER mgKOH/gm (D974)	
OXIDATION STABILITY, mg/100 ml. (D 2274)	
POUR POINT °F (D97)	
SEDIMENT BY EXTRACTION, % MASS (D473)	
SEDIMENT BY HOT FILTRATION, % MASS	
SULFUR, % WGT, X-RAY (D4294)	
SULFUR, % WGT. (D 129)	0.05
VISCOSITY, KINEMATIC @ 50° C CST (D445)	
VISCOSITY, KINEMATIC @ 40° C CST (D445)	
WATER BY DISTILLATION, % WGT (D95)	
WATER AND SEDIMENT, % VOL. (D1796)	
WATER AND SEDIMENT % VOL. (D2709)	
SUSPENDED SEDIMENT mg/100 ml. (D2276)	

DISTILLATION (D86)

% RECOVERY	F	C
IBP		
10		
20		
30		
40		
50		
60		
70		
80		
90		
95		
END POINT		
RECOVERY _____		
RESIDUE _____		
LOSS _____		

ELEMENTS BY ATOMIC ABSORPTION, PPM.

ALUMINUM (Al)	
CALCIUM (Ca)	
CHROMIUM (Cr)	
COPPER (Cu)	
IRON (Fe)	
LEAD (Pb)	
MAGNESIUM (Mg)	
MANAGANESE (Mn)	
NICKEL (Ni)	
POTASSIUM (K)	
SILICON (Si)	
SODIUM (Na)	
SODIUM + POTASSIUM	
VANADIUM (V)	
ZINC (Zn)	

Walter Johnson

ATTACHMENT C
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Unit 008 and 009 - Proposed Combustion Turbine Electric Generating Units

The air pollution control associated with the combustion turbines will consist of water injection for NO_x emissions reduction. Design details and manufacturer guarantees for control efficiency for the water injection system are unavailable. The control efficiency of the water injection system is believed to be sufficient for the gas turbines to meet proposed NO_x emissions limitations.

ATTACHMENT D
STACK SAMPLING FACILITIES

STACK SAMPLING FACILITIES

Unit 008 and 009 - Proposed Combustion Turbine Electric Generating Units

A single port will be located on the side of the combustion turbine stacks and is accessible from the top of the unit enclosure.

ATTACHMENT E
PROCEDURES FOR STARTUP AND SHUTDOWN

PROCEDURES FOR STARTUP AND SHUTDOWN

Unit 008 and 009 - Proposed Combustion Turbine Electric Generating Units

The units will be brought to load and put online as fast as possible in accordance with manufacturer instructions to minimize opacity emissions.

ATTACHMENT A
CONSTRUCTION PERMIT APPLICATION
SUPPLEMENTAL INFORMATION

SECTION 3-1

PROJECT DESCRIPTION

PURPOSE

In order to provide adequate electric generating capacity for the Key West, Florida electric system during peak load conditions and during emergency conditions, the Florida Municipal Power Agency ("FMPA") and the Utility Board of Key West ("Utility Board") are proposing to install two used combustion turbine units at the Utility Board's Stock Island Plant site. FMPA will own and finance the installation of the units and the Utility Board will operate and maintain the units along with the other existing generating units at the Stock Island site. Part of the need for the proposed CT's is to replace the electric generating capacity of the existing 37 MW steam electric generating unit at the Stock Island plant site which is being retired by the Utility Board. As part of the permitting action in this application, the Utility Board will officially retire the steam unit from the State of Florida's emission inventory.

PROJECT LOCATION

The Stock Island Power Plant site comprises roughly 50 acres and is located approximately one mile east of the City of Key West, Monroe County, Florida. The site is a peninsula bounded by Safe Harbor and Hawk Channel. Across Safe Harbor to the west of the site is Cow Key, and north of the site is the main portion of Stock Island. The latitude of the site is 24° 33' 49" N, and the longitude of the site is 81° 44' 03" W. In Universal Transverse Mercator ("UTM") coordinates, the site is located in Zone 17, 425 km East and 2716 km North. The surrounding topography is essentially flat and varies from sea level to approximately 5 feet above mean sea level ("msl") with a small plot of land rising to approximately 10 feet msl. Figure 3-1-1 is a proximity map of Key West and Stock Island.

EXISTING FACILITIES

The existing Stock Island Plant site includes the following electric generating units:

- One 37 MW steam electric generating unit;
- Two 8.8 MW medium speed diesel units;
- Three 2 MW high speed diesel units; and
- One 23.8 MW combustion turbine.

In addition the site includes the fuel storage and handling facilities, electric substation, warehouse, office space, demineralized water storage, and various support facilities.

Fuel storage in the past included both No. 6 fuel and No. 2 fuel. With the planned retirement, all fuel storage will be converted to No. 2 fuel, with a fuel sulfur content of 0.05 percent.

PROPOSED COMBUSTION TURBINE UNITS

The proposed CT's to be installed are each rated at 19.77 MW at peak load at a ambient temperature of 85° F. The following summarizes the ratings of each unit.

Parameter	Value for Peak Rating
Output @ 85°F/sea level/60%RH, KW	19,770
Heat Rate @ above conditions (LHV), Btu/kwh	14,467
Heat Input @ above conditions (LHV), MMBtu/hr	286
Heat Input @ 40° F/sea level/60% RH (LHV), MMBtu/hr	327.4

The proposed CT's will be located east of the existing combustion turbine as shown in Figure 3-1-2.

The CT's will be in the standard metal enclosure typical of the General Electric Frame 5 series combustion turbines. The building is approximately 28m long and 5.5m wide and 4.88m high from the existing site grade. The exhaust stack will be 12.02m in height above the grade of each units foundation. The foundation will be constructed with a height of 1.07m above the existing site grade. Thus the total height of the stack will be 13.08m above the existing site grade. The stack will be rectangular with dimensions of 3.05m by 3.81m, for a total cross section area of 11.62m².

PROPOSED COMBUSTION TURBINE UNIT EMISSIONS

Emissions from the proposed units are summarized in Table 3-1-1 at the various operating temperatures. Nitrogen oxide emissions will be controlled using water injection. Sulfur dioxide emissions will be controlled by using 0.05 percent sulfur fuel. Particulates, carbon monoxide and volatile organic compounds will be controlled by using standard industry operating practices for the units.

PROJECT SCHEDULE

The schedule for installation of the used CT's is anticipated as follows:

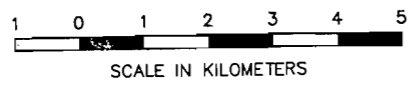
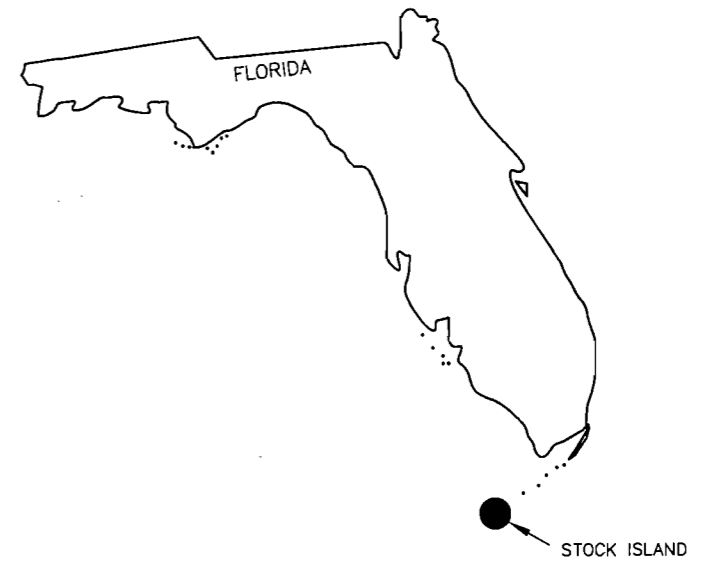
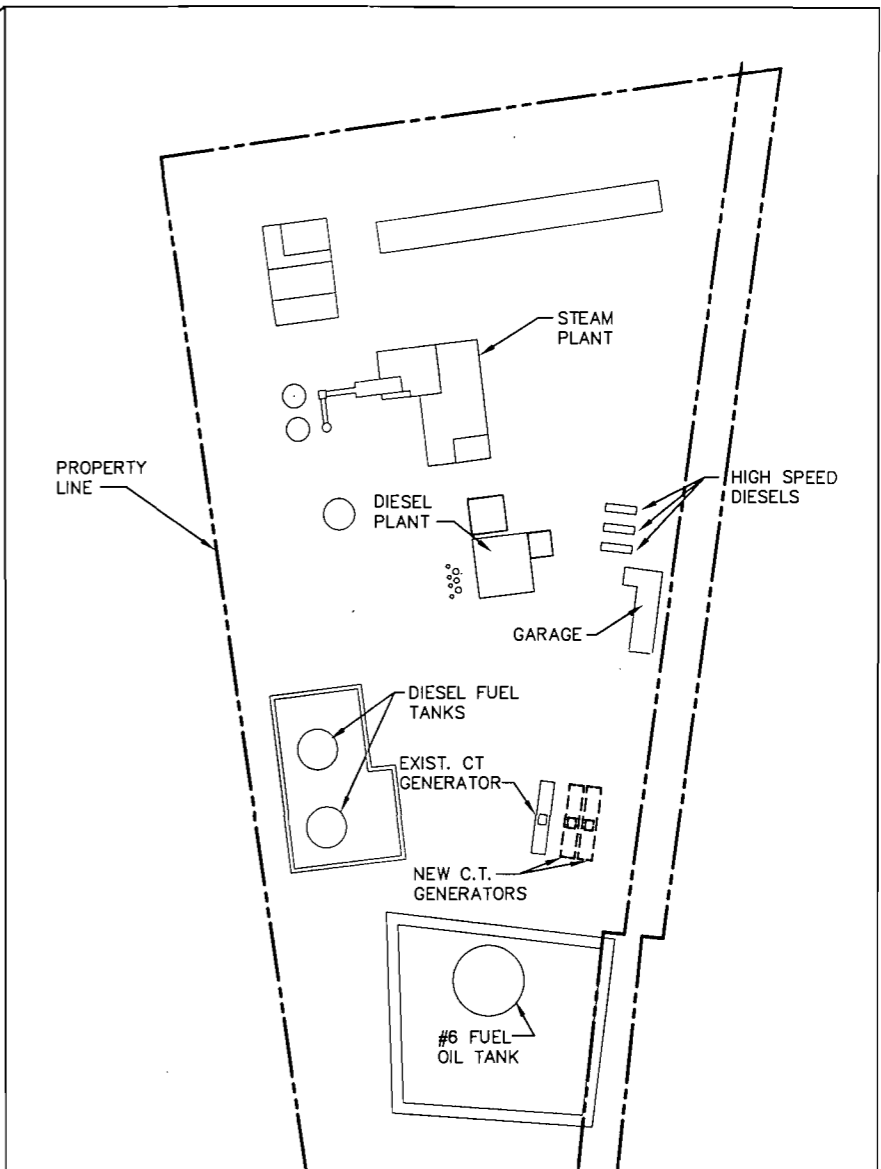
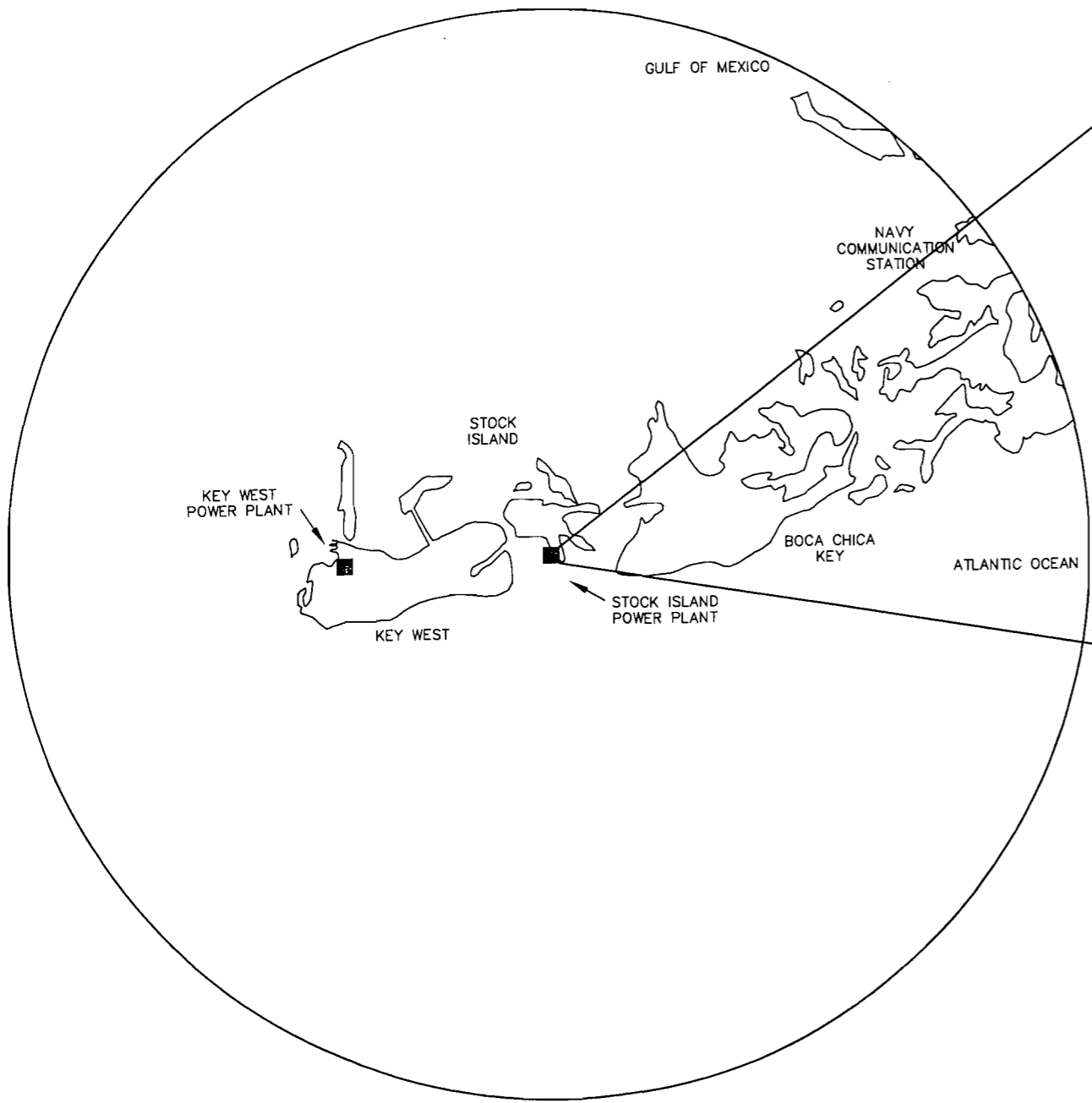
Begin Site Work	November 1, 1997
Begin Foundation Construction	December 1, 1997 (or as soon as air emission permit is received)
Deliver CT's to site	February 15, 1997
Begin Testing of CT's	April 15, 1997
Commercial Operation	June 1, 1997

TABLE 3-1-1
STEWART & STEVENSON
19.7 MW COMBUSTION TURBINE ELECTRIC GENERATORS
MODELING PARAMETERS

UNIT	Stack Height (m)	Stack Diameter (m)	Load Condition		Heat Input (MMBtu/hr)*	Stack Temperature (K)	Stack Velocity (m/s)	Emission Rate (g/s)				
			Temperature (F)	Load (%)				NO _x	CO	PM	PM ₁₀	SO ₂ **
Stewart & Stevenson	13.08	3.85	40	100	327.4	749.9	26.26	12.71	2.08	2.39	2.39	2.28
				75	261.92	643.5	18.03	10.17	5.51	1.91	1.91	1.82
				50	198.08	593.6	12.58	7.69	8.47	1.44	1.44	1.38
			59	100	309.92	756	25.06	12.03	1.99	2.26	2.26	2.16
				75	247.94	676	17.93	9.63	5.27	1.81	1.81	1.73
				50	187.5	598	11.99	7.28	8.11	1.37	1.37	1.31
			85	100	286	764.3	23.38	10.8	1.97	2.08	2.08	1.99
				75	228.8	720.5	17.63	8.64	5.24	1.67	1.67	1.59
				50	173.03	604	11.18	6.53	8.06	1.26	1.26	1.20

*Based on Lower Heating Value (LHV).

**Based on firing No. 2 Oil containing 0.05% sulfur.



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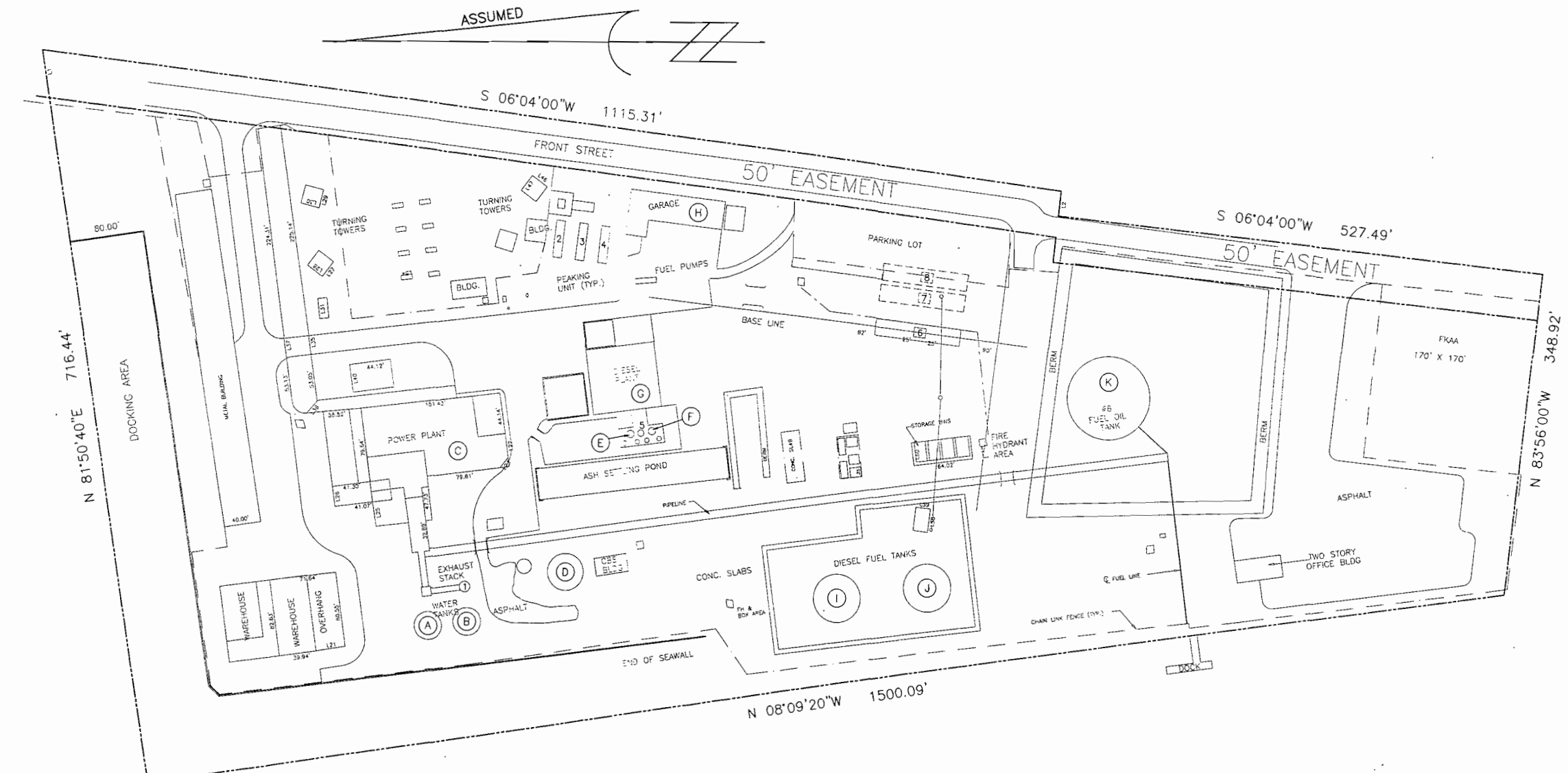
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DES	CIVIL REV	ELEC REV
DWN	MECH REV	STRUC REV
CK'D	APPD	DATE



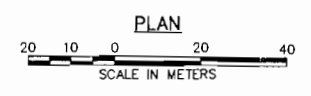
FLORIDA MUNICIPAL POWER AGENCY
 KEY WEST SYSTEM STEAM PLANT
 FIGURE 3-1-1
 PROXIMITY MAP AND SITE PLAN

FILE NO	
W/O	
DWG NO	SK-5



- BUILDINGS**
- A. DEMINERALIZATION TANK No. 1
 - B. DEMINERALIZATION TANK No. 2
 - C. WATER ELECTRIC GENERATOR BUILDING (RALF GARCIA STEAM PLANT)
 - D. WATER TANK
 - E. MEDIUM SPEED DIESEL MUFFLER No. 1
 - F. MEDIUM SPEED DIESEL MUFFLER No. 2
 - G. MEDIUM SPEED DIESEL PLANT BUILDING
 - H. GARAGE
 - I. DIESEL FUEL TANK No. 1
 - J. DIESEL FUEL TANK No. 2
 - K. No. 5 FUEL OIL TANK

- STACKS**
- 1. STEAM ELECTRIC GENERATOR
 - 2. HIGH SPEED DIESEL No. 1
 - 3. HIGH SPEED DIESEL No. 2
 - 4. HIGH SPEED DIESEL No. 3
 - 5. MEDIUM SPEED DIESEL
 - 6. EXISTING COMBUSTION TURBINE
 - 7. PROPOSED COMBUSTION TURBINE No. 1
 - 8. PROPOSED COMBUSTION TURBINE No. 2



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 SHEETS:

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REV	DATE	DES	CHK'D	APPROVALS	REVISION DESCRIPTION	REV	DATE	DES	CHK'D	APPROVALS	REVISION DESCRIPTION

DES	CIVIL	ELEC
DWN	MECH	STRUC
CK'D	APPD	DATE



FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 3-1-2
BOUNDARY AND LIMITED TOPTGRAPHICAL SURVEY

FILE NO: 005186
 SHEET: 5/2
 DRAWN BY: SK-6

NEW SOURCE PERFORMANCE STANDARDS

The CAA required USEPA to promulgate national emission standards for stationary sources of air pollution. The New Source Performance Standards (NSPS) are applicable to specific categories or sources, and apply to new sources of air pollution as well as to modified or reconstructed existing sources. NSPS refer to "affected facilities" and "existing facilities". An affected facility means any apparatus to which a standard is applicable. An existing facility means any apparatus of the type for which a standard has been developed, but was constructed before the date of that standard. NSPS applies to new, modified or reconstructed sources for which a standard applies.

For the purposes of the NSPS, a modification is a physical or operational change to an existing facility that causes an increase in the emission rate (in mass per unit time) of any pollutant to which a standard applies. Reconstruction means the replacement of components of an existing facility whose fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable, entirely new facility. A reconstructed facility becomes an affected facility irrespective of any changes in emission rates.

The NSPS appear in 40 CFR 60. Subpart GG, 40 CFR 60.330-60.335, consists of Standards of Performance for Stationary Gas Turbines. NSPS for gas turbines include standards for NO_x and SO₂ emissions.

NSPS - NO_x

The Standard for NO_x, 40 CFR 60.332, limits NO_x emissions. For gas turbines with heat input at peak load greater than 100 mm Btu/hr, based on the LHV of the fuel fired, the limit is a minimum level of 0.0075 percent by volume on a dry basis corrected to 15% O₂ at ISO conditions, plus an allowance for fuel-bound nitrogen:

$$STD = 0.0075 (14.4/Y) + F$$

where: STD = allowable NO_x emissions, percent by dry volume corrected to 15% O₂;

Y = manufacturer's rated or actual measured heat rate, kilojoules per watt-hour; and

F = allowance for fuel-bound nitrogen.

The minimum 0.0075 percent is increased depending on the particular turbine's rated or measured heat rate at peak load, in inverse proportion to the heat rate (Y) up to a maximum of 14.4 kilojoules per watt-hour (13,658 Btu/kWh) at ISO (59°F ambient temperature, 60% relative humidity). The proposed MS5001L units have a heat input at peak load of approximately 309.9 MMBtu/hr, LHV, and a heat rate of 15,675 Btu/kWh at ISO conditions. Therefore, the maximum heat rate of 13,658 Btu/kWh is exceeded, and the minimum NO_x standard of .0075 percent or 75 ppm applies.

The allowance (F) for fuel-bound nitrogen ranges from:

$$F = 0$$

for fuel-bound nitrogen content of the fuel (N) less than or equal to 0.015 percent by weight.

$$F = 0.04 (N)$$

for N greater than 0.015 and less than or equal to 0.1.

$$F = 0.004 + 0.0067 (N - 0.1)$$

for N greater than 0.1 and less than equal to 0.25.

$$F = 0.005$$

for N greater than 0.25.

A typical ultimate analysis for No. 2 fuel oil shows the nitrogen content to be 0.006% by weight. For this fuel, F would equal zero. NO_x emissions allowed by NSPS for the proposed gas turbines would be 0.0075%, or 75 ppmvd corrected to 15% O₂ and ISO conditions. It should be noted that while a typical analysis of No. 2 fuel oil shows a very small nitrogen content, it varies widely and could affect the standard. NO_x emissions from the proposed turbine will be less than the applicable NSPS through utilization of water injection.

NSPS - SO₂

The Standard for SO₂, 40 CFR 60.333, limits SO₂ emissions from turbines to a maximum of 0.015 percent by dry volume, or 150 ppmvd @ 15% O₂. The Standard also limits fuel sulfur content to a maximum of 0.8 percent by weight.

Sulfur content of the No. 2 fuel oil for use at the Stock Island Plant site will not exceed 0.05 percent by weight. SO₂ emissions from the proposed turbine will be well within this NSPS limit.

CONTEMPORANEOUS EMISSIONS, EMISSION OFF-SETS AND OPERATING LIMITATIONS

Since the installation of the proposed CT units will in part replace the capacity of the existing, to-be-retired, steam generating unit at the Stock Island Plant site, it is appropriate to consider emission off-sets from the steam unit in permitting the CT units. Application of emission off-sets was discussed with the FDEP and a determination was received from FDEP in a letter dated August 22, 1997. This determination indicates that in order to consider emission off-sets, FDEP requires "an analysis of contemporaneous emissions, i.e. any other increases and decreases in actual emissions at the source that are contemporaneous (five years prior to submission of a complete application) with the particular change", as stated in FDEP's rule 62-212.400(2)(e)3. Units that were permitted prior to the five-year period (September 1992) do not need to be included in the contemporaneous analysis. This includes the medium-speed diesel units and the high-speed diesel units. The two units that contemporaneous applies to are: 1) the relocated gas turbine that was moved to the Stock Island Plant site in 1996 from the old Key West power plant site; and 2) the Stock Island Steam Unit, which is proposed for retirement.

The gas turbine relocation was permitted by FDEP in September 1995. This relocation permit was a PSD permit for the pollutant NO_x and non-PSD for SO₂ and Particulate emissions. Since contemporaneous applies to only non-PSD pollutants, the only contemporaneous emissions are emissions of SO₂ and Particulates from the relocated gas turbine during 1996 and the first seven months of 1997. Table 3-3-1 summarizes the actual emissions during this time period for the combustion turbine. The average emissions during the 1996 and 1997 time period were:

Average Annual SO ₂ Emissions	0.12 tons/year
Average Annual Particulate Emissions	0.13 tons/year

With respect to the steam unit, Table 3-3-2 summarizes the annual operations and emission for the period 1987 through 1997. FDEP has reviewed this information and provided a preliminary determination in a letter dated August 22, 1997, indicating that the contemporaneous emissions is considered to be the average of 1993 and 1994 emissions, which were the last two years of normal operations for the steam unit. Therefore, the contemporaneous emissions that can be used for off-sets are:

SECTION 3-3

Average Annual NO _x Emissions	134.5 tons/year
Average Annual SO ₂ Emissions	729 tons/year
Average Annual Particulate Emissions	30.5 tons/year

Therefore, the following table provides the calculated allowable emission off-sets taking into account the contemporaneous emission increases of the relocated gas turbine and the contemporaneous emission decreases of the steam unit.

Contemporaneous Emission Increases and (Decreases) (tons/year)			
Pollutant	Gas Turbine	Steam Unit	Allowable Emission Off-Set (tons/year)
NO _x	-	134.5	134.5
SO ₂	(0.12)	729.0	728.88
Particulates	(0.13)	30.5	30.37

Taking into account these emission off-sets and the desire to permit the proposed two CT's as non-PSD sources, the emissions from the CT's must be less than the following annual emission levels:

Pollutant	Allowable Emission Off-Set (tons/year)	Emission Threshold for PSD Applicability (tons/year)	Total Allowable Emissions (tons/year)
NO _x	134.5	40	< 174.5
SO ₂	728.9	40	< 768.9
Particulates	30.4	25	< 55.4

CONTEMPORANEOUS EMISSION, EMISSION OFF-SETS AND OPERATING LIMITATIONS

In order to assure compliance with the above allowable emission limits, operating hour and annual NO_x emission, the following limitations are proposed:

Maximum Operating Heat Input	303 MMBtu/hr @ 85°F (HHV)
NO _x Emissions (ppm)	75 ppm @ 15% O ₂
NO _x Emissions (lb/hr)	86 lb/hr @ 85°F
NO _x Emissions (tons/hr)	0.043 tons/hr @ 85°F
Proposed Annual Operating Hour Limitation	2,000 hours per year per unit
or	4,000 hours total for either or both units
Annual NO _x Emissions (tons/yr)	172 tons/yr total for both units

Note that the above stated maximum heat input is at an ambient temperature of 85° F, reflecting typical operating conditions. The true maximum heat input is stated elsewhere in this application as 347 MMBtu/hr (HHV) or 327 MMBtu/hr (LHV) which would occur at a low ambient temperature of 40°F.

With the above limitations, SO₂ and Particulate emissions will both be well below the allowable emissions stated above.

TABLE 3-3-1

STOCK ISLAND GAS TURBINE
Annual Operations
1996 - 1997

Year	Gas Turbine ^[1] Gross Generation (KWH)	Gas Turbine ^[1] Fuel Consumed (gallons)	Gas Turbine ^[1] Fuel Consumed (pounds)	Gas Turbine ^[1] Fuel Heat Value (Btu/gal.)	Gas Turbine Air Emissions (tons/yr)	
					SO ₂ ^[2]	Particulates ^[3]
1996	259,000	22,208	156,300	136,228	0.08	0.1
1997	302,000	45,851	320,891	135,887	0.16	0.2
Average					0.12	0.13

[1] Data based on calendar 1996 year-end production report and 1997 year-to-date production report (through July 1997) for Stock Island Gas Turbine unit.

[2] Based on a fuel sulfur content of 0.05 percent sulfur.

[3] Based on an emission rate of 0.0545 lbs. per MMBtu.

TABLE 3-3-2

**STOCK ISLAND STEAM UNIT
Annual Operations
1987 - 1996**

Year	Steam Unit ^[1] Annual Gross Generation	Steam Unit ^[1] Annual Fuel Consumed	Steam Unit ^[1] Annual Fuel Consumed	Steam Unit ^[2] Annual Fuel Heat Value	Steam Unit Air Emissions (tons/yr)		
	(KWH)	(gallons)	(pounds)	(Btu/gal.)	No _x ^[3]	SO ₂ ^[4]	Particulates ^[5]
1987	61,456,000	5,580,306	45,840,107	151,315	187	1008	42.2
1988	68,766,000	5,918,157	49,065,295	151,315	198	1079	44.8
1989	128,378,000	10,969,883	89,578,431	151,315	367	1971	83.0
1990	90,897,000	7,911,166	65,235,472	151,315	265	1435	59.9
1991	113,731,000	9,865,331	81,181,809	151,315	330	1786	74.6
1992	65,897,000	5,883,816	48,353,200	151,178	197	1064	44.5
1993	40,961,000	3,805,456	31,315,097	151,315	127	689	28.8
1994	44,567,000	4,239,081	34,934,270	151,470	142	769	32.1
1995	0	0	0	0	0	0	0.0
1996	0	0	0	0	0	0	0.0
1997	0	0	0	0	0	0	0.0
Ten Year Average					181	980	41

^[1]Data based on calendar year end production report for Stock Island Steam Unit.

^[2]Average #6 fuel heat value has been assumed at 151,315 Btu/gal based on typical fuel delivery values, except for years 1992, 1993 and 1994 which are based on actual fuel heating value measurements.

^[3]Based on an emission rate of 67 lbs. of NO_x per 1000 gallons of fuel burned.

^[4]Based on a fuel sulfur content of 2.2 percent.

^[5]Based on an emission rate of 0.1 pounds per MM Btu.

SECTION 3-4

AIR QUALITY IMPACT ASSESSMENT

INTRODUCTION

The addition of the two 19.7 MW combustion turbine electric generating units, upon the approval of the retirement of the 37 MW Steam Electric Generator, at the Utility Board's Stock Island Power Plant will constitute a construction/modification of a major source. The primary objective of this air quality assessment is to demonstrate compliance with National Ambient Air Quality Standards (NAAQS).

Dispersion modeling has been conducted to determine the significance of the impacts from the two used 19.77 MW CT's and the existing sources on the regional ambient air quality. This assessment presents the results of the comprehensive air quality evaluation which indicates that the addition of the CT's will not cause or contribute to a violation of the NAAQS.

ENVIRONMENTAL BASELINE CONDITIONS

TOPOGRAPHICAL FEATURES

The Stock Island Plant site is located on the southern end of Stock Island and to the east of Key West, as shown in Figure 3-1-1. The surrounding islands are essentially flat. The site is at approximately 2 m msl. One point on Key West, seven km from the project site, rises to 3 m. Since the variation in terrain is minimal and is less than the height of the exhaust stacks on the CT's (13.08 m), the use of a flat terrain dispersion model is appropriate for the analysis.

METEOROLOGICAL LAND USE CLASSIFICATION

The meteorological land use classification is used to determine the profile of the vertical wind speed and associated mechanical turbulence due to surface roughness. The wind speed profile is then used to extrapolate wind speeds at various heights for use in the estimates of atmospheric pollutant dispersion. USEPA's *Guideline on Air Quality Models* stipulates that the land use within the total area circumscribed by a 3-km radius around the source can be classified using Auer's scheme of meteorological land use typing proposed in the *Journal of Applied Meteorology* (1976). Auer's classifications are as follows:

Type	Description
I1	Heavy Industrial
I2	Light/Moderate Industrial
C1	Commercial
R1	Common Residential
R2/R3	Compact Residential
R4	Estate Residential
A1	Metropolitan Natural
A2	Agricultural Rural
A3/A4	Undeveloped
A5	Water Surfaces

According to the Guidelines, if more than 50 percent of the total area in the circle is classified by land use as I1, I2, C1, R2, or R3, urban dispersion coefficients should be used in the modeling, otherwise, appropriate rural dispersion coefficients should be used. A USGS 7.5-minute series topographical map was used to estimate the land use around the project site as more than 50% in type "A5: Water Surfaces". Therefore, default rural dispersion coefficients were used in the analysis.

BACKGROUND AMBIENT AIR QUALITY

Stock Island is designated attainment or unclassified for all criteria pollutants. This designation is consistent with several features of the area. First, there are no large sources of air pollution nearby. Second, there is no significant terrain which could trap pollution and cause exceedances of the NAAQS. Third, the prevailing winds are east and southeast bringing clean air in the absence of sources in those directions from Key West.

MODELING METHOD

MODEL SELECTION

Mathematical models are the primary tools for air quality assessments to simulate the dispersion of the effluent plumes into the atmosphere. It is, therefore, important to choose models which will appropriately simulate the actual physical situation in the region of the project. The choice of models is primarily based on two considerations: 1) the level of detail and accuracy needed for the analysis, and 2) the topographical characteristics of the area. Analyses requiring extensive detail and accuracy require increasingly sophisticated models.

An advanced model, USEPA's Industrial Source Complex-Short Term (ISCST), was used for this air dispersion analysis. The most current version, ISCST3, was utilized for the air modeling. This steady-state Gaussian plume model contains

algorithms for predicting area and volume source impacts, modified downwash algorithms for non-buoyant plumes, and an Huber-Snyder algorithm which incorporates wind-direction-specific building heights and widths similar to the Schulman-Scire algorithm. This software also allows each model run to include several averaging intervals and multiple receptors.

METEOROLOGICAL DATA

The refined analysis presented herein used five complete years (1987 through 1991) of wind and stability data consisting of actual surface observations in Key West and twice-per-day upper air soundings concurrently recorded from a station in Miami. Default wind speed profile exponents (indicative of increasing wind speed with increasing distance from the surface) and vertical potential temperature gradients (indicative of decreasing temperature with increasing distance above the surface) were used in the modeling. Five years of meteorology were processed using unrestricted source parameters. After reviewing the first-high concentration results for each of the five years, it was determined that 1987 had the highest concentration, and therefore, would be used in further analyses (Table 3-4-1).

SOURCE DATA

Emissions of NO_x from the CT units will be controlled by water injection and SO_2 emissions will be controlled by firing No. 2 fuel with a sulfur content not exceed 0.05 percent. According to design, each CT will have a single exhaust. The modeling parameters presented in Table 3-1-1 represent the proposed units operating at 40°F, 59°F and 85°F, and 100%, 75% and 50% of capacity.

The source parameters for the existing sources at the Stock Island Power Plant are presented in Table 3-4-2.

STACK HEIGHT CONSIDERATIONS

According to 40 CFR 51.100(hh), a good engineering practice (GEP) stack height is the greater of:

65 meters

or

$$H_g = H_b + 1.5L$$

where: H_g = the GEP stack height;

H_b = the height of the dominant nearby building; and

L = the lesser dimension of the height or projected width of the dominant nearby building.

As shown in Tables 3-1-1 and 3-4-2, the stacks of the proposed 19.7 MW CT's and the stacks of the existing units are less than 65 m. Therefore, the stacks conform to the regulations and guidelines. This, in combination with the building

dimensions indicate the potential for building downwash. For this reason, building downwash analysis was included in the dispersion modeling.

Structures tend to disrupt air flow across a region and create turbulence around the structure. This disruption is referred to as the building wake effect or building downwash effect. This effect can result in high local ground-level pollutant concentrations if the emission point of the source is not far enough above or away from the structure to avoid the effect. A stack constructed at a height approximately 2.5 times the height of a nearby building is not likely to be affected by structural turbulence. If a stack is located within 5L of a building, and the building height is greater than approximately 40 percent of the stack height, then the stack is considered to be affected by building downwash.

The ISCST model used in the ambient air quality assessment uses a combination of two algorithms for predicting building wake effects. The Schulman-Scire algorithm is applicable when the stack height is less than $1.5 H_b$ and takes into account wind-direction-specific building heights and widths when determining wake effects. The Huber-Snyder algorithm is applicable when the stack height is between $1.5 H_b$ and $2.5 H_b$ and uses the actual building height and maximum projected width for all wind directions. Software packages are available to determine the values of the building heights and widths which can influence each stack. Building Profile Input Program (BPIP), has been used for this analysis to estimate the wake effects caused by the structures at the Stock Island Plant site.

All significant structures and units at the Stock Island Plant site were included in the downwash analysis. With the large number of buildings and units on-site, the default values in the BPIP program had to be changed in order to accommodate all the inputs. The layout of the buildings and units can be viewed in Figure 3-1-2. The results of BPIP can be found in the input for the modeling run (Attachment 1).

RECEPTOR NETWORKS

The receptor grid for the refined air quality analysis consists of a polar coordinate system centered at 425.65 km East and 2716.67 km North, the center of the Stock Island Plant site. The grid system consisted of 36 direction radials separated by 10-degree increments. Receptors were placed at ground level at 150, 200, 250, 300, 400, 500, 750 and 1000m intervals, and along the Plant's property boundary. This grid analysis provided sufficient resolution and downwind coverage to identify the areas of expected maximum concentrations.

RESULTS OF MODELING ANALYSIS

REFINED ANALYSIS

ISCST was used with real-time meteorological data to account for the consistency of the meteorology from the east and southeast. Further, the influence of structural downwash on the exhaust plumes was included in the refined calculations.

NAAQS have been established as a guide to assist in the evaluation of a source's impact on ambient air quality (40 CFR 51.165(b)(2)). Air quality impacts below the Standards are not considered to cause or contribute to any violations of ambient air quality. These NAAQS's are presented in Table 3-4-3 for the pollutants assessed in this analysis.

The preliminary analysis that was conducted to determine the year of meteorology (1987) which resulted in the significant impact (Table 3-4-1), also showed that the highest impacts resulting from all sources, in general, were in a northeasterly direction. This was found for both annual impacts for NO_x and for 24-hour impacts for PM and PM_{10} emissions. Impacts for SO_2 and CO were well below NAAQS for all averaging intervals. In general, the maximum impacts for NO_x and PM/PM_{10} were in a sector from 60° to 70° . In this direction the property line of the Stock Island Plant site is at the edge of South Bay, as shown in the aerial photo, Figure 3-4-1. This area is a restricted area designated and marked as "No Trespassing" by the Utility Board. Beyond this point the nearest receptor in the direction of maximum impacts is the marina located approximately 350 meters across South Bay. It was discovered during these evaluations that the high concentrations were not caused by the proposed combustion turbine units. Instead, the three high speed diesels were creating high impacts due to their short stacks and orientation with respect to the medium-speed diesel plant building. Table 3-4-4 presents the first and second high concentrations for the site when the high speed units are not included.

In order to determine compliance in the direction of the marina across South Bay, impacts at distances of 150, 200, and 250 meters were evaluated (see Figure 3-4-1). High values for both NO_x annual impacts and PM/PM_{10} 24-hour impacts were seen at the 150m and 200m distances. However, these impacts occur in the middle of South Bay. Impacts at 250m, well short of the marina, decreased significantly from those observed at 150m and 200m, indicating a decay of downwash concentrations with distance. At this distance, the NO_x impacts of $51.96 \text{ ug}/\text{m}^3$ are well below the standard. The PM impacts for 24-hour are also well below at $185.11 \text{ ug}/\text{m}^3$ for the first high. PM_{10} impacts were found to be $171.04 \text{ ug}/\text{m}^3$ for the first high and $117.89 \text{ ug}/\text{m}^3$ for the second high. After reviewing all five years of data (1987 through 1991), it is appropriate to consider the high second high (HSH) concentration, which would be $117.89 \text{ ug}/\text{m}^3$ in 1987. Modeling runs for NO_x , PM and PM_{10} at 250m are included in Section IV. A model run was performed to determine if there were any significant impacts along the populated land areas to the north, west and south of the plant site. All

SECTION 3-4

maximum impacts were found to occur to the east and north-east in South Bay. A table of concentration results for all pollutants at 250m and their NAAQS standards can be found in Table 3-4-5. This table demonstrates that the addition of the proposed CT's at the Stock Island Plant site will comply with NAAQS, considering all existing sources at the plant site.

TABLE 3-4-1
AMBIENT AIR QUALITY STANDARDS
NO_x (UNRESTRICTED)
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT)

ANNUAL		
YEAR	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
1987	275.84	151.37
1988	192.49	126.39
1989	146.59	145.64
1990	168.18	140.86
1991	245.77	167.52
24-HOUR^[1]		
YEAR	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
1987	6929.42	6589.71
1988	5759.37	5604.04
1989	6658.76	5643.57
1990	6547.92	5047.76
1991	6390.42	6068.14

[1] 24-hour concentrations are only used for a reference for other pollutants.
There are no 24-hour standards for Nox.

**TABLE 3-4-2
EXISTING STOCK ISLAND EMISSION SOURCE
MODELING PARAMETERS**

UNIT	Stack Height (m)	Stack Diameter (m)	Load Condition		Heat Input (MMBtu/hr)*	Stack Temperature (K)	Stack Velocity (m/s)	Emission Rate (g/s)					
			Temperature (F)	Load (%)				NO _x	CO	PM	PM ₁₀	SO ₂ **	
EXISTING													
High Speed Diesel #1	4.88	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15	
High Speed Diesel #2	4.88	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15	
High Speed Diesel #3	4.88	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15	
MSD Stack	30.49	1.74			85	588.6	30.5	20.27	6.76	1.08	1.08	0.56	
Gas Turbine	11.77	3.93	59	100	311.6	756	25.2	12.05	1.96	2.27	2.27	2.122	
				75	249.3	676	18	9.64	5.48	2.27	2.27	1.698	
				50	188.5	598	15.9	7.29	8.05	2.27	2.27	1.283	
				90	100	283	766	24	10.94	1.33	2.27	2.27	1.927
				75	226.4	729	18.3	8.76	3.27	2.27	2.27	1.542	
				50	171.2	605	15.1	6.62	5.37	2.27	2.27	1.167	

*Based on Lower Heating Value (LHV).

**Based on firing No. 2 Oil containing 0.05% sulfur.

**TABLE 3-4-3
NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Interval	Primary Standard	Secondary Standard
NO _x	Annual	100	Same as Primary
CO	1-Hour	40,000	Same as Primary
	8-Hour	10,000	Same as Primary
PM	24-Hour	260	150
	Annual	75	60
PM ₁₀	24-Hour	150	Same as Primary
	Annual	50	Same as Primary
SO ₂	3-Hour	-	1,300
	24-Hour	365	-
	Annual	80	-

TABLE 3-4-4
UNRESTRICTED (1987)
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT and HIGH SPEED DIESELS)

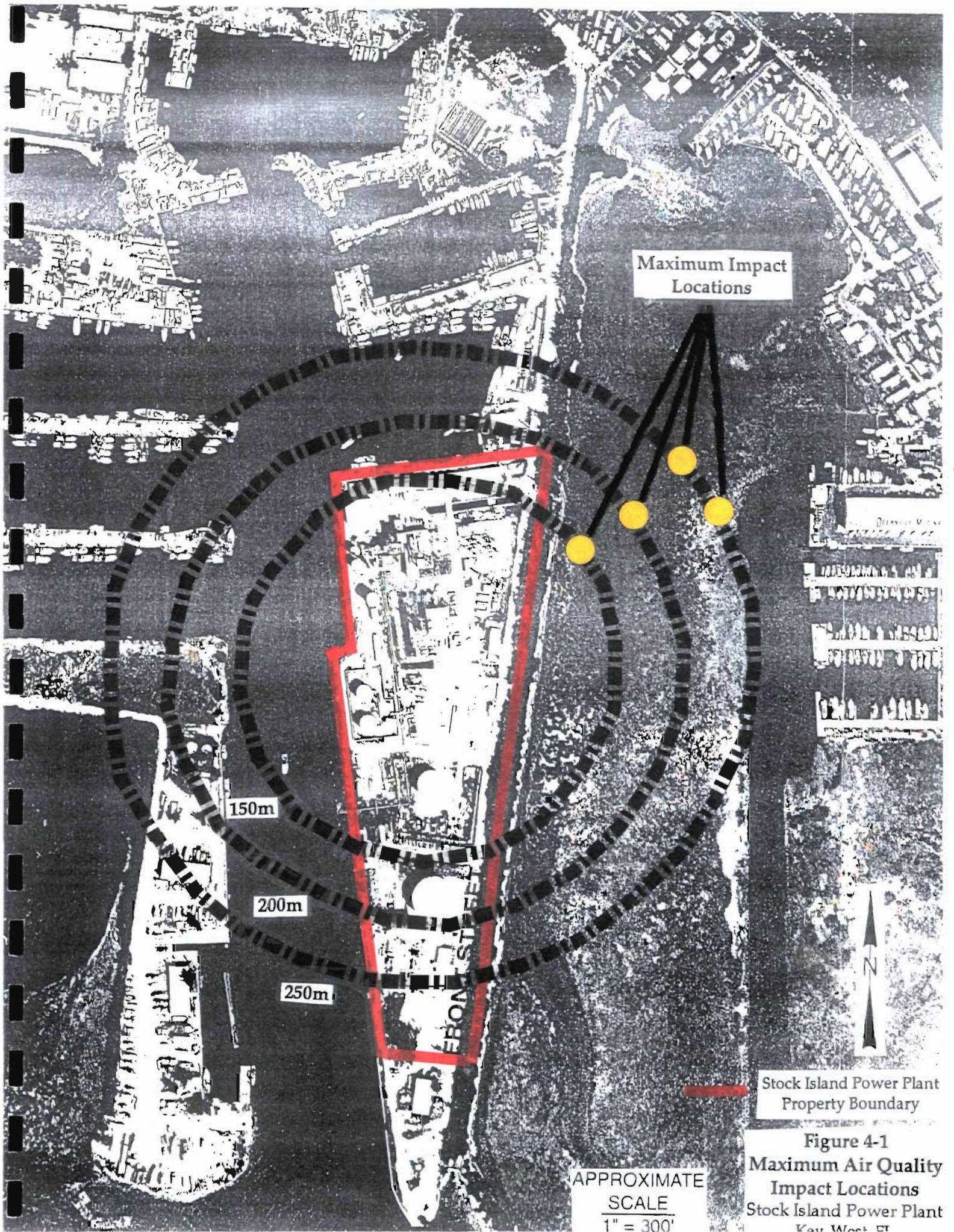
ANNUAL		
POLLUTANT	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
NO _x	1.04	0.97
PM	0.07	0.064
PM ₁₀	0.07	0.064
24-HOUR		
POLLUTANT	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
NO _x	-	-
PM	1.83	1.16
PM ₁₀	1.83	1.16

TABLE 3-4-5
 UNRESTRICTED (1987)
 RECEPTORS AT 250m
 FIRST AND SECOND HIGH CONCENTRATIONS
 (ALL UNITS, except STEAM UNIT)

ANNUAL				
POLLUTANT	1st High (ug/m ³)		2nd High (ug/m ³)	
	Concentration	Standard	Concentration	Standard
NO _x	51.96	100	51.79	100
PM	6.08	75	6.06	60
PM ₁₀	5.61	50	5.60	50
SO ₂	0.87	80	0.86	-
24-HOUR				
PM	185.11	260	127.59	150
PM ₁₀	171.04	150	117.89	150
SO ₂	26.44	365	18.23	-
CO	414.29	10,000 ^[1]	285.56	10,000 ^[1]
3-HOUR				
SO ₂	46.03	-	45.34	1,300
CO	720.99	40,000 ^[2]	710.25	40,000 ^[2]

[1] 8-hour standard

[2] 1-hour standard



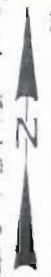
Maximum Impact Locations

150m

200m

250m

FRONT STREET



Stock Island Power Plant Property Boundary

Figure 4-1
Maximum Air Quality Impact Locations
Stock Island Power Plant
Key West, FL

APPROXIMATE
SCALE
1" = 300'

SECTION IV
MODEL RUNS

CO STARTING

TITLEONE 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/11/97

CO TITLETWO ANN 24&3-HR - ALL - SS UNITS - nox - 85F & 100%

CO MODELOPT DFAULT CONC RURAL

AVERTIME 3 24 PERIOD

POLLUTID OTHER

CO DCAYCOEF .000000

RUNORNOT RUN

FINISHED

SO STARTING

LOCATION HSD1 POINT 56.6 63.2 0.0

LOCATION HSD2 POINT 55.6 55.6 0.0

LOCATION HSD3 POINT 54.7 48.4 0.0

LOCATION MSD POINT -7.2 35.88 0.0

LOCATION GT POINT 26.2 -56.8 0.0

LOCATION SS1GT POINT 3.5 -54.0 0.0

LOCATION SS2GT POINT 48.9 -59.6 0.0

** POINT: SRCID QS HS TS VS DS

SO SRCPARAM HSD1 8.98 4.88 660.8 20.38 0.76

SRCPARAM HSD2 8.98 4.88 660.8 20.38 0.76

SRCPARAM HSD3 8.98 4.88 660.8 20.38 0.76

SO SRCPARAM MSD 20.27 30.49 588.6 30.5 1.74

SRCPARAM GT 10.94 11.77 766 24.0 3.93

SRCPARAM SS1GT 10.80 13.08 764.3 23.38 3.85

SO SRCPARAM SS2GT 10.80 13.08 764.3 23.38 3.85

BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97

SO BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14

SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14

SO BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79

BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40

BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50

SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40

SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71

BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50

SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97

SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14

SO BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14

SO BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14

SO BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79

BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40

BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37

SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40

BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62

BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37

SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97

SO BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79

BUILDHGT HSD3 5.79 5.79 5.79 5.79 5.79 5.79

SO BUILDHGT HSD3	3.14	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT HSD3	3.14	3.14	3.14	3.14	5.79	5.79
BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO BUILDWID HSD3	12.30	12.53	12.37	11.80	35.76	29.40
SO BUILDWID HSD3	27.09	23.96	25.29	28.10	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69
BUILDWID HSD3	12.30	12.53	12.37	11.80	10.88	9.62
SO BUILDWID HSD3	8.07	6.28	4.30	3.73	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69

SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	15.26	15.26
BUILDHGT MSD	15.26	10.97	16.15	16.15	16.15	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
BUILDWID MSD	27.09	23.96	25.29	28.10	11.46	11.75
BUILDWID MSD	12.11	30.35	18.94	18.93	18.34	30.59
SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	30.06	31.10
BUILDWID MSD	31.20	30.35	28.58	32.08	30.84	30.59

BUILDHGT GT	12.19	12.19	12.19	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID GT	26.98	25.74	26.49	20.04	22.92	25.52
BUILDWID GT	27.36	28.70	28.79	28.52	28.78	28.08
BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90
SO BUILDWID GT	6.97	11.73	16.13	20.04	22.92	25.52
BUILDWID GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90

BUILDHGT SS1GT	12.19	0.00	0.00	0.00	0.00	4.88
BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT SS1GT	4.88	0.00	0.00	0.00	0.00	0.00
BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	4.88
BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	0.00	0.00	0.00	12.19	12.19
BUILDWID SS1GT	26.98	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID SS1GT	26.70	0.00	0.00	0.00	0.00	0.00
SO BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	27.74	28.70	28.79	28.52	28.78	28.17
BUILDWID SS1GT	26.70	0.00	0.00	0.00	26.98	27.39

BUILDHGT SS2GT	4.88	4.88	12.19	12.19	12.19	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDWID SS2GT	6.62	11.34	26.49	27.32	27.32	25.52

S BUILDWID SS2GT 27.36 28.35 28.49 28.42 28.69 28.08
S BUILDWID SS2GT 26.63 24.36 21.35 17.69 13.50 8.90
SO BUILDWID SS2GT 6.62 11.34 15.72 19.62 22.92 25.52
S BUILDWID SS2GT 27.36 28.35 28.49 28.42 28.69 28.08
S BUILDWID SS2GT 26.63 24.36 21.35 17.69 13.50 8.90

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)

S SRCGROUP ALL

SO FINISHED

R STARTING

R GRIDPOLR POL STA

**GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)

R GRIDPOLR POL ORIG 0.0 0.0

R GRIDPOLR POL DIST 250. 300. 400. 500. 750. 1000.

RE GRIDPOLR POL GDIR 36 10.0 10.0

RE GRIDPOLR POL END

R FINISHED

ME STARTING

M INPUTFIL KYWPRE87.LST

M ANEMHGHT 6.700 METERS

ME SURFDATA 12836 1987 KEY WEST

M UAIRDATA 12844 1987 MIAMI

M FINISHED

OU STARTING

C RECTABLE ALLAVE FIRST-SIXTH

C FINISHED

MODELOPTS: CONC

RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)					
	250.00	300.00	400.00	500.00	750.00	1000.00
10.00	17.02602	11.63738	9.79253	9.21559	6.55285	4.74320
20.00	7.79071	5.57488	5.31210	5.14202	3.89476	2.94049
30.00	3.53415	4.03927	5.03601	5.23872	4.34383	3.44189
40.00	14.82127	10.29113	7.81720	7.12387	5.17451	3.84006
50.00	32.54041	20.07117	11.64770	9.04162	5.50417	3.80691
60.00	32.39954	21.71812	13.33700	10.49034	6.50422	4.64492
70.00	15.80518	11.18850	7.36951	5.99079	3.94892	2.92933
80.00	6.06385	4.64186	3.55969	3.19592	2.44963	1.99264
90.00	2.86738	2.17684	1.87395	1.81328	1.50162	1.24889
100.00	3.31323	2.28429	2.02924	1.83014	1.34547	1.07444
110.00	8.06710	5.09042	3.59337	2.81963	1.97358	1.60587
120.00	11.01609	8.50838	7.35981	6.00022	3.69888	2.61398
130.00	13.30936	11.62061	10.35704	8.91195	6.06024	4.37436
140.00	13.56256	13.12991	12.35553	10.95163	7.78758	5.76985
150.00	16.99706	15.79123	13.58754	11.89505	8.90734	7.02174
160.00	21.27698	20.43189	18.33150	16.08288	11.34534	8.48773
170.00	22.57666	23.86538	23.02500	20.64390	14.95414	11.33374
180.00	15.40205	17.10314	18.53928	18.31208	15.56009	12.81978
190.00	13.15642	14.12342	14.67268	14.19721	11.89791	9.78836
200.00	13.89460	14.42476	14.42373	13.72230	11.38506	9.37904
210.00	16.34661	17.06541	17.10947	16.23960	13.36332	11.00586
220.00	16.77904	17.53354	17.63657	16.78528	13.81374	11.29304
230.00	18.73439	19.76811	20.15443	19.33963	16.08825	13.24547
240.00	17.59287	18.45318	18.67209	17.86010	14.92231	12.43955
250.00	13.77400	14.24462	14.16939	13.45616	11.27882	9.52428
260.00	10.33230	10.74382	10.84249	10.42640	8.86934	7.48258
270.00	8.31179	8.96779	9.70125	9.86785	9.23065	8.20317
280.00	9.38578	11.00850	12.72799	12.98219	11.48591	9.66549
290.00	12.50523	14.80640	17.28461	17.76777	15.83207	13.29327
300.00	19.80639	24.26461	29.05671	30.51430	28.49058	24.64558
310.00	35.72079	44.37649	51.95884	49.94489	36.65721	26.72104
320.00	51.79421	49.49286	44.56470	38.19551	26.80741	20.30658
330.00	45.02386	39.06331	38.96955	35.15704	24.58766	17.76131
340.00	44.18737	34.27821	31.05054	25.12356	14.95270	10.19926
350.00	34.85227	21.75015	16.96665	14.07044	9.32969	6.86527
360.00	20.85634	13.69392	11.84218	11.03888	8.01321	6.05529

BEST AVAILABLE COPY

* ISCST3 - VERSION 96113 ***
*** 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/11/97 ***
*** ANN 24&3-HR - ALL - SS UNITS - nox - 85F & 100% ***

09/09/9
13:10:2
PAGE 3

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
----------	--------------	---------------------------------	---------	-----------------

1ST HIGHEST VALUE IS	51.95884 AT (	-306.42, 257.11,	0.00, 0.00)	GP POL
2ND HIGHEST VALUE IS	51.79421 AT (	-160.70, 191.51,	0.00, 0.00)	GP POL
3RD HIGHEST VALUE IS	49.94489 AT (	-383.02, 321.39,	0.00, 0.00)	GP POL
4TH HIGHEST VALUE IS	49.49286 AT (	-192.84, 229.81,	0.00, 0.00)	GP POL
5TH HIGHEST VALUE IS	45.02386 AT (	-125.00, 216.51,	0.00, 0.00)	GP POL
6TH HIGHEST VALUE IS	44.56470 AT (	-257.12, 306.42,	0.00, 0.00)	GP POL

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

CO STARTING
 C TITLEONE 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/11/97
 C TITLETWO ANN 24&3-HR - ALL - SS UNITS - PM - 85F & 100%
 CO MODELOPT DFAULT CONC RURAL
 C AVERTIME 3 24 PERIOD
 C POLLUTID OTHER
 CO DCAYCOEF .000000
 CO RUNORNOT RUN
 C FINISHED

SO STARTING
 S LOCATION HSD1 POINT 56.6 63.2 0.0
 S LOCATION HSD2 POINT 55.6 55.6 0.0
 SO LOCATION HSD3 POINT 54.7 48.4 0.0
 S LOCATION MSD POINT -7.2 35.88 0.0
 S LOCATION GT POINT 26.2 -56.8 0.0
 SO LOCATION SS1GT POINT 3.5 -54.0 0.0
 SO LOCATION SS2GT POINT 48.9 -59.6 0.0

* POINT: SRCID QS HS TS VS DS
 SO SRCPARAM HSD1 1.05 4.88 660.8 20.38 0.76
 S SRCPARAM HSD2 1.05 4.88 660.8 20.38 0.76
 S SRCPARAM HSD3 1.05 4.88 660.8 20.38 0.76
 SO SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74
 SO SRCPARAM GT 2.27 11.77 766 24.0 3.93
 S SRCPARAM SS1GT 2.08 13.08 764.3 23.38 3.85
 SO SRCPARAM SS2GT 2.08 13.08 764.3 23.38 3.85

S BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
 S BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 S BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 S BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79
 SO BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
 S BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
 S BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
 S BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
 S BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

S BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
 SO BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14
 S BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
 S BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79
 S BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40
 S BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
 S BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

S BUILDHGT HSD3 3.14 3.14 3.14 7.62 10.97
 SO BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79

BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
BUILDHGT HSD3	3.14	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT HSD3	3.14	3.14	3.14	3.14	5.79	5.79
BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
BUILDWID HSD3	12.30	12.53	12.37	11.80	35.76	29.40
SO BUILDWID HSD3	27.09	23.96	25.29	28.10	32.60	32.48
SO BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69
BUILDWID HSD3	12.30	12.53	12.37	11.80	10.88	9.62
SO BUILDWID HSD3	8.07	6.28	4.30	3.73	32.60	32.48
SO BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69

SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	15.26	15.26
BUILDHGT MSD	15.26	10.97	16.15	16.15	16.15	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	11.46	11.75
BUILDWID MSD	12.11	30.35	18.94	18.93	18.34	30.59
BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	30.06	31.10
BUILDWID MSD	31.20	30.35	28.58	32.08	30.84	30.59

SO BUILDHGT GT	12.19	12.19	12.19	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID GT	26.98	25.74	26.49	20.04	22.92	25.52
SO BUILDWID GT	27.36	28.70	28.79	28.52	28.78	28.08
BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90
SO BUILDWID GT	6.97	11.73	16.13	20.04	22.92	25.52
SO BUILDWID GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90

BUILDHGT SS1GT	12.19	0.00	0.00	0.00	0.00	4.88
BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT SS1GT	4.88	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	4.88
BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS1GT	4.88	0.00	0.00	0.00	12.19	12.19
SO BUILDWID SS1GT	26.98	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID SS1GT	26.70	0.00	0.00	0.00	0.00	0.00
SO BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	25.93
SO BUILDWID SS1GT	27.74	28.70	28.79	28.52	28.78	28.17
BUILDWID SS1GT	26.70	0.00	0.00	0.00	26.98	27.39

BUILDHGT SS2GT	4.88	4.88	12.19	12.19	12.19	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88

SO BUILDWID	SS2GT	6.62	11.34	26.49	27.32	27.32	25.52
SO BUILDWID	SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID	SS2GT	26.63	24.36	21.35	17.69	13.50	8.90
SO BUILDWID	SS2GT	6.62	11.34	15.72	19.62	22.92	25.52
SO BUILDWID	SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID	SS2GT	26.63	24.36	21.35	17.69	13.50	8.90

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)

SO SRCGROUP ALL

SO FINISHED

RE STARTING

RE GRIDPOLR POL STA

GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)

RE GRIDPOLR POL ORIG 0.0 0.0

RE GRIDPOLR POL DIST 250. 300. 400. 500. 750. 1000.

RE GRIDPOLR POL GDIR 36 10.0 10.0

RE GRIDPOLR POL END

RE FINISHED

ME STARTING

ME INPUTFIL KYWPRE87.LST

ME ANEMHGHT 6.700 METERS

ME SURFDATA 12836 1987 KEY WEST

ME UAIRDATA 12844 1987 MIAMI

ME FINISHED

CO STARTING

CO RECTABLE ALLAVE FIRST-SIXTH

CO FINISHED

*** SETUP Finishes Successfully ***

MODELOPTs: CONC

RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)					
	250.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	1.99136	1.36129	1.14552	1.07738	0.76057	0.54540
20.00 |	0.91134	0.65223	0.62142	0.60096	0.45051	0.33620
30.00 |	0.41356	0.47263	0.58914	0.61229	0.50266	0.39368
40.00 |	1.73333	1.20364	0.91434	0.83273	0.59999	0.44064
50.00 |	3.80530	2.34735	1.36235	1.05705	0.63888	0.43727
60.00 |	3.78908	2.53986	1.55969	1.22646	0.75701	0.53690
70.00 |	1.84828	1.30845	0.86189	0.70051	0.45990	0.33916
80.00 |	0.70920	0.54296	0.41647	0.37392	0.28593	0.23183
90.00 |	0.33549	0.25484	0.21951	0.21244	0.17562	0.14568
100.00 |	0.38767	0.26745	0.23766	0.21432	0.15717	0.12509
110.00 |	0.94355	0.59560	0.42055	0.32995	0.23001	0.18617
120.00 |	1.28841	0.99533	0.86096	0.70161	0.43006	0.30163
130.00 |	1.55633	1.35914	1.21140	1.04184	0.70414	0.50408
140.00 |	1.57769	1.52953	1.44127	1.27761	0.90400	0.66411
150.00 |	1.96583	1.82824	1.57462	1.37857	1.02969	0.80526
160.00 |	2.46754	2.37220	2.13069	1.86949	1.31497	0.97640
170.00 |	2.61562	2.77012	2.67637	2.39986	1.73350	1.30407
180.00 |	1.79455	1.99518	2.16464	2.13773	1.80630	1.47688
190.00 |	1.53911	1.65254	1.71666	1.65987	1.38104	1.12674
200.00 |	1.62590	1.68819	1.68796	1.60503	1.32328	1.08218
210.00 |	1.91296	1.99722	2.00211	1.89945	1.55469	1.27194
220.00 |	1.96377	2.05222	2.06399	1.96352	1.60721	1.30454
230.00 |	2.19244	2.31362	2.35872	2.26260	1.87276	1.53101
240.00 |	2.05879	2.15963	2.18549	2.09000	1.73801	1.43933
250.00 |	1.61195	1.66719	1.65869	1.57496	1.31444	1.10343
260.00 |	1.20923	1.25756	1.26949	1.22063	1.03375	0.86697
270.00 |	0.97272	1.04962	1.13577	1.15492	1.07467	0.94911
280.00 |	1.09822	1.28814	1.48953	1.51853	1.33482	1.11439
290.00 |	1.46312	1.73246	2.02272	2.07795	1.83699	1.52799
300.00 |	2.31695	2.83852	3.39921	3.56728	3.30410	2.83035
310.00 |	4.17786	5.19019	6.07696	5.83874	4.25813	3.07529
320.00 |	6.05725	5.78840	5.21235	4.46520	3.10912	2.33005
330.00 |	5.26552	4.56871	4.55770	4.10966	2.85294	2.03975
340.00 |	5.16759	4.00895	3.63142	2.93689	1.73516	1.17145
350.00 |	4.07667	2.54448	1.98486	1.64511	1.08253	0.78906
360.00 |	2.43976	1.60220	1.38556	1.29077	0.93014	0.69647

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	58.29486 (87010424)	35.32424 (87010424)	20.25843 (87062624)	22.51300 (87062624)	17.42228 (8706
20.0 |	27.36942 (87062624)	18.23009 (87062624)	14.27962 (87062624)	13.14230 (87062624)	9.81598 (8706
30.0 |	27.49721 (87012224)	21.58240 (87012224)	16.88442 (87012224)	16.41056 (87062524)	12.22812 (8706
40.0 |	52.52180 (87110524)	33.46615 (87062524)	23.67200 (87062524)	21.75369 (87110524)	17.99395 (8711
50.0 |	133.15775c(87093024)	80.34888c(87093024)	45.10719c(87093024)	34.28180c(87093024)	19.55647c(8709
60.0 |	185.10712 (87030824)	139.12347 (87030824)	91.37846 (87030824)	69.17931 (87030824)	39.08973 (8703
70.0 |	70.04800 (87041824)	45.61013 (87041824)	27.41350 (87030824)	23.53475 (87030824)	15.05448 (8703
80.0 |	47.98439 (87041824)	37.24855 (87041824)	23.02612 (87041824)	17.49100 (87041824)	10.37152 (8704
90.0 |	30.49412 (87010424)	14.29925 (87010424)	11.84365 (87041724)	10.60410 (87041724)	7.48447 (8704
100.0 |	22.46824 (87010524)	18.90632 (87010424)	23.33909 (87010424)	20.51059 (87010424)	10.05856 (8701
110.0 |	45.78122 (87010524)	28.41928 (87010524)	15.08971 (87041624)	10.80986 (87041624)	7.11291 (8701
120.0 |	49.60679 (87020824)	29.47027 (87020824)	25.57668 (87031024)	22.94448 (87031024)	11.70104 (8704
130.0 |	56.20259 (87033124)	38.87226 (87012624)	38.13314 (87020824)	32.16650 (87020824)	17.66106 (8712
140.0 |	38.20143 (87033124)	43.91284 (87033124)	40.73626 (87033124)	31.19202 (87033124)	21.52465 (8701
150.0 |	37.01828 (87040424)	29.87918 (87040424)	32.54556 (87042224)	28.56954 (87042224)	18.56413 (8704
160.0 |	53.24832 (87112024)	45.73841 (87112024)	35.37844 (87040424)	31.66028 (87040424)	21.54653 (8710
170.0 |	36.86243 (87121624)	36.66299 (87011124)	38.70326 (87112024)	35.76123 (87112024)	24.64899 (8711
180.0 |	26.43295 (87121724)	27.76066 (87121724)	27.94589 (87101424)	26.55019 (87101424)	20.24313 (8710
190.0 |	18.68760 (87100824)	20.50909 (87100824)	20.86292 (87100824)	19.15360 (87100824)	16.46430 (8710
200.0 |	23.50374 (87112124)	23.02681 (87112124)	23.32774 (87101524)	22.28187 (87101524)	17.51346 (8710
210.0 |	24.98004 (87103024)	25.45489 (87103124)	24.82800 (87103124)	23.16123 (87021024)	18.02666 (8702
220.0 |	22.88383 (87100924)	23.35956 (87100424)	22.99126 (87100424)	21.34977 (87100424)	16.27247 (8710
230.0 |	38.17208 (87100924)	37.50541 (87100924)	34.05438 (87100924)	29.81852 (87100924)	21.57912 (8711
240.0 |	29.10806 (87110724)	29.48348 (87110724)	27.64808 (87110724)	24.55607 (87110724)	17.39106 (8711
250.0 |	30.95333 (87110824)	32.73346 (87110824)	32.68937 (87110824)	30.21913 (87110824)	22.40960 (8711
260.0 |	23.84458 (87110824)	22.89600 (87030524)	20.01026 (87111524)	17.96483 (87111524)	13.03425 (8711
270.0 |	17.05316 (87111524)	15.74771 (87111524)	15.73003 (87052424)	15.99306 (87052424)	14.13416 (8705
280.0 |	17.56256 (87052424)	20.43307 (87052424)	21.53631 (87052424)	19.27818 (87052424)	15.33513 (8706
290.0 |	26.11798 (87060824)	30.04010 (87060824)	30.07487 (87060824)	26.45063 (87060824)	18.01932 (8706
300.0 |	32.85535 (87111624)	31.69376 (87111624)	29.09253 (87061124)	29.18350 (87061124)	23.85010 (8706
310.0 |	41.67057 (87022624)	45.95735 (87022624)	53.56712 (87031724)	46.47838 (87031724)	32.18416 (8706
320.0 |	60.16191 (87031724)	54.90344 (87111724)	53.96012 (87121424)	48.80909 (87031824)	36.16875 (8703
330.0 |	73.10903 (87121424)	57.33165 (87031824)	47.19669 (87032624)	41.25321 (87032624)	25.80960 (8703
340.0 |	70.33980 (87032424)	56.38498 (87022824)	51.75850 (87022824)	40.74142 (87022824)	22.14318 (8702
350.0 |	104.18169 (87022824)	66.12812 (87022824)	35.14462 (87022824)	28.99321 (87033024)	18.87569 (8703
360.0 |	64.96243 (87033024)	38.33265 (87033024)	25.18804 (87033024)	18.52992 (87033024)	13.60502 (8701

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 DEGREES) | 1000.00

10.0	12.62337 (87090524)
20.0	7.26696 (87012224)
30.0	9.16570 (87062524)
40.0	14.16467 (87110524)
50.0	13.04637c(87093024)
60.0	26.74514 (87030824)
70.0	10.71314 (87030824)
80.0	7.31574 (87041824)
90.0	6.51224 (87041824)
100.0	5.21983 (87010424)
110.0	6.23809 (87010424)
120.0	8.02015 (87041624)
130.0	12.59070 (87120424)
140.0	16.48538 (87012624)
150.0	13.05167 (87042624)
160.0	15.27289 (87102824)
170.0	17.20762 (87112024)
180.0	15.16113 (87101424)
190.0	13.18349 (87101424)
200.0	13.36014 (87101524)
210.0	14.11636 (87021024)
220.0	12.34013 (87100424)
230.0	16.27115 (87112324)
240.0	12.88886 (87110724)
250.0	16.66944 (87110824)
260.0	9.66537 (87111524)
270.0	11.54844 (87052424)
280.0	12.30291 (87060824)
290.0	14.41838 (87060924)
300.0	18.65085 (87061124)
310.0	21.42071 (87060224)
320.0	24.55986 (87031824)
330.0	17.90359 (87032424)
340.0	14.94100 (87012124)
350.0	13.39630 (87033024)
360.0	9.64737 (87012524)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	36.38746 (87030124)	20.75564 (87012524)	16.50312 (87031924)	15.86100 (87031924)	15.41752 (8709
20.0 |	23.18235 (87031924)	15.38998 (87031924)	11.28785 (87031924)	9.82779 (87030724)	9.02471 (8701
30.0 |	15.09359 (87030724)	12.42488 (87062524)	16.53335 (87062524)	16.04282 (87012224)	11.50359 (8701
40.0 |	50.62442 (87062524)	32.34813 (87110524)	22.65113 (87110524)	20.40255 (87062524)	15.18607 (8702
50.0 |	127.59200 (87030824)	77.95578 (87030824)	39.15964 (87030824)	25.96721c(87110424)	15.53361c(8711
60.0 |	116.53851 (87030924)	74.82422 (87030924)	44.82476 (87030724)	37.44554c(87093024)	23.37100c(8709
70.0 |	43.32782 (87041724)	34.96501 (87041724)	25.93602 (87041824)	19.15763 (87041824)	12.82133 (8703
80.0 |	19.21354 (87041624)	13.45278 (87041624)	10.90602 (87092424)	10.88735 (87092424)	6.93514 (8709
90.0 |	10.18085 (87041624)	11.16198 (87041724)	7.90048 (87041824)	8.32454 (87041824)	5.95861 (8704
100.0 |	17.88444 (87010424)	15.12925 (87010524)	9.61465 (87010524)	6.28982 (87041624)	5.42153 (8704
110.0 |	36.49582 (87041624)	22.80132 (87041624)	14.58174 (87010524)	10.04064 (87010524)	6.56680 (8701
120.0 |	44.29088 (87012624)	27.73295 (87012624)	23.59127 (87041624)	19.22081 (87041624)	11.23865 (8703
130.0 |	38.64633 (87012624)	38.23205 (87033124)	37.38346 (87012624)	30.79807 (87012624)	17.35876 (8701
140.0 |	29.44041 (87042624)	25.80515 (87042624)	27.45022 (87012724)	25.48396 (87012724)	17.54422 (8704
150.0 |	31.71301 (87010524)	29.06826 (87042224)	25.14003 (87042624)	24.97978 (87042624)	17.02619 (8704
160.0 |	34.69292 (87111124)	35.91465 (87111124)	32.86222 (87102824)	30.33804 (87102824)	20.50557 (8704
170.0 |	36.73582 (87011124)	36.38158 (87112024)	31.82090 (87011124)	26.38209 (87011124)	21.11382 (8711
180.0 |	23.54752 (87101424)	26.41537 (87101424)	25.46988 (87121724)	23.11100 (87010624)	18.91939 (8701
190.0 |	16.42864 (87031124)	18.44210 (87011224)	19.73335 (87102924)	18.94274 (87102924)	14.44095 (8712
200.0 |	21.14501 (87101524)	22.57676 (87101524)	19.93151 (87112124)	16.46014 (87112124)	14.94577 (8710
210.0 |	24.78459 (87103124)	25.34471 (87103024)	24.67238 (87021024)	22.91541 (87103124)	17.35531 (8710
220.0 |	22.63438 (87100424)	22.84114 (87103124)	22.18784 (87103124)	20.30655 (87103124)	15.07773 (8710
230.0 |	32.68296 (87112324)	33.45382 (87112324)	32.17749 (87112324)	29.25566 (87112324)	20.89670 (8710
240.0 |	28.14224 (87112324)	27.50756 (87112324)	24.87079 (87112324)	22.17795 (87120624)	16.90606 (8712
250.0 |	25.20608 (87110724)	22.09587 (87110724)	21.79824 (87112524)	20.08649 (87112524)	15.68933 (8711
260.0 |	23.79997 (87030524)	21.25257 (87110824)	18.47725 (87030524)	14.03103 (87030524)	9.79715 (8703
270.0 |	12.21299 (87052424)	14.06153 (87052424)	13.94776 (87052224)	14.75898 (87052224)	12.65394 (8705
280.0 |	16.91118 (87052224)	17.99948 (87052224)	16.93107 (87052224)	16.87915 (87060824)	12.84219 (8705
290.0 |	17.50618 (87052424)	18.66441 (87052324)	21.30089 (87111624)	20.27860 (87111624)	17.12496 (8706
300.0 |	31.50082 (87060824)	30.11579 (87060924)	28.32821 (87060924)	23.65880 (87022624)	19.98612 (8705
310.0 |	38.92497 (87061124)	44.94978 (87031724)	45.12515 (87022624)	41.21835 (87060224)	29.09815 (8706
320.0 |	56.24894 (87111724)	52.43771 (87121424)	47.94001 (87111724)	43.81666 (87121424)	23.70576 (8712
330.0 |	72.13315 (87031824)	47.01188 (87121424)	40.41553 (87031824)	35.31512 (87022824)	25.45696 (8703
340.0 |	66.30007 (87032624)	56.06586 (87032424)	38.70356 (87032424)	26.52664 (87032624)	18.22591 (8703
350.0 |	50.70610 (87033024)	38.18060 (87033024)	34.51257 (87033024)	22.39182 (87030124)	15.43050 (8703
360.0 |	57.61847 (87030124)	36.32124 (87030124)	22.67215 (87030124)	17.89129 (87032824)	13.54478 (8703

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0 |	12.03272 (87062624)
20.0 |	7.20016 (87062624)
30.0 |	8.07072 (87012224)
40.0 |	11.79100 (87021624)
50.0 |	10.55671c(87043024)
60.0 |	15.97443c(87093024)
70.0 |	10.20600 (87030924)
80.0 |	5.59601 (87031924)
90.0 |	4.09499 (87092424)
100.0 |	3.73509 (87041624)
110.0 |	4.76016 (87010524)
120.0 |	7.51289 (87020724)
130.0 |	10.45483 (87042524)
140.0 |	13.72689 (87042324)
150.0 |	12.12249 (87033124)
160.0 |	14.02860 (87040424)
170.0 |	16.92731 (87111124)
180.0 |	15.00474 (87011324)
190.0 |	11.34211 (87121724)
200.0 |	12.89667 (87102924)
210.0 |	13.17089 (87103124)
220.0 |	12.24217 (87100324)
230.0 |	15.79612 (87111324)
240.0 |	12.69533 (87120624)
250.0 |	12.33914 (87111524)
260.0 |	7.81432 (87031524)
270.0 |	9.84695 (87052224)
280.0 |	10.14517 (87052324)
290.0 |	11.44012 (87060824)
300.0 |	18.36369 (87051624)
310.0 |	21.13738 (87061924)
320.0 |	18.12388 (87032524)
330.0 |	16.74508 (87032624)
340.0 |	14.14218 (87022824)
350.0 |	10.51230 (87011524)
360.0 |	9.24586 (87032824)

MODELOPTS: CONC

RURAL FLAT

DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

Table with columns: DIRECTION (DEGREES), 250.00, 300.00, 400.00, 500.00, 750.00. Rows list concentration values for various directions from 10.0 to 360.0 degrees.

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 DEGREES) | 1000.00

10.0	10.46288 (87062724)
20.0	6.77293 (87030724)
30.0	8.05057c(87110424)
40.0	10.21322 (87062524)
50.0	10.29871c(87110424)
60.0	13.39988 (87030724)
70.0	6.43070c(87100124)
80.0	5.22743 (87081124)
90.0	3.41170 (87041724)
100.0	3.02727 (87030824)
110.0	4.00962 (87081124)
120.0	6.35562 (87010524)
130.0	10.39158 (87012624)
140.0	12.42376 (87020824)
150.0	10.67254 (87042224)
160.0	11.98076 (87042224)
170.0	14.43694 (87102824)
180.0	14.87262 (87031224)
190.0	10.82009 (87011224)
200.0	11.41883 (87031124)
210.0	12.87352c(87120224)
220.0	12.22972 (87101124)
230.0	15.42612 (87100924)
240.0	12.38454 (87110824)
250.0	11.13515 (87112524)
260.0	7.30020 (87052424)
270.0	9.09752 (87052124)
280.0	9.44280 (87052524)
290.0	10.60839 (87111624)
300.0	17.29184 (87031724)
310.0	19.35258 (87121424)
320.0	16.28467 (87032624)
330.0	16.14510 (87022824)
340.0	11.96129 (87032724)
350.0	10.34693 (87030124)
360.0	8.84096 (87030124)

MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0	30.02664 (87032724)	18.94131 (87030124)	15.67880 (87030724)	14.25686 (87020524)	11.56201 (8702
20.0	18.56692 (87062724)	11.52250 (87021624)	9.24286 (87011924)	9.32813 (87031924)	6.99006 (8701
30.0	8.49169c(87110424)	10.23637 (87030724)	11.76103c(87110424)	12.60892 (87062624)	10.05387 (8706
40.0	40.17363c(87093024)	24.12602c(87093024)	16.91803c(87043024)	15.66053c(87043024)	10.42174c(8704
50.0	76.13531 (87062724)	47.20578 (87062724)	27.58648 (87062724)	20.87792 (87062724)	13.24755 (8709
60.0	90.94351 (87030724)	64.57697c(87093024)	39.19817 (87030924)	27.55261 (87030924)	15.20073c(8711
70.0	40.94580 (87012624)	31.67430 (87030924)	20.74437 (87030924)	15.51248 (87041724)	8.83819 (8704
80.0	14.92493 (87010124)	9.96388 (87020724)	8.35949c(87092324)	7.82206 (87010424)	5.85501 (8701
90.0	7.76456 (87041824)	7.53506 (87041824)	6.12331 (87010424)	5.41131 (87041624)	4.24286 (8702
100.0	13.01241 (87041624)	5.84139 (87041624)	5.36080 (87041624)	5.10983 (87092524)	2.61158 (8701
110.0	23.88782c(87081024)	12.64974 (87031024)	8.85717 (87042924)	8.00472 (87010424)	4.84562 (8708
120.0	25.52110 (87012724)	22.84269 (87010524)	22.80721 (87010524)	17.26650c(87081024)	10.08126 (8702
130.0	35.72278 (87020824)	35.90759 (87012224)	21.83667 (87012724)	19.57763 (87042524)	14.15051 (8704
140.0	23.89808 (87101224)	23.25993 (87012724)	23.62089 (87012624)	20.30627 (87020824)	15.55782 (8703
150.0	28.52473 (87122924)	26.15457 (87101324)	21.47942 (87102824)	16.22059 (87033124)	11.33902 (8703
160.0	33.05247 (87040424)	30.77409 (87102824)	29.84735 (87112024)	20.21015 (87101324)	14.22392 (8710
170.0	31.22239 (87112024)	34.15738 (87121624)	27.45323 (87010624)	24.57213 (87111124)	16.58123 (8701
180.0	19.22749 (87010624)	21.51563 (87040124)	21.22617 (87011324)	21.28584 (87101624)	17.54375 (8710
190.0	16.02239 (87101524)	17.43807 (87031124)	17.63730 (87101424)	18.64232 (87101424)	14.35110 (8701
200.0	17.25950 (87053124)	16.34270 (87021024)	16.13585 (87031124)	16.24473 (87031124)	12.39265 (8705
210.0	21.86886 (87042724)	20.67664 (87042724)	19.69932 (87101524)	18.98124 (87110224)	15.74951c(8712
220.0	21.54877 (87111324)	21.73388 (87100924)	19.95457 (87042724)	18.21372 (87042724)	14.28981 (8710
230.0	26.00967 (87111324)	27.43871 (87111324)	26.10809 (87112224)	23.30314 (87112224)	16.69661 (8711
240.0	25.16106 (87100924)	23.53908 (87100924)	22.05580 (87110824)	20.84898 (87110824)	15.26023 (8711
250.0	20.71815 (87112524)	21.44295 (87112424)	19.23110 (87111524)	18.50939 (87112424)	13.03300 (8711
260.0	16.43804 (87112424)	15.58149 (87112424)	13.48122 (87112424)	11.66042 (87031524)	7.96048 (8706
270.0	8.68816 (87060824)	9.26769 (87112724)	9.86905 (87112724)	9.77151 (87112724)	9.20987 (8711
280.0	11.76508 (87060724)	12.66795 (87060724)	14.38929 (87052524)	14.75970 (87052324)	12.43033 (8705
290.0	14.83054 (87052524)	16.47848 (87052524)	16.89337 (87060924)	15.39300 (87052324)	12.74271 (8706
300.0	22.16949 (87022624)	25.29254 (87022624)	23.71079 (87111624)	22.16715 (87122524)	18.78712 (8703
310.0	31.26248 (87031724)	37.09366 (87051624)	40.51500 (87051624)	36.02935 (87061924)	24.78680 (8712
320.0	48.42820 (87111624)	42.18922 (87061924)	36.57494 (87121924)	27.53736 (87061924)	18.57096 (8703
330.0	48.22325 (87121924)	36.13340 (87111724)	36.24456 (87032424)	32.47437 (87032524)	21.81965 (8703
340.0	45.94023 (87032524)	33.19317 (87032524)	26.96606 (87033024)	22.31401 (87032424)	15.15914 (8706
350.0	46.63206 (87032724)	24.98804 (87091224)	23.08608 (87012124)	18.60264 (87022824)	12.17322 (8712
360.0	33.50885 (87101224)	19.98406 (87101224)	16.99227 (87012524)	17.25634 (87012524)	11.57296 (8703

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0	8.55695 (87021624)
20.0	5.86388 (87110324)
30.0	7.63791 (87062624)
40.0	7.39600 (87062624)
50.0	9.10032 (87092424)
60.0	12.54080c(87110424)
70.0	6.15257 (87041724)
80.0	4.78910 (87012624)
90.0	3.16732 (87020624)
100.0	2.24440 (87041824)
110.0	3.99326 (87092524)
120.0	5.84897 (87120424)
130.0	10.34353c(87081024)
140.0	10.95627 (87012724)
150.0	10.10475c(87102724)
160.0	10.15455 (87101324)
170.0	13.32473 (87102124)
180.0	14.63564 (87101824)
190.0	10.60211 (87102924)
200.0	9.27228 (87101624)
210.0	12.72398 (87110224)
220.0	11.44503 (87101024)
230.0	12.89118 (87103024)
240.0	11.70378 (87100524)
250.0	10.72542 (87031524)
260.0	6.52597 (87060824)
270.0	8.72920 (87112724)
280.0	8.37796 (87052424)
290.0	10.23334 (87061124)
300.0	14.94983 (87122524)
310.0	16.56485 (87111724)
320.0	14.68513 (87121424)
330.0	14.56132 (87032524)
340.0	10.24013 (87061524)
350.0	9.08069 (87121524)
360.0	8.49078 (87010424)

MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	26.71210 (87021624)	18.42871 (87062624)	15.51377 (87032724)	14.25271 (87021624)	11.19368 (8703)
20.0 |	13.09222 (87030724)	8.32257 (87030724)	8.45438 (87030724)	9.19484 (87062724)	6.47672 (8701)
30.0 |	8.22634 (87062524)	9.66953c(87110424)	8.77151c(87040324)	8.66933c(87040324)	8.19496 (8711)
40.0 |	34.67798 (87062724)	23.28840 (87030724)	16.04309 (87030724)	13.60131 (87062624)	10.05521 (8706)
50.0 |	71.36800c(87040324)	44.50910c(87040324)	24.69738c(87040324)	20.20041 (87092424)	12.10187 (8703)
60.0 |	62.37760c(87110424)	41.66954c(87110424)	23.73096c(87110424)	20.51370c(87110424)	14.60098 (8703)
70.0 |	36.30674 (87010124)	28.82332 (87010124)	20.18336 (87010124)	15.20108 (87010124)	8.59328c(8710)
80.0 |	13.50339 (87031924)	9.38156 (87031924)	8.29748c(87040324)	7.60571 (87031924)	5.49891c(8704)
90.0 |	6.62729 (87010524)	5.18984 (87020624)	5.44668 (87020624)	4.43961 (87030924)	3.88563 (8704)
100.0 |	7.07915 (87081124)	5.26826 (87081124)	4.35660 (87081124)	3.73960 (87081124)	2.56233 (8708)
110.0 |	19.97962 (87120424)	12.48050 (87042924)	8.77032 (87120424)	6.42778c(87071424)	4.80719 (8709)
120.0 |	25.21702 (87033124)	20.79736c(87081024)	20.00779 (87120424)	15.99896 (87120424)	9.00882 (8712)
130.0 |	33.32211 (87012724)	26.25380 (87012724)	21.62856 (87042524)	18.25862 (87012724)	12.32486 (8703)
140.0 |	21.01705 (87012724)	22.75195 (87042224)	21.35412 (87020724)	18.55304 (87042324)	15.37179 (8702)
150.0 |	27.75230 (87111124)	22.43977 (87042624)	18.55611 (87040424)	15.81654 (87031024)	10.55095 (8702)
160.0 |	30.29132 (87121624)	28.75162 (87121624)	24.83888 (87121624)	20.12711 (87010524)	13.98492 (8704)
170.0 |	29.13951 (87120524)	33.00937 (87120524)	26.10591 (87121624)	20.50142 (87022324)	15.11549 (8712)
180.0 |	18.50627 (87100824)	18.74422 (87101624)	21.21160 (87101624)	21.16352 (87121724)	17.12122 (8701)
190.0 |	15.93371 (87102924)	16.99673 (87110624)	17.63457 (87121724)	17.57542 (87121724)	13.76425 (8710)
200.0 |	16.36731 (87110224)	16.08057 (87110224)	14.31607 (87110224)	15.16204 (87102924)	11.73554 (8710)
210.0 |	19.82907 (87031424)	20.41739 (87031424)	19.53348 (87031424)	18.62804 (87101524)	15.51756 (8710)
220.0 |	20.40503 (87042724)	20.77658 (87042724)	19.21112 (87031324)	17.80520 (87031324)	14.03040 (8710)
230.0 |	25.08789 (87030524)	24.80043 (87030524)	22.66789 (87030524)	20.68486 (87112424)	16.43964 (8710)
240.0 |	22.10770 (87120624)	23.45446 (87120624)	21.76760 (87030524)	18.73187 (87030524)	14.83719 (8710)
250.0 |	18.83813 (87112324)	18.52178 (87102424)	18.19179 (87102424)	16.82513 (87102424)	12.69362 (8710)
260.0 |	15.98569 (87102424)	15.31711 (87102424)	12.78898 (87102424)	11.40173 (87112424)	7.40258 (8711)
270.0 |	8.28844 (87112724)	9.19606 (87060824)	9.39578 (87123124)	9.44402 (87111524)	7.36531 (8705)
280.0 |	9.59718 (87052524)	11.63879 (87052524)	13.95201 (87052324)	14.46884 (87052224)	9.67302 (8705)
290.0 |	14.41776 (87111624)	16.18628 (87052424)	16.20670 (87052524)	15.22387 (87060724)	12.31487 (8706)
300.0 |	18.22110 (87061124)	24.05304 (87061124)	20.16657 (87052524)	19.82492 (87061024)	18.64406 (8702)
310.0 |	26.98215 (87051624)	34.40021 (87111624)	37.13679 (87060224)	35.54557 (87061124)	23.12239 (8711)
320.0 |	45.90490 (87121424)	39.88688 (87121924)	35.46891 (87061924)	27.52894 (87121924)	18.52387 (8711)
330.0 |	39.25995 (87111824)	33.55475 (87111824)	35.30914 (87032524)	25.90262 (87031824)	19.20049 (8712)
340.0 |	38.02740 (87121524)	28.12631 (87051824)	25.02460 (87032524)	20.74993 (87033024)	12.28449 (8706)
350.0 |	40.92023 (87032424)	20.87775 (87012124)	22.16597 (87030124)	18.18097 (87012124)	10.79353 (8701)
360.0 |	31.09438 (87022824)	19.72685 (87012524)	15.42763 (87032824)	16.32846 (87010424)	9.41176 (8701)

MODELOPTS: CONC

RURAL FLAT

DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0 |	8.32388 (87011924)
20.0 |	5.14729 (87011024)
30.0 |	6.95315 (87110524)
40.0 |	6.99390c(87043024)
50.0 |	7.93872c(87040324)
60.0 |	9.35290 (87030924)
70.0 |	5.97057 (87041824)
80.0 |	4.45331 (87010424)
90.0 |	2.96190 (87041624)
100.0 |	2.20973 (87011124)
110.0 |	3.77694 (87111024)
120.0 |	5.70444 (87031024)
130.0 |	10.09329 (87031024)
140.0 |	10.48416 (87042524)
150.0 |	9.53282c(87121124)
160.0 |	9.28947 (87042624)
170.0 |	11.38049 (87011124)
180.0 |	13.60379 (87101624)
190.0 |	9.98501 (87100824)
200.0 |	9.23119 (87053124)
210.0 |	12.24520 (87112124)
220.0 |	11.32136 (87103124)
230.0 |	12.87793 (87120624)
240.0 |	11.18183 (87112324)
250.0 |	9.56739 (87102424)
260.0 |	5.78945 (87121324)
270.0 |	5.96898 (87052524)
280.0 |	7.91605 (87052724)
290.0 |	9.39195 (87060724)
300.0 |	14.75449 (87070324)
310.0 |	16.35292 (87031724)
320.0 |	14.49144 (87032924)
330.0 |	13.96803 (87121524)
340.0 |	9.62551 (87061624)
350.0 |	7.54352 (87011624)
360.0 |	7.26914 (87012024)

MODELOPTS: CONC RURAL FLAT DFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0	25.10844 (87101224)	18.00695 (87020524)	14.11354 (87032824)	14.13990 (87032824)	9.81048 (8701
20.0	11.63009 (87020224)	8.09641 (87020224)	8.06564 (87021624)	9.13706 (87012224)	6.28946 (8706
30.0	5.91315c (87100124)	6.16642c (87040324)	7.86639 (87011024)	7.98388 (87011024)	6.61758 (8701
40.0	32.85029c (87043024)	23.21682 (87062724)	15.32494 (87062724)	13.32239c (87093024)	8.96394 (8702
50.0	66.23526 (87030924)	38.96579 (87030924)	23.45616 (87092424)	19.25919c (87040324)	11.97716c (8704
60.0	58.75781 (87041724)	38.95686 (87041724)	22.99563 (87062724)	17.67119 (87062724)	10.61195c (8704
70.0	33.71276 (87030824)	24.34281 (87012624)	15.03137 (87030724)	12.56387 (87030724)	8.34134 (8701
80.0	12.39377 (87030924)	9.13756 (87041724)	8.07611 (87010424)	7.59432 (87010124)	4.91926 (8701
90.0	5.80218 (87020624)	4.25660 (87030724)	4.40499 (87030924)	4.37884 (87010424)	3.41882 (8703
100.0	6.66025 (87010124)	4.83974 (87092524)	4.09859c (87093024)	3.48206c (87093024)	2.23929 (8704
110.0	18.64090 (87042524)	12.34452 (87020924)	8.69928 (87020724)	6.32924 (87081124)	4.74809 (8702
120.0	23.00751 (87012224)	20.78607 (87120424)	19.43132 (87042524)	15.57517 (87042924)	8.71207 (8704
130.0	23.16162 (87020724)	21.89516 (87010124)	21.13768 (87033124)	16.45170 (87042324)	11.78592 (8704
140.0	20.91566 (87020824)	22.05920 (87020724)	16.66885 (87101224)	16.83705 (87012224)	13.75167 (8701
150.0	25.95449 (87101324)	21.71914 (87122924)	16.15287 (87033124)	15.75222 (87102824)	10.39933 (8701
160.0	25.36622 (87102824)	28.31818 (87011124)	23.62217 (87010524)	19.79254 (87121624)	13.16491 (8710
170.0	28.77781 (87040124)	26.78334 (87101424)	23.24140 (87111124)	20.42518 (87010624)	14.85127 (8702
180.0	16.62870 (87011224)	17.71347 (87011324)	20.71246 (87011124)	21.00066 (87011124)	16.85557 (8701
190.0	15.71560 (87110624)	16.17905 (87101624)	17.14047 (87031124)	15.75672 (87101624)	12.56028 (8710
200.0	15.91120 (87103024)	15.30640 (87103124)	13.92516 (87103124)	13.92246 (87101624)	11.16413 (8702
210.0	19.74962 (87111224)	20.09691 (87111224)	19.03715 (87110224)	18.58610 (87112124)	15.33894 (8711
220.0	18.90427 (87103024)	19.47135 (87031324)	18.75714 (87100924)	17.56497 (87111224)	13.81468 (8711
230.0	22.20343 (87100424)	22.77194 (87112424)	22.41222 (87112424)	20.46279 (87103024)	16.20134 (8712
240.0	20.36912 (87112224)	21.58338 (87110824)	19.84998 (87100924)	17.79825 (87100524)	12.73831 (8703
250.0	17.96434 (87102424)	18.23715 (87112324)	17.43552 (87123024)	15.99207 (87123024)	12.10308 (8703
260.0	14.55568 (87030624)	13.36914 (87030624)	11.85267 (87031524)	10.31636 (87102424)	7.30578 (8705
270.0	8.26353 (87052224)	8.84289 (87123124)	9.35807 (87060724)	9.01816 (87060724)	7.07498 (8706
280.0	9.22317 (87072224)	11.45310 (87072224)	13.01087 (87052124)	11.18179 (87072224)	9.06531 (8705
290.0	13.69133 (87052224)	13.26584 (87050324)	14.75329 (87050324)	14.49287 (87022624)	12.12834 (8702
300.0	17.70246 (87052524)	20.10972 (87060724)	19.98305 (87060724)	19.02208 (87060124)	17.47318 (8707
310.0	25.38868 (87060924)	29.04966 (87111724)	35.53453 (87111624)	34.44816 (87051624)	21.54036 (8707
320.0	42.96161 (87061924)	35.46803 (87060224)	27.88618 (87111824)	26.96410 (87122124)	18.39142 (8712
330.0	33.33249 (87032424)	33.00003 (87032424)	29.76004 (87111824)	25.49141 (87051824)	19.16735 (8702
340.0	37.41356 (87051824)	27.65234 (87033024)	25.01795 (87032724)	20.50463 (87061524)	12.14084 (8703
350.0	37.73769 (87091224)	20.78073 (87032624)	19.20170 (87062224)	16.24015 (87121524)	10.44173 (8703
360.0	27.99269 (87012524)	17.19112 (87011524)	15.01954 (87011524)	13.61293 (87021624)	9.15662 (8709

MODELOPTS: CONC

RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)					NETWORK	
							OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	6.07696 AT (	-306.42,	257.11,	0.00,	0.00)	GP	POL
	2ND HIGHEST VALUE IS	6.05725 AT (	-160.70,	191.51,	0.00,	0.00)	GP	POL
	3RD HIGHEST VALUE IS	5.83874 AT (	-383.02,	321.39,	0.00,	0.00)	GP	POL
	4TH HIGHEST VALUE IS	5.78840 AT (	-192.84,	229.81,	0.00,	0.00)	GP	POL
	5TH HIGHEST VALUE IS	5.26552 AT (	-125.00,	216.51,	0.00,	0.00)	GP	POL
	6TH HIGHEST VALUE IS	5.21235 AT (	-257.12,	306.42,	0.00,	0.00)	GP	POL

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

MODELOPTS: CONC

RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR	(XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK
						GRID-ID
HIGH 1ST HIGH VALUE IS	185.10712	ON 87030824	AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
HIGH 2ND HIGH VALUE IS	127.59200	ON 87030824	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
HIGH 3RD HIGH VALUE IS	93.13313c	ON 87110424	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
HIGH 4TH HIGH VALUE IS	90.94351	ON 87030724	AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
HIGH 5TH HIGH VALUE IS	71.36800c	ON 87040324	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
HIGH 6TH HIGH VALUE IS	66.23526	ON 87030924	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

CO STARTING

TITLEONE 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/11/97

TITLETWO ANN 24&3-HR - ALL - SS UNITS - PM10 - 85F & 100%

CO MODELOPT DFAULT CONC RURAL

AVERTIME 3 24 PERIOD

POLLUTID OTHER

DCAYCOEF .000000

CO RUNORNOT RUN

FINISHED

SO STARTING

LOCATION HSD1 POINT 56.6 63.2 0.0

LOCATION HSD2 POINT 55.6 55.6 0.0

SO LOCATION HSD3 POINT 54.7 48.4 0.0

SO LOCATION MSD POINT -7.2 35.88 0.0

LOCATION GT POINT 26.2 -56.8 0.0

SO LOCATION SS1GT POINT 3.5 -54.0 0.0

SO LOCATION SS2GT POINT 48.9 -59.6 0.0

POINT: SRCID QS HS TS VS DS

SO SRCPARAM HSD1 0.97 4.88 660.8 20.38 0.76

SRCPARAM HSD2 0.97 4.88 660.8 20.38 0.76

SRCPARAM HSD3 0.97 4.88 660.8 20.38 0.76

SO SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74

SO SRCPARAM GT 2.27 11.77 766 24.0 3.93

SRCPARAM SS1GT 2.08 13.08 764.3 23.38 3.85

SO SRCPARAM SS2GT 2.08 13.08 764.3 23.38 3.85

BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97

BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14

SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14

SO BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79

BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40

BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50

BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40

SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71

BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50

BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97

BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14

SO BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14

BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14

SO BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79

BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40

BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37

SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40

BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62

BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37

SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97

SO BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79

BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
BUILDHGT HSD3	3.14	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT HSD3	3.14	3.14	3.14	3.14	5.79	5.79
BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
BUILDWID HSD3	12.30	12.53	12.37	11.80	35.76	29.40
SO BUILDWID HSD3	27.09	23.96	25.29	28.10	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69
BUILDWID HSD3	12.30	12.53	12.37	11.80	10.88	9.62
SO BUILDWID HSD3	8.07	6.28	4.30	3.73	32.60	32.48
SO BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69

SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	15.26	15.26
BUILDHGT MSD	15.26	10.97	16.15	16.15	16.15	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	11.46	11.75
BUILDWID MSD	12.11	30.35	18.94	18.93	18.34	30.59
BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	30.06	31.10
BUILDWID MSD	31.20	30.35	28.58	32.08	30.84	30.59

SO BUILDHGT GT	12.19	12.19	12.19	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID GT	26.98	25.74	26.49	20.04	22.92	25.52
SO BUILDWID GT	27.36	28.70	28.79	28.52	28.78	28.08
BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90
SO BUILDWID GT	6.97	11.73	16.13	20.04	22.92	25.52
SO BUILDWID GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90

BUILDHGT SS1GT	12.19	0.00	0.00	0.00	0.00	4.88
BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT SS1GT	4.88	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	4.88
BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS1GT	4.88	0.00	0.00	0.00	12.19	12.19
SO BUILDWID SS1GT	26.98	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID SS1GT	26.70	0.00	0.00	0.00	0.00	0.00
SO BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	27.74	28.70	28.79	28.52	28.78	28.17
BUILDWID SS1GT	26.70	0.00	0.00	0.00	26.98	27.39

BUILDHGT SS2GT	4.88	4.88	12.19	12.19	12.19	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88

BUILDWID	SS2GT	6.62	11.34	26.49	27.32	27.32	25.52
BUILDWID	SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID	SS2GT	26.63	24.36	21.35	17.69	13.50	8.90
BUILDWID	SS2GT	6.62	11.34	15.72	19.62	22.92	25.52
BUILDWID	SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID	SS2GT	26.63	24.36	21.35	17.69	13.50	8.90

EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)

SO SRCGROUP ALL

SO FINISHED

STARTING

RE GRIDPOLR POL STA

GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)

GRIDPOLR POL ORIG 0.0 0.0

RE GRIDPOLR POL DIST 250. 300. 400. 500. 750. 1000.

RE GRIDPOLR POL GDIR 36 10.0 10.0

GRIDPOLR POL END

RE FINISHED

STARTING

INPUTFIL KYWPRE87.LST

ME ANEMHGHT 6.700 METERS

SURFDATA 12836 1987 KEY WEST

UAIRDATA 12844 1987 MIAMI

ME FINISHED

STARTING

RECTABLE ALLAVE FIRST-SIXTH

OU FINISHED

*** SETUP Finishes Successfully ***

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	250.00	300.00	400.00	500.00	750.00	1000.00
10.00	1.83973	1.25767	1.05834	0.99543	0.70322	0.50492
20.00	0.84197	0.60260	0.57414	0.55527	0.41666	0.31144
30.00	0.38211	0.43667	0.54431	0.56574	0.46485	0.36458
40.00	1.60132	1.11199	0.84474	0.76938	0.55474	0.40791
50.00	3.51544	2.16859	1.25863	0.97662	0.59062	0.40470
60.00	3.50050	2.34642	1.44090	1.13309	0.69965	0.49660
70.00	1.70750	1.20879	0.79626	0.64719	0.42504	0.31367
80.00	0.65520	0.50163	0.38479	0.34549	0.26427	0.21438
90.00	0.30997	0.23548	0.20286	0.19633	0.16235	0.13473
100.00	0.35818	0.24713	0.21962	0.19805	0.14527	0.11566
110.00	0.87171	0.55029	0.38858	0.30490	0.21263	0.17220
120.00	1.19030	0.91957	0.79545	0.64828	0.39757	0.27905
130.00	1.43783	1.25569	1.11921	0.96262	0.65092	0.46636
140.00	1.45807	1.41346	1.33181	1.18060	0.83569	0.61441
150.00	1.81749	1.69022	1.45571	1.27451	0.95220	0.74525
160.00	2.28091	2.19268	1.96937	1.72801	1.21579	0.90341
170.00	2.41799	2.56054	2.47372	2.21822	1.60273	1.20658
180.00	1.65838	1.84368	2.00018	1.97541	1.66986	1.36630
190.00	1.42200	1.52684	1.58612	1.53377	1.27680	1.04250
200.00	1.50223	1.55983	1.55965	1.48315	1.22338	1.00119
210.00	1.76748	1.84535	1.84989	1.75516	1.43721	1.17663
220.00	1.81446	1.89622	1.90708	1.81435	1.48574	1.20676
230.00	2.02571	2.13771	2.17941	2.09069	1.73111	1.41613
240.00	1.90221	1.99542	2.01939	1.93127	1.60662	1.33140
250.00	1.48937	1.54043	1.53266	1.45538	1.21510	1.02070
260.00	1.11728	1.16197	1.17307	1.12799	0.95567	0.80202
270.00	0.89875	0.96982	1.04949	1.06726	0.99354	0.87814
280.00	1.01468	1.19016	1.37629	1.40318	1.23410	1.03134
290.00	1.35180	1.60066	1.86893	1.92011	1.69855	1.41453
300.00	2.14059	2.62247	3.14058	3.29610	3.05488	2.61987
310.00	3.85974	4.79498	5.61431	5.39446	3.93617	2.84573
320.00	5.59596	5.34762	4.81552	4.12551	2.87455	2.15699
330.00	4.86452	4.22082	4.21069	3.79695	2.63751	1.88801
340.00	4.77400	3.70366	3.35490	2.71337	1.60416	1.08440
350.00	3.76631	2.35082	1.83382	1.52000	1.00094	0.73050
360.00	2.25405	1.48030	1.28015	1.19265	0.86007	0.64481

MODELOPTS: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0	53.85384 (87010424)	32.63317 (87010424)	18.71520 (87062624)	20.79880 (87062624)	16.10193 (8706
20.0	25.28426 (87062624)	16.84127 (87062624)	13.19199 (87062624)	12.14224 (87062624)	9.07614 (8706
30.0	25.40238 (87012224)	19.93827 (87012224)	15.59829 (87012224)	15.16370 (87062524)	11.31330 (8706
40.0	48.52095 (87110524)	30.91686 (87062524)	21.86992 (87062524)	20.09779 (87110524)	16.62706 (8711
50.0	123.01376c(87093024)	74.22840c(87093024)	41.67163c(87093024)	31.67122c(87093024)	18.07209c(8709
60.0	171.00372 (87030824)	128.52361 (87030824)	84.41630 (87030824)	63.90858 (87030824)	36.11483 (8703
70.0	64.71102 (87041824)	42.13507 (87041824)	25.32485 (87030824)	21.74164 (87030824)	13.90851 (8703
80.0	44.32845 (87041824)	34.41058 (87041824)	21.27201 (87041824)	16.15900 (87041824)	9.58439 (8704
90.0	28.17076 (87010424)	13.20979 (87010424)	10.94132 (87041724)	9.79652 (87041724)	6.91779 (8704
100.0	20.75638 (87010524)	17.46584 (87010424)	21.56088 (87010424)	18.94798 (87010424)	9.29364 (8701
110.0	42.29313 (87010524)	26.25401 (87010524)	13.94006 (87041624)	9.98644 (87041624)	6.57401 (8701
120.0	45.82723 (87020824)	27.22492 (87020824)	23.62861 (87031024)	21.19736 (87031024)	10.81793 (8704
130.0	51.92122 (87033124)	35.91119 (87012624)	35.22782 (87020824)	29.71592 (87020824)	16.31790 (8712
140.0	35.32455 (87033124)	40.59179 (87033124)	37.64791 (87033124)	28.82670 (87033124)	19.89275 (8701
150.0	34.20012 (87040424)	27.60466 (87040424)	30.06754 (87042224)	26.39541 (87042224)	17.15792 (8704
160.0	49.21372 (87112024)	42.27209 (87112024)	32.69664 (87040424)	29.25961 (87040424)	19.90997 (8710
170.0	34.10056 (87121624)	33.88863 (87011124)	35.79745 (87112024)	33.07244 (87112024)	22.79166 (8711
180.0	24.42286 (87121724)	25.64862 (87121724)	25.81669 (87101424)	24.52750 (87101424)	18.70441 (8710
190.0	17.26393 (87100824)	18.94735 (87100824)	19.27445 (87100824)	17.69552 (87100824)	15.21443 (8710
200.0	21.71298 (87112124)	21.27239 (87112124)	21.55042 (87101524)	20.58462 (87101524)	16.18327 (8710
210.0	23.07680 (87103024)	23.51547 (87103124)	22.93635 (87103124)	21.39773 (87021024)	16.65978 (8702
220.0	21.14030 (87100924)	21.57979 (87100424)	21.23965 (87100424)	19.72367 (87100424)	15.03789 (8710
230.0	35.26374 (87100924)	34.64787 (87100924)	31.45981 (87100924)	27.54724 (87100924)	19.94078 (8711
240.0	26.89030 (87110724)	27.23713 (87110724)	25.54159 (87110724)	22.68557 (87110724)	16.07366 (8711
250.0	28.59499 (87110824)	30.23949 (87110824)	30.19877 (87110824)	27.91692 (87110824)	20.70765 (8711
260.0	22.02785 (87110824)	21.15154 (87030524)	18.48567 (87111524)	16.59620 (87111524)	12.04456 (8711
270.0	15.75387 (87111524)	14.54788 (87111524)	14.53162 (87052424)	14.77499 (87052424)	13.06199 (8705
280.0	16.22446 (87052424)	18.87627 (87052424)	19.89565 (87052424)	17.81056 (87052424)	14.17702 (8706
290.0	24.12804 (87060824)	27.75134 (87060824)	27.78377 (87060824)	24.43696 (87060824)	16.65385 (8706
300.0	30.35208 (87111624)	29.27901 (87111624)	26.87620 (87061124)	26.96178 (87061124)	22.04775 (8706
310.0	38.49567 (87022624)	42.45585 (87022624)	49.48602 (87031724)	42.93824 (87031724)	29.73920 (8706
320.0	55.57814 (87031724)	50.72033 (87111724)	49.84889 (87121424)	45.09120 (87031824)	33.42153 (8703
330.0	67.53883 (87121424)	52.96354 (87031824)	43.60075 (87032624)	38.11016 (87032624)	23.84643 (8703
340.0	64.98058 (87032424)	52.08899 (87022824)	47.81500 (87022824)	37.63742 (87022824)	20.45948 (8702
350.0	96.24403 (87022824)	61.08981 (87022824)	32.46693 (87022824)	26.78454 (87033024)	17.44115 (8703
360.0	60.01306 (87033024)	35.41228 (87033024)	23.26933 (87033024)	17.11898 (87033024)	12.57111 (8701

MODELOPTs: CONC

RURAL FLAT

DEFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION |	DISTANCE (METERS)
DEGREES) |	
	1000.00

10.0 |	11.67464 (87090524)
20.0 |	6.71960 (87012224)
30.0 |	8.49595 (87062524)
40.0 |	13.09369 (87110524)
50.0 |	12.06314c(87093024)
60.0 |	24.71818 (87030824)
70.0 |	9.90038 (87030824)
80.0 |	6.76470 (87041824)
90.0 |	6.02269 (87041824)
100.0 |	4.82491 (87010424)
110.0 |	5.77083 (87010424)
120.0 |	7.42107 (87041624)
130.0 |	11.63685 (87120424)
140.0 |	15.24408 (87012624)
150.0 |	12.06912 (87042624)
160.0 |	14.11857 (87102824)
170.0 |	15.92246 (87112024)
180.0 |	14.01437 (87101424)
190.0 |	12.18933 (87101424)
200.0 |	12.35115 (87101524)
210.0 |	13.05501 (87021024)
220.0 |	11.41190 (87100424)
230.0 |	15.04664 (87112324)
240.0 |	11.92598 (87110724)
250.0 |	15.41360 (87110824)
260.0 |	8.93783 (87111524)
270.0 |	10.68071 (87052424)
280.0 |	11.38872 (87060824)
290.0 |	13.33756 (87060924)
300.0 |	17.26276 (87061124)
310.0 |	19.80433 (87060224)
320.0 |	22.70827 (87031824)
330.0 |	16.54993 (87032424)
340.0 |	13.80919 (87012124)
350.0 |	12.38477 (87033024)
360.0 |	8.91913 (87012524)

** ISCST3 - VERSION 96113 **

*** 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/11/97 ***

09/09/9

*** ANN 24&3-HR - ALL - SS UNITS - PM10 - 85F & 100% ***

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MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION |	DISTANCE (METERS)
DEGREES) |	
	1000.00

10.0 |	11.12988 (87062624)
20.0 |	6.66687 (87062624)
30.0 |	7.46195 (87012224)
40.0 |	10.89846 (87021624)
50.0 |	9.77649c(87043024)
60.0 |	14.76703c(87093024)
70.0 |	9.43518 (87030924)
80.0 |	5.17038 (87031924)
90.0 |	3.78607 (87092424)
100.0 |	3.45199 (87041624)
110.0 |	4.40229 (87010524)
120.0 |	6.94483 (87020724)
130.0 |	9.67617 (87042524)
140.0 |	12.69377 (87042324)
150.0 |	11.23993 (87033124)
160.0 |	12.97157 (87040424)
170.0 |	15.65961 (87111124)
180.0 |	13.87490 (87011324)
190.0 |	10.49187 (87121724)
200.0 |	11.92251 (87102924)
210.0 |	12.17688 (87103124)
220.0 |	11.31218 (87100324)
230.0 |	14.60386 (87111324)
240.0 |	11.74086 (87120624)
250.0 |	11.41003 (87111524)
260.0 |	7.22465 (87031524)
270.0 |	9.11257 (87052224)
280.0 |	9.38049 (87052324)
290.0 |	10.58614 (87060824)
300.0 |	16.98812 (87051624)
310.0 |	19.54166 (87061924)
320.0 |	16.75897 (87032524)
330.0 |	15.47775 (87032624)
340.0 |	13.07538 (87022824)
350.0 |	9.72600 (87011524)
360.0 |	8.55389 (87032824)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DEGREES |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	31.50556 (87012524)	18.00195 (87032724)	14.84349 (87020524)	13.94888 (87090524)	11.55032 (8706
20.0 |	19.03828 (87021624)	12.39040 (87062724)	9.78573 (87062724)	8.75202 (87011924)	8.19038 (8703
30.0 |	9.73334 (87062624)	10.12040 (87062624)	11.63863 (87062624)	12.04597c(87110424)	10.08795c(8711
40.0 |	40.00899 (87021624)	25.97401 (87021624)	18.43215 (87021624)	17.51334 (87021624)	13.00853 (8706
50.0 |	86.03851c(87110424)	52.05733c(87110424)	30.24287c(87110424)	23.63860 (87030824)	13.14162c(8704
60.0 |	84.15343c(87093024)	63.33623 (87030724)	41.12568c(87093024)	31.18783 (87030724)	17.81572 (8703
70.0 |	37.99369 (87030924)	29.70681 (87030824)	20.11068 (87041724)	16.04487 (87030924)	9.01936 (8704
80.0 |	15.56780 (87041724)	12.20542 (87010124)	9.00492 (87010124)	7.49707c(87040324)	6.33670 (8703
90.0 |	8.75680 (87041724)	7.19037 (87041624)	5.80263 (87041624)	5.03997 (87020624)	3.92278 (8709
100.0 |	12.32646 (87020924)	5.88561 (87020924)	5.17896 (87092524)	5.24647 (87010524)	2.95506 (8709
110.0 |	26.89252 (87031024)	12.02074c(87081024)	9.81624 (87020924)	8.02887 (87020924)	5.04880 (8704
120.0 |	23.61466 (87041624)	22.84481 (87041624)	21.25207c(87081024)	17.55582 (87010524)	9.70676 (8701
130.0 |	34.43188 (87012224)	33.17376 (87020824)	22.22968 (87012224)	19.11272 (87120424)	15.68892 (8702
140.0 |	27.09264 (87042224)	22.73552 (87020824)	21.89120 (87020824)	23.30993 (87012624)	15.19337 (8701
150.0 |	26.68767 (87102824)	25.03241 (87102824)	20.16439 (87101324)	15.44707 (87101324)	13.56806 (8703
160.0 |	30.77747 (87011124)	32.43516 (87040424)	30.00492 (87111124)	24.64017 (87111124)	13.71544 (8711
170.0 |	33.60245 (87010624)	32.22919 (87010624)	28.97090 (87120524)	24.03340 (87120524)	15.40376 (8710
180.0 |	19.44249 (87040124)	20.80606 (87010624)	22.58829 (87010624)	20.32631 (87011324)	16.99579 (8703
190.0 |	15.14328 (87011224)	16.80597 (87102924)	18.08039 (87011224)	17.22510 (87011224)	13.29893 (8710
200.0 |	15.96781 (87021024)	16.43333 (87053124)	16.22198 (87053124)	15.10404 (87053124)	12.98387 (8703
210.0 |	21.14285 (87021024)	22.52814 (87021024)	22.17551 (87103024)	19.90734 (87103024)	14.73731 (8711
220.0 |	20.49329 (87103124)	20.58326 (87111324)	20.13484 (87111324)	18.51208 (87111324)	13.79704 (8711
230.0 |	25.61677 (87112224)	25.74719 (87112224)	25.69733 (87111324)	24.31401 (87111324)	19.01813 (8711
240.0 |	23.39964 (87030524)	22.65858 (87030524)	21.88004 (87120624)	20.10805 (87112324)	14.93674 (8711
250.0 |	19.16303 (87112424)	20.26755 (87112524)	19.05761 (87112424)	17.70028 (87111524)	13.78679 (8711
260.0 |	19.36003 (87111524)	19.61257 (87111524)	14.75832 (87110824)	11.06113 (87110824)	8.16841 (8705
270.0 |	8.10968 (87030624)	9.99689 (87052224)	11.41111 (87111524)	9.30573 (87052124)	9.91192 (8705
280.0 |	11.00378 (87052124)	12.63963 (87052124)	13.90247 (87060824)	13.85434 (87052524)	11.54951 (8705
290.0 |	15.22237 (87052324)	17.16019 (87111624)	16.99280 (87052324)	17.91418 (87060924)	13.60804 (8711
300.0 |	24.04429 (87060924)	25.92129 (87060824)	23.44663 (87022624)	21.24810 (87060924)	17.85585 (8712
310.0 |	29.60964 (87111624)	40.95755 (87061124)	40.41328 (87061124)	33.76274 (87022624)	24.26070 (8703
320.0 |	50.19798 (87022624)	39.30003 (87031724)	42.81835 (87031824)	34.31475 (87111724)	20.98144 (8703
330.0 |	59.73421 (87111724)	36.97395 (87032624)	34.88226 (87022824)	32.44275 (87032424)	21.58171 (8702
340.0 |	61.17079 (87022824)	40.30562 (87032624)	32.80937 (87032624)	23.49283 (87032724)	15.92012 (8701
350.0 |	44.19957 (87032624)	30.76784 (87032724)	23.15287 (87032724)	17.33804 (87032724)	11.72501 (8701
360.0 |	42.88335 (87032724)	27.40840 (87032724)	17.46786 (87032724)	16.41084 (87030124)	11.61289 (8701

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)
	1000.00

10.0	9.67722 (87062724)
20.0	6.26114 (87030724)
30.0	7.44567c(87110424)
40.0	9.45853 (87062524)
50.0	9.52469c(87110424)
60.0	12.38644 (87030724)
70.0	5.94437c(87100124)
80.0	4.83170 (87081124)
90.0	3.15357 (87041724)
100.0	2.79848 (87030824)
110.0	3.71236 (87081124)
120.0	5.87933 (87010524)
130.0	9.60401 (87012624)
140.0	11.49479 (87020824)
150.0	9.87292 (87042224)
160.0	11.09549 (87042224)
170.0	13.35548 (87102824)
180.0	13.74759 (87031224)
190.0	10.00268 (87011224)
200.0	10.56876 (87031124)
210.0	11.90144c(87120224)
220.0	11.30222 (87101124)
230.0	14.27175 (87100924)
240.0	11.45129 (87110824)
250.0	10.29757 (87112524)
260.0	6.74946 (87052424)
270.0	8.41069 (87052124)
280.0	8.73518 (87052524)
290.0	9.81343 (87111624)
300.0	15.99904 (87031724)
310.0	17.89637 (87121424)
320.0	15.05801 (87032624)
330.0	14.93337 (87022824)
340.0	11.06223 (87032724)
350.0	9.56427 (87030124)
360.0	8.17200 (87030124)

MODELOPTs: CONC

RURAL FLAT

DEFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	27.73891 (87032724)	17.49857 (87030124)	14.48424 (87030724)	13.17062 (87020524)	10.68321 (8702)
20.0 |	17.15380 (87062724)	10.64462 (87021624)	8.53981 (87011924)	8.61756 (87031924)	6.46079 (8701)
30.0 |	7.84530c(87110424)	9.45647 (87030724)	10.86584c(87110424)	11.64883 (87062624)	9.29263 (8706)
40.0 |	37.11361c(87093024)	22.28886c(87093024)	15.63041c(87043024)	14.47018c(87043024)	9.64312c(8704)
50.0 |	70.33454 (87062724)	43.60917 (87062724)	25.48469 (87062724)	19.28765 (87062724)	12.24201 (8709)
60.0 |	84.01829 (87030724)	59.65824c(87093024)	36.21176 (87030924)	25.45406 (87030924)	14.04747c(8711)
70.0 |	37.82612 (87012624)	29.26103 (87030924)	19.16421 (87030924)	14.33062 (87041724)	8.16630 (8704)
80.0 |	13.78780 (87010124)	9.20473 (87020724)	7.72258c(87092324)	7.22612 (87010424)	5.40973 (8701)
90.0 |	7.17297 (87041824)	6.96099 (87041824)	5.65677 (87010424)	4.99953 (87041624)	3.92087 (8702)
100.0 |	12.02099 (87041624)	5.39633 (87041624)	4.95238 (87041624)	4.72213 (87092524)	2.41279 (8701)
110.0 |	22.06779c(87081024)	11.68637 (87031024)	8.18427 (87042924)	7.39497 (87010424)	4.48286 (8708)
120.0 |	23.57663 (87012724)	21.10229 (87010524)	21.06959 (87010524)	15.95209c(87081024)	9.31543 (8702)
130.0 |	33.00131 (87020824)	33.17226 (87012224)	20.17297 (87012724)	18.08897 (87042524)	13.08366 (8704)
140.0 |	22.08644 (87101224)	21.49807 (87012724)	21.83112 (87012624)	18.76286 (87020824)	14.38193 (8703)
150.0 |	26.35409 (87122924)	24.17135 (87101324)	19.84499 (87102824)	15.04087 (87033124)	10.47885 (8703)
160.0 |	30.55514 (87040424)	28.43079 (87102824)	27.58713 (87112024)	18.69027 (87101324)	13.15174 (8710)
170.0 |	28.90714 (87112024)	31.59503 (87121624)	25.36227 (87010624)	22.72642 (87111124)	15.32627 (8701)
180.0 |	17.76254 (87010624)	19.87752 (87040124)	19.60933 (87011324)	19.66426 (87101624)	16.21089 (8710)
190.0 |	14.80164 (87101524)	16.10956 (87031124)	16.29353 (87101424)	17.22218 (87101424)	13.26062 (8701)
200.0 |	15.94449 (87053124)	15.09755 (87021024)	14.90754 (87031124)	15.00980 (87031124)	11.45470 (8705)
210.0 |	20.20267 (87042724)	19.10132 (87042724)	18.19843 (87101524)	17.53574 (87110224)	14.55356c(8712)
220.0 |	19.90697 (87111324)	20.07797 (87100924)	18.43473 (87042724)	16.82813 (87042724)	13.20316 (8710)
230.0 |	24.02798 (87111324)	25.34815 (87111324)	24.11890 (87112224)	21.52792 (87112224)	15.42987 (8711)
240.0 |	23.24403 (87100924)	21.74562 (87100924)	20.37537 (87110824)	19.26062 (87110824)	14.10218 (8711)
250.0 |	19.13963 (87112524)	19.80920 (87112424)	17.76591 (87111524)	17.09931 (87112424)	12.04376 (8711)
260.0 |	15.18563 (87112424)	14.39433 (87112424)	12.45408 (87112424)	10.77331 (87031524)	7.35548 (8706)
270.0 |	8.02621 (87060824)	8.56256 (87112724)	9.11896 (87112724)	9.02944 (87112724)	8.51474 (8711)
280.0 |	10.86869 (87060724)	11.70277 (87060724)	13.29299 (87052524)	13.63522 (87052324)	11.48785 (8705)
290.0 |	13.70059 (87052524)	15.22298 (87052524)	15.60636 (87060924)	14.22066 (87052324)	11.77767 (8706)
300.0 |	20.48039 (87022624)	23.36548 (87022624)	21.90427 (87111624)	20.47828 (87122524)	17.36433 (8703)
310.0 |	28.88058 (87031724)	34.26749 (87051624)	37.42834 (87051624)	33.28463 (87061924)	22.90392 (8712)
320.0 |	44.73843 (87111624)	38.97481 (87061924)	33.78829 (87121924)	25.43996 (87061924)	17.16017 (8703)
330.0 |	44.54910 (87121924)	33.38039 (87111724)	33.48307 (87032424)	30.00072 (87032524)	20.16359 (8703)
340.0 |	42.44003 (87032524)	30.66418 (87032524)	24.91158 (87033024)	20.61390 (87032424)	14.01328 (8706)
350.0 |	43.07915 (87032724)	23.08421 (87091224)	21.32839 (87012124)	17.18530 (87022824)	11.24698 (8712)
360.0 |	30.97027 (87101224)	18.47180 (87101224)	15.69763 (87012524)	15.94170 (87012524)	10.69320 (8703)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0 |	7.91045 (87021624)
20.0 |	5.42129 (87110324)
30.0 |	7.06610 (87062624)
40.0 |	6.83700 (87062624)
50.0 |	8.41561 (87092424)
60.0 |	11.59353c (87110424)
70.0 |	5.68859 (87041724)
80.0 |	4.42868 (87012624)
90.0 |	2.92741 (87020624)
100.0 |	2.07486 (87041824)
110.0 |	3.69448 (87092524)
120.0 |	5.40608 (87120424)
130.0 |	9.57124c (87081024)
140.0 |	10.13004 (87012724)
150.0 |	9.34826c (87102724)
160.0 |	9.39588 (87101324)
170.0 |	12.33067 (87102124)
180.0 |	13.53421 (87101824)
190.0 |	9.79869 (87102924)
200.0 |	8.57214 (87101624)
210.0 |	11.76424 (87110224)
220.0 |	10.57852 (87101024)
230.0 |	11.91755 (87103024)
240.0 |	10.82036 (87100524)
250.0 |	9.92135 (87031524)
260.0 |	6.03325 (87060824)
270.0 |	8.07569 (87112724)
280.0 |	7.75437 (87052424)
290.0 |	9.46744 (87061124)
300.0 |	13.81966 (87122524)
310.0 |	15.32308 (87111724)
320.0 |	13.57382 (87121424)
330.0 |	13.46623 (87032524)
340.0 |	9.47765 (87061524)
350.0 |	8.39122 (87121524)
360.0 |	7.85178 (87010424)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION |	DISTANCE (METERS)				
DEGREES) |	250.00	300.00	400.00	500.00	750.00
10.0 |	24.67694 (87021624)	17.02472 (87062624)	14.33178 (87032724)	13.16734 (87021624)	10.34661 (8703)
20.0 |	12.09473 (87030724)	7.68848 (87030724)	7.81024 (87030724)	8.49520 (87062724)	5.98729 (8701)
30.0 |	7.60002 (87062524)	8.93379c(87110424)	8.10403c(87040324)	8.01303c(87040324)	7.57367 (8711)
40.0 |	32.03600 (87062724)	21.51414 (87030724)	14.82109 (87030724)	12.56513 (87062624)	9.29086 (8706)
50.0 |	65.93050c(87040324)	41.11805c(87040324)	22.81593c(87040324)	18.66153 (87092424)	11.18108 (8703)
60.0 |	57.62712c(87110424)	38.49681c(87110424)	21.92492c(87110424)	18.95299c(87110424)	13.49191 (8703)
70.0 |	33.54052 (87010124)	26.62726 (87010124)	18.64559 (87010124)	14.04302 (87010124)	7.93993c(8710)
80.0 |	12.47456 (87031924)	8.66677 (87031924)	7.66532c(87040324)	7.02623 (87031924)	5.08024c(8704)
90.0 |	6.12235 (87010524)	4.79552 (87020624)	5.03313 (87020624)	4.10183 (87030924)	3.59083 (8704)
100.0 |	6.54212 (87081124)	4.86901 (87081124)	4.02642 (87081124)	3.45611 (87081124)	2.36971 (8708)
110.0 |	18.45743 (87120424)	11.53116 (87042924)	8.10216 (87120424)	5.93973c(87071424)	4.44431 (8709)
120.0 |	23.29572 (87033124)	19.21281c(87081024)	18.48339 (87120424)	14.78004 (87120424)	8.32360 (8712)
130.0 |	30.78357 (87012724)	24.25364 (87012724)	19.98126 (87042524)	16.86757 (87012724)	11.38889 (8703)
140.0 |	19.43017 (87012724)	21.01847 (87042224)	19.73366 (87020724)	17.14203 (87042324)	14.20917 (8702)
150.0 |	25.64194 (87111124)	20.73841 (87042624)	17.14353 (87040424)	14.61382 (87031024)	9.76242 (8702)
160.0 |	28.00315 (87121624)	26.57697 (87121624)	22.95788 (87121624)	18.60725 (87010524)	12.93702 (8704)
170.0 |	26.92552 (87120524)	30.49957 (87120524)	24.14866 (87121624)	18.93950 (87022324)	13.96690 (8712)
180.0 |	17.09629 (87100824)	17.31609 (87101624)	19.59549 (87101624)	19.55293 (87121724)	15.82302 (8701)
190.0 |	14.71972 (87102924)	15.70286 (87110624)	16.29115 (87121724)	16.23771 (87121724)	12.71997 (8710)
200.0 |	15.12028 (87110224)	14.85538 (87110224)	13.22533 (87110224)	14.00753 (87102924)	10.84411 (8710)
210.0 |	18.31828 (87031424)	18.86178 (87031424)	18.04523 (87031424)	17.20898 (87101524)	14.33918 (8710)
220.0 |	18.85036 (87042724)	19.19363 (87042724)	17.74743 (87031324)	16.44878 (87031324)	12.96318 (8710)
230.0 |	23.17642 (87030524)	22.91088 (87030524)	20.94085 (87030524)	19.10900 (87112424)	15.19046 (8710)
240.0 |	20.42331 (87120624)	21.66746 (87120624)	20.10914 (87030524)	17.30500 (87030524)	13.71094 (8710)
250.0 |	17.40284 (87112324)	17.11062 (87102424)	16.80617 (87102424)	15.54423 (87102424)	11.73002 (8710)
260.0 |	14.76774 (87102424)	14.15011 (87102424)	11.81502 (87102424)	10.53311 (87112424)	6.84047 (8711)
270.0 |	7.65736 (87112724)	8.49540 (87060824)	8.67991 (87123124)	8.72450 (87111524)	6.80568 (8705)
280.0 |	8.86597 (87052524)	10.75203 (87052524)	12.88900 (87052324)	13.36757 (87052224)	8.94320 (8705)
290.0 |	13.31926 (87111624)	14.95304 (87052424)	14.97208 (87052524)	14.06451 (87060724)	11.38140 (8706)
300.0 |	16.83283 (87061124)	22.22043 (87061124)	18.63021 (87052524)	18.31544 (87061024)	17.23083 (8702)
310.0 |	24.92637 (87051624)	31.77925 (87111624)	34.30737 (87060224)	32.83923 (87061124)	21.36762 (8711)
320.0 |	42.40738 (87121424)	36.84788 (87121924)	32.76659 (87061924)	25.43152 (87121924)	17.11479 (8711)
330.0 |	36.26871 (87111824)	30.99820 (87111824)	32.61898 (87032524)	23.92973 (87031824)	17.74073 (8712)
340.0 |	35.13044 (87121524)	25.98335 (87051824)	23.11802 (87032524)	19.16968 (87033024)	11.35368 (8706)
350.0 |	37.80250 (87032424)	19.28761 (87012124)	20.47757 (87030124)	16.79820 (87012124)	9.97573 (8701)
360.0 |	28.72528 (87022824)	18.22386 (87012524)	14.25220 (87032824)	15.08762 (87010424)	8.70038 (8701)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0 |	7.70236 (87011924)
20.0 |	4.76375 (87011024)
30.0 |	6.43059 (87110524)
40.0 |	6.48769c (87043024)
50.0 |	7.35023c (87040324)
60.0 |	8.64754 (87030924)
70.0 |	5.52494 (87041824)
80.0 |	4.11638 (87010424)
90.0 |	2.73825 (87041624)
100.0 |	2.04183 (87011124)
110.0 |	3.49155 (87111024)
120.0 |	5.27249 (87031024)
130.0 |	9.33130 (87031024)
140.0 |	9.70715 (87042524)
150.0 |	8.82183c (87121124)
160.0 |	8.59721 (87042624)
170.0 |	10.52538 (87011124)
180.0 |	12.57590 (87101624)
190.0 |	9.23307 (87100824)
200.0 |	8.53943 (87053124)
210.0 |	11.32437 (87112124)
220.0 |	10.46998 (87103124)
230.0 |	11.90659 (87120624)
240.0 |	10.34107 (87112324)
250.0 |	8.84676 (87102424)
260.0 |	5.36246 (87121324)
270.0 |	5.51895 (87052524)
280.0 |	7.32770 (87052724)
290.0 |	8.69075 (87060724)
300.0 |	13.65496 (87070324)
310.0 |	15.12247 (87031724)
320.0 |	13.40251 (87032924)
330.0 |	12.91126 (87121524)
340.0 |	8.90167 (87061624)
350.0 |	6.97901 (87011624)
360.0 |	6.72648 (87012024)

MODELOPTs: CONC

RURAL FLAT DEFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	23.19555 (87101224)	16.63499 (87020524)	13.03823 (87032824)	13.06267 (87032824)	9.06888 (8701
20.0 |	10.74399 (87020224)	7.47954 (87020224)	7.45116 (87021624)	8.44096 (87012224)	5.82638 (8706
30.0 |	5.46262c(87100124)	5.69678c(87040324)	7.26748 (87011024)	7.37622 (87011024)	6.11680 (8701
40.0 |	30.34836c(87043024)	21.44798 (87062724)	14.15736 (87062724)	12.30983c(87093024)	8.28646 (8702
50.0 |	61.18877 (87030924)	35.99697 (87030924)	21.66908 (87092424)	17.79284c(87040324)	11.07349c(8704
60.0 |	54.28104 (87041724)	35.98872 (87041724)	21.24362 (87062724)	16.32517 (87062724)	9.80697c(8704
70.0 |	31.14417 (87030824)	22.48814 (87012624)	13.88613 (87030724)	11.60665 (87030724)	7.70812 (8701
80.0 |	11.44948 (87030924)	8.44136 (87041724)	7.46079 (87010424)	7.01573 (87010124)	4.54760 (8701
90.0 |	5.36053 (87020624)	3.93229 (87030724)	4.06947 (87030924)	4.04522 (87010424)	3.15849 (8703
100.0 |	6.15281 (87010124)	4.47235 (87092524)	3.78631c(87093024)	3.21677c(87093024)	2.06985 (8704
110.0 |	17.22064 (87042524)	11.40399 (87020924)	8.03648 (87020724)	5.85049 (87081124)	4.38692 (8702
120.0 |	21.25457 (87012224)	19.20237 (87120424)	17.95144 (87042524)	14.39118 (87042924)	8.05529 (8704
130.0 |	21.39712 (87020724)	20.22699 (87010124)	19.52731 (87033124)	15.19892 (87042324)	10.90349 (8704
140.0 |	19.33329 (87020824)	20.38946 (87020724)	15.40253 (87101224)	15.56507 (87012224)	12.71436 (8701
150.0 |	23.98961 (87101324)	20.06626 (87122924)	14.98906 (87033124)	14.55391 (87102824)	9.62035 (8701
160.0 |	23.43484 (87102824)	26.17422 (87011124)	21.83981 (87010524)	18.29347 (87121624)	12.16727 (8710
170.0 |	26.59996 (87040124)	24.74270 (87101424)	21.50202 (87111124)	18.86983 (87010624)	13.72143 (8702
180.0 |	15.36174 (87011224)	16.36389 (87011324)	19.14250 (87011124)	19.40726 (87011124)	15.57980 (8701
190.0 |	14.51914 (87110624)	14.94637 (87101624)	15.83526 (87031124)	14.55637 (87101624)	11.61417 (8710
200.0 |	14.69892 (87103024)	14.14020 (87103124)	12.86420 (87103124)	12.86181 (87101624)	10.31588 (8702
210.0 |	18.24489 (87111224)	18.56572 (87111224)	17.58676 (87110224)	17.17057 (87112124)	14.17575 (8711
220.0 |	17.46394 (87103024)	17.98782 (87031324)	17.32804 (87100924)	16.22721 (87111224)	12.76618 (8711
230.0 |	20.51174 (87100424)	21.03694 (87112424)	20.70464 (87112424)	18.90386 (87103024)	14.97102 (8712
240.0 |	18.81718 (87112224)	19.93894 (87110824)	18.33763 (87100924)	16.44310 (87100524)	11.77297 (8703
250.0 |	16.59563 (87102424)	16.84765 (87112324)	16.10710 (87123024)	14.77372 (87123024)	11.18828 (8703
260.0 |	13.44668 (87030624)	12.35054 (87030624)	10.95064 (87031524)	9.53165 (87102424)	6.75020 (8705
270.0 |	7.63393 (87052224)	8.16914 (87123124)	8.64508 (87060724)	8.33112 (87060724)	6.53791 (8706
280.0 |	8.52046 (87072224)	10.58051 (87072224)	12.01984 (87052124)	10.33159 (87072224)	8.38158 (8705
290.0 |	12.64817 (87052224)	12.25514 (87050324)	13.62963 (87050324)	13.38876 (87022624)	11.20797 (8702
300.0 |	16.35370 (87052524)	18.57756 (87060724)	18.46079 (87060724)	17.57488 (87060124)	16.15405 (8707
310.0 |	23.45432 (87060924)	26.83636 (87111724)	32.82714 (87111624)	31.82439 (87051624)	19.90304 (8707
320.0 |	39.68834 (87061924)	32.76571 (87060224)	25.76151 (87111824)	24.90986 (87122124)	16.99155 (8712
330.0 |	30.79288 (87032424)	30.48574 (87032424)	27.49261 (87111824)	23.54991 (87051824)	17.70927 (8702
340.0 |	34.56301 (87051824)	25.54550 (87033024)	23.11188 (87032724)	18.94339 (87061524)	11.21623 (8703
350.0 |	34.86245 (87091224)	19.19744 (87032624)	17.73890 (87062224)	15.00363 (87121524)	9.64849 (8703
360.0 |	25.85992 (87012524)	15.88266 (87011524)	13.87719 (87011524)	12.57606 (87021624)	8.46703 (8709

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0 |	7.21774 (87031924)
20.0 |	4.57408 (87011924)
30.0 |	4.64981 (87012524)
40.0 |	5.81664c(87093024)
50.0 |	7.03349 (87030824)
60.0 |	7.48821c(87040324)
70.0 |	5.16114 (87010124)
80.0 |	4.05474 (87092424)
90.0 |	2.65622 (87092524)
100.0 |	1.98018 (87092524)
110.0 |	3.28732 (87092424)
120.0 |	5.26568 (87042924)
130.0 |	8.93427 (87020824)
140.0 |	9.27532 (87012224)
150.0 |	8.34131 (87012724)
160.0 |	8.42724 (87102124)
170.0 |	10.45472 (87040424)
180.0 |	11.95293 (87011124)
190.0 |	9.14103 (87102624)
200.0 |	8.45432 (87021924)
210.0 |	10.60906 (87103024)
220.0 |	10.33151 (87111324)
230.0 |	11.53725 (87110124)
240.0 |	9.75547 (87101024)
250.0 |	8.69972 (87112424)
260.0 |	4.94262 (87123124)
270.0 |	5.49358 (87082224)
280.0 |	7.11395 (87072124)
290.0 |	8.47885 (87022524)
300.0 |	13.62014 (87061324)
310.0 |	14.56423 (87122124)
320.0 |	12.72546 (87111824)
330.0 |	11.97225 (87022724)
340.0 |	8.36588 (87121524)
350.0 |	6.65548 (87012124)
360.0 |	6.55081 (87020524)

MODELOPTs: CONC

RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
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1ST HIGHEST VALUE IS	5.61431 AT (-306.42, 257.11,	0.00, 0.00)	GP POL
2ND HIGHEST VALUE IS	5.59596 AT (-160.70, 191.51,	0.00, 0.00)	GP POL
3RD HIGHEST VALUE IS	5.39446 AT (	-383.02, 321.39,	0.00, 0.00)	GP POL
4TH HIGHEST VALUE IS	5.34762 AT (	-192.84, 229.81,	0.00, 0.00)	GP POL
5TH HIGHEST VALUE IS	4.86452 AT (	-125.00, 216.51,	0.00, 0.00)	GP POL
6TH HIGHEST VALUE IS	4.81552 AT (	-257.12, 306.42,	0.00, 0.00)	GP POL

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

* MODELOPTs: CONC

RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
HIGH 1ST HIGH VALUE IS	171.00372	ON 87030824: AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
HIGH 2ND HIGH VALUE IS	117.87074	ON 87030824: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
HIGH 3RD HIGH VALUE IS	86.03851c	ON 87110424: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
HIGH 4TH HIGH VALUE IS	84.01829	ON 87030724: AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
HIGH 5TH HIGH VALUE IS	65.93050c	ON 87040324: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
HIGH 6TH HIGH VALUE IS	61.18877	ON 87030924: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

Addendum 1

**Application for Air Emission
Construction Permit**

for

**Two 19.77 MW
Combustion Turbines
at Stock Island Power Plant**

**Florida Municipal Power Agency
Utility Board of Key West**

September 30, 1997





September 30, 1997

via Federal Express

Mr. Syed Arif
Permitting and Standards Section
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

OCT 01 1997

BUREAU OF
AIR REGULATION

**Subject: Air Emission Source Construction Permit Application for the
FMFA/Key West Combustion Turbines**

Dear Mr. Arif:

In response to your questions that you provided in our telephone discussion on September 23, 1997, this letter and the enclosed addendum provides additional information and corrected information concerning the emissions from the proposed combustion turbines.

You expressed concerns for the magnitude of new emissions (PM, PM₁₀ and CO) from the proposed units, taking into account the amount of emission offsets that would be available from the Stock Island steam unit which would be retired as part of the project. To clarify this we have added more detail to the contemporaneous emission analysis which was included in the subject application (Attachment A - Section 3-3). Also, we have clarified the requested emission limitations (both short term pounds per hour and annual tons per year). We believe these clarifications along with the emission corrections discussed below resolve the issues that were of concern.

As you know we expedited submission of the application and for that reason we used estimated emissions for the two used units. We have reviewed those emission estimates with Stewart and Stevinson, the supplier of the used combustion turbines, and they have recommended a number of corrections for the predicted emissions from the units. These corrections have reduced predicted emissions from the units for all pollutants, since the supplier's data indicates fuel heat input is lower (305 MM Btu versus 347 MM Btu @ 40°F), when operating at maximum rated load and 75 ppm NO_x emissions. Also, for CO emissions the maximum emission rate occurs at 50 percent load and at 40°F. At these conditions the supplier recommends lower emissions than those estimated in the initial application. We have gone through the application and corrected all information involving these new emission values.

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The following is a summary of the information included in this Addendum:

Revised ELSA Forms (Tab 1)

Section	Modification
III Part 4-1	Manufacturer (GE) Model Number (MS5001R) Max Heat Input Rate (305 mmBtu/hr) @ 40°F ambient temperature
III Part 7a-1	Exit Temperature (982°F) Actual Volume Flow Rate (607,567 acfm)
III Part 8-1	Maximum Hourly Rate (2.21) Maximum Annual Rate (8,840)
III Part 9b-1 to 6	Emission Changes
III Part 9c-1 to 4	Emission Changes
Figures 3 & 4	(Flow Diagrams)

Revisions to potential emissions (Section III Part 9b - Short Term Maximum Emissions) reflect the emissions from each combustion turbine at an ambient temperature of 40°F and at maximum rated load with NO_x emission at 75 ppm. For CO emissions the maximum potential emissions occurs at 40°F and at 50 percent load.

Revisions to allowable emissions (Section III Part 9c - annual allowable emissions) are based on operation of each combustion turbine at 40°F and at maximum rated load with NO_x emissions at 75 ppm. The resulting allowable pounds per hour limit is then multiplied by 4000 hours per year to obtain the annual tonnage limitation. The 4000 hour limit is obtained from the NO_x emissions and the available offset emissions shown in Attachment A, Section 3-3.

A revised diskette is enclosed with the ELSA revisions. Tab 1 includes a complete set of ELSA pages for Section III - Complete Emissions Unit Information.

Attachment A Revisions (Tab 2)

Revisions to Attachment A include:

- Correction of heat input values at 40°F (page 3-1-2).
- Revision of Table 3-1-1 emission values at various ambient temperatures and loads.



- Revision of Section 3-3 Contemporaneous Emissions (pages 3-3-1 and 3-3-2), reflecting expanded discussion of the emission off-sets, including PM, PM₁₀ and CO.
- Revision and clarification of proposed emission limits taking into account the corrected emission values (page 3-3-3).
- Revision of Tables 3-3-1 and 3-3-2 with the addition of PM₁₀ and CO values.
- Revision of Tables 3-4-4 and 3-4-5, reflecting very slight changes for air quality impacts based on the revised emission values.

Tab 2 includes a complete revised Attachment A with the above revisions included.

Air Dispersion Modeling Revisions (Tab 3)

A revised air dispersion modeling run is attached reflecting the adjusted emissions. Results are very slightly changed, none of which impact the results or conclusions with respect to compliance with NAAQS.

Based on the above information we believe all the issues and concerns have been addressed and the subject permit application should be considered complete. If you have any questions concerning this information, please contact me.

Sincerely,

R. W. BECK, INC.

A handwritten signature in black ink, appearing to read 'Ivan L. Clark'. The signature is written in a cursive, flowing style.

Ivan L. Clark
Senior Director
Environmental Services

ILC/smm

Enclosures

- c: R. Williams, FMFA
L. Thompson, Utility Board of Key West
C. Jansen, Utility Board of Key West
D. Finigan, Utility Board of Key West
K. Plante, Gray, Harris & Robinson
N. Guarriello, R. W. Beck
W. Reynolds, R. W. Beck

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : 19.77 MW Combustion Turbine Electric Generating Unit #1		
2. Emissions Unit Identification Number : 008 [] No Corresponding ID [] Unknown		
3. Emissions Unit Status Code : C	4. Acid Rain Unit? [] Yes [X] No	5. Emissions Unit Major Group SIC Code : 49
6. Emissions Unit Comment : Upon approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.		

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Emissions Unit Control Equipment 1

1. Description :	
Water Injection	
2. Control Device or Method Code :	28

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Emissions Unit Details

1. Initial Startup Date :	31-May-1998	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer : General Electric	Model Number : MS5001R	
4. Generator Nameplate Rating :	20	MW
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	305	mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :		
Maximum heat input of 305 MMBtu/hr is based on Higher Heating Value (HHV) at 40F ambient air temperature. Maximum heat input at 85F is 303.2 MMBtu/hr, based on HHV.		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	4,000 hours/year

III. Part 4 - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Rule Applicability Analysis

--

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

List of Applicable Regulations

40 CFR 70 - State Operating Permits

40 CFR 60.7 - Notification and Recordkeeping (NSPS)

40 CFR 60.8 - Performance Tests (NSPS)

40 CFR 60.11 - Compliance with Standards and Maintenance Requirements (NSPS)

40 CFR 60.12 - Circumvention (NSPS)

40 CFR 60.13 - Monitoring Requirements (NSPS)

40 CFR 60.19 - General Notification and Reporting Requirements (NSPS)

40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines (NSPS)

62-4.001 through 62-4.160, FAC - Permits Part I General

62-4.210, FAC - Construction Permits

62-4.220, FAC - Operating Permits

62-103.150, FAC - Public Notice of Application and Proposed Agency Action

62-210, FAC - Stationary Sources

62-212.300, FAC - General Preconstruction Review Requirements

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

List of Applicable Regulations

62-212.500(5), FAC - Emission Offsets

62-213, FAC - Operation Permits for Major Sources of Air Pollution (Title V)

62-204.240, FAC - Ambient Air Quality Standards

62-296.320(4)(b), FAC - General Visible Emission Standards

62-296.320(2), FAC - General Pollutant Emission Limiting Standards, Objectionable Odor

62-297.310, FAC - General Test Requirements

62-297.620, FAC - Exceptions and Approvals of Alternative Procedures and Requirements

62-296.320(4)(c), FAC - Unconfined Emissions of Particulate Matter

62-297.401, FAC - Compliance Test Methods

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 7		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	43	feet	
7. Exit Diameter :	12.6	feet	
8. Exit Temperature :	982	°F	
9. Actual Volumetric Flow Rate :	607567	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.687 North (km) : 2716.610
14. Emission Point Comment :			
Exit Diameter of 12.6 feet is an equivalent diameter. The stack is actually rectangular with exit dimensions of 10' x 12.5'. Exit Temperature and Actual Volumetric Flow Rate are based on 40F ambient air temperature and 100% load. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric			

III. Part 7a - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Generating Units are proposed for construction.

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : No. 2 fuel oil fired gas turbine.	
2. Source Classification Code (SCC) : 2-01-001-01	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 2.21	5. Maximum Annual Rate : 8,840.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.05	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 138	
10. Segment Comment : Maximum hourly and annual fuel rates are at 40F ambient temperature. The proposed annual fuel rate is based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature. The unit will burn fuel oil with a maximum of 0.05% sulfur by weight.	

III. Part 8 - 1

**G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - CO			EL
2 - NOX	028		EL
3 - PM			EL
4 - PM10			EL
5 - SO2			EL
6 - VOC			NS

III. Part 9a - 1

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : CO			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
25.24	lb/hour	50.48	tons/year
4. Synthetically Limited?			
[X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:			
		to	tons/year
6. Emissions Factor :			
Reference : Mfr data			
7. Emissions Method Code : 2			
8. Calculations of Emissions :			
25.24 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 50.48 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment :			
<p>Potential emissions are based on a maximum heat input at 40F ambient temperature during 50% load operation. Hourly emissions are provided by the manufacturer at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.</p>			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2
 19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX			
2. Total Percent Efficiency of Control :	55.90	%	
3. Potential Emissions :	93.84	lb/hour	172.00 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions: <div style="text-align: right;">to tons/year</div>			
6. Emissions Factor : Reference : Mfr data			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 132 tpy (Offsets) + 40 tpy (PSD Applicability Emission Threshold)= 172 tpy			
9. Pollutant Potential/Estimated Emissions Comment : Total percent efficiency of control is based on uncontrolled NOx emissions of 170 ppm (0.698 lbs/mmBtu, AP-42). Potential emissions are based on a maximum heat input at 40F ambient temperature. Hourly emissions are provided by the manufacturer at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature and 172 tpy of NOx.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : PM			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
16.62	lb/hour	33.25	tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:			
		to	tons/year
6. Emissions Factor :			
Reference :		Mfr data-simlr units	
7. Emissions Method Code : 2			
8. Calculations of Emissions :			
$0.0545 \text{ lbs/MMBtu} \times 305 \text{ MMBtu/hr} = 16.62 \text{ lbs/hr}$ $16.62 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 33.25 \text{ tons/yr}$			
9. Pollutant Potential/Estimated Emissions Comment :			
<p>Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.</p>			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10				
2. Total Percent Efficiency of Control : %				
3. Potential Emissions :				
	16.62	lb/hour	33.25	tons/year
4. Synthetically Limited? [X] Yes [] No				
5. Range of Estimated Fugitive/Other Emissions:				
		to		tons/year
6. Emissions Factor :				
	Reference :	Mfr data-simlr units		
7. Emissions Method Code : 2				
8. Calculations of Emissions :				
$0.0545 \text{ lbs/MMBtu} \times 305 \text{ MMBtu/hr} = 16.62 \text{ lbs/hr}$ $16.62 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 33.25 \text{ tons/yr}$				
9. Pollutant Potential/Estimated Emissions Comment :				
<p>Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.</p>				

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 2
 19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : SO2			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :			
15.92	lb/hour	31.84	tons/year
4. Synthetically Limited?			
[X] Yes		[] No	
5. Range of Estimated Fugitive/Other Emissions:			
		to	tons/year
6. Emissions Factor :			
Reference :		Mass Balance	
7. Emissions Method Code : 2			
8. Calculations of Emissions :			
$1000 \text{ gal}/138 \text{ MMBtu} \times 7.2 \text{ lbs/gal} \times 0.05\%S \times 2 = 0.0522 \text{ lbs/MMBtu}$ $0.0522 \text{ lbs/MMBtu} \times 305 \text{ MMBtu/hr} = 15.92 \text{ lbs/hr}$ $15.92 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 31.84 \text{ tons/yr}$			
9. Pollutant Potential/Estimated Emissions Comment :			
<p>Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.</p>			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	5.55	lb/hour	11.10 tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0182 lbs/MMBtu x 305 MMBtu/hr = 5.55 lbs/hr 5.55 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 11.1 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input of 40F ambient temperature. Allowable annual emission are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 1

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	3.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	2.28	lb/hour	4.56 tons/year
5. Method of Compliance :	Fuel consumption, power output monitoring and load curve.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 3 ppmvd @ 15% O2 (2.28 lbs/hr), with the exception that they may increase to 33.15 ppmvd @ 15% O2 (25.24 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.		

III. Part 9c - 1

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 1

Allowable Emissions 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	33.15	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	25.24	lb/hour	50.48 tons/year
5. Method of Compliance :	Fuel consumption, power output monitoring and load curve.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 3 ppmvd @ 15% O2 (2.28 lbs/hr), with the exception that they may increase to 33.15 ppmvd @ 15% O2 (25.24 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.		

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 2

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	75.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	93.84	lb/hour	172.00 tons/year
5. Method of Compliance :	Initial stack testing, comparing the ratio of water to fuel.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature and 172 tons/yr of NOx.		

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Pollutant Information Section 3

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	16.62	lbs/hr	
4. Equivalent Allowable Emissions :	16.62	lb/hour	33.25 tons/year
5. Method of Compliance :	Fuel consumption monitoring and mft data for similar units.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	20									
2. Basis for Allowable Opacity :	RULE									
3. Requested Allowable Opacity :	<table style="margin-left: auto; margin-right: auto;"><tr><td style="padding: 0 20px;">Normal Conditions :</td><td style="padding: 0 10px;">20</td><td style="padding: 0 10px;">%</td></tr><tr><td style="padding: 0 20px;">Exceptional Conditions :</td><td style="padding: 0 10px;">100</td><td style="padding: 0 10px;">%</td></tr><tr><td style="padding: 0 20px;">Maximum Period of Excess Opacity Allowed :</td><td style="padding: 0 10px;">10</td><td style="padding: 0 10px;">min/hour</td></tr></table>	Normal Conditions :	20	%	Exceptional Conditions :	100	%	Maximum Period of Excess Opacity Allowed :	10	min/hour
Normal Conditions :	20	%								
Exceptional Conditions :	100	%								
Maximum Period of Excess Opacity Allowed :	10	min/hour								
4. Method of Compliance :	Annual testing using EPA Method 9 or a State approved method									
5. Visible Emissions Comment :	General emission standard under 62-296.310(2)(a), FAC. Exceptional conditions opacity limit requested is to allow for excess emissions during startup. As per 62-210.700(1), FAC excess emissions during startup, shutdown or malfunction shall be permitted but in no case exceed two hours in any 24 hour period.									

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 2
19.77 MW Combustion Turbine Electric Generating Unit #1

Continuous Monitoring System : Continuous Monitor 1

1. Parameter Code :	2. Pollutant :
3. CMS Requirement :	
4. Monitor Information : Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment :	

**F. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

-] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

III. Part 12 - 1

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emission unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Figure 3
2. Fuel Analysis or Specification :	Attachment B
3. Detailed Description of Control Equipment :	Attachment C
4. Description of Stack Sampling Facilities :	Attachment D
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	Attachemnt E
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attachment A
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

III. Part 13 - 1

12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. EMISSIONS UNIT INFORMATION

A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one :

- [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- [] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one :

- [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- [] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- [] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

III. Part 1 - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

**B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : 19.77 MW Combustion Turbine Electric Generating Unit #2		
2. Emissions Unit Identification Number : 009 [] No Corresponding ID [] Unknown		
3. Emissions Unit Status Code : C	4. Acid Rain Unit? [] Yes [X] No	5. Emissions Unit Major Group SIC Code : 49
6. Emissions Unit Comment : Upon approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric Generating Units are proposed for construction.		

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Emissions Unit Control Equipment 1

1. Description :	
Water Injection	
2. Control Device or Method Code :	28

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Emissions Unit Details

1. Initial Startup Date :	31-May-1998	
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer :	General Electric	Model Number : MS5001R
4. Generator Nameplate Rating :	20	MW
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	305	mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
5. Operating Capacity Comment :		
	Maximum heat input of 305 MMBtu/hr is based on Higher Heating Value (HHV) at 40F ambient air temperature. Maximum heat input at 85F is 303.2 MMBtu/hr, based on HHV.	

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	4,000 hours/year

**D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Rule Applicability Analysis

--

III. Part 6a - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

List of Applicable Regulations

40 CFR 70 - State Operating Permits

40 CFR 60.7 - Notification and Recordkeeping (NSPS)

40 CFR 60.8 - Performance Tests (NSPS)

40 CFR 60.11 - Compliance with Standards and Maintenance Requirements (NSPS)

40 CFR 60.12 - Circumvention (NSPS)

40 CFR 60.13 - Monitoring Requirements (NSPS)

40 CFR 60.19 - General Notification and Reporting Requirements (NSPS)

40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines (NSPS)

62-4.001 through 62-4.160, FAC - Permits Part I General

62-4.210, FAC - Construction Permits

62-4.220, FAC - Operating Permits

62-103.150, FAC - Public Notice of Application and Proposed Agency Action

62-210, FAC - Stationary Sources

62-212.300, FAC - General Preconstruction Review Requirements

III. Part 6b - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

List of Applicable Regulations

62-212.500(5), FAC - Emission Offsets

62-213, FAC - Operation Permits for Major Sources of Air Pollution (Title V)

62-204.240, FAC - Ambient Air Quality Standards

62-296.320(4)(b), FAC - General Visible Emission Standards

62-296.320(2), FAC - General Pollutant Emission Limiting Standards, Objectionable Odor

62-297.310, FAC - General Test Requirements

62-297.620, FAC - Exceptions and Approvals of Alternative Procedures and Requirements

62-296.320(4)(c), FAC - Unconfined Emissions of Particulate Matter

62-297.401, FAC - Compliance Test Methods

III. Part 6b - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 8		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	43	feet	
7. Exit Diameter :	12.6	feet	
8. Exit Temperature :	982	°F	
9. Actual Volumetric Flow Rate :	607567	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.694
		North (km) :	2716.610
14. Emission Point Comment :			
Exit Diameter of 12.6 feet is an equivalent diameter. The stack is actually rectangular with exit dimensions of 10' x 12.5'. Exit Temperature and Actual Volumetric Flow Rate are based on 40F ambient air temperature and 100% load. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric			

III. Part 7a - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Generating Units are proposed for construction.

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : No. 2 fuel oil fired gas turbine.	
2. Source Classification Code (SCC) : 2-01-001-01	
3. SCC Units : Thousand Gallons Burned (all liquid fuels)	
4. Maximum Hourly Rate : 2.21	5. Maximum Annual Rate : 8,840.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.05	8. Maximum Percent Ash :
9. Million Btu per SCC Unit : 138	
10. Segment Comment : Maximum hourly and annual fuel rates are at 40F ambient temperature. The proposed annual fuel rate is based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature. The unit will burn fuel oil with a maximum of 0.05% sulfur by weight.	

III. Part 8 - 1

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - CO			EL
2 - NOX	028		EL
3 - PM			EL
4 - PM10			EL
5 - SO2			EL
6 - VOC			NS

III. Part 9a - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : CO			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	25.24	lb/hour	50.48 tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 25.24 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 50.48 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature during 50% load operation. Hourly emissions are provided by the manufacturer at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
 19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX			
2. Total Percent Efficiency of Control :	55.90	%	
3. Potential Emissions :	93.84	lb/hour	172.00 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions: <div style="text-align: right;">to tons/year</div>			
6. Emissions Factor : Reference : Mfr data			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 132 tpy (Offsets) + 40 tpy (PSD Applicability Emission Threshold) = 172 tpy			
9. Pollutant Potential/Estimated Emissions Comment : Total percent efficiency of control is based on uncontrolled NOx emissions of 170 ppm (0.698 lbs/mmBtu, AP-42). Potential emissions are based on a maximum heat input at 40F ambient temperature. Hourly emissions data is provided by the manufacturer at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature and 172 tpy of NOx.			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
 19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 3

1. Pollutant Emitted : PM			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :		16.62	lb/hour
		33.25	tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:			tons/year
6. Emissions Factor :			
Reference :		Mfr data-simlr units	
7. Emissions Method Code : 2			
8. Calculations of Emissions :			
$0.0545 \text{ lbs/MMBtu} \times 305 \text{ MMBtu/hr} = 16.62 \text{ lbs/hr}$ $16.62 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 33.25 \text{ tons/yr}$			
9. Pollutant Potential/Estimated Emissions Comment :			
Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

III. Part 9b - 3

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :		16.62	lb/hour
		33.25	tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0545 lbs/MMBtu x 305 MMBtu/hr = 16.62 lbs/hr 16.62 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 33.25 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 3
 19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : SO2			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :	15.92	lb/hour	31.84 tons/year
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mass Balance			
7. Emissions Method Code : 2			
8. Calculations of Emissions : $1000 \text{ gal}/138 \text{ MMBtu} \times 7.2 \text{ lbs/gal} \times 0.05\%S \times 2 = 0.0522 \text{ lbs/MMBtu}$ $0.0522 \text{ lbs/MMBtu} \times 305 \text{ MMBtu/hr} = 15.92 \text{ lbs/hr}$ $15.92 \text{ lbs/hr} \times 4000 \text{ hrs/yr} \times \text{ton}/2000 \text{ lbs} = 31.84 \text{ tons/yr}$			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Potential/Estimated Emissions : Pollutant 6

1. Pollutant Emitted : VOC			
2. Total Percent Efficiency of Control :		%	
3. Potential Emissions :		5.55	lb/hour
		11.10	tons/year
4. Synthetically Limited? [X] Yes [] No			
5. Range of Estimated Fugitive/Other Emissions:		to	tons/year
6. Emissions Factor : Reference : Mfr data-simlr units			
7. Emissions Method Code : 2			
8. Calculations of Emissions : 0.0182 lbs/MMBtu x 305 MMBtu/hr = 5.55 lbs/hr 5.55 lbs/hr x 4000 hrs/yr x ton/2000 lbs = 11.1 tons/yr			
9. Pollutant Potential/Estimated Emissions Comment : Potential emissions are based on a maximum heat input of 40F ambient temperature. Allowable annual emission are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

Emissions Unit Information Section 3
 19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 1

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	3.00	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	2.28	lb/hour	4.56 tons/year
5. Method of Compliance :	Fuel consumption, power output monitoring and load curve.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	<p>Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 3 ppmvd @ 15% O2 (2.28 lbs/hr), with the exception that they may increase to 33.15 ppmvd @ 15% O2 (25.24 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.</p>		

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 1

Allowable Emissions 2

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	33.15	ppmvd @ 15% O2	
4. Equivalent Allowable Emissions :	25.24	lb/hour	50.48 tons/year
5. Method of Compliance :	Fuel consumption, power output monitoring and load curve.		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions are based on a maximum heat input at 40F ambient temperature. CO emissions will be limited to 3 ppmvd @ 15% O2 (2.28 lbs/hr), with the exception that they may increase to 33.15 ppmvd @ 15% O2 (25.24 lbs/hr) during part load operation. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature..		

III. Part 9c - 2

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 2

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER
2. Future Effective Date of Allowable Emissions :	
3. Requested Allowable Emissions and Units :	75.00 ppmvd @ 15% O2
4. Equivalent Allowable Emissions :	93.84 lb/hour 172.00 tons/year
5. Method of Compliance :	Initial stack testing, comparing the ratio of water to fuel.
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Potential emissions based on a maximum heat input at 40F ambient temperature. Allowable annual emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature and 172 tpy of NOx.

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Pollutant Information Section 3

Allowable Emissions 1

1. Basis for Allowable Emissions Code :		OTHER	
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :		16.62	lbs/hr
4. Equivalent Allowable Emissions :			
	16.62	lb/hour	33.25 tons/year
5. Method of Compliance :			
Fuel consumption monitoring and mft data for similar units.			
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			
Potential emissions are based on a maximum heat input at 40F ambient temperature. Allowable emissions are based on a proposed operating limit of 4000 hrs/yr at 85F ambient temperature.			

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Unit Only)

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :	20									
2. Basis for Allowable Opacity :	RULE									
3. Requested Allowable Opacity :	<table style="margin-left: auto; margin-right: auto;"><tr><td style="padding: 0 20px;">Normal Conditions :</td><td style="padding: 0 10px;">20</td><td style="padding: 0 10px;">%</td></tr><tr><td style="padding: 0 20px;">Exceptional Conditions :</td><td style="padding: 0 10px;">100</td><td style="padding: 0 10px;">%</td></tr><tr><td style="padding: 0 20px;">Maximum Period of Excess Opacity Allowed :</td><td style="padding: 0 10px;">10</td><td style="padding: 0 10px;">min/hour</td></tr></table>	Normal Conditions :	20	%	Exceptional Conditions :	100	%	Maximum Period of Excess Opacity Allowed :	10	min/hour
Normal Conditions :	20	%								
Exceptional Conditions :	100	%								
Maximum Period of Excess Opacity Allowed :	10	min/hour								
4. Method of Compliance :	Annual testing using EPA Method 9 or a State approved method									
5. Visible Emissions Comment :	General emission standard under 62-296.310(2)(a), FAC. Exceptional conditions opacity limit requested is to allow for excess emissions during startup. As per 62-210.700(1), FAC excess emissions during startup, shutdown or malfunction shall be permitted but in no case exceed two hours in any 24 hour period.									

**J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 3
19.77 MW Combustion Turbine Electric Generating Unit #2

Continuous Monitoring System : Continuous Monitor 1

1. Parameter Code :	2. Pollutant :
3. CMS Requirement :	
4. Monitor Information : Manufacturer : Model Number : Serial Number :	
5. Installation Date :	
6. Performance Specification Test Date :	
7. Continuous Monitor Comment :	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT
TRACKING INFORMATION**

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

- [] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- [] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

-] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] The facility addressed in this application is classified as an EPA major source, and the emission unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
-] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code :		
PM : U	SO2 : U	NO2 : U
4. Baseline Emissions :		
PM :	lb/hour	tons/year
SO2 :	lb/hour	tons/year
NO2 :		tons/year
5. PSD Comment :		

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Figure 4
2. Fuel Analysis or Specification :	Attachment B
3. Detailed Description of Control Equipment :	Attachment C
4. Description of Stack Sampling Facilities :	Attachment D
5. Compliance Test Report :	NA
6. Procedures for Startup and Shutdown :	Attachemnt E
7. Operation and Maintenance Plan :	NA
8. Supplemental Information for Construction Permit Application :	Attachment A
9. Other Information Required by Rule or Statue :	NA

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operations :	NA
11. Alterntive Modes of Operation (Emissions Trading) :	NA

III. Part 13 - 1

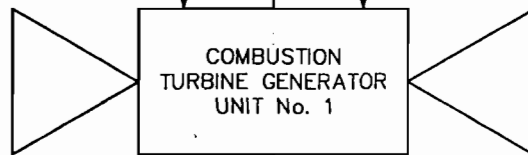
12. Identification of Additional Applicable Requirements :	NA
13. Compliance Assurance Monitoring Plan :	NA
14. Acid Rain Application (Hard-copy Required) :	
NA	Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
NA	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
NA	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
NA	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)

III. Part 13 - 2

EXHAUST FLOW 607,567 a.c.f.m. @ 982° F

#2 FUEL
2210.1 gal/hr
(305 mm btu/hr)
(HHV)

WATER INJECTION
1.485 lbs/sec



22,680 KW
(NOMINAL)

NOTE:
ABOVE CONDITIONS ARE AT AMBIENT TEMPERATURE OF 40°F.
HEAT INPUT (HHV) WILL DECREASE TO 303.16 mm btu/hr @ 85°F.

D.L. 1/20/08 Temp 303 8-12-87 © 11:14

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DES	CIVIL REV	ELEC REV
DWN	MECH REV	STRUC REV
CK'D	APP'D	DATE

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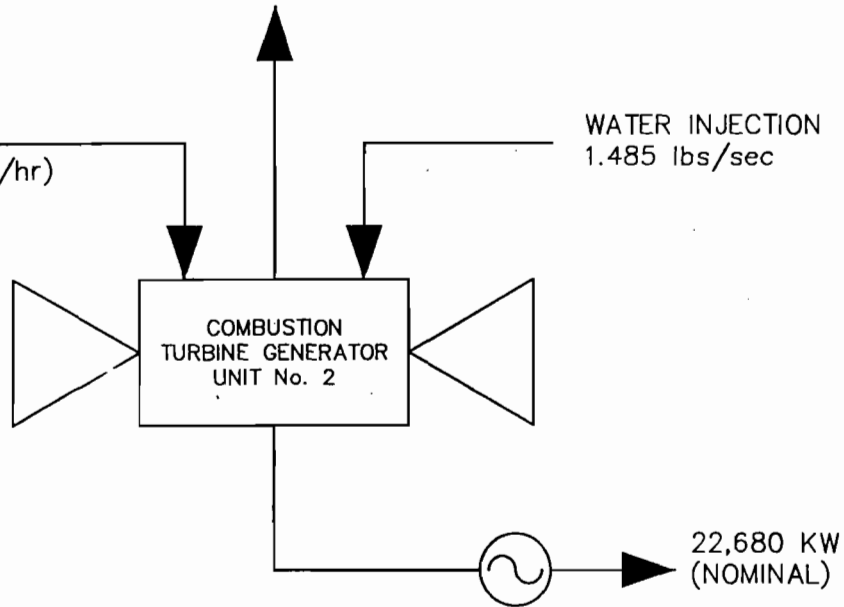
FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 3
UNIT No. 1 PROCESS FLOW DIAGRAM

FILE NO. 005186
W/O
DWG NO
SK-3.

EXHAUST FLOW 607,567 a.c.f.m. @ 982° F

#2 FUEL
2210.0 gal/hr
(305 mm btu/hr)
(HHV)

WATER INJECTION
1.485 lbs/sec



NOTE:
ABOVE CONDITIONS ARE AT AMBIENT TEMPERATURE OF 40°F.
HEAT INPUT (HHV) WILL DECREASE TO 303.16 mm btu/hr @ 85°F.

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FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 4
UNIT No. 2 PROCESS FLOW DIAGRAM

FILE NO 005186 W/O
DWG NO SK-4.

PURPOSE

In order to provide adequate electric generating capacity for the Key West, Florida electric system during peak load conditions and during emergency conditions, the Florida Municipal Power Agency ("FMPA") and the Utility Board of Key West ("Utility Board") are proposing to install two used combustion turbine units at the Utility Board's Stock Island Plant site. FMPA will own and finance the installation of the units and the Utility Board will operate and maintain the units along with the other existing generating units at the Stock Island site. Part of the need for the proposed CT's is to replace the electric generating capacity of the existing 37 MW steam electric generating unit at the Stock Island plant site which is being retired by the Utility Board. As part of the permitting action in this application, the Utility Board will officially retire the steam unit from the State of Florida's emission inventory.

PROJECT LOCATION

The Stock Island Power Plant site comprises roughly 50 acres and is located approximately one mile east of the City of Key West, Monroe County, Florida. The site is a peninsula bounded by Safe Harbor and Hawk Channel. Across Safe Harbor to the west of the site is Cow Key, and north of the site is the main portion of Stock Island. The latitude of the site is 24° 33' 49" N, and the longitude of the site is 81° 44' 03" W. In Universal Transverse Mercator ("UTM") coordinates, the site is located in Zone 17, 425 km East and 2716 km North. The surrounding topography is essentially flat and varies from sea level to approximately 5 feet above mean sea level ("msl") with a small plot of land rising to approximately 10 feet msl. Figure 3-1-1 is a proximity map of Key West and Stock Island.

EXISTING FACILITIES

The existing Stock Island Plant site includes the following electric generating units:

- One 37 MW steam electric generating unit;
- Two 8.8 MW medium speed diesel units;
- Three 2 MW high speed diesel units; and
- One 23.8 MW combustion turbine.

In addition the site includes the fuel storage and handling facilities, electric substation, warehouse, office space, demineralized water storage, and various support facilities. .

Fuel storage in the past included both No. 6 fuel and No. 2 fuel. With the planned retirement, all fuel storage will be converted to No. 2 fuel, with a fuel sulfur content of 0.05 percent.

PROPOSED COMBUSTION TURBINE UNITS

The proposed CT's to be installed are each rated at 19.77 MW at peak load at a ambient temperature of 85° F. The following summarizes the ratings of each unit.

Parameter	Value for Peak Rating
Output @ 85°F/sea level/60%RH, KW	19,770
Heat Rate @ above conditions (LHV), Btu/kwh	14,467
Heat Input @ above conditions (LHV), MMBtu/hr	286
Heat Input @ 40° F/sea level/60% RH (LHV), MMBtu/hr	287.7

The proposed CT's will be located east of the existing combustion turbine as shown in Figure 3-1-2.

The CT's will be in the standard metal enclosure typical of the General Electric Frame 5 series combustion turbines. The building is approximately 28m long and 5.5m wide and 4.88m high from the existing site grade. The exhaust stack will be 12.02m in height above the grade of each units foundation. The foundation will be constructed with a height of 1.07m above the existing site grade. Thus the total height of the stack will be 13.08m above the existing site grade. The stack will be rectangular with dimensions of 3.05m by 3.81m, for a total cross section area of 11.62m².

PROPOSED COMBUSTION TURBINE UNIT EMISSIONS

Emissions from the proposed units are summarized in Table 3-1-1 at the various operating temperatures. Nitrogen oxide emissions will be controlled using water injection. All the emission values shown in Table 3-1-1 assume NO_x emissions will be at 75ppm. Sulfur dioxide emissions will be controlled by using 0.05 percent sulfur fuel. Particulates, carbon monoxide and volatile organic compounds will be controlled by using standard industry operating practices for the units.

PROJECT SCHEDULE

The schedule for installation of the used CT's is anticipated as follows:

Begin Site Work	November 1, 1997
Begin Foundation Construction	December 1, 1997 (or as soon as air emission permit is received)
Deliver CT's to site	February 15, 1998
Begin Testing of CT's	April 15, 1998
Commercial Operation	June 1, 1998

**TABLE 3-1-1
STEWART & STEVENSON
19.7 MW COMBUSTION TURBINE ELECTRIC GENERATORS
MODELING PARAMETERS**

UNIT	Stack Height (m)	Stack Diameter (m)	Load Condition		Heat Input (MMBtu/hr)*	Stack Temperature (K)	Stack Velocity (m/s)	Emission Rate (g/s)				
			Temperature (F)	Load (%)				NO _x	CO	PM	PM ₁₀	SO ₂ **
Stewart & Stevenson	13.08	3.85	40	100	287.7	801	24.65	11.82	0.29	2.10	2.10	1.96
				75	231.44	726.1	17.98	9.51	0.97	1.69	1.69	1.58
				50	185.65	640.2	12.72	7.63	3.18	1.36	1.36	1.26
			59	100	272.6	808.2	23.57	11.20	0.28	1.99	1.99	1.86
				75	219.6	734.6	17.26	9.02	0.93	1.60	1.60	1.50
				50	167.0	651.3	11.64	6.86	2.78	1.22	1.22	1.14
			85	100	254.8	818.3	22.31	10.47	0.26	1.86	1.86	1.74
				75	206.6	747.2	16.52	8.49	0.62	1.51	1.51	1.41
				50	158.6	667.4	11.33	6.52	2.20	1.16	1.16	1.08

*Based on Lower Heating Value (LHV).

**Based on firing No. 2 Oil containing 0.05% sulfur.

NEW SOURCE PERFORMANCE STANDARDS

The CAA required USEPA to promulgate national emission standards for stationary sources of air pollution. The New Source Performance Standards (NSPS) are applicable to specific categories or sources, and apply to new sources of air pollution as well as to modified or reconstructed existing sources. NSPS refer to "affected facilities" and "existing facilities". An affected facility means any apparatus to which a standard is applicable. An existing facility means any apparatus of the type for which a standard has been developed, but was constructed before the date of that standard. NSPS applies to new, modified or reconstructed sources for which a standard applies.

For the purposes of the NSPS, a modification is a physical or operational change to an existing facility that causes an increase in the emission rate (in mass per unit time) of any pollutant to which a standard applies. Reconstruction means the replacement of components of an existing facility whose fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable, entirely new facility. A reconstructed facility becomes an affected facility irrespective of any changes in emission rates.

The NSPS appear in 40 CFR 60. Subpart GG, 40 CFR 60.330-60.335, consists of Standards of Performance for Stationary Gas Turbines. NSPS for gas turbines include standards for NO_x and SO₂ emissions.

NSPS - NO_x

The Standard for NO_x, 40 CFR 60.332, limits NO_x emissions. For gas turbines with heat input at peak load greater than 100 mm Btu/hr, based on the LHV of the fuel fired, the limit is a minimum level of 0.0075 percent by volume on a dry basis corrected to 15% O₂ at ISO conditions, plus an allowance for fuel-bound nitrogen:

$$STD = 0.0075 (14.4/Y) + F$$

where: STD = allowable NO_x emissions, percent by dry volume corrected to 15% O₂;

Y = manufacturer's rated or actual measured heat rate, kilojoules per watt-hour; and

F = allowance for fuel-bound nitrogen.

The minimum 0.0075 percent is increased depending on the particular turbine's rated or measured heat rate at peak load, in inverse proportion to the heat rate (Y) up to a maximum of 14.4 kilojoules per watt-hour (13,658 Btu/kWh) at ISO (59°F ambient temperature, 60% relative humidity). The proposed MS5001R units have a heat input at peak load of approximately 309.9 MMBtu/hr, LHV, and a heat rate of 15,675 Btu/kWh at ISO conditions. Therefore, the maximum heat rate of 13,658 Btu/kWh is exceeded, and the minimum NO_x standard of .0075 percent or 75 ppm applies.

The allowance (F) for fuel-bound nitrogen ranges from:

$$F = 0$$

for fuel-bound nitrogen content of the fuel (N) less than or equal to 0.015 percent by weight.

$$F = 0.04 (N)$$

for N greater than 0.015 and less than or equal to 0.1.

$$F = 0.004 + 0.0067 (N - 0.1)$$

for N greater than 0.1 and less than equal to 0.25.

$$F = 0.005$$

for N greater than 0.25.

A typical ultimate analysis for No. 2 fuel oil shows the nitrogen content to be 0.006% by weight. For this fuel, F would equal zero. NO_x emissions allowed by NSPS for the proposed gas turbines would be 0.0075%, or 75 ppmvd corrected to 15% O₂ and ISO conditions. It should be noted that while a typical analysis of No. 2 fuel oil shows a very small nitrogen content, it varies widely and could affect the standard. NO_x emissions from the proposed turbine will be less than the applicable NSPS through utilization of water injection.

NSPS - SO₂

The Standard for SO₂, 40 CFR 60.333, limits SO₂ emissions from turbines to a maximum of 0.015 percent by dry volume, or 150 ppmvd @ 15% O₂. The Standard also limits fuel sulfur content to a maximum of 0.8 percent by weight.

Sulfur content of the No. 2 fuel oil for use at the Stock Island Plant site will not exceed 0.05 percent by weight. SO₂ emissions from the proposed turbine will be well within this NSPS limit.

CONTEMPORANEOUS EMISSIONS, EMISSION OFF-SETS AND OPERATING LIMITATIONS

Since the installation of the proposed CT units will in part replace the capacity of the existing, to-be-retired, steam generating unit at the Stock Island Plant site, it is appropriate to consider emission off-sets from the steam unit in permitting the CT units. Application of emission off-sets was discussed with the FDEP and a determination was received from FDEP in a letter dated August 22, 1997. This determination indicates that in order to consider emission off-sets, FDEP requires "an analysis of contemporaneous emissions, i.e. any other increases and decreases in actual emissions at the source that are contemporaneous (five years prior to submission of a complete application) with the particular change", as stated in FDEP's rule 62-212.400(2)(e)3. Units that were permitted prior to the five-year period (September 1992) do not need to be included in the contemporaneous analysis. This includes the medium-speed diesel units and the high-speed diesel units. The two units that contemporaneous applies to are: 1) the relocated gas turbine that was moved to the Stock Island Plant site in 1996 from the old Key West power plant site; and 2) the Stock Island Steam Unit, which is proposed for retirement.

The gas turbine relocation was permitted by FDEP in September 1995. This relocation permit was a PSD permit for the pollutant NO_x and non-PSD for SO₂, Particulate (PM), PM₁₀ and CO emissions. Since contemporaneous applies to only non-PSD pollutants, the only contemporaneous emissions are emissions of SO₂, PM, PM₁₀ and CO from the relocated gas turbine during 1996 and the first seven months of 1997. Table 3-3-1 summarizes the actual emissions during this time period for the combustion turbine. The average emissions during the 1996 and 1997 time period were:

Average Annual SO ₂ Emissions	0.12 tons/year
Average Annual Particulate Emissions	0.13 tons/year
Average Annual PM ₁₀ Emissions	0.13 tons/year
Average Annual CO Emissions	0.45 tons/year

With respect to the steam unit, Table 3-3-2 summarizes the annual operations and emission for the period 1987 through 1997. FDEP has reviewed this information and provided a preliminary determination in a letter dated August 22, 1997, indicating that the contemporaneous emissions are considered to be the average of 1993 and 1994 emissions, which were the last two years of normal operations for the steam unit. Therefore, the contemporaneous emissions that can be used for off-sets are:

SECTION 3-3

Average Annual NO _x Emissions	134.5 tons/year
Average Annual SO ₂ Emissions	729 tons/year
Average Annual Particulate Emissions	30.5 tons/year
Average Annual PM ₁₀ Emissions	30.5 tons/year
Average Annual CO Emissions	10.1 tons/year

Therefore, the following table provides the calculated allowable emission off-sets taking into account the contemporaneous emission increases of the relocated gas turbine and the contemporaneous emission decreases of the steam unit.

Contemporaneous Emission Increases and (Decreases) (tons/year)			
Pollutant	Gas Turbine	Steam Unit	Allowable Emission Off-Set (tons/year)
NO _x	-	(134.5)	(134.5)
SO ₂	0.12	(729.0)	(728.88)
PM	0.13	(30.5)	(30.37)
PM ₁₀	0.13	(30.5)	(30.37)
CO	0.45	(10.1)	(9.65)

Taking into account these emission off-sets and the desire to permit the proposed two CT's as non-PSD sources, the emissions from the CT's must be less than the following annual emission levels:

Pollutant	Allowable Emission Off-Set (tons/year)	Emission Threshold for PSD Applicability (tons/year)	Total Allowable Emissions (tons/year)
NO _x	134.5	40	< 174.5
SO ₂	728.9	40	< 768.9
PM	30.4	25	< 55.4
PM ₁₀	30.4	15	< 45.4
CO	9.7	100	< 109.7

**CONTEMPORANEOUS EMISSION, EMISSION
OFF-SETS AND OPERATING LIMITATIONS**

In order to assure compliance with the above allowable emission limits, the following limitations are proposed for each unit and the combined units at 40°F ambient temperature and the maximum heat input of 305 MMBtu/hr (HHV):

	Short-Term Limits (lbs/hr) For Each Unit	Annual Limits (tons/yr) ^[1] For Each Unit	Combined Annual Limits (tons/yr) ^[3] For Both Units
NO _x	93.84	172.00	172.00
CO ^[2]	25.24	50.48	100.96
PM	16.62	33.25	55.00
PM ₁₀	16.62	33.25	45.00
SO ₂	15.92	31.84	63.68
<p>[1] Based on a proposed annual operating hour limitation of 4,000 hours per year total for both units at 85°F ambient temperature and 86 lbs/hr NO_x emission rate. The 86 lbs/hr is based on a heat input of 303 mmBtu/hr and a combustion turbine output of 19.77 MW at 85°F.</p> <p>[2] Based on 50% load operating conditions.</p> <p>[3] Combined annual emission limits are dependent on the total allowable emissions from page 3-3-2 or are equal to the single unit annual emission limit multiplied by two.</p>			

The most restrictive annual operating limit for all pollutants for the combined emissions from both units is NO_x tons per year. We propose limiting each unit to 4,000 hours of operation and the combined operation of both units to 4,000 hours.

Note that the short-term limits for each unit are based on a conservative maximum fuel heat input of 305 MMBtu/hr, which is at an ambient temperature of 40°F. Actual operation of the units at typical ambient temperatures of 85°F would reflect a reduced fuel heat input of 303 MMBtu/hr and reduced emissions. This is the reason for using a slightly lower pounds per hour NO_x value of 86 lbs/hr in calculating the annual tons per year NO_x limit of 172 tons per year.

TABLE 3-3-1

STOCK ISLAND GAS TURBINE
Annual Operations
1996 - 1997

Year	Gas Turbine ^[1] Gross Generation (KWH)	Gas Turbine ^[1] Fuel Consumed (gallons)	Gas Turbine ^[1] Fuel Consumed (pounds)	Gas Turbine ^[1] Fuel Heat Value (Btu/gal.)	Gas Turbine Air Emissions (tons/yr)			
					SO ₂ ^[2]	Particulates ^[3]	PM ₁₀ ^[3]	CO ^[4]
1996	259,000	22,208	156,300	136,228	0.08	0.1	0.1	0.3
1997	302,000	45,851	320,891	135,887	0.16	0.2	0.2	0.6
Average					0.12	0.13	0.13	0.45

[1] Data based on calendar 1996 year-end production report and 1997 year-to-date production report (through July 1997) for Stock Island Gas Turbine unit.

[2] Based on a fuel sulfur content of 0.05 percent sulfur.

[3] Based on an emission rate of 0.0545 lbs. per MMBtu.

[4] Based on an emission rate of 0.1938 lbs. per MMBtu.

TABLE 3-3-2

**STOCK ISLAND STEAM UNIT
Annual Operations
1987 - 1996**

Year	Steam Unit ⁽¹⁾	Steam Unit ⁽¹⁾	Steam Unit ⁽¹⁾	Steam Unit ⁽²⁾	Steam Unit				
	Annual Gross Generation (KWH)	Annual Fuel Consumed (gallons)	Annual Fuel Consumed (pounds)	Annual Fuel Heat Value (Btu/gal.)	Air Emissions (tons/yr)				
					No _x ⁽³⁾	SO ₂ ⁽⁴⁾	Particulates ⁽⁵⁾	PM ₁₀ ⁽⁵⁾	CO ⁽⁶⁾
1987	61,456,000	5,580,306	45,840,107	151,315	187	1008	42.2	42.2	14.0
1988	68,766,000	5,918,157	49,065,295	151,315	198	1079	44.8	44.8	14.8
1989	128,378,000	10,969,883	89,578,431	151,315	367	1971	83.0	83.0	27.4
1990	90,897,000	7,911,166	65,235,472	151,315	265	1435	59.9	59.9	19.8
1991	113,731,000	9,865,331	81,181,809	151,315	330	1786	74.6	74.6	24.7
1992	65,897,000	5,883,816	48,353,200	151,178	197	1064	44.5	44.5	14.7
1993	40,961,000	3,805,456	31,315,097	151,315	127	689	28.8	28.8	9.5
1994	44,567,000	4,239,081	34,934,270	151,470	142	769	32.1	32.1	10.6
1995	0	0	0	0	0	0	0.0	0.0	0.0
1996	0	0	0	0	0	0	0.0	0.0	0.0
1997	0	0	0	0	0	0	0.0	0.0	0.0
Ten Year Average					181	980	41	41	14

⁽¹⁾ Data based on calendar year end production report for Stock Island Steam Unit.

⁽²⁾ Average #6 fuel heat value has been assumed at 151,315 Btu/gal based on typical fuel delivery values, except for years 1992, 1993 and 1994 which are based on actual fuel heating value measurements.

⁽³⁾ Based on an emission rate of 67 lbs. of NO_x per 1000 gallons of fuel burned.

⁽⁴⁾ Based on a fuel sulfur content of 2.2 percent.

⁽⁵⁾ Based on an emission rate of 0.1 pounds per MM Btu.

⁽⁶⁾ Based on an emission rate of 5 lb. per 1000 gal. of fuel burned.

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SECTION 3-4

AIR QUALITY IMPACT ASSESSMENT

INTRODUCTION

The addition of the two 19.7 MW combustion turbine electric generating units, upon the approval of the retirement of the 37 MW Steam Electric Generator, at the Utility Board's Stock Island Power Plant will constitute a construction/modification of a major source. The primary objective of this air quality assessment is to demonstrate compliance with National Ambient Air Quality Standards (NAAQS).

Dispersion modeling has been conducted to determine the significance of the impacts from the two used 19.77 MW CT's and the existing sources on the regional ambient air quality. This assessment presents the results of the comprehensive air quality evaluation which indicates that the addition of the CT's will not cause or contribute to a violation of the NAAQS.

ENVIRONMENTAL BASELINE CONDITIONS

TOPOGRAPHICAL FEATURES

The Stock Island Plant site is located on the southern end of Stock Island and to the east of Key West, as shown in Figure 3-1-1. The surrounding islands are essentially flat. The site is at approximately 2 m msl. One point on Key West, seven km from the project site, rises to 3 m. Since the variation in terrain is minimal and is less than the height of the exhaust stacks on the CT's (13.08 m), the use of a flat terrain dispersion model is appropriate for the analysis.

METEOROLOGICAL LAND USE CLASSIFICATION

The meteorological land use classification is used to determine the profile of the vertical wind speed and associated mechanical turbulence due to surface roughness. The wind speed profile is then used to extrapolate wind speeds at various heights for use in the estimates of atmospheric pollutant dispersion. USEPA's *Guideline on Air Quality Models* stipulates that the land use within the total area circumscribed by a 3-km radius around the source can be classified using Auer's scheme of meteorological land use typing proposed in the *Journal of Applied Meteorology* (1976). Auer's classifications are as follows:

Type	Description
I1	Heavy Industrial
I2	Light/Moderate Industrial
C1	Commercial
R1	Common Residential
R2/R3	Compact Residential
R4	Estate Residential
A1	Metropolitan Natural
A2	Agricultural Rural
A3/A4	Undeveloped
A5	Water Surfaces

According to the Guidelines, if more than 50 percent of the total area in the circle is classified by land use as I1, I2, C1, R2, or R3, urban dispersion coefficients should be used in the modeling, otherwise, appropriate rural dispersion coefficients should be used. A USGS 7.5-minute series topographical map was used to estimate the land use around the project site as more than 50% in type "A5: Water Surfaces". Therefore, default rural dispersion coefficients were used in the analysis.

BACKGROUND AMBIENT AIR QUALITY

Stock Island is designated attainment or unclassified for all criteria pollutants. This designation is consistent with several features of the area. First, there are no large sources of air pollution nearby. Second, there is no significant terrain which could trap pollution and cause exceedances of the NAAQS. Third, the prevailing winds are east and southeast bringing clean air in the absence of sources in those directions from Key West.

MODELING METHOD

MODEL SELECTION

Mathematical models are the primary tools for air quality assessments to simulate the dispersion of the effluent plumes into the atmosphere. It is, therefore, important to choose models which will appropriately simulate the actual physical situation in the region of the project. The choice of models is primarily based on two considerations: 1) the level of detail and accuracy needed for the analysis, and 2) the topographical characteristics of the area. Analyses requiring extensive detail and accuracy require increasingly sophisticated models.

An advanced model, USEPA's Industrial Source Complex-Short Term (ISCST), was used for this air dispersion analysis. The most current version, ISCST3, was utilized for the air modeling. This steady-state Gaussian plume model contains

algorithms for predicting area and volume source impacts, modified downwash algorithms for non-buoyant plumes, and an Huber-Snyder algorithm which incorporates wind-direction-specific building heights and widths similar to the Schulman-Scire algorithm. This software also allows each model run to include several averaging intervals and multiple receptors.

METEOROLOGICAL DATA

The refined analysis presented herein used five complete years (1987 through 1991) of wind and stability data consisting of actual surface observations in Key West and twice-per-day upper air soundings concurrently recorded from a station in Miami. Default wind speed profile exponents (indicative of increasing wind speed with increasing distance from the surface) and vertical potential temperature gradients (indicative of decreasing temperature with increasing distance above the surface) were used in the modeling. Five years of meteorology were processed using unrestricted source parameters. After reviewing the first-high concentration results for each of the five years, it was determined that 1987 had the highest concentration, and therefore, would be used in further analyses (Table 3-4-1).

SOURCE DATA

Emissions of NO_x from the CT units will be controlled by water injection and SO_2 emissions will be controlled by firing No. 2 fuel with a sulfur content not exceed 0.05 percent. According to design, each CT will have a single exhaust. The modeling parameters presented in Table 3-1-1 represent the proposed units operating at 40°F, 59°F and 85°F, and 100%, 75% and 50% of capacity.

The source parameters for the existing sources at the Stock Island Power Plant are presented in Table 3-4-2.

STACK HEIGHT CONSIDERATIONS

According to 40 CFR 51.100(hh), a good engineering practice (GEP) stack height is the greater of:

65 meters

or

$$H_g = H_b + 1.5L$$

where: H_g = the GEP stack height;
 H_b = the height of the dominant nearby building; and
 L = the lesser dimension of the height or projected width of the dominant nearby building.

As shown in Tables 3-1-1 and 3-4-2, the stacks of the proposed 19.7 MW CT's and the stacks of the existing units are less than 65 m. Therefore, the stacks conform to the regulations and guidelines. This, in combination with the building

dimensions indicate the potential for building downwash. For this reason, building downwash analysis was included in the dispersion modeling.

Structures tend to disrupt air flow across a region and create turbulence around the structure. This disruption is referred to as the building wake effect or building downwash effect. This effect can result in high local ground-level pollutant concentrations if the emission point of the source is not far enough above or away from the structure to avoid the effect. A stack constructed at a height approximately 2.5 times the height of a nearby building is not likely to be affected by structural turbulence. If a stack is located within 5L of a building, and the building height is greater than approximately 40 percent of the stack height, then the stack is considered to be affected by building downwash.

The ISCST model used in the ambient air quality assessment uses a combination of two algorithms for predicting building wake effects. The Schulman-Scire algorithm is applicable when the stack height is less than $1.5 H_b$ and takes into account wind-direction-specific building heights and widths when determining wake effects. The Huber-Snyder algorithm is applicable when the stack height is between $1.5 H_b$ and $2.5 H_b$ and uses the actual building height and maximum projected width for all wind directions. Software packages are available to determine the values of the building heights and widths which can influence each stack. Building Profile Input Program (BPIP), has been used for this analysis to estimate the wake effects caused by the structures at the Stock Island Plant site.

All significant structures and units at the Stock Island Plant site were included in the downwash analysis. With the large number of buildings and units on-site, the default values in the BPIP program had to be changed in order to accommodate all the inputs. The layout of the buildings and units can be viewed in Figure 3-1-2. The results of BPIP can be found in the input for the modeling run (Attachment 1).

RECEPTOR NETWORKS

The receptor grid for the refined air quality analysis consists of a polar coordinate system centered at 425.65 km East and 2716.67 km North, the center of the Stock Island Plant site. The grid system consisted of 36 direction radials separated by 10-degree increments. Receptors were placed at ground level at 150, 200, 250, 300, 400, 500, 750 and 1000m intervals, and along the Plant's property boundary. This grid analysis provided sufficient resolution and downwind coverage to identify the areas of expected maximum concentrations.

RESULTS OF MODELING ANALYSIS

REFINED ANALYSIS

ISCST was used with real-time meteorological data to account for the consistency of the meteorology from the east and southeast. Further, the influence of structural downwash on the exhaust plumes was included in the refined calculations.

NAAQS have been established as a guide to assist in the evaluation of a source's impact on ambient air quality (40 CFR 51.165(b)(2)). Air quality impacts below the Standards are not considered to cause or contribute to any violations of ambient air quality. These NAAQS's are presented in Table 3-4-3 for the pollutants assessed in this analysis.

The preliminary analysis that was conducted to determine the year of meteorology (1987) which resulted in the significant impact (Table 3-4-1), also showed that the highest impacts resulting from all sources, in general, were in a northeasterly direction. This was found for both annual impacts for NO_x and for 24-hour impacts for PM and PM_{10} emissions. Impacts for SO_2 and CO were well below NAAQS for all averaging intervals. In general, the maximum impacts for NO_x and PM/ PM_{10} were in a sector from 60° to 70° . In this direction the property line of the Stock Island Plant site is at the edge of South Bay, as shown in the aerial photo, Figure 3-4-1. This area is a restricted area designated and marked as "No Trespassing" by the Utility Board. Beyond this point the nearest receptor in the direction of maximum impacts is the marina located approximately 350 meters across South Bay. It was discovered during these evaluations that the high concentrations were not caused by the proposed combustion turbine units. Instead, the three high speed diesels were creating high impacts due to their short stacks and orientation with respect to the medium-speed diesel plant building. Table 3-4-4 presents the first and second high concentrations for the site when the high speed units are not included.

In order to determine compliance in the direction of the marina across South Bay, impacts at distances of 150, 200, and 250 meters were evaluated (see Figure 3-4-1). High values for both NO_x annual impacts and PM/ PM_{10} 24-hour impacts were seen at the 150m and 200m distances. However, these impacts occur in the middle of South Bay. Impacts at 250m, well short of the marina, decreased significantly from those observed at 150m and 200m, indicating a decay of downwash concentrations with distance. At this distance, the NO_x impacts of 51.96 ug/m^3 are well below the standard. The PM impacts for 24-hour are also well below at 185.11 ug/m^3 for the first high. PM_{10} impacts were found to be 171.00 ug/m^3 for the first high and 117.87 ug/m^3 for the second high. After reviewing all five years of data (1987 through 1991), it is appropriate to consider the high second high (HSH) concentration, which would be 117.87 ug/m^3 in 1987. Modeling runs for NO_x , PM and PM_{10} at 250m are included in Section IV. A model run was performed to determine if there were any significant impacts along the populated land areas to the north, west and south of the plant site. All

SECTION 3-4

maximum impacts were found to occur to the east and north-east in South Bay. A table of concentration results for all pollutants at 250m and their NAAQS standards can be found in Table 3-4-5. This table demonstrates that the addition of the proposed CT's at the Stock Island Plant site will comply with NAAQS, considering all existing sources at the plant site.

TABLE 3-4-1
AMBIENT AIR QUALITY STANDARDS
NO_x (UNRESTRICTED)
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT)

ANNUAL		
YEAR	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
1987	275.84	151.37
1988	192.49	126.39
1989	146.59	145.64
1990	168.18	140.86
1991	245.77	167.52
24-HOUR^[1]		
YEAR	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
1987	6929.42	6589.71
1988	5759.37	5604.04
1989	6658.76	5643.57
1990	6547.92	5047.76
1991	6390.42	6068.14

[1] 24-hour concentrations are only used for a reference for other pollutants.
There are no 24-hour standards for Nox.

**TABLE 3-4-2
EXISTING STOCK ISLAND EMISSION SOURCE
MODELING PARAMETERS**

UNIT	Stack Height (m)	Stack Diameter (m)	Load Condition		Heat Input (MMBtu/hr)*	Stack Temperature (K)	Stack Velocity (m/s)	Emission Rate (g/s)				
			Temperature (F)	Load (%)				NO _x	CO	PM	PM ₁₀	SO ₂ **
EXISTING												
High Speed Diesel #1	4.88	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15
High Speed Diesel #2	4.88	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15
High Speed Diesel #3	4.88	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15
MSD Stack	30.49	1.74			85	588.6	30.5	20.27	6.76	1.08	1.08	0.56
Gas Turbine	11.77	3.93	59	100	311.6	56	25.2	12.05	1.96	2.27	2.27	2.122
				75	249.3	676	18	9.64	5.48	2.27	2.27	1.698
				50	188.5	598	15.9	7.29	8.05	2.27	2.27	1.283
			90	100	283	766	24	10.94	1.33	2.27	2.27	1.927
				75	226.4	729	18.3	8.76	3.27	2.27	2.27	1.542
				50	171.2	605	15.1	6.62	5.37	2.27	2.27	1.167

*Based on Lower Heating Value (LHV).

**Based on firing No. 2 Oil containing 0.05% sulfur.

**TABLE 3-4-3
NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Interval	Primary Standard	Secondary Standard
NO _x	Annual	100	Same as Primary
CO	1-Hour	40,000	Same as Primary
	8-Hour	10,000	Same as Primary
PM	24-Hour	260	150
	Annual	75	60
PM ₁₀	24-Hour	150	Same as Primary
	Annual	50	Same as Primary
SO ₂	3-Hour	-	1,300
	24-Hour	365	-
	Annual	80	-

TABLE 3-4-4
UNRESTRICTED (1987)
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT and HIGH SPEED DIESELS)

ANNUAL		
POLLUTANT	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
NO _x	1.02	0.95
PM	0.065	0.060
PM ₁₀	0.065	0.060
24-HOUR		
POLLUTANT	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
NO _x	-	-
PM	2.47	1.16
PM ₁₀	2.47	1.16

TABLE 3-4-5
UNRESTRICTED (1987)
RECEPTORS AT 250m
FIRST AND SECOND HIGH CONCENTRATIONS
AT 40° F AMBIENT TEMPERATURE
(ALL UNITS, except STEAM UNIT)

ANNUAL				
POLLUTANT	1st High (ug/m³)		2nd High (ug/m³)	
	Concentration	Standard	Concentration	Standard
NO _x	51.96	100	51.80	100
PM	6.08	75	6.06	60
PM ₁₀	5.61	50	5.60	50
SO ₂	0.87	80	0.86	-
24-HOUR				
PM	185.11	260	127.59	150
PM ₁₀	171	150	117.87	150
SO ₂	26.44	365	18.23	-
CO	414.29	10,000 ^[1]	285.56	10,000 ^[1]
3-HOUR				
SO ₂	46.03	-	45.34	1,300
CO	720.91	40,000 ^[2]	710.25	40,000 ^[2]

[1] 8-hour standard

[2] 1-hour standard

STARTING
 TITLEONE 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/26/17
 CO TITLETWO ANN 24&3-HR - ALL - SS UNITS - NOx - 40F & 100%
 MODELOPT DFAULT CONC RURAL
 AVERTIME 3 24 PERIOD
 CO POLLUTID OTHER
 DCAYCOEF .000000
 RUNORNOT RUN
 CO FINISHED

STARTING
 LOCATION HSD1 POINT 56.6 63.2 0.0
 SO LOCATION HSD2 POINT 55.6 55.6 0.0
 LOCATION HSD3 POINT 54.7 48.4 0.0
 LOCATION MSD POINT -7.2 35.88 0.0
 SO LOCATION GT POINT 26.2 -56.8 0.0
 LOCATION SS1GT POINT 3.5 -54.0 0.0
 LOCATION SS2GT POINT 48.9 -59.6 0.0

** POINT: SRCID QS HS TS VS DS
 SRCPARAM HSD1 8.98 4.88 660.8 20.38 0.76
 SRCPARAM HSD2 8.98 4.88 660.8 20.38 0.76
 SO SRCPARAM HSD3 8.98 4.88 660.8 20.38 0.76
 SRCPARAM MSD 20.27 30.49 588.6 30.5 1.74
 SRCPARAM GT 10.94 11.77 766 24.0 3.93
 SO SRCPARAM SS1GT 11.82 13.08 801.0 24.65 3.85
 SO SRCPARAM SS2GT 11.82 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14
 BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79
 BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
 BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
 BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
 BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
 BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79
 BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
 BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
 BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
 BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79

SO BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO BUILDHGT HSD3	3.14	3.14	3.14	3.14	3.14	3.14
BUILDHGT HSD3	3.14	3.14	3.14	3.14	5.79	5.79
BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO BUILDWID HSD3	12.30	12.53	12.37	11.80	35.76	29.40
BUILDWID HSD3	27.09	23.96	25.29	28.10	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69
SO BUILDWID HSD3	12.30	12.53	12.37	11.80	10.88	9.62
BUILDWID HSD3	8.07	6.28	4.30	3.73	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69

BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	15.26	15.26
SO BUILDHGT MSD	15.26	10.97	16.15	16.15	16.15	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
BUILDWID MSD	27.09	23.96	25.29	28.10	11.46	11.75
SO BUILDWID MSD	12.11	30.35	18.94	18.93	18.34	30.59
SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.92	29.40
BUILDWID MSD	27.09	23.96	25.29	28.10	30.06	31.10
BUILDWID MSD	31.20	30.35	28.58	32.08	30.84	30.59

BUILDHGT GT	12.19	12.19	12.19	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDWID GT	26.98	25.74	26.49	20.04	22.92	25.52
BUILDWID GT	27.36	28.70	28.79	28.52	28.78	28.08
SO BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90
BUILDWID GT	6.97	11.73	16.13	20.04	22.92	25.52
BUILDWID GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90

BUILDHGT SS1GT	12.19	0.00	0.00	0.00	0.00	4.88
SO BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT SS1GT	4.88	0.00	0.00	0.00	0.00	0.00
BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	0.00	0.00	0.00	12.19	12.19
BUILDWID SS1GT	26.98	0.00	0.00	0.00	0.00	25.93
SO BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID SS1GT	26.70	0.00	0.00	0.00	0.00	0.00
BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	27.74	28.70	28.79	28.52	28.78	28.17
SO BUILDWID SS1GT	26.70	0.00	0.00	0.00	26.98	27.39

SO BUILDHGT SS2GT	4.88	4.88	12.19	12.19	12.19	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88

SO BUILDWID SS2GT	6.62	11.34	26.49	27.32	27.32	25.52
SO BUILDWID SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID SS2GT	26.63	24.36	21.35	17.69	13.50	8.90
BUILDWID SS2GT	6.62	11.34	15.72	19.62	22.92	25.52
SO BUILDWID SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID SS2GT	26.63	24.36	21.35	17.69	13.50	8.90

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)

SRCGROUP ALL
FINISHED

RE STARTING

GRIDPOLR POL STA
GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)

RE GRIDPOLR POL ORIG 0.0 0.0
GRIDPOLR POL DIST 250. 300. 400. 500. 750. 1000.
GRIDPOLR POL GDIR 36 10.0 10.0
RE GRIDPOLR POL END

DE FINISHED

ME STARTING

ME INPUTFIL KYWPRE87.LST
ANEMHGHT 6.700 METERS
SURFDATA 12836 1987 KEY WEST
ME UAIRDATA 12844 1987 MIAMI

FINISHED

OU STARTING

OU RECTABLE ALLAVE FIRST-SIXTH
FINISHED

* SETUP Finishes Successfully ***

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)					
	250.00	300.00	400.00	500.00	750.00	1000.00
10.00	17.02681	11.63815	9.79325	9.21617	6.55317	4.74447
20.00	7.79132	5.57547	5.31264	5.14246	3.89507	2.94150
30.00	3.53466	4.03979	5.03654	5.23920	4.34424	3.44279
40.00	14.82171	10.29156	7.81762	7.12423	5.17474	3.84060
50.00	32.54061	20.07133	11.64790	9.04186	5.50435	3.80723
60.00	32.39960	21.71838	13.33730	10.49065	6.50449	4.64523
70.00	15.80548	11.18881	7.36982	5.99111	3.94916	2.92953
80.00	6.06414	4.64220	3.56009	3.19638	2.45011	1.99313
90.00	2.86773	2.17732	1.87456	1.81393	1.50225	1.24952
100.00	3.31363	2.28484	2.02985	1.83070	1.34589	1.07481
110.00	8.06756	5.09103	3.59404	2.82028	1.97416	1.60642
120.00	11.01659	8.50911	7.36060	6.00104	3.69958	2.61457
130.00	13.30986	11.62139	10.35792	8.91289	6.06108	4.37497
140.00	13.56301	13.13065	12.35645	10.95260	7.78843	5.77038
150.00	16.99749	15.79200	13.58861	11.89626	8.90850	7.02247
160.00	21.27752	20.43283	18.33286	16.08456	11.34686	8.48880
170.00	22.57739	23.86657	23.02662	20.64592	14.95612	11.33513
180.00	15.40306	17.10459	18.54108	18.31424	15.56208	12.82111
190.00	13.15783	14.12534	14.67482	14.19954	11.89991	9.79976
200.00	13.89652	14.42716	14.42631	13.72514	11.38753	9.38090
210.00	16.34905	17.06827	17.11230	16.24259	13.36607	11.00810
220.00	16.78186	17.53683	17.63972	16.78844	13.81647	11.29502
230.00	18.73729	19.77155	20.15797	19.34324	16.09121	13.24755
240.00	17.59551	18.45625	18.67566	17.86398	14.92584	12.44256
250.00	13.77618	14.24715	14.17245	13.45947	11.28188	9.52712
260.00	10.33401	10.74586	10.84515	10.42931	8.87188	7.48465
270.00	8.31312	8.96941	9.70350	9.87040	9.23266	8.20433
280.00	9.38701	11.01000	12.73009	12.98457	11.48713	9.66525
290.00	12.50666	14.80817	17.28731	17.77089	15.83340	13.29235
300.00	19.80802	24.26662	29.05968	30.51776	28.49247	24.64508
310.00	35.72259	44.37862	51.96173	49.94806	36.65905	26.72117
320.00	51.79594	49.49489	44.56731	38.19839	26.80960	20.30783
330.00	45.02540	39.06503	38.97156	35.15905	24.58897	17.76233
340.00	44.18866	34.27954	31.05183	25.12472	14.95336	10.20034
350.00	34.85368	21.75142	16.96773	14.07102	9.33016	6.86664
360.00	20.85727	13.69483	11.84307	11.03948	8.01376	6.05699

MODELOPTS: CONC

RURAL FLAT

DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS 51.96173 AT (	-306.42, 257.11,	0.00, 0.00)	GP POL
	2ND HIGHEST VALUE IS 51.79594 AT (	-160.70, 191.51,	0.00, 0.00)	GP POL
	3RD HIGHEST VALUE IS 49.94806 AT (	-383.02, 321.39,	0.00, 0.00)	GP POL
	4TH HIGHEST VALUE IS 49.49489 AT (	-192.84, 229.81,	0.00, 0.00)	GP POL
	5TH HIGHEST VALUE IS 45.02540 AT (	-125.00, 216.51,	0.00, 0.00)	GP POL
	6TH HIGHEST VALUE IS 44.56731 AT (	-257.12, 306.42,	0.00, 0.00)	GP POL

** RECEPTOR TYPES:

- GC = GRIDCART
- GP = GRIDPOLR
- DC = DISCCART
- DP = DISCPOLR
- BD = BOUNDARY

STARTING

TITLEONE 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/26/97

CO TITLETWO ANN 24&3-HR - ALL - SS UNITS - PM - 40F & 100%

MODELOPT DFAULT CONC RURAL

AVERTIME 3 24 PERIOD

CO POLLUTID OTHER

CO DCAYCOEF .000000

RUNORNOT RUN

CO FINISHED

STARTING

LOCATION	HSD1	POINT	56.6	63.2	0.0
SO LOCATION	HSD2	POINT	55.6	55.6	0.0
LOCATION	HSD3	POINT	54.7	48.4	0.0
LOCATION	MSD	POINT	-7.2	35.88	0.0
SO LOCATION	GT	POINT	26.2	-56.8	0.0
SO LOCATION	SS1GT	POINT	3.5	-54.0	0.0
LOCATION	SS2GT	POINT	48.9	-59.6	0.0

** POINT:	SRCID	QS	HS	TS	VS	DS
SRCPARAM	HSD1	1.05	4.88	660.8	20.38	0.76
SRCPARAM	HSD2	1.05	4.88	660.8	20.38	0.76
SO SRCPARAM	HSD3	1.05	4.88	660.8	20.38	0.76
SRCPARAM	MSD	1.08	30.49	588.6	30.5	1.74
SRCPARAM	GT	2.27	11.77	766	24.0	3.93
SO SRCPARAM	SS1GT	2.10	13.08	801.0	24.65	3.85
SO SRCPARAM	SS2GT	2.10	13.08	801.0	24.65	3.85

BUILDHGT	HSD1	3.14	3.14	3.14	7.62	10.97	10.97
SO BUILDHGT	HSD1	10.97	10.97	3.14	3.14	3.14	3.14
BUILDHGT	HSD1	3.14	3.14	3.14	3.14	3.14	3.14
BUILDHGT	HSD1	3.14	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT	HSD1	3.14	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT	HSD1	3.14	3.14	5.79	5.79	5.79	5.79
BUILDWID	HSD1	12.30	12.53	12.37	37.48	30.82	29.40
SO BUILDWID	HSD1	27.09	23.96	4.40	3.63	5.65	7.50
SO BUILDWID	HSD1	9.12	10.41	11.47	12.16	12.47	12.40
BUILDWID	HSD1	12.30	12.53	12.38	11.85	10.95	9.71
BUILDWID	HSD1	8.17	6.38	4.40	3.63	5.65	7.50
SO BUILDWID	HSD1	9.12	10.41	26.37	22.62	18.18	15.69

SO BUILDHGT	HSD2	3.14	3.14	3.14	7.62	10.97	10.97
SO BUILDHGT	HSD2	10.97	10.97	10.97	3.14	3.14	3.14
BUILDHGT	HSD2	5.79	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT	HSD2	3.14	3.14	3.14	3.14	3.14	3.14
SO BUILDHGT	HSD2	3.14	3.14	3.14	3.14	3.14	3.14
BUILDHGT	HSD2	5.79	5.79	5.79	5.79	5.79	5.79
BUILDWID	HSD2	12.30	12.53	12.37	37.48	30.82	29.40
SO BUILDWID	HSD2	27.09	23.96	25.29	3.45	5.49	7.37
BUILDWID	HSD2	31.38	10.41	11.47	12.16	12.47	12.40
BUILDWID	HSD2	12.30	12.53	12.37	11.80	10.88	9.62
SO BUILDWID	HSD2	8.23	6.46	4.50	3.45	5.49	7.37
SO BUILDWID	HSD2	31.38	29.32	26.37	22.62	18.18	15.69

SO BUILDHGT	HSD3	3.14	3.14	3.14	3.14	7.62	10.97
BUILDHGT	HSD3	10.97	10.97	10.97	10.97	5.79	5.79

SO	BUILDHGT	HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO	BUILDHGT	HSD3	3.14	3.14	3.14	3.14	3.14	3.14
	BUILDHGT	HSD3	3.14	3.14	3.14	3.14	5.79	5.79
	BUILDHGT	HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO	BUILDWID	HSD3	12.30	12.53	12.37	11.80	35.76	29.40
	BUILDWID	HSD3	27.09	23.96	25.29	28.10	32.60	32.48
	BUILDWID	HSD3	31.38	29.32	26.37	22.62	18.18	15.69
SO	BUILDWID	HSD3	12.30	12.53	12.37	11.80	10.88	9.62
SO	BUILDWID	HSD3	8.07	6.28	4.30	3.73	32.60	32.48
	BUILDWID	HSD3	31.38	29.32	26.37	22.62	18.18	15.69

	BUILDHGT	MSD	10.97	10.97	10.97	10.97	10.97	10.97
	BUILDHGT	MSD	10.97	10.97	10.97	10.97	15.26	15.26
SO	BUILDHGT	MSD	15.26	10.97	16.15	16.15	16.15	10.97
	BUILDHGT	MSD	10.97	10.97	10.97	10.97	10.97	10.97
	BUILDHGT	MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO	BUILDHGT	MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO	BUILDWID	MSD	27.12	29.42	30.83	31.30	30.82	29.40
	BUILDWID	MSD	27.09	23.96	25.29	28.10	11.46	11.75
SO	BUILDWID	MSD	12.11	30.35	18.94	18.93	18.34	30.59
SO	BUILDWID	MSD	27.12	29.42	30.83	31.30	30.82	29.40
	BUILDWID	MSD	27.09	23.96	25.29	28.10	30.06	31.10
	BUILDWID	MSD	31.20	30.35	28.58	32.08	30.84	30.59

	BUILDHGT	GT	12.19	12.19	12.19	4.88	4.88	4.88
SO	BUILDHGT	GT	4.88	4.88	4.88	4.88	4.88	4.88
SO	BUILDHGT	GT	4.88	4.88	4.88	4.88	4.88	4.88
	BUILDHGT	GT	4.88	4.88	4.88	4.88	4.88	4.88
	BUILDHGT	GT	4.88	4.88	4.88	4.88	4.88	4.88
SO	BUILDHGT	GT	4.88	4.88	4.88	4.88	4.88	4.88
	BUILDWID	GT	26.98	25.74	26.49	20.04	22.92	25.52
	BUILDWID	GT	27.36	28.70	28.79	28.52	28.78	28.08
SO	BUILDWID	GT	26.63	24.36	21.40	17.73	13.52	8.90
SO	BUILDWID	GT	6.97	11.73	16.13	20.04	22.92	25.52
	BUILDWID	GT	27.36	28.35	28.49	28.42	28.69	28.08
SO	BUILDWID	GT	26.63	24.36	21.40	17.73	13.52	8.90

	BUILDHGT	SS1GT	12.19	0.00	0.00	0.00	0.00	4.88
SO	BUILDHGT	SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
	BUILDHGT	SS1GT	4.88	0.00	0.00	0.00	0.00	0.00
	BUILDHGT	SS1GT	0.00	0.00	0.00	0.00	0.00	4.88
SO	BUILDHGT	SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO	BUILDHGT	SS1GT	4.88	0.00	0.00	0.00	12.19	12.19
	BUILDWID	SS1GT	26.98	0.00	0.00	0.00	0.00	25.93
	BUILDWID	SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO	BUILDWID	SS1GT	26.70	0.00	0.00	0.00	0.00	0.00
	BUILDWID	SS1GT	0.00	0.00	0.00	0.00	0.00	25.93
	BUILDWID	SS1GT	27.74	28.70	28.79	28.52	28.78	28.17
SO	BUILDWID	SS1GT	26.70	0.00	0.00	0.00	26.98	27.39

SO	BUILDHGT	SS2GT	4.88	4.88	12.19	12.19	12.19	4.88
SO	BUILDHGT	SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
	BUILDHGT	SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
	BUILDHGT	SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO	BUILDHGT	SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
	BUILDHGT	SS2GT	4.88	4.88	4.88	4.88	4.88	4.88

SO BUILDWID SS2GT	6.62	11.34	26.49	27.32	27.32	25.52
SO BUILDWID SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID SS2GT	26.63	24.36	21.35	17.69	13.50	8.90
SO BUILDWID SS2GT	6.62	11.34	15.72	19.62	22.92	25.52
SO BUILDWID SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID SS2GT	26.63	24.36	21.35	17.69	13.50	8.90

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)

SO SRCGROUP ALL

SO FINISHED

RE STARTING

RE GRIDPOLR POL STA

RE GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)

RE GRIDPOLR POL ORIG 0.0 0.0

RE GRIDPOLR POL DIST 250. 300. 400. 500. 750. 1000.

RE GRIDPOLR POL GDIR 36 10.0 10.0

RE GRIDPOLR POL END

RE FINISHED

ME STARTING

ME INPUTFIL KYWPRE87.LST

ME ANEMHGHT 6.700 METERS

ME SURFDATA 12836 1987 KEY WEST

ME UAIRDATA 12844 1987 MIAMI

ME FINISHED

OU STARTING

OU RECTABLE ALLAVE FIRST-SIXTH

OU FINISHED

* SETUP Finishes Successfully ***

MODELOPTS: CONC

RURAL FLAT

DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)					
	250.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	1.99135	1.36127	1.14549	1.07732	0.76031	0.54498
20.00 |	0.91134	0.65223	0.62141	0.60094	0.45036	0.33589
30.00 |	0.41356	0.47263	0.58912	0.61226	0.50253	0.39338
40.00 |	1.73332	1.20362	0.91431	0.83268	0.59985	0.44034
50.00 |	3.80519	2.34721	1.36222	1.05695	0.63875	0.43701
60.00 |	3.78882	2.53976	1.55966	1.22643	0.75693	0.53668
70.00 |	1.84827	1.30844	0.86188	0.70050	0.45986	0.33901
80.00 |	0.70921	0.54297	0.41647	0.37392	0.28591	0.23175
90.00 |	0.33550	0.25484	0.21951	0.21243	0.17560	0.14564
100.00 |	0.38767	0.26745	0.23766	0.21431	0.15716	0.12506
110.00 |	0.94355	0.59560	0.42055	0.32995	0.23000	0.18613
120.00 |	1.28841	0.99533	0.86096	0.70160	0.43004	0.30154
130.00 |	1.55634	1.35915	1.21139	1.04183	0.70411	0.50392
140.00 |	1.57770	1.52953	1.44128	1.27760	0.90397	0.66391
150.00 |	1.96583	1.82825	1.57462	1.37857	1.02964	0.80495
160.00 |	2.46754	2.37221	2.13069	1.86948	1.31491	0.97611
170.00 |	2.61563	2.77013	2.67637	2.39984	1.73342	1.30365
180.00 |	1.79456	1.99519	2.16464	2.13772	1.80623	1.47642
190.00 |	1.53912	1.65255	1.71666	1.65985	1.38097	1.12638
200.00 |	1.62591	1.68820	1.68795	1.60501	1.32320	1.08182
210.00 |	1.91297	1.99723	2.00211	1.89944	1.55459	1.27151
220.00 |	1.96378	2.05224	2.06399	1.96350	1.60712	1.30411
230.00 |	2.19245	2.31362	2.35872	2.26257	1.87267	1.53056
240.00 |	2.05880	2.15964	2.18548	2.08996	1.73789	1.43890
250.00 |	1.61197	1.66720	1.65869	1.57493	1.31433	1.10306
260.00 |	1.20924	1.25756	1.26948	1.22059	1.03363	0.86656
270.00 |	0.97273	1.04962	1.13576	1.15488	1.07445	0.94839
280.00 |	1.09823	1.28815	1.48952	1.51850	1.33444	1.11321
290.00 |	1.46313	1.73246	2.02269	2.07788	1.83642	1.52611
300.00 |	2.31696	2.83852	3.39918	3.56721	3.30341	2.82772
310.00 |	4.17787	5.19019	6.07693	5.83869	4.25759	3.07317
320.00 |	6.05725	5.78840	5.21232	4.46514	3.10861	2.32810
330.00 |	5.26552	4.56870	4.55768	4.10962	2.85250	2.03818
340.00 |	5.16757	4.00893	3.63140	2.93686	1.73483	1.17051
350.00 |	4.07638	2.54426	1.98471	1.64492	1.08217	0.78843
360.00 |	2.43956	1.60205	1.38543	1.29061	0.92977	0.69594

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	58.29265 (87010424)	35.32286 (87010424)	20.25821 (87062624)	22.51276 (87062624)	17.42099 (87062
20.0 |	27.36933 (87062624)	18.23002 (87062624)	14.27957 (87062624)	13.14225 (87062624)	9.81450 (87062
30.0 |	27.49713 (87012224)	21.58220 (87012224)	16.88397 (87012224)	16.40896 (87062524)	12.22320 (87062
40.0 |	52.52187 (87110524)	33.46560 (87062524)	23.67048 (87062524)	21.75348 (87110524)	17.99333 (87110
50.0 |	133.15758c(87093024)	80.34856c(87093024)	45.10665c(87093024)	34.28096c(87093024)	19.55517c(87093
60.0 |	185.10712 (87030824)	139.12347 (87030824)	91.37846 (87030824)	69.17931 (87030824)	39.08964 (87030
70.0 |	70.04799 (87041824)	45.61009 (87041824)	27.41350 (87030824)	23.53475 (87030824)	15.05441 (87030
80.0 |	47.98439 (87041824)	37.24854 (87041824)	23.02611 (87041824)	17.49095 (87041824)	10.37110 (87041
90.0 |	30.49412 (87010424)	14.29925 (87010424)	11.84364 (87041724)	10.60404 (87041724)	7.48385 (87041
100.0 |	22.46824 (87010524)	18.90632 (87010424)	23.33909 (87010424)	20.51059 (87010424)	10.05855 (87010
110.0 |	45.78122 (87010524)	28.41928 (87010524)	15.08971 (87041624)	10.80989 (87041624)	7.11284 (87010
120.0 |	49.60679 (87020824)	29.47027 (87020824)	25.57670 (87031024)	22.94441 (87031024)	11.70050 (87041
130.0 |	56.20259 (87033124)	38.87230 (87012624)	38.13314 (87020824)	32.16650 (87020824)	17.66106 (87120
140.0 |	38.20143 (87033124)	43.91284 (87033124)	40.73626 (87033124)	31.19202 (87033124)	21.52461 (87012
150.0 |	37.01830 (87040424)	29.87918 (87040424)	32.54556 (87042224)	28.56954 (87042224)	18.56344 (87042
160.0 |	53.24832 (87112024)	45.73841 (87112024)	35.37826 (87040424)	31.66005 (87040424)	21.54636 (87102
170.0 |	36.86243 (87121624)	36.66299 (87011124)	38.70326 (87112024)	35.76123 (87112024)	24.64884 (87112
180.0 |	26.43295 (87121724)	27.76066 (87121724)	27.94589 (87101424)	26.55019 (87101424)	20.24309 (87101
190.0 |	18.68763 (87100824)	20.50916 (87100824)	20.86295 (87100824)	19.15360 (87100824)	16.46426 (87101
200.0 |	23.50374 (87112124)	23.02681 (87112124)	23.32774 (87101524)	22.28181 (87101524)	17.51311 (87101
210.0 |	24.98004 (87103024)	25.45489 (87103124)	24.82800 (87103124)	23.16118 (87021024)	18.02633 (87021
220.0 |	22.88383 (87100924)	23.35956 (87100424)	22.99126 (87100424)	21.34976 (87100424)	16.27174 (87100
230.0 |	38.17208 (87100924)	37.50541 (87100924)	34.05438 (87100924)	29.81852 (87100924)	21.57896 (87112
240.0 |	29.10806 (87110724)	29.48348 (87110724)	27.64808 (87110724)	24.55607 (87110724)	17.39064 (87110
250.0 |	30.95333 (87110824)	32.73346 (87110824)	32.68937 (87110824)	30.21913 (87110824)	22.40949 (87110
260.0 |	23.84458 (87110824)	22.89600 (87030524)	20.01026 (87111524)	17.96484 (87111524)	13.03419 (87111
270.0 |	17.05316 (87111524)	15.74771 (87111524)	15.73003 (87052424)	15.99304 (87052424)	14.13263 (87052
280.0 |	17.56256 (87052424)	20.43307 (87052424)	21.53631 (87052424)	19.27815 (87052424)	15.33194 (87060
290.0 |	26.11798 (87060824)	30.04010 (87060824)	30.07487 (87060824)	26.45056 (87060824)	18.01736 (87060
300.0 |	32.85535 (87111624)	31.69376 (87111624)	29.09253 (87061124)	29.18338 (87061124)	23.84548 (87061
310.0 |	41.67057 (87022624)	45.95735 (87022624)	53.56709 (87031724)	46.47830 (87031724)	32.18357 (87060
320.0 |	60.16191 (87031724)	54.90344 (87111724)	53.96012 (87121424)	48.80901 (87031824)	36.16626 (87031
330.0 |	73.10903 (87121424)	57.33165 (87031824)	47.19669 (87032624)	41.25321 (87032624)	25.80917 (87032
340.0 |	70.33980 (87032424)	56.38498 (87022824)	51.75850 (87022824)	40.74141 (87022824)	22.14250 (87022
350.0 |	104.18169 (87022824)	66.12812 (87022824)	35.14462 (87022824)	28.99285 (87033024)	18.87474 (87033
360.0 |	64.96166 (87033024)	38.33167 (87033024)	25.18669 (87033024)	18.52834 (87033024)	13.60476 (87012

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0	12.61986 (87090524)
20.0	7.26542 (87012224)
30.0	9.15211 (87062524)
40.0	14.16279 (87110524)
50.0	13.04394c(87093024)
60.0	26.74321 (87030824)
70.0	10.71172 (87030824)
80.0	7.31342 (87041824)
90.0	6.51025 (87041824)
100.0	5.21963 (87010424)
110.0	6.23631 (87010424)
120.0	8.01756 (87041624)
130.0	12.59018 (87120424)
140.0	16.48361 (87012624)
150.0	13.04887 (87042624)
160.0	15.27142 (87102824)
170.0	17.20391 (87112024)
180.0	15.15981 (87101424)
190.0	13.18216 (87101424)
200.0	13.35831 (87101524)
210.0	14.11367 (87021024)
220.0	12.33503 (87100424)
230.0	16.26762 (87112324)
240.0	12.88311 (87110724)
250.0	16.66722 (87110824)
260.0	9.66400 (87111524)
270.0	11.54136 (87052424)
280.0	12.28994 (87060824)
290.0	14.40932 (87060924)
300.0	18.63233 (87061124)
310.0	21.41606 (87060224)
320.0	24.55000 (87031824)
330.0	17.89965 (87032424)
340.0	14.93904 (87012124)
350.0	13.39250 (87033024)
360.0	9.64582 (87012524)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	36.38736 (87030124)	20.75564 (87012524)	16.50301 (87031924)	15.86084 (87031924)	15.41673 (87090)
20.0 |	23.18231 (87031924)	15.38994 (87031924)	11.28779 (87031924)	9.82779 (87030724)	9.02459 (87012)
30.0 |	15.09359 (87030724)	12.42457 (87062524)	16.53247 (87062524)	16.04220 (87012224)	11.50269 (87012)
40.0 |	50.62413 (87062524)	32.34817 (87110524)	22.65109 (87110524)	20.39984 (87062524)	15.18590 (87021)
50.0 |	127.59200 (87030824)	77.95578 (87030824)	39.15964 (87030824)	25.96710c(87110424)	15.53316c(87110)
60.0 |	116.53851 (87030924)	74.82422 (87030924)	44.82438 (87030724)	37.44512c(87093024)	23.37047c(87093)
70.0 |	43.32782 (87041724)	34.96501 (87041724)	25.93591 (87041824)	19.15748 (87041824)	12.82069 (87030)
80.0 |	19.21354 (87041624)	13.45278 (87041624)	10.90596 (87092424)	10.88718 (87092424)	6.93468 (87092)
90.0 |	10.18085 (87041624)	11.16198 (87041724)	7.90040 (87041824)	8.32432 (87041824)	5.95855 (87041)
100.0 |	17.88444 (87010424)	15.12925 (87010524)	9.61465 (87010524)	6.28979 (87041624)	5.42152 (87041)
110.0 |	36.49582 (87041624)	22.80132 (87041624)	14.58174 (87010524)	10.04064 (87010524)	6.56678 (87010)
120.0 |	44.29088 (87012624)	27.73290 (87012624)	23.59125 (87041624)	19.22067 (87041624)	11.23830 (87031)
130.0 |	38.64633 (87012624)	38.23205 (87033124)	37.38352 (87012624)	30.79809 (87012624)	17.35875 (87012)
140.0 |	29.44041 (87042624)	25.80515 (87042624)	27.45022 (87012724)	25.48396 (87012724)	17.54384 (87042)
150.0 |	31.71301 (87010524)	29.06826 (87042224)	25.14003 (87042624)	24.97968 (87042624)	17.02594 (87042)
160.0 |	34.69292 (87111124)	35.91465 (87111124)	32.86232 (87102824)	30.33810 (87102824)	20.50507 (87040)
170.0 |	36.73582 (87011124)	36.38158 (87112024)	31.82090 (87011124)	26.38209 (87011124)	21.11374 (87111)
180.0 |	23.54752 (87101424)	26.41537 (87101424)	25.46988 (87121724)	23.11105 (87010624)	18.91889 (87011)
190.0 |	16.42864 (87031124)	18.44210 (87011224)	19.73334 (87102924)	18.94268 (87102924)	14.44073 (87121)
200.0 |	21.14501 (87101524)	22.57676 (87101524)	19.93149 (87112124)	16.46000 (87112124)	14.94539 (87102)
210.0 |	24.78459 (87103124)	25.34471 (87103024)	24.67237 (87021024)	22.91541 (87103124)	17.35522 (87103)
220.0 |	22.63438 (87100424)	22.84114 (87103124)	22.18794 (87103124)	20.30655 (87103124)	15.07755 (87103)
230.0 |	32.68296 (87112324)	33.45382 (87112324)	32.17749 (87112324)	29.25566 (87112324)	20.89644 (87100)
240.0 |	28.14224 (87112324)	27.50756 (87112324)	24.87079 (87112324)	22.17795 (87120624)	16.90593 (87120)
250.0 |	25.20608 (87110724)	22.09587 (87110724)	21.79822 (87112524)	20.08621 (87112524)	15.68891 (87111)
260.0 |	23.79997 (87030524)	21.25257 (87110824)	18.47725 (87030524)	14.03103 (87030524)	9.79683 (87031)
270.0 |	12.21299 (87052424)	14.06153 (87052424)	13.94776 (87052224)	14.75896 (87052224)	12.65254 (87052)
280.0 |	16.91118 (87052224)	17.99948 (87052224)	16.93107 (87052224)	16.87907 (87060824)	12.84177 (87052)
290.0 |	17.50618 (87052424)	18.66441 (87052324)	21.30089 (87111624)	20.27859 (87111624)	17.12248 (87060)
300.0 |	31.50082 (87060824)	30.11579 (87060924)	28.32815 (87060924)	23.65879 (87022624)	19.98507 (87051)
310.0 |	38.92497 (87061124)	44.94978 (87031724)	45.12515 (87022624)	41.21836 (87060224)	29.09746 (87061)
320.0 |	56.24894 (87111724)	52.43771 (87121424)	47.94001 (87111724)	43.81666 (87121424)	23.70553 (87121)
330.0 |	72.13315 (87031824)	47.01188 (87121424)	40.41553 (87031824)	35.31512 (87022824)	25.45667 (87032)
340.0 |	66.30007 (87032624)	56.06586 (87032424)	38.70356 (87032424)	26.52664 (87032624)	18.22496 (87032)
350.0 |	50.70575 (87033024)	38.18024 (87033024)	34.51222 (87033024)	22.39052 (87030124)	15.42954 (87030)
360.0 |	57.61490 (87030124)	36.31860 (87030124)	22.67043 (87030124)	17.89126 (87032824)	13.54452 (87032)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
EGREES) | 1000.00

10.0	12.02750 (87062624)
20.0	7.19343 (87062624)
30.0	8.06840 (87012224)
40.0	11.79003 (87021624)
50.0	10.54697c(87043024)
60.0	15.97212c(87093024)
70.0	10.20360 (87030924)
80.0	5.59594 (87031924)
90.0	4.09424 (87092424)
100.0	3.73497 (87041624)
110.0	4.75963 (87010524)
120.0	7.51257 (87020724)
130.0	10.45177 (87042524)
140.0	13.72381 (87042324)
150.0	12.11302 (87033124)
160.0	14.02646 (87040424)
170.0	16.92497 (87111124)
180.0	15.00227 (87011324)
190.0	11.33978 (87121724)
200.0	12.89529 (87102924)
210.0	13.16868 (87103124)
220.0	12.24174 (87100324)
230.0	15.79408 (87111324)
240.0	12.69319 (87120624)
250.0	12.33590 (87111524)
260.0	7.81328 (87031524)
270.0	9.84028 (87052224)
280.0	10.14225 (87052324)
290.0	11.43148 (87060824)
300.0	18.35530 (87051624)
310.0	21.13244 (87061924)
320.0	18.11717 (87032524)
330.0	16.74198 (87032624)
340.0	14.13706 (87022824)
350.0	10.50832 (87011524)
360.0	9.24383 (87032824)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | EGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	34.10395 (87012524)	19.48656 (87032724)	16.06769 (87020524)	15.09751 (87090524)	12.49486 (87062)
20.0 |	20.60833 (87021624)	13.41029 (87062724)	10.59142 (87062724)	9.47191 (87011924)	8.86438 (87030)
30.0 |	10.53602 (87062624)	10.95498 (87062624)	12.59831 (87062624)	13.03824c(87110424)	10.91498c(87110)
40.0 |	43.30870 (87021624)	28.11619 (87021624)	19.95212 (87021624)	18.95721 (87021624)	14.06132 (87062)
50.0 |	93.13323c(87110424)	56.34937c(87110424)	32.73560c(87110424)	25.58813 (87030824)	14.20904c(87043)
60.0 |	91.09213c(87093024)	68.55388 (87030724)	44.51559c(87093024)	33.75988 (87030724)	19.28223 (87030)
70.0 |	41.12719 (87030924)	32.15685 (87030824)	21.76929 (87041724)	17.36699 (87030924)	9.75766 (87041)
80.0 |	16.85174 (87041724)	13.21205 (87010124)	9.74759 (87010124)	8.11536c(87040324)	6.85903 (87031)
90.0 |	9.47901 (87041724)	7.78339 (87041624)	6.28113 (87041624)	5.45399 (87020624)	4.24382 (87092)
100.0 |	13.34308 (87020924)	6.37102 (87020924)	5.60418 (87092524)	5.67915 (87010524)	3.19523 (87092)
110.0 |	29.11041 (87031024)	13.01214c(87081024)	10.62582 (87020924)	8.69101 (87020924)	5.46433 (87041)
120.0 |	25.56226 (87041624)	24.72887 (87041624)	23.00459c(87081024)	19.00319 (87010524)	10.50270 (87010)
130.0 |	37.27053 (87012224)	35.90960 (87020824)	24.06286 (87012224)	20.68891 (87120424)	16.98019 (87020)
140.0 |	29.32706 (87042224)	24.60202 (87020824)	23.69151 (87020824)	25.22430 (87012624)	16.44138 (87012)
150.0 |	28.88584 (87102824)	27.09430 (87102824)	21.82076 (87101324)	16.71621 (87101324)	14.64973 (87033)
160.0 |	33.29851 (87011124)	35.09076 (87040424)	32.46384 (87111124)	26.65981 (87111124)	14.83953 (87111)
170.0 |	36.37375 (87010624)	34.88693 (87010624)	31.35590 (87120524)	26.01189 (87120524)	16.66097 (87102)
180.0 |	21.04430 (87040124)	22.52196 (87010624)	24.45113 (87010624)	22.00044 (87011324)	18.39309 (87031)
190.0 |	16.39221 (87011224)	18.19202 (87102924)	19.57154 (87011224)	18.64557 (87011224)	14.39320 (87102)
200.0 |	17.28473 (87021024)	17.78865 (87053124)	17.55961 (87053124)	16.34851 (87053124)	14.04109 (87031)
210.0 |	22.88658 (87021024)	24.38613 (87021024)	24.00440 (87103024)	21.54899 (87103024)	15.94730 (87110)
220.0 |	22.18346 (87103124)	22.28084 (87111324)	21.79543 (87111324)	20.03877 (87111324)	14.93239 (87111)
230.0 |	27.72948 (87112224)	27.87067 (87112224)	27.81669 (87111324)	26.31910 (87111324)	20.58168 (87111)
240.0 |	25.32950 (87030524)	24.52732 (87030524)	23.68452 (87120624)	21.76621 (87112324)	16.16443 (87110)
250.0 |	20.74349 (87112424)	21.93910 (87112524)	20.62936 (87112424)	19.15958 (87111524)	14.91709 (87112)
260.0 |	20.95673 (87111524)	21.23010 (87111524)	15.97550 (87110824)	11.97331 (87110824)	8.83975 (87052)
270.0 |	8.77852 (87030624)	10.82137 (87052224)	12.35223 (87111524)	10.07198 (87052124)	10.72623 (87052)
280.0 |	11.91130 (87052124)	13.68206 (87052124)	15.04879 (87060824)	14.99659 (87052524)	12.49201 (87052)
290.0 |	16.47782 (87052324)	18.57546 (87111624)	18.39421 (87052324)	19.39080 (87060924)	14.72443 (87111)
300.0 |	26.02733 (87060924)	28.05911 (87060824)	25.38036 (87022624)	22.99792 (87060924)	19.32537 (87122)
310.0 |	32.05166 (87111624)	44.33548 (87061124)	43.74601 (87061124)	36.54715 (87022624)	26.25242 (87031)
320.0 |	54.33803 (87022624)	42.54126 (87031724)	46.34964 (87031824)	37.14476 (87111724)	22.70441 (87032)
330.0 |	64.66076 (87111724)	40.02333 (87032624)	37.75912 (87022824)	35.11835 (87032424)	23.35393 (87022)
340.0 |	66.21580 (87022824)	43.62978 (87032624)	35.51529 (87032624)	25.42996 (87032724)	17.22994 (87012)
350.0 |	47.84488 (87032624)	33.30531 (87032724)	25.06230 (87032724)	18.76777 (87032724)	12.68332 (87011)
360.0 |	46.41986 (87032724)	29.66867 (87032724)	18.90830 (87032724)	17.76209 (87030124)	12.55865 (87010)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0	10.45957 (87062724)
20.0	6.77126 (87030724)
30.0	8.04806c(87110424)
40.0	10.20099 (87062524)
50.0	10.29617c(87110424)
60.0	13.39799 (87030724)
70.0	6.42981c(87100124)
80.0	5.22738 (87081124)
90.0	3.41158 (87041724)
100.0	3.02683 (87030824)
110.0	4.00780 (87081124)
120.0	6.35387 (87010524)
130.0	10.39129 (87012624)
140.0	12.42053 (87020824)
150.0	10.66943 (87042224)
160.0	11.97473 (87042224)
170.0	14.43399 (87102824)
180.0	14.87164 (87031224)
190.0	10.81907 (87011224)
200.0	11.41473 (87031124)
210.0	12.87198c(87120224)
220.0	12.22865 (87101124)
230.0	15.42126 (87100924)
240.0	12.38129 (87110824)
250.0	11.13283 (87112524)
260.0	7.29783 (87052424)
270.0	9.09529 (87052124)
280.0	9.43513 (87052524)
290.0	10.60306 (87111624)
300.0	17.28115 (87031724)
310.0	19.34571 (87121424)
320.0	16.27931 (87032624)
330.0	16.13567 (87022824)
340.0	11.95531 (87032724)
350.0	10.34489 (87030124)
360.0	8.83922 (87030124)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	30.02654 (87032724)	18.94121 (87030124)	15.67873 (87030724)	14.25686 (87020524)	11.56158 (87021
20.0 |	18.56674 (87062724)	11.52246 (87021624)	9.24261 (87011924)	9.32804 (87031924)	6.98938 (87011
30.0 |	8.49168c(87110424)	10.23637 (87030724)	11.76091c(87110424)	12.60890 (87062624)	10.05299 (87062
40.0 |	40.17352c(87093024)	24.12568c(87093024)	16.91762c(87043024)	15.65978c(87043024)	10.41901c(87043
50.0 |	76.13531 (87062724)	47.20580 (87062724)	27.58647 (87062724)	20.87787 (87062724)	13.24748 (87092
60.0 |	90.92624 (87030724)	64.57677c(87093024)	39.19816 (87030924)	27.55252 (87030924)	15.19991c(87110
70.0 |	40.94580 (87012624)	31.67430 (87030924)	20.74435 (87030924)	15.51248 (87041724)	8.83807 (87041
80.0 |	14.92493 (87010124)	9.96388 (87020724)	8.35949c(87092324)	7.82206 (87010424)	5.85500 (87010
90.0 |	7.76456 (87041824)	7.53506 (87041824)	6.12331 (87010424)	5.41124 (87041624)	4.24253 (87020
100.0 |	13.01241 (87041624)	5.84139 (87041624)	5.36079 (87041624)	5.10959 (87092524)	2.61158 (87011
110.0 |	23.88782c(87081024)	12.64977 (87031024)	8.85711 (87042924)	8.00472 (87010424)	4.84495 (87081
120.0 |	25.52110 (87012724)	22.84269 (87010524)	22.80721 (87010524)	17.26651c(87081024)	10.08125 (87020
130.0 |	35.72278 (87020824)	35.90759 (87012224)	21.83667 (87012724)	19.57756 (87042524)	14.15030 (87042
140.0 |	23.89808 (87101224)	23.25993 (87012724)	23.62089 (87012624)	20.30627 (87020824)	15.55762 (87033
150.0 |	28.52473 (87122924)	26.15457 (87101324)	21.47944 (87102824)	16.22059 (87033124)	11.33893 (87031
160.0 |	33.05243 (87040424)	30.77417 (87102824)	29.84736 (87112024)	20.21015 (87101324)	14.22388 (87101
170.0 |	31.22239 (87112024)	34.15738 (87121624)	27.45320 (87010624)	24.57213 (87111124)	16.58118 (87011
180.0 |	19.22749 (87010624)	21.51563 (87040124)	21.22617 (87011324)	21.28584 (87101624)	17.54372 (87101
190.0 |	16.02239 (87101524)	17.43807 (87031124)	17.63730 (87101424)	18.64232 (87101424)	14.35109 (87011
200.0 |	17.25950 (87053124)	16.34270 (87021024)	16.13572 (87031124)	16.24456 (87031124)	12.39212 (87053
210.0 |	21.86886 (87042724)	20.67664 (87042724)	19.69932 (87101524)	18.98110 (87110224)	15.74908c(87120
220.0 |	21.54877 (87111324)	21.73388 (87100924)	19.95457 (87042724)	18.21372 (87042724)	14.28978 (87101
230.0 |	26.00967 (87111324)	27.43871 (87111324)	26.10809 (87112224)	23.30314 (87112224)	16.69650 (87112
240.0 |	25.16106 (87100924)	23.53908 (87100924)	22.05580 (87110824)	20.84898 (87110824)	15.26011 (87112
250.0 |	20.71815 (87112524)	21.44295 (87112424)	19.23110 (87111524)	18.50939 (87112424)	13.03288 (87112
260.0 |	16.43804 (87112424)	15.58149 (87112424)	13.48122 (87112424)	11.66025 (87031524)	7.96029 (87060
270.0 |	8.68816 (87060824)	9.26780 (87112724)	9.86905 (87112724)	9.77130 (87112724)	9.20885 (87112
280.0 |	11.76508 (87060724)	12.66795 (87060724)	14.38929 (87052524)	14.75969 (87052324)	12.42876 (87052
290.0 |	14.83054 (87052524)	16.47848 (87052524)	16.89337 (87060924)	15.39296 (87052324)	12.74001 (87060
300.0 |	22.16949 (87022624)	25.29254 (87022624)	23.71079 (87111624)	22.16715 (87122524)	18.78554 (87031
310.0 |	31.26248 (87031724)	37.09366 (87051624)	40.51498 (87051624)	36.02935 (87061924)	24.78613 (87121
320.0 |	48.42820 (87111624)	42.18922 (87061924)	36.57494 (87121924)	27.53732 (87061924)	18.57046 (87032
330.0 |	48.22325 (87121924)	36.13340 (87111724)	36.24456 (87032424)	32.47435 (87032524)	21.81818 (87032
340.0 |	45.94023 (87032524)	33.19317 (87032524)	26.96605 (87033024)	22.31401 (87032424)	15.15260 (87061
350.0 |	46.63199 (87032724)	24.98790 (87091224)	23.08592 (87012124)	18.60264 (87022824)	12.17298 (87121
360.0 |	33.48138 (87101224)	19.96420 (87101224)	16.99225 (87012524)	17.25630 (87012524)	11.57188 (87030

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0	26.71183 (87021624)	18.42848 (87062624)	15.51371 (87032724)	14.25238 (87021624)	11.19292 (87031
20.0	13.09222 (87030724)	8.32257 (87030724)	8.45438 (87030724)	9.19482 (87062724)	6.47647 (87011
30.0	8.22618 (87062524)	9.66941c(87110424)	8.77055c(87040324)	8.66738c(87040324)	8.19487 (87110
40.0	34.67805 (87062724)	23.28797 (87030724)	16.04171 (87030724)	13.60128 (87062624)	10.05498 (87062
50.0	71.36775c(87040324)	44.50874c(87040324)	24.69685c(87040324)	20.20042 (87092424)	12.10185 (87030
60.0	62.37764c(87110424)	41.66963c(87110424)	23.73104c(87110424)	20.51361c(87110424)	14.60080 (87030
70.0	36.30674 (87010124)	28.82332 (87010124)	20.18336 (87010124)	15.20108 (87010124)	8.59320c(87100
80.0	13.50339 (87031924)	9.38156 (87031924)	8.29750c(87040324)	7.60571 (87031924)	5.49891c(87040
90.0	6.62729 (87010524)	5.18968 (87020624)	5.44645 (87020624)	4.43952 (87030924)	3.88529 (87041
100.0	7.07921 (87081124)	5.26844 (87081124)	4.35687 (87081124)	3.73976 (87081124)	2.56201 (87081
110.0	19.97963 (87120424)	12.48054 (87042924)	8.77037 (87120424)	6.42779c(87071424)	4.80726 (87092
120.0	25.21702 (87033124)	20.79737c(87081024)	20.00779 (87120424)	15.99896 (87120424)	9.00881 (87120
130.0	33.32211 (87012724)	26.25380 (87012724)	21.62854 (87042524)	18.25862 (87012724)	12.32483 (87031
140.0	21.01705 (87012724)	22.75195 (87042224)	21.35412 (87020724)	18.55300 (87042324)	15.37166 (87020
150.0	27.75230 (87111124)	22.43977 (87042624)	18.55614 (87040424)	15.81654 (87031024)	10.55072 (87020
160.0	30.29132 (87121624)	28.75162 (87121624)	24.83888 (87121624)	20.12711 (87010524)	13.98435 (87042
170.0	29.13951 (87120524)	33.00937 (87120524)	26.10591 (87121624)	20.50143 (87022324)	15.11548 (87120
180.0	18.50628 (87100824)	18.74422 (87101624)	21.21160 (87101624)	21.16353 (87121724)	17.12110 (87010
190.0	15.93371 (87102924)	16.99673 (87110624)	17.63455 (87121724)	17.57531 (87121724)	13.76410 (87100
200.0	16.36731 (87110224)	16.08057 (87110224)	14.31607 (87110224)	15.16194 (87102924)	11.73552 (87101
210.0	19.82907 (87031424)	20.41739 (87031424)	19.53348 (87031424)	18.62804 (87101524)	15.51747 (87103
220.0	20.40503 (87042724)	20.77658 (87042724)	19.21112 (87031324)	17.80520 (87031324)	14.03034 (87101
230.0	25.08789 (87030524)	24.80043 (87030524)	22.66789 (87030524)	20.68486 (87112424)	16.43959 (87103
240.0	22.10770 (87120624)	23.45446 (87120624)	21.76760 (87030524)	18.73187 (87030524)	14.83713 (87100
250.0	18.83813 (87112324)	18.52177 (87102424)	18.19171 (87102424)	16.82500 (87102424)	12.69348 (87102
260.0	15.98569 (87102424)	15.31711 (87102424)	12.78892 (87102424)	11.40173 (87112424)	7.40257 (87112
270.0	8.28854 (87112724)	9.19606 (87060824)	9.39578 (87123124)	9.44402 (87111524)	7.36504 (87052
280.0	9.59718 (87052524)	11.63879 (87052524)	13.95201 (87052324)	14.46882 (87052224)	9.67120 (87052
290.0	14.41776 (87111624)	16.18628 (87052424)	16.20670 (87052524)	15.22380 (87060724)	12.31274 (87061
300.0	18.22110 (87061124)	24.05304 (87061124)	20.16657 (87052524)	19.82476 (87061024)	18.64289 (87022
310.0	26.98215 (87051624)	34.40021 (87111624)	37.13680 (87060224)	35.54551 (87061124)	23.12119 (87111
320.0	45.90490 (87121424)	39.88688 (87121924)	35.46891 (87061924)	27.52894 (87121924)	18.52367 (87111
330.0	39.25995 (87111824)	33.55475 (87111824)	35.30914 (87032524)	25.90257 (87031824)	19.19989 (87121
340.0	38.02741 (87121524)	28.12631 (87051824)	25.02460 (87032524)	20.74990 (87033024)	12.28310 (87061
350.0	40.92023 (87032424)	20.87774 (87012124)	22.16417 (87030124)	18.18050 (87012124)	10.79304 (87011
360.0	31.09438 (87022824)	19.72685 (87012524)	15.42762 (87032824)	16.31637 (87010424)	9.41092 (87012

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
EGREES) | 1000.00

10.0	8.32123 (87011924)
20.0	5.14521 (87011024)
30.0	6.95214 (87110524)
40.0	6.98395c(87043024)
50.0	7.93199c(87040324)
60.0	9.35185 (87030924)
70.0	5.96687 (87041824)
80.0	4.45306 (87010424)
90.0	2.96114 (87041624)
100.0	2.20971 (87011124)
110.0	3.77650 (87111024)
120.0	5.70375 (87031024)
130.0	10.09252 (87031024)
140.0	10.47899 (87042524)
150.0	9.52963c(87121124)
160.0	9.28622 (87042624)
170.0	11.37894 (87011124)
180.0	13.60260 (87101624)
190.0	9.98327 (87100824)
200.0	9.22639 (87053124)
210.0	12.24367 (87112124)
220.0	11.31945 (87103124)
230.0	12.87503 (87120624)
240.0	11.17948 (87112324)
250.0	9.56562 (87102424)
260.0	5.78441 (87121324)
270.0	5.96675 (87052524)
280.0	7.90795 (87052724)
290.0	9.38161 (87060724)
300.0	14.74026 (87070324)
310.0	16.34739 (87031724)
320.0	14.48922 (87032924)
330.0	13.96542 (87121524)
340.0	9.62014 (87061624)
350.0	7.53928 (87011624)
360.0	7.26679 (87012024)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0	25.10814 (87101224)	18.00695 (87020524)	14.11353 (87032824)	14.13988 (87032824)	9.80993 (87011
20.0	11.63008 (87020224)	8.09641 (87020224)	8.06563 (87021624)	9.13706 (87012224)	6.28601 (87062
30.0	5.91315c(87100124)	6.16606c(87040324)	7.86628 (87011024)	7.98371 (87011024)	6.61745 (87012
40.0	32.85014c(87043024)	23.21688 (87062724)	15.32494 (87062724)	13.32071c(87093024)	8.96372 (87022
50.0	66.23526 (87030924)	38.96579 (87030924)	23.45620 (87092424)	19.25841c(87040324)	11.97092c(87040
60.0	58.75781 (87041724)	38.95686 (87041724)	22.99561 (87062724)	17.67114 (87062724)	10.60970c(87040
70.0	33.71276 (87030824)	24.34281 (87012624)	15.03137 (87030724)	12.56387 (87030724)	8.34128 (87010
80.0	12.39377 (87030924)	9.13756 (87041724)	8.07611 (87010424)	7.59432 (87010124)	4.91819 (87012
90.0	5.80212 (87020624)	4.25660 (87030724)	4.40500 (87030924)	4.37884 (87010424)	3.41882 (87031
100.0	6.66025 (87010124)	4.83964 (87092524)	4.09859c(87093024)	3.48206c(87093024)	2.23918 (87041
110.0	18.64090 (87042524)	12.34452 (87020924)	8.69928 (87020724)	6.32891 (87081124)	4.74809 (87020
120.0	23.00751 (87012224)	20.78608 (87120424)	19.43126 (87042524)	15.57516 (87042924)	8.71197 (87042
130.0	23.16162 (87020724)	21.89516 (87010124)	21.13768 (87033124)	16.45178 (87042324)	11.78473 (87041
140.0	20.91566 (87020824)	22.05920 (87020724)	16.66885 (87101224)	16.83705 (87012224)	13.75149 (87012
150.0	25.95449 (87101324)	21.71918 (87122924)	16.15287 (87033124)	15.75222 (87102824)	10.39921 (87012
160.0	25.36624 (87102824)	28.31818 (87011124)	23.62217 (87010524)	19.79254 (87121624)	13.16477 (87102
170.0	28.77781 (87040124)	26.78334 (87101424)	23.24140 (87111124)	20.42512 (87010624)	14.85126 (87022
180.0	16.62870 (87011224)	17.71348 (87011324)	20.71246 (87011124)	21.00066 (87011124)	16.85549 (87011
190.0	15.71555 (87110624)	16.17905 (87101624)	17.14044 (87031124)	15.75672 (87101624)	12.55948 (87102
200.0	15.91120 (87103024)	15.30640 (87103124)	13.92516 (87103124)	13.92246 (87101624)	11.16380 (87021
210.0	19.74962 (87111224)	20.09691 (87111224)	19.03714 (87110224)	18.58610 (87112124)	15.33881 (87112
220.0	18.90427 (87103024)	19.47135 (87031324)	18.75714 (87100924)	17.56488 (87111224)	13.81452 (87111
230.0	22.20343 (87100424)	22.77194 (87112424)	22.41222 (87112424)	20.46279 (87103024)	16.20112 (87120
240.0	20.36912 (87112224)	21.58338 (87110824)	19.84998 (87100924)	17.79824 (87100524)	12.73815 (87030
250.0	17.96434 (87102424)	18.23715 (87112324)	17.43552 (87123024)	15.99207 (87123024)	12.10170 (87031
260.0	14.55568 (87030624)	13.36914 (87030624)	11.85255 (87031524)	10.31606 (87102424)	7.30574 (87052
270.0	8.26353 (87052224)	8.84289 (87123124)	9.35807 (87060724)	9.01816 (87060724)	7.07487 (87060
280.0	9.22317 (87072224)	11.45309 (87072224)	13.01084 (87052124)	11.18152 (87072224)	9.06354 (87052
290.0	13.69133 (87052224)	13.26584 (87050324)	14.75322 (87050324)	14.49287 (87022624)	12.12759 (87022
300.0	17.70246 (87052524)	20.10972 (87060724)	19.98305 (87060724)	19.02176 (87060124)	17.46902 (87070
310.0	25.38868 (87060924)	29.04966 (87111724)	35.53453 (87111624)	34.44811 (87051624)	21.54001 (87070
320.0	42.96161 (87061924)	35.46803 (87060224)	27.88618 (87111824)	26.96412 (87122124)	18.39135 (87122
330.0	33.33249 (87032424)	33.00003 (87032424)	29.76004 (87111824)	25.49140 (87051824)	19.16715 (87022
340.0	37.41356 (87051824)	27.65231 (87033024)	25.01795 (87032724)	20.50241 (87061524)	12.14078 (87032
350.0	37.73763 (87091224)	20.78073 (87032624)	19.20085 (87062224)	16.24003 (87121524)	10.44116 (87032
360.0	27.99269 (87012524)	17.19099 (87011524)	15.01928 (87011524)	13.61290 (87021624)	9.15078 (87091

MODELOPTS: CONC

RURAL FLAT

DFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0	7.79498 (87031924)
20.0	4.94224 (87011924)
30.0	5.02384 (87012524)
40.0	6.28127c(87093024)
50.0	7.60973 (87030824)
60.0	8.09365c(87040324)
70.0	5.57967 (87010124)
80.0	4.38226 (87092424)
90.0	2.87224 (87092524)
100.0	2.14084 (87020624)
110.0	3.55627 (87092424)
120.0	5.68760 (87042924)
130.0	9.66538 (87020824)
140.0	10.01983 (87012224)
150.0	9.00812 (87012724)
160.0	9.11197 (87102124)
170.0	11.27888 (87040424)
180.0	12.91943 (87011124)
190.0	9.87297 (87102624)
200.0	9.14677 (87021924)
210.0	11.47130 (87103024)
220.0	11.17478 (87111324)
230.0	12.48061 (87110124)
240.0	10.55485 (87101024)
250.0	9.40487 (87112424)
260.0	5.34615 (87123124)
270.0	5.92610 (87082224)
280.0	7.69194 (87072124)
290.0	9.17142 (87022524)
300.0	14.72044 (87061324)
310.0	15.75176 (87122124)
320.0	13.76431 (87111824)
330.0	12.95120 (87022724)
340.0	9.04868 (87121524)
350.0	7.19098 (87012124)
360.0	7.08757 (87020524)

MODELOPTs: CONC

RURAL FLAT

DEFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	RECEPTOR	(XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK	
					GRID-ID	
ALL	1ST HIGHEST VALUE IS	6.07693 AT (	-306.42, 257.11,	0.00, 0.00)	GP	POL
	2ND HIGHEST VALUE IS	6.05725 AT (	-160.70, 191.51,	0.00, 0.00)	GP	POL
	3RD HIGHEST VALUE IS	5.83869 AT (	-383.02, 321.39,	0.00, 0.00)	GP	POL
	4TH HIGHEST VALUE IS	5.78840 AT (	-192.84, 229.81,	0.00, 0.00)	GP	POL
	5TH HIGHEST VALUE IS	5.26552 AT (	-125.00, 216.51,	0.00, 0.00)	GP	POL
	6TH HIGHEST VALUE IS	5.21232 AT (	-257.12, 306.42,	0.00, 0.00)	GP	POL

** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR	(XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	185.10712	ON 87030824: AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
	HIGH 2ND HIGH VALUE IS	127.59200	ON 87030824: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
	HIGH 3RD HIGH VALUE IS	93.13323c	ON 87110424: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
	HIGH 4TH HIGH VALUE IS	90.92624	ON 87030724: AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
	HIGH 5TH HIGH VALUE IS	71.36775c	ON 87040324: AT (	191.51, 160.70, 0.00, 0.00)	GP	PC
	HIGH 6TH HIGH VALUE IS	66.23526	ON 87030924: AT (	191.51, 160.70, 0.00, 0.00)	GP	POL

** RECEPTOR TYPES:

- GC = GRIDCART
- GP = GRIDPOLR
- DC = DISCCART
- DP = DISCPOLR
- BD = BOUNDARY

STARTING
 TITLEONE 1987 STOCK ISLAND POWER PLANT - UTILITY BOARD OF KEY WEST - 8/26/97
 CO TITLETWO ANN 24&3-HR - ALL - SS UNITS - PM10 - 40F & 100%
 MODELOPT DFAULT CONC RURAL
 AVERTIME 3 24 PERIOD
 CO POLLUTID OTHER
 DCAYCOEF .000000
 RUNORNOT RUN
 CO FINISHED

STARTING
 LOCATION HSD1 POINT 56.6 63.2 0.0
 SO LOCATION HSD2 POINT 55.6 55.6 0.0
 LOCATION HSD3 POINT 54.7 48.4 0.0
 LOCATION MSD POINT -7.2 35.88 0.0
 SO LOCATION GT POINT 26.2 -56.8 0.0
 LOCATION SS1GT POINT 3.5 -54.0 0.0
 LOCATION SS2GT POINT 48.9 -59.6 0.0

** POINT: SRCID QS HS TS VS DS
 SRCPARAM HSD1 0.97 4.88 660.8 20.38 0.76
 SRCPARAM HSD2 0.97 4.88 660.8 20.38 0.76
 SO SRCPARAM HSD3 0.97 4.88 660.8 20.38 0.76
 SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74
 SRCPARAM GT 2.27 11.77 766 24.0 3.93
 SO SRCPARAM SS1GT 2.10 13.08 801.0 24.65 3.85
 SO SRCPARAM SS2GT 2.10 13.08 801.0 24.65 3.85

BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14
 BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79
 BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
 BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
 BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
 BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
 BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79
 BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
 BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
 BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
 BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79

SO BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO BUILDHGT HSD3	3.14	3.14	3.14	3.14	3.14	3.14
BUILDHGT HSD3	3.14	3.14	3.14	3.14	5.79	5.79
BUILDHGT HSD3	5.79	5.79	5.79	5.79	5.79	5.79
SO BUILDWID HSD3	12.30	12.53	12.37	11.80	35.76	29.40
BUILDWID HSD3	27.09	23.96	25.29	28.10	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69
SO BUILDWID HSD3	12.30	12.53	12.37	11.80	10.88	9.62
BUILDWID HSD3	8.07	6.28	4.30	3.73	32.60	32.48
BUILDWID HSD3	31.38	29.32	26.37	22.62	18.18	15.69

BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	15.26	15.26
SO BUILDHGT MSD	15.26	10.97	16.15	16.15	16.15	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
SO BUILDHGT MSD	10.97	10.97	10.97	10.97	10.97	10.97
BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
BUILDWID MSD	27.09	23.96	25.29	28.10	11.46	11.75
SO BUILDWID MSD	12.11	30.35	18.94	18.93	18.34	30.59
SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
BUILDWID MSD	27.09	23.96	25.29	28.10	30.06	31.10
BUILDWID MSD	31.20	30.35	28.58	32.08	30.84	30.59

BUILDHGT GT	12.19	12.19	12.19	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDWID GT	26.98	25.74	26.49	20.04	22.92	25.52
BUILDWID GT	27.36	28.70	28.79	28.52	28.78	28.08
SO BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90
BUILDWID GT	6.97	11.73	16.13	20.04	22.92	25.52
BUILDWID GT	27.36	28.35	28.49	28.42	28.69	28.08
SO BUILDWID GT	26.63	24.36	21.40	17.73	13.52	8.90

BUILDHGT SS1GT	12.19	0.00	0.00	0.00	0.00	4.88
SO BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT SS1GT	4.88	0.00	0.00	0.00	0.00	0.00
BUILDHGT SS1GT	0.00	0.00	0.00	0.00	0.00	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	0.00	0.00	0.00	12.19	12.19
BUILDWID SS1GT	26.98	0.00	0.00	0.00	0.00	25.93
SO BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID SS1GT	26.70	0.00	0.00	0.00	0.00	0.00
BUILDWID SS1GT	0.00	0.00	0.00	0.00	0.00	25.93
BUILDWID SS1GT	27.74	28.70	28.79	28.52	28.78	28.17
SO BUILDWID SS1GT	26.70	0.00	0.00	0.00	26.98	27.39

SO BUILDHGT SS2GT	4.88	4.88	12.19	12.19	12.19	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88

SO BUILDWID SS2GT	6.62	11.34	26.49	27.32	27.32	25.52
SO BUILDWID SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID SS2GT	26.63	24.36	21.35	17.69	13.50	8.90
BUILDWID SS2GT	6.62	11.34	15.72	19.62	22.92	25.52
SO BUILDWID SS2GT	27.36	28.35	28.49	28.42	28.69	28.08
BUILDWID SS2GT	26.63	24.36	21.35	17.69	13.50	8.90

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)

SO SRCGROUP ALL

FINISHED

RE STARTING

GRIDPOLR POL STA

GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)

RE GRIDPOLR POL ORIG 0.0 0.0

GRIDPOLR POL DIST 250. 300. 400. 500. 750. 1000.

GRIDPOLR POL GDIR 36 10.0 10.0

RE GRIDPOLR POL END

RE FINISHED

ME STARTING

ME INPUTFIL KYWPRE87.LST

ANEMHGHT 6.700 METERS

SURFDATA 12836 1987 KEY WEST

ME UAIRDATA 12844 1987 MIAMI

FINISHED

OU STARTING

OU RECTABLE ALLAVE FIRST-SIXTH

FINISHED

* SETUP Finishes Successfully ***

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS)					
	250.00	300.00	400.00	500.00	750.00	1000.00
10.00	1.83972	1.25765	1.05831	0.99537	0.70296	0.50450
20.00	0.84197	0.60260	0.57413	0.55524	0.41651	0.31113
30.00	0.38211	0.43667	0.54430	0.55571	0.46472	0.36428
40.00	1.60131	1.11197	0.84470	0.76934	0.55460	0.40760
50.00	3.51533	2.16845	1.25851	0.97652	0.59049	0.40444
60.00	3.50024	2.34632	1.44087	1.13306	0.69957	0.49637
70.00	1.70749	1.20879	0.79625	0.64718	0.42500	0.31352
80.00	0.65520	0.50163	0.38479	0.34548	0.26424	0.21430
90.00	0.30997	0.23548	0.20285	0.19632	0.16233	0.13469
100.00	0.35818	0.24714	0.21962	0.19805	0.14526	0.11564
110.00	0.87171	0.55029	0.38858	0.30490	0.21261	0.17216
120.00	1.19030	0.91957	0.79545	0.64827	0.39755	0.27897
130.00	1.43783	1.25569	1.11921	0.96261	0.65089	0.46620
140.00	1.45808	1.41347	1.33182	1.18059	0.83566	0.61421
150.00	1.81750	1.69023	1.45571	1.27450	0.95215	0.74494
160.00	2.28091	2.19268	1.96938	1.72800	1.21573	0.90311
170.00	2.41799	2.56055	2.47372	2.21820	1.60265	1.20616
180.00	1.65839	1.84369	2.00018	1.97539	1.66979	1.36584
190.00	1.42201	1.52686	1.58613	1.53376	1.27674	1.04215
200.00	1.50224	1.55984	1.55965	1.48313	1.22330	1.00083
210.00	1.76749	1.84537	1.84990	1.75514	1.43711	1.17620
220.00	1.81447	1.89623	1.90709	1.81433	1.48565	1.20634
230.00	2.02572	2.13772	2.17940	2.09066	1.73102	1.41568
240.00	1.90223	1.99543	2.01937	1.93122	1.60651	1.33097
250.00	1.48939	1.54044	1.53265	1.45535	1.21500	1.02033
260.00	1.11729	1.16197	1.17305	1.12795	0.95555	0.80162
270.00	0.89876	0.96983	1.04948	1.06722	0.99333	0.87743
280.00	1.01469	1.19017	1.37628	1.40314	1.23372	1.03016
290.00	1.35180	1.60066	1.86890	1.92005	1.69799	1.41265
300.00	2.14060	2.62246	3.14055	3.29602	3.05419	2.61724
310.00	3.85975	4.79497	5.61428	5.39441	3.93564	2.84360
320.00	5.59596	5.34761	4.81550	4.12545	2.87404	2.15504
330.00	4.86452	4.22081	4.21067	3.79691	2.63707	1.88645
340.00	4.77398	3.70364	3.35488	2.71333	1.60382	1.08346
350.00	3.76603	2.35061	1.83367	1.51981	1.00057	0.72987
360.00	2.25385	1.48014	1.28003	1.19248	0.85970	0.64427

MODELOPTs: CONC

RURAL FLAT

DEFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	53.85163 (87010424)	32.63180 (87010424)	18.71498 (87062624)	20.79856 (87062624)	16.10064 (87062
20.0 |	25.28416 (87062624)	16.84120 (87062624)	13.19194 (87062624)	12.14219 (87062624)	9.07465 (87062
30.0 |	25.40230 (87012224)	19.93807 (87012224)	15.59784 (87012224)	15.16210 (87062524)	11.30838 (87062
40.0 |	48.52101 (87110524)	30.91631 (87062524)	21.86840 (87062524)	20.09758 (87110524)	16.62643 (87110
50.0 |	123.01360c(87093024)	74.22809c(87093024)	41.67109c(87093024)	31.67038c(87093024)	18.07079c(87093
60.0 |	171.00372 (87030824)	128.52361 (87030824)	84.41630 (87030824)	63.90858 (87030824)	36.11475 (87030
70.0 |	64.71101 (87041824)	42.13503 (87041824)	25.32485 (87030824)	21.74164 (87030824)	13.90844 (87030
80.0 |	44.32845 (87041824)	34.41056 (87041824)	21.27200 (87041824)	16.15896 (87041824)	9.58396 (87041
90.0 |	28.17076 (87010424)	13.20979 (87010424)	10.94131 (87041724)	9.79646 (87041724)	6.91716 (87041
100.0 |	20.75638 (87010524)	17.46584 (87010424)	21.56088 (87010424)	18.94798 (87010424)	9.29363 (87010
110.0 |	42.29313 (87010524)	26.25401 (87010524)	13.94007 (87041624)	9.98647 (87041624)	6.57395 (87010
120.0 |	45.82723 (87020824)	27.22492 (87020824)	23.62863 (87031024)	21.19729 (87031024)	10.81739 (87041
130.0 |	51.92122 (87033124)	35.91123 (87012624)	35.22782 (87020824)	29.71592 (87020824)	16.31789 (87120
140.0 |	35.32455 (87033124)	40.59179 (87033124)	37.64791 (87033124)	28.82670 (87033124)	19.89270 (87012
150.0 |	34.20013 (87040424)	27.60466 (87040424)	30.06754 (87042224)	26.39542 (87042224)	17.15723 (87042
160.0 |	49.21372 (87112024)	42.27209 (87112024)	32.69645 (87040424)	29.25938 (87040424)	19.90980 (87102
170.0 |	34.10056 (87121624)	33.88863 (87011124)	35.79745 (87112024)	33.07244 (87112024)	22.79151 (87112
180.0 |	24.42286 (87121724)	25.64862 (87121724)	25.81669 (87101424)	24.52750 (87101424)	18.70437 (87101
190.0 |	17.26396 (87100824)	18.94742 (87100824)	19.27447 (87100824)	17.69551 (87100824)	15.21439 (87101
200.0 |	21.71298 (87112124)	21.27239 (87112124)	21.55041 (87101524)	20.58456 (87101524)	16.18292 (87101
210.0 |	23.07680 (87103024)	23.51547 (87103124)	22.93635 (87103124)	21.39768 (87021024)	16.65945 (87021
220.0 |	21.14030 (87100924)	21.57979 (87100424)	21.23965 (87100424)	19.72367 (87100424)	15.03716 (87100
230.0 |	35.26374 (87100924)	34.64787 (87100924)	31.45981 (87100924)	27.54724 (87100924)	19.94061 (87112
240.0 |	26.89030 (87110724)	27.23713 (87110724)	25.54159 (87110724)	22.68557 (87110724)	16.07325 (87110
250.0 |	28.59499 (87110824)	30.23949 (87110824)	30.19877 (87110824)	27.91692 (87110824)	20.70754 (87110
260.0 |	22.02785 (87110824)	21.15154 (87030524)	18.48567 (87111524)	16.59621 (87111524)	12.04450 (87111
270.0 |	15.75387 (87111524)	14.54788 (87111524)	14.53162 (87052424)	14.77496 (87052424)	13.06047 (87052
280.0 |	16.22446 (87052424)	18.87627 (87052424)	19.89565 (87052424)	17.81053 (87052424)	14.17384 (87060
290.0 |	24.12804 (87060824)	27.75134 (87060824)	27.78377 (87060824)	24.43689 (87060824)	16.65189 (87060
300.0 |	30.35208 (87111624)	29.27901 (87111624)	26.87619 (87061124)	26.96166 (87061124)	22.04313 (87061
310.0 |	38.49567 (87022624)	42.45585 (87022624)	49.48600 (87031724)	42.93815 (87031724)	29.73861 (87060
320.0 |	55.57814 (87031724)	50.72033 (87111724)	49.84889 (87121424)	45.09111 (87031824)	33.41905 (87031
330.0 |	67.53883 (87121424)	52.96354 (87031824)	43.60075 (87032624)	38.11016 (87032624)	23.84601 (87032
340.0 |	64.98058 (87032424)	52.08899 (87022824)	47.81500 (87022824)	37.63741 (87022824)	20.45881 (87022
350.0 |	96.24403 (87022824)	61.08981 (87022824)	32.46693 (87022824)	26.78418 (87033024)	17.44020 (87033
360.0 |	60.01230 (87033024)	35.41130 (87033024)	23.26798 (87033024)	17.11740 (87033024)	12.57085 (87012

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
EGREES) | 1000.00

10.0	11.67114 (87090524)
20.0	6.71805 (87012224)
30.0	8.48237 (97062524)
40.0	13.09181 (87110524)
50.0	12.06071c(87093024)
60.0	24.71624 (87030824)
70.0	9.89897 (87030824)
80.0	6.76237 (87041824)
90.0	6.02071 (87041824)
100.0	4.82471 (87010424)
110.0	5.76905 (87010424)
120.0	7.41848 (87041624)
130.0	11.63633 (87120424)
140.0	15.24231 (87012624)
150.0	12.06633 (87042624)
160.0	14.11709 (87102824)
170.0	15.91875 (87112024)
180.0	14.01304 (87101424)
190.0	12.18801 (87101424)
200.0	12.34931 (87101524)
210.0	13.05232 (87021024)
220.0	11.40679 (87100424)
230.0	15.04311 (87112324)
240.0	11.92023 (87110724)
250.0	15.41138 (87110824)
260.0	8.93646 (87111524)
270.0	10.67362 (87052424)
280.0	11.37574 (87060824)
290.0	13.32850 (87060924)
300.0	17.24425 (87061124)
310.0	19.79967 (87060224)
320.0	22.69842 (87031824)
330.0	16.54599 (87032424)
340.0	13.80723 (87012124)
350.0	12.38098 (87033024)
360.0	8.91758 (87012524)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	33.61512 (87030124)	19.17426 (87012524)	15.24568 (87031924)	14.65277 (87031924)	14.24858 (87090
20.0 |	21.41605 (87031924)	14.21738 (87031924)	10.42779 (87031924)	9.07904 (87030724)	8.33902 (87012
30.0 |	13.94361 (87030724)	11.47856 (87062524)	15.27415 (87062524)	14.82027 (87012224)	10.62850 (87012
40.0 |	46.76738 (87062524)	29.88440 (87110524)	20.92632 (87110524)	18.84861 (87062524)	14.03139 (87021
50.0 |	117.87074 (87030824)	72.01629 (87030824)	36.17605 (87030824)	23.99031c(87110424)	14.35529c(8711c
60.0 |	107.65939 (87030924)	69.12333 (87030924)	41.40925 (87030724)	34.59380c(87093024)	21.59465c(87093
70.0 |	40.02666 (87041724)	32.50101 (87041724)	23.95992 (87041824)	17.69838 (87041824)	11.84703 (87030
80.0 |	17.74965 (87041624)	12.42780 (87041624)	10.07575 (87092424)	10.05860 (87092424)	6.40920 (87092
90.0 |	9.40517 (87041624)	10.31155 (87041724)	7.29903 (87041824)	7.69151 (87041824)	5.50567 (87041
100.0 |	16.52182 (87010424)	13.97654 (87010524)	8.88211 (87010524)	5.81079 (87041624)	5.00924 (87041
110.0 |	33.71519 (87041624)	21.06409 (87041624)	13.47077 (87010524)	9.27579 (87010524)	6.06863 (87010
120.0 |	40.91641 (87012624)	25.62048 (87012624)	21.79456 (87041624)	17.75903 (87041624)	10.38390 (87031
130.0 |	35.70279 (87012624)	35.31946 (87033124)	34.53550 (87012624)	28.45177 (87012624)	16.03825 (87012
140.0 |	27.19788 (87042624)	23.83935 (87042624)	25.36495 (87012724)	23.54666 (87012724)	16.21516 (87042
150.0 |	29.32476 (87010524)	26.85570 (87042224)	23.23080 (87042624)	23.08261 (87042624)	15.73749 (87042
160.0 |	32.07360 (87111124)	33.19793 (87111124)	30.35967 (87102824)	28.02789 (87102824)	18.95138 (87040
170.0 |	33.95922 (87011124)	33.66420 (87112024)	29.41132 (87011124)	24.38443 (87011124)	19.52165 (87111
180.0 |	21.75343 (87101424)	24.40277 (87101424)	23.53148 (87121724)	21.35072 (87010624)	17.48470 (87011
190.0 |	15.17694 (87031124)	17.03699 (87011224)	18.22991 (87102924)	17.50006 (87102924)	13.34723 (87121
200.0 |	19.53397 (87101524)	20.85663 (87101524)	18.41299 (87112124)	15.20671 (87112124)	13.81068 (87102
210.0 |	22.89625 (87103124)	23.41368 (87103024)	22.79279 (87021024)	21.16964 (87103124)	16.03671 (87103
220.0 |	20.90986 (87100424)	21.10087 (87103124)	20.49736 (87103124)	18.75963 (87103124)	13.93369 (87103
230.0 |	30.19284 (87112324)	30.90496 (87112324)	29.72588 (87112324)	27.02692 (87112324)	15.31334 (87100
240.0 |	25.99807 (87112324)	25.41176 (87112324)	22.97589 (87112324)	20.48869 (87120624)	15.62381 (87120
250.0 |	23.28561 (87110724)	20.41238 (87110724)	20.13756 (87112524)	18.55712 (87112524)	14.49774 (87111
260.0 |	21.98665 (87030524)	19.63333 (87110824)	17.06946 (87030524)	12.96214 (87030524)	9.05378 (87031
270.0 |	11.28248 (87052424)	12.99018 (87052424)	12.88527 (87052224)	13.63564 (87052224)	11.69639 (87052
280.0 |	15.62271 (87052224)	16.62810 (87052224)	15.64126 (87052224)	15.59448 (87060824)	11.86603 (87052
290.0 |	16.17237 (87052424)	17.24236 (87052324)	19.67797 (87111624)	18.73375 (87111624)	15.82687 (87060
300.0 |	29.10076 (87060824)	27.82127 (87060924)	26.17023 (87060924)	21.85645 (87022624)	18.47174 (87051
310.0 |	35.95926 (87061124)	41.52505 (87031724)	41.68705 (87022624)	38.07848 (87060224)	26.88642 (87061
320.0 |	51.96333 (87111724)	48.44246 (87121424)	44.28746 (87111724)	40.47831 (87121424)	21.90178 (87121
330.0 |	66.63729 (87031824)	43.43002 (87121424)	37.33635 (87031824)	32.62461 (87022824)	23.51961 (87032
340.0 |	61.24866 (87032624)	51.79419 (87032424)	35.75471 (87032424)	24.50556 (87032624)	16.84128 (87032
350.0 |	46.84248 (87033024)	35.27131 (87033024)	31.88278 (87033024)	20.68485 (87030124)	14.25581 (87030
360.0 |	53.22567 (87030124)	33.55216 (87030124)	20.94384 (87030124)	16.52834 (87032824)	12.51764 (87032

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0	11.12467 (87062624)
20.0	6.66014 (87062624)
30.0	7.45962 (87012224)
40.0	10.89749 (87021624)
50.0	9.76675c(87043024)
60.0	14.76472c(87093024)
70.0	9.43279 (87030924)
80.0	5.17031 (87031924)
90.0	3.78533 (87092424)
100.0	3.45187 (87041624)
110.0	4.40177 (87010524)
120.0	6.94451 (87020724)
130.0	9.67311 (87042524)
140.0	12.69070 (87042324)
150.0	11.23046 (87033124)
160.0	12.96943 (87040424)
170.0	15.65727 (87111124)
180.0	13.87243 (87011324)
190.0	10.48955 (87121724)
200.0	11.92114 (87102924)
210.0	12.17468 (87103124)
220.0	11.31176 (87100324)
230.0	14.60182 (87111324)
240.0	11.73872 (87120624)
250.0	11.40679 (87111524)
260.0	7.22362 (87031524)
270.0	9.10590 (87052224)
280.0	9.37757 (87052324)
290.0	10.57750 (87060824)
300.0	16.97973 (87051624)
310.0	19.53671 (87061924)
320.0	16.75226 (87032524)
330.0	15.47464 (87032624)
340.0	13.07026 (87022824)
350.0	9.72202 (87011524)
360.0	8.55186 (87032824)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | EGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	31.50556 (87012524)	18.00187 (87032724)	14.84349 (87020524)	13.94860 (87090524)	11.54889 (87062)
20.0 |	19.03822 (87021624)	12.39022 (87062724)	9.78566 (87062724)	8.75156 (87011924)	8.19025 (87030)
30.0 |	9.73334 (87062624)	10.12040 (87062624)	11.63863 (87062624)	12.04587c(87110424)	10.08761c(87110)
40.0 |	40.00899 (87021624)	25.97401 (87021624)	18.43210 (87021624)	17.51327 (87021624)	13.00293 (87062)
50.0 |	86.03862c(87110424)	52.05743c(87110424)	30.24285c(87110424)	23.63860 (87030824)	13.13935c(87043)
60.0 |	84.15331c(87093024)	63.33144 (87030724)	41.12534c(87093024)	31.18779 (87030724)	17.81560 (87030)
70.0 |	37.99369 (87030924)	29.70681 (87030824)	20.11068 (87041724)	16.04475 (87030924)	9.01874 (87041)
80.0 |	15.56780 (87041724)	12.20542 (87010124)	9.00492 (87010124)	7.49710c(87040324)	6.33669 (87031)
90.0 |	8.75680 (87041724)	7.19037 (87041624)	5.80262 (87041624)	5.03974 (87020624)	3.92257 (87092)
100.0 |	12.32646 (87020924)	5.88561 (87020924)	5.17876 (87092524)	5.24647 (87010524)	2.95465 (87092)
110.0 |	26.89253 (87031024)	12.02074c(87081024)	9.81624 (87020924)	8.02887 (87020924)	5.04880 (87041)
120.0 |	23.61466 (87041624)	22.84481 (87041624)	21.25208c(87081024)	17.55582 (87010524)	9.70667 (87010)
130.0 |	34.43188 (87012224)	33.17376 (87020824)	22.22968 (87012224)	19.11273 (87120424)	15.68890 (87020)
140.0 |	27.09264 (87042224)	22.73552 (87020824)	21.89120 (87020824)	23.30993 (87012624)	15.19334 (87012)
150.0 |	26.68767 (87102824)	25.03243 (87102824)	20.16439 (87101324)	15.44707 (87101324)	13.56740 (87033)
160.0 |	30.77747 (87011124)	32.43502 (87040424)	30.00492 (87111124)	24.64017 (87111124)	13.71540 (87111)
170.0 |	33.60245 (87010624)	32.22919 (87010624)	28.97090 (87120524)	24.03340 (87120524)	15.40305 (87102)
180.0 |	19.44249 (87040124)	20.80609 (87010624)	22.58835 (87010624)	20.32619 (87011324)	16.99577 (87031)
190.0 |	15.14328 (87011224)	16.80597 (87102924)	18.08039 (87011224)	17.22510 (87011224)	13.29870 (87102)
200.0 |	15.96781 (87021024)	16.43333 (87053124)	16.22198 (87053124)	15.10404 (87053124)	12.98329 (87031)
210.0 |	21.14285 (87021024)	22.52814 (87021024)	22.17551 (87103024)	19.90734 (87103024)	14.73688 (87110)
220.0 |	20.49329 (87103124)	20.58326 (87111324)	20.13484 (87111324)	18.51208 (87111324)	13.79697 (87111)
230.0 |	25.61677 (87112224)	25.74719 (87112224)	25.69733 (87111324)	24.31401 (87111324)	19.01805 (87111)
240.0 |	23.39964 (87030524)	22.65858 (87030524)	21.88004 (87120624)	20.10805 (87112324)	14.93657 (87110)
250.0 |	19.16303 (87112424)	20.26755 (87112524)	19.05761 (87112424)	17.70025 (87111524)	13.78582 (87112)
260.0 |	19.36003 (87111524)	19.61257 (87111524)	14.75832 (87110824)	11.06113 (87110824)	8.16798 (87052)
270.0 |	8.10968 (87030624)	9.99689 (87052224)	11.41111 (87111524)	9.30555 (87052124)	9.91145 (87052)
280.0 |	11.00378 (87052124)	12.63963 (87052124)	13.90247 (87060824)	13.85432 (87052524)	11.54757 (87052)
290.0 |	15.22237 (87052324)	17.16019 (87111624)	16.99280 (87052324)	17.91416 (87060924)	13.60734 (87111)
300.0 |	24.04429 (87060924)	25.92129 (87060824)	23.44663 (87022624)	21.24785 (87060924)	17.85566 (87122)
310.0 |	29.60964 (87111624)	40.95755 (87061124)	40.41327 (87061124)	33.76274 (87022624)	24.25962 (87031)
320.0 |	50.19798 (87022624)	39.30003 (87031724)	42.81834 (87031824)	34.31475 (87111724)	20.98050 (87032)
330.0 |	59.73421 (87111724)	36.97395 (87032624)	34.88226 (87022824)	32.44275 (87032424)	21.58040 (87022)
340.0 |	61.17079 (87022824)	40.30562 (87032624)	32.80937 (87032624)	23.49283 (87032724)	15.91977 (87012)
350.0 |	44.19957 (87032624)	30.76777 (87032724)	23.15280 (87032724)	17.33796 (87032724)	11.72392 (87011)
360.0 |	42.88314 (87032724)	27.40821 (87032724)	17.46769 (87032724)	16.40953 (87030124)	11.60554 (87010)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 3RD HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
EGREES) | 1000.00

10.0	9.67391 (87062724)
20.0	6.25948 (87030724)
30.0	7.44317c(87110424)
40.0	9.44631 (87062524)
50.0	9.52215c(87110424)
60.0	12.38455 (87030724)
70.0	5.94348c(87100124)
80.0	4.83165 (87081124)
90.0	3.15345 (87041724)
100.0	2.79805 (87030824)
110.0	3.71054 (87081124)
120.0	5.87759 (87010524)
130.0	9.60373 (87012624)
140.0	11.49156 (87020824)
150.0	9.86980 (87042224)
160.0	11.08946 (87042224)
170.0	13.35254 (87102824)
180.0	13.74662 (87031224)
190.0	10.00167 (87011224)
200.0	10.56465 (87031124)
210.0	11.89990c(87120224)
220.0	11.30114 (87101124)
230.0	14.26690 (87100924)
240.0	11.44803 (87110824)
250.0	10.29525 (87112524)
260.0	6.74708 (87052424)
270.0	8.40847 (87052124)
280.0	8.72750 (87052524)
290.0	9.80810 (87111624)
300.0	15.98835 (87031724)
310.0	17.88951 (87121424)
320.0	15.05265 (87032624)
330.0	14.92395 (87022824)
340.0	11.05626 (87032724)
350.0	9.56222 (87030124)
360.0	8.17026 (87030124)

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	27.73881 (87032724)	17.49847 (87030124)	14.48417 (87030724)	13.17062 (87020524)	10.68278 (87021
20.0 |	17.15362 (87062724)	10.64458 (87021624)	8.53956 (87011924)	8.61748 (87031924)	6.45981 (87011
30.0 |	7.84529c(87110424)	9.45647 (87030724)	10.86571c(87110424)	11.64881 (87062624)	9.29175 (87062
40.0 |	37.11350c(87093024)	22.28852c(87093024)	15.63001c(87043024)	14.46943c(87043024)	9.64039c(87043
50.0 |	70.33456 (87062724)	43.60918 (87062724)	25.48467 (87062724)	19.28760 (87062724)	12.24194 (87092
60.0 |	84.00101 (87030724)	59.65806c(87093024)	36.21175 (87030924)	25.45396 (87030924)	14.04666c(87110
70.0 |	37.82612 (87012624)	29.26103 (87030924)	19.16419 (87030924)	14.33062 (87041724)	8.16617 (87041
80.0 |	13.78780 (87010124)	9.20473 (87020724)	7.72258c(87092324)	7.22612 (87010424)	5.40972 (87010
90.0 |	7.17297 (87041824)	6.96098 (87041824)	5.65677 (87010424)	4.99945 (87041624)	3.92055 (87020
100.0 |	12.02099 (87041624)	5.39633 (87041624)	4.95238 (87041624)	4.72189 (87092524)	2.41279 (87011
110.0 |	22.06779c(87081024)	11.68640 (87031024)	8.18421 (87042924)	7.39497 (87010424)	4.48219 (87081
120.0 |	23.57663 (87012724)	21.10229 (87010524)	21.06959 (87010524)	15.95209c(87081024)	9.31542 (87020
130.0 |	33.00131 (87020824)	33.17226 (87012224)	20.17297 (87012724)	18.08889 (87042524)	13.08346 (87042
140.0 |	22.08644 (87101224)	21.49807 (87012724)	21.83112 (87012624)	18.76286 (87020824)	14.38174 (87033
150.0 |	26.35409 (87122924)	24.17135 (87101324)	19.84502 (87102824)	15.04087 (87033124)	10.47876 (87031
160.0 |	30.55510 (87040424)	28.43086 (87102824)	27.58713 (87112024)	18.69027 (87101324)	13.15169 (87101
170.0 |	28.90714 (87112024)	31.59503 (87121624)	25.36224 (87010624)	22.72642 (87111124)	15.32622 (87011
180.0 |	17.76254 (87010624)	19.87752 (87040124)	19.60933 (87011324)	19.66426 (87101624)	16.21086 (87101
190.0 |	14.80164 (87101524)	16.10955 (87031124)	16.29353 (87101424)	17.22218 (87101424)	13.26060 (87011
200.0 |	15.94449 (87053124)	15.09755 (87021024)	14.90741 (87031124)	15.00962 (87031124)	11.45417 (87053
210.0 |	20.20267 (87042724)	19.10132 (87042724)	18.19843 (87101524)	17.53561 (87110224)	14.55314c(87120
220.0 |	19.90697 (87111324)	20.07797 (87100924)	18.43473 (87042724)	16.82812 (87042724)	13.20313 (87101
230.0 |	24.02798 (87111324)	25.34815 (87111324)	24.11890 (87112224)	21.52792 (87112224)	15.42976 (87112
240.0 |	23.24403 (87100924)	21.74562 (87100924)	20.37537 (87110824)	19.26062 (87110824)	14.10205 (87112
250.0 |	19.13963 (87112524)	19.80920 (87112424)	17.76591 (87111524)	17.09931 (87112424)	12.04364 (87112
260.0 |	15.18563 (87112424)	14.39433 (87112424)	12.45408 (87112424)	10.77314 (87031524)	7.35529 (87060
270.0 |	8.02621 (87060824)	8.56268 (87112724)	9.11896 (87112724)	9.02923 (87112724)	8.51371 (87112
280.0 |	10.86869 (87060724)	11.70277 (87060724)	13.29299 (87052524)	13.63521 (87052324)	11.43627 (87052
290.0 |	13.70059 (87052524)	15.22298 (87052524)	15.60637 (87060924)	14.22062 (87052324)	11.77497 (87060
300.0 |	20.48039 (87022624)	23.36548 (87022624)	21.90427 (87111624)	20.47828 (87122524)	17.36274 (87031
310.0 |	28.88058 (87031724)	34.26748 (87051624)	37.42832 (87051624)	33.28463 (87061924)	22.90325 (87121
320.0 |	44.73843 (87111624)	38.97481 (87061924)	33.78829 (87121924)	25.43992 (87061924)	17.15967 (87032
330.0 |	44.54910 (87121924)	33.38039 (87111724)	33.48307 (87032424)	30.00070 (87032524)	20.16212 (87032
340.0 |	42.44003 (87032524)	30.66418 (87032524)	24.91157 (87033024)	20.61390 (87032424)	14.00675 (87061
350.0 |	43.07907 (87032724)	23.08407 (87091224)	21.32823 (87012124)	17.18530 (87022824)	11.24674 (87121
360.0 |	30.94280 (87101224)	18.45194 (87101224)	15.69761 (87012524)	15.94167 (87012524)	10.69212 (87030

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 4TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
EGREES) | 1000.00

10.0	7.90911 (87021624)
20.0	5.42015 (87110324)
30.0	7.06179 (87062624)
40.0	6.83577 (87062624)
50.0	8.41470 (87092424)
60.0	11.59106c(87110424)
70.0	5.68664 (87041724)
80.0	4.42669 (87012624)
90.0	2.92699 (87020624)
100.0	2.07439 (87041824)
110.0	3.69394 (87092524)
120.0	5.40585 (87120424)
130.0	9.56745c(87081024)
140.0	10.12895 (87012724)
150.0	9.34413c(87102724)
160.0	9.39444 (87101324)
170.0	12.32620 (87102124)
180.0	13.52999 (87101824)
190.0	9.79763 (87102924)
200.0	8.57139 (87101624)
210.0	11.76270 (87110224)
220.0	10.57749 (87101024)
230.0	11.91619 (87103024)
240.0	10.81903 (87100524)
250.0	9.91754 (87031524)
260.0	6.03217 (87060824)
270.0	8.07250 (87112724)
280.0	7.74595 (87052424)
290.0	9.45786 (87061124)
300.0	13.81714 (87122524)
310.0	15.31412 (87111724)
320.0	13.57140 (87121424)
330.0	12.45901 (87032524)
340.0	9.46728 (87061524)
350.0	8.39047 (87121524)
360.0	7.64565 (87010424)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | EGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	24.67668 (87021624)	17.02449 (87062624)	14.33172 (87032724)	13.16701 (87021624)	10.34584 (87031
20.0 |	12.09472 (87030724)	7.68848 (87030724)	7.81024 (87030724)	8.49518 (87062724)	5.98704 (87011
30.0 |	7.59986 (87062524)	8.93367c(87110424)	8.10308c(87040324)	8.01108c(87040324)	7.57358 (87110
40.0 |	32.03607 (87062724)	21.51372 (87030724)	14.81971 (87030724)	12.56511 (87062624)	9.29063 (87062
50.0 |	65.93026c(87040324)	41.11769c(87040324)	22.81540c(87040324)	18.66154 (87092424)	11.18107 (87030
60.0 |	57.62716c(87110424)	38.49690c(87110424)	21.92499c(87110424)	18.95289c(87110424)	13.49173 (87030
70.0 |	33.54051 (87010124)	26.62726 (87010124)	18.64559 (87010124)	14.04302 (87010124)	7.93986c(87100
80.0 |	12.47456 (87031924)	8.66677 (87031924)	7.66535c(87040324)	7.02623 (87031924)	5.08025c(87040
90.0 |	6.12235 (87010524)	4.79536 (87020624)	5.03290 (87020624)	4.10174 (87030924)	3.59049 (87041
100.0 |	6.54219 (87081124)	4.86920 (87081124)	4.02669 (87081124)	3.45627 (87081124)	2.36939 (87081
110.0 |	18.45744 (87120424)	11.53120 (87042924)	8.10221 (87120424)	5.93973c(87071424)	4.44438 (87092
120.0 |	23.29572 (87033124)	19.21282c(87081024)	18.48339 (87120424)	14.78004 (87120424)	8.32360 (87120
130.0 |	30.78357 (87012724)	24.25364 (87012724)	19.98125 (87042524)	16.86757 (87012724)	11.38887 (87031
140.0 |	19.43017 (87012724)	21.01847 (87042224)	19.73366 (87020724)	17.14198 (87042324)	14.20905 (87020
150.0 |	25.64194 (87111124)	20.73841 (87042624)	17.14357 (87040424)	14.61382 (87031024)	9.76219 (87020
160.0 |	28.00315 (87121624)	26.57697 (87121624)	22.95788 (87121624)	18.60725 (87010524)	12.93645 (87042
170.0 |	26.92552 (87120524)	30.49957 (87120524)	24.14866 (87121624)	18.93950 (87022324)	13.96688 (87120
180.0 |	17.09630 (87100824)	17.31609 (87101624)	19.59549 (87101624)	19.55295 (87121724)	15.82290 (87010
190.0 |	14.71972 (87102924)	15.70286 (87110624)	16.29113 (87121724)	16.23760 (87121724)	12.71981 (87100
200.0 |	15.12028 (87110224)	14.85538 (87110224)	13.22533 (87110224)	14.00743 (87102924)	10.84410 (87101
210.0 |	18.31828 (87031424)	18.86178 (87031424)	18.04523 (87031424)	17.20898 (87101524)	14.33909 (87103
220.0 |	18.85036 (87042724)	19.19363 (87042724)	17.74743 (87031324)	16.44878 (87031324)	12.96313 (87101
230.0 |	23.17642 (87030524)	22.91088 (87030524)	20.94085 (87030524)	19.10900 (87112424)	15.19041 (87103
240.0 |	20.42331 (87120624)	21.66746 (87120624)	20.10914 (87030524)	17.30500 (87030524)	13.71088 (87100
250.0 |	17.40284 (87112324)	17.11062 (87102424)	16.80609 (87102424)	15.54411 (87102424)	11.72989 (87102
260.0 |	14.76774 (87102424)	14.15011 (87102424)	11.81496 (87102424)	10.53311 (87112424)	6.84045 (87112
270.0 |	7.65746 (87112724)	8.49540 (87060824)	8.67991 (87123124)	8.72450 (87111524)	6.80540 (87052
280.0 |	8.86597 (87052524)	10.75203 (87052524)	12.88900 (87052324)	13.36755 (87052224)	8.94137 (87052
290.0 |	13.31926 (87111624)	14.95304 (87052424)	14.97208 (87052524)	14.06444 (87060724)	11.37926 (87061
300.0 |	16.83283 (87061124)	22.22043 (87061124)	18.63021 (87052524)	18.31527 (87061024)	17.22967 (87022
310.0 |	24.92637 (87051624)	31.77925 (87111624)	34.30738 (87060224)	32.83916 (87061124)	21.36642 (87111
320.0 |	42.40738 (87121424)	36.84788 (87121924)	32.76659 (87061924)	25.43152 (87121924)	17.11459 (87111
330.0 |	36.26871 (87111824)	30.99820 (87111824)	32.61897 (87032524)	23.92969 (87031824)	17.74014 (87121
340.0 |	35.13044 (87121524)	25.98335 (87051824)	23.11802 (87032524)	19.16964 (87033024)	11.35229 (87061
350.0 |	37.80250 (87032424)	19.28760 (87012124)	20.47577 (87030124)	16.79773 (87012124)	9.97524 (87011
360.0 |	28.72528 (87022824)	18.22385 (87012524)	14.25219 (87032824)	15.07553 (87010424)	8.69954 (87012

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 5TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES) | 1000.00

10.0	7.69970 (87011924)
20.0	4.76167 (87011024)
30.0	6.42959 (87110524)
40.0	6.47774c(87043024)
50.0	7.34351c(87040324)
60.0	8.64649 (87030924)
70.0	5.52123 (87041824)
80.0	4.11613 (87010424)
90.0	2.73750 (87041624)
100.0	2.04181 (87011124)
110.0	3.49110 (87111024)
120.0	5.27180 (87031024)
130.0	9.33053 (87031024)
140.0	9.70198 (87042524)
150.0	8.81864c(87121124)
160.0	8.59396 (87042624)
170.0	10.52383 (87011124)
180.0	12.57471 (87101624)
190.0	9.23134 (87100824)
200.0	8.53463 (87053124)
210.0	11.32285 (87112124)
220.0	10.46808 (87103124)
230.0	11.90370 (87120624)
240.0	10.33873 (87112324)
250.0	8.84499 (87102424)
260.0	5.35741 (87121324)
270.0	5.51672 (87052524)
280.0	7.31959 (87052724)
290.0	8.68041 (87060724)
300.0	13.64073 (87070324)
310.0	15.11694 (87031724)
320.0	13.40030 (87032924)
330.0	12.90865 (87121524)
340.0	8.89629 (87061624)
350.0	6.97478 (87011624)
360.0	6.72413 (87012024)

MODELOPTS: CONC

RURAL FLAT

DFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DEGREES) |	DISTANCE (METERS)				
	250.00	300.00	400.00	500.00	750.00
10.0 |	23.19525 (87101224)	16.63499 (87020524)	13.03822 (87032824)	13.06265 (87032824)	9.06833 (87011
20.0 |	10.74399 (87020224)	7.47954 (87020224)	7.45115 (87021624)	8.44095 (87012224)	5.82293 (87062
30.0 |	5.46262c(87100124)	5.69642c(87040324)	7.26737 (87011024)	7.37606 (87011024)	6.11667 (87012
40.0 |	30.34822c(87043024)	21.44804 (87062724)	14.15736 (87062724)	12.30814c(87093024)	8.28624 (87022
50.0 |	61.18877 (87030924)	35.99697 (87030924)	21.66912 (87092424)	17.79206c(87040324)	11.06725c(87040
60.0 |	54.28104 (87041724)	35.98872 (87041724)	21.24360 (87062724)	16.32512 (87062724)	9.80472c(87040
70.0 |	31.14417 (87030824)	22.48814 (87012624)	13.88613 (87030724)	11.60665 (87030724)	7.70806 (87010
80.0 |	11.44948 (87030924)	8.44136 (87041724)	7.46079 (87010424)	7.01573 (87010124)	4.54653 (87012
90.0 |	5.36047 (87020624)	3.93229 (87030724)	4.06948 (87030924)	4.04522 (87010424)	3.15849 (87031
100.0 |	6.15281 (87010124)	4.47226 (87092524)	3.78631c(87093024)	3.21677c(87093024)	2.06974 (87041
110.0 |	17.22064 (87042524)	11.40399 (87020924)	8.03648 (87020724)	5.85017 (87081124)	4.38692 (87020
120.0 |	21.25457 (87012224)	19.20238 (87120424)	17.95138 (87042524)	14.39116 (87042924)	8.05519 (87042
130.0 |	21.39712 (87020724)	20.22699 (87010124)	19.52731 (87033124)	15.19900 (87042324)	10.90230 (87041
140.0 |	19.33329 (87020824)	20.38946 (87020724)	15.40253 (87101224)	15.56507 (87012224)	12.71419 (87012
150.0 |	23.98961 (87101324)	20.06630 (87122924)	14.98906 (87033124)	14.55392 (87102824)	9.62023 (87012
160.0 |	23.43485 (87102824)	26.17422 (87011124)	21.83981 (87010524)	18.29347 (87121624)	12.16714 (87102
170.0 |	26.59996 (87040124)	24.74270 (87101424)	21.50202 (87111124)	18.86977 (87010624)	13.72142 (87022
180.0 |	15.36174 (87011224)	16.36390 (87011324)	19.14250 (87011124)	19.40726 (87011124)	15.57972 (87011
190.0 |	14.51908 (87110624)	14.94637 (87101624)	15.83523 (87031124)	14.55637 (87101624)	11.61337 (87102
200.0 |	14.69892 (87103024)	14.14020 (87103124)	12.86420 (87103124)	12.86181 (87101624)	10.31555 (87021
210.0 |	18.24489 (87111224)	18.56572 (87111224)	17.58674 (87110224)	17.17057 (87112124)	14.17562 (87112
220.0 |	17.46394 (87103024)	17.98782 (87031324)	17.32804 (87100924)	16.22712 (87111224)	12.76602 (87111
230.0 |	20.51174 (87100424)	21.03694 (87112424)	20.70464 (87112424)	18.90386 (87103024)	14.97081 (87120
240.0 |	18.81718 (87112224)	19.93894 (87110824)	18.33763 (87100924)	16.44309 (87100524)	11.77282 (87030
250.0 |	16.59563 (87102424)	16.84765 (87112324)	16.10710 (87123024)	14.77372 (87123024)	11.18690 (87031
260.0 |	13.44668 (87030624)	12.35054 (87030624)	10.95052 (87031524)	9.53135 (87102424)	6.75016 (87052
270.0 |	7.63393 (87052224)	8.16914 (87123124)	8.64508 (87060724)	8.33112 (87060724)	6.53781 (87060
280.0 |	8.52046 (87072224)	10.58051 (87072224)	12.01980 (87052124)	10.33132 (87072224)	8.37981 (87052
290.0 |	12.64817 (87052224)	12.25513 (87050324)	13.62956 (87050324)	13.38876 (87022624)	11.20722 (87022
300.0 |	16.35370 (87052524)	18.57756 (87060724)	18.46079 (87060724)	17.57457 (87060124)	16.14989 (87070
310.0 |	23.45432 (87060924)	26.83636 (87111724)	32.82714 (87111624)	31.82434 (87051624)	19.90269 (87070
320.0 |	39.68834 (87061924)	32.76571 (87060224)	25.76151 (87111824)	24.90988 (87122124)	16.99148 (87122
330.0 |	30.79288 (87032424)	30.48574 (87032424)	27.49261 (87111824)	23.54990 (87051824)	17.70907 (87022
340.0 |	34.56301 (87051824)	25.54547 (87033024)	23.11188 (87032724)	18.94117 (87061524)	11.21617 (87032
350.0 |	34.86238 (87091224)	19.19744 (87032624)	17.73805 (87062224)	15.00351 (87121524)	9.64792 (87032
360.0 |	25.85992 (87012524)	15.88253 (87011524)	13.87694 (87011524)	12.57603 (87021624)	8.46119 (87091

MODELOPTs: CONC

RURAL FLAT

DFAULT

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RECTION | DISTANCE (METERS)
EGREES) | 1000.00

10.0	7.21383 (87031924)
20.0	4.57147 (87011924)
30.0	4.64871 (87012524)
40.0	5.81149c(87093024)
50.0	7.03322 (87030824)
60.0	7.48447c(87040324)
70.0	5.16018 (87010124)
80.0	4.05359 (87092424)
90.0	2.65548 (87092524)
100.0	1.97931 (87092524)
110.0	3.28729 (87092424)
120.0	5.26452 (87042924)
130.0	8.93379 (87020824)
140.0	9.27214 (87012224)
150.0	8.33941 (87012724)
160.0	8.42583 (87102124)
170.0	10.44581 (87040424)
180.0	11.95046 (87011124)
190.0	9.13793 (87102624)
200.0	8.45355 (87021924)
210.0	10.60685 (87103024)
220.0	10.32959 (87111324)
230.0	11.53641 (87110124)
240.0	9.75512 (87101024)
250.0	8.69773 (87112424)
260.0	4.94167 (87123124)
270.0	5.48633 (87082224)
280.0	7.11157 (87072124)
290.0	8.47734 (87022524)
300.0	13.61350 (87061324)
310.0	14.56105 (87122124)
320.0	12.72305 (87111824)
330.0	11.97033 (87022724)
340.0	8.36414 (87121524)
350.0	6.65289 (87012124)
360.0	6.55064 (87020524)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	5.61428 AT (-306.42, 257.11, 0.00, 0.00)	GP	POL
	2ND HIGHEST VALUE IS	5.59596 AT (-160.70, 191.51, 0.00, 0.00)	GP	POL
	3RD HIGHEST VALUE IS	5.39441 AT (-383.02, 321.39, 0.00, 0.00)	GP	POL
	4TH HIGHEST VALUE IS	5.34761 AT (-192.84, 229.81, 0.00, 0.00)	GP	POL
	5TH HIGHEST VALUE IS	4.86452 AT (-125.00, 216.51, 0.00, 0.00)	GP	POL
	6TH HIGHEST VALUE IS	4.81550 AT (-257.12, 306.42, 0.00, 0.00)	GP	POL

** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

MODELOPTs: CONC

RURAL FLAT DEFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR	(XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	171.00372 ON 87030824	AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
	HIGH 2ND HIGH VALUE IS	117.87074 ON 87030824	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
	HIGH 3RD HIGH VALUE IS	86.03862c ON 87110424	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
	HIGH 4TH HIGH VALUE IS	84.00101 ON 87030724	AT (	216.51, 125.00, 0.00, 0.00)	GP	POL
	HIGH 5TH HIGH VALUE IS	65.93026c ON 87040324	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL
	HIGH 6TH HIGH VALUE IS	61.18877 ON 87030924	AT (	191.51, 160.70, 0.00, 0.00)	GP	POL

** RECEPTOR TYPES:

- GC = GRIDCART
- GP = GRIDPOLR
- DC = DISCCART
- DP = DISCPOLR
- BD = BOUNDARY

Addendum 2

Application for Air Emission Construction Permit

for

**Two 19.77 MW
Combustion Turbines
at Stock Island Power Plant**

**Florida Municipal Power Agency
Utility Board of Key West**

November 7, 1997





November 7, 1997

via Federal Express

Mr. A. A. Linero, P.E. Administrator
New Source Review Section
Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

NOV 10 1997

**BUREAU OF
AIR REGULATION**

**Subject: Air Emission Source Construction Permit Application for the
FMPA/Key West Two Used 19.77 MW Combustion Turbine Units
File No. 0870003-003-AC**

Dear Mr. Linero:

In response to your letter dated October 10, 1997, this letter and the enclosed Addendum provides additional information concerning the air quality impacts associated with the proposed units and the existing units on the Stock Island Plant site.

You expressed concerns for the predicted air quality impacts for PM, PM₁₀ and NO_x at receptors located 150 meters and 200 meters off of the property. To resolve these concerns, the Utility Board of Key West has committed to modification of the high speed diesel units stacks from their existing elevation of 16 feet to an elevation of 40 feet. This increase in stack height mitigates the predicted downwash condition that was influencing the dispersion of emissions from the HSD units. The attached Addendum 2 revises our earlier submittals for this permit application by incorporating this increase in stack height in the construction schedule for the proposed used combustion turbine units.

In addition to stack height changes, minor adjustment have been made to the coordinates for the proposed used combustion turbine unit's stacks. These adjustments are very minor (adjustment of the foot print for the CT's), and do not impact air quality evaluations. However, these adjustment have been incorporated into the latest air dispersion modeling runs and ELSA forms have been revised accordingly.

The following is a summary of the information included in this Addendum 2:



Revised ELSA Forms (Tab 1)

Section	Modification
III Part 7a-1	Item 13. Emission Point Coordinates have been revised for both CTs
III Part 7a-1	Item 6. Increase in stack height has been added for the three high speed diesel units.
Figures SK-1	Site Plan has been revised reflecting new foot print for CTs

Tab 1 includes a complete set of ELSA pages for these changes.

Attachment A Revisions (Tab 2)

Revisions to Attachment A include:

- Revision of text in Section 3-1 reflecting the commitment to increase the stack height for the high speed diesel units.
- Revision of anticipated construction schedule.
- Complete revision of Section 3-4 Air Quality Impact Assessment reflecting the increase in the stack height for the high speed diesel units.

Tab 2 includes a complete revised Attachment A with the above revisions included.

Air Dispersion Modeling Revisions (Tab 3)

Revised air dispersion modeling runs are included in Tab 3. A total of six runs are included, the results of which are summarized in Tables 3-4-5 and 3-4-6 in Section 3-4 of Tab 3.

Based on the above information we believe all the issues and concerns have been addressed and the subject permit application should be considered complete. If you have any questions concerning this information, please contact me.

Mr. A. A. Linero
Page 3

R·W·BECK

Sincerely,

R. W. BECK, INC.



Ivan L. Clark
Senior Director
Environmental Services

ILC/smm

Enclosures

c: R. Williams, FMFA
L. Thompson, Utility Board of Key West
C. Jansen, Utility Board of Key West
D. Finigan, Utility Board of Key West
D. Tremore, Rose, Sundstrom and Bentley
N. Guarriello, R. W. Beck
W. Reynolds, R. W. Beck

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 2

19.77 MW Combustion Turbine Electric Generating Unit #1

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 7		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	43	feet	
7. Exit Diameter :	12.6	feet	
8. Exit Temperature :	982	°F	
9. Actual Volumetric Flow Rate :	607567	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.689
		North (km) :	2716.612
14. Emission Point Comment :			
Exit Diameter of 12.6 feet is an equivalent diameter. The stack is actually rectangular with exit dimensions of 10' x 12.5'. Exit Temperature and Actual Volumetric Flow Rate are based on 40F ambient air temperature and 100% load. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric			

III. Part 7a - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Generating Units are proposed for construction.

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 3

19.77 MW Combustion Turbine Electric Generating Unit #2

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 8		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	43	feet	
7. Exit Diameter :	12.6	feet	
8. Exit Temperature :	982	°F	
9. Actual Volumetric Flow Rate :	607567	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.702
		North (km) :	2716.610
14. Emission Point Comment :			
Exit Diameter of 12.6 feet is an equivalent diameter. The stack is actually rectangular with exit dimensions of 10' x 12.5'. Exit Temperature and Actual Volumetric Flow Rate are based on 40F ambient air temperature and 100% load. Upon the approval of the retirement of the 37 MW Steam Electric Generator (Ralph Garcia Steam Plant), two used 19.77 MW Combustion Turbine Electric			

III. Part 7a - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

Generating Units are proposed for construction.

III. Part 7a - 2

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 4

2 MW Diesel Peaking Unit #1

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 2		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	40	feet	
7. Exit Diameter :	2.5	feet	
8. Exit Temperature :	730	°F	
9. Actual Volumetric Flow Rate :	19650	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.707
		North (km) :	2716.733
14. Emission Point Comment :			

III. Part 7a - 1

DEP Form No. 62-210.900(1) - Form

Effective : 3-21-96

E. EMISSION POINT (STACK/VENT) INFORMATION

Emissions Unit Information Section 5

2 MW Diesel Peaking Unit #2

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 3		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	40	feet	
7. Exit Diameter :	2.5	feet	
8. Exit Temperature :	730	°F	
9. Actual Volumetric Flow Rate :	19650	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.706
		North (km) :	2716.726
14. Emission Point Comment :			

III. Part 7a - 1

E. EMISSION POINT (STACK/VENT) INFORMATION

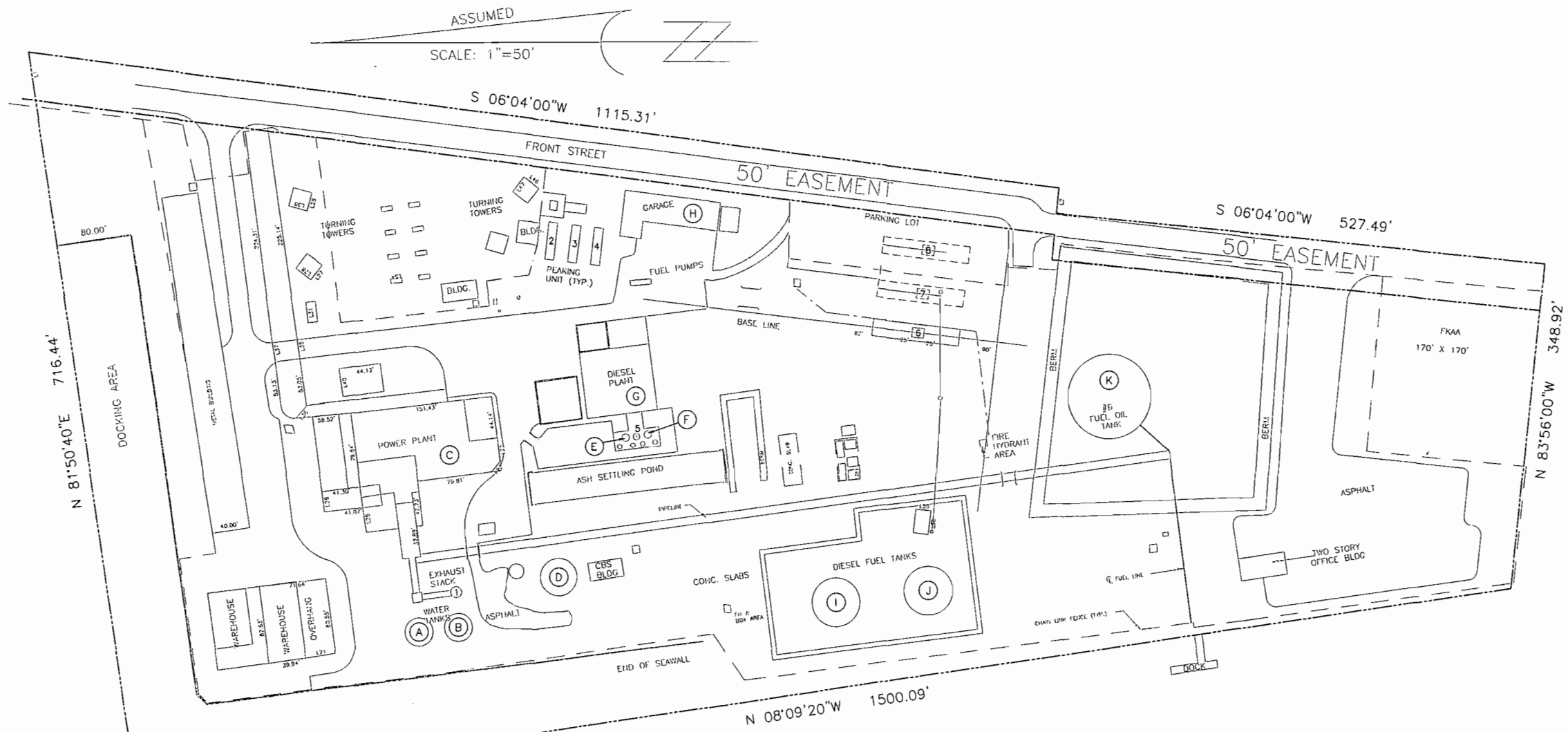
Emissions Unit Information Section 6

2 MW Diesel Peaking Unit #3

Emission Point Description and Type :

1. Identification of Point on Plot Plan or Flow Diagram :	Figure 2, Stack 4		
2. Emission Point Type Code :	1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking : (limit to 100 characters per point)			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common :			
5. Discharge Type Code :	V		
6. Stack Height :	40	feet	
7. Exit Diameter :	2.5	feet	
8. Exit Temperature :	730	°F	
9. Actual Volumetric Flow Rate :	19650	acfm	
10. Percent Water Vapor :	%		
11. Maximum Dry Standard Flow Rate :	dscfm		
12. Nonstack Emission Point Height :	feet		
13. Emission Point UTM Coordinates :			
Zone :	17	East (km) :	425.705
		North (km) :	2716.718
14. Emission Point Comment :			

III. Part 7a - 1



- BUILDINGS**
- A. DEMINERALIZATION TANK No. 1
 - B. DEMINERALIZATION TANK No. 2
 - C. WATER ELECTRIC GENERATOR BUILDING (RALPH GARCIA STEAM PLANT)
 - D. WATER TANK
 - E. MEDIUM SPEED DIESEL MUFFLER No. 1
 - F. MEDIUM SPEED DIESEL MUFFLER No. 2
 - G. MEDIUM SPEED DIESEL PLANT BUILDING
 - H. GARAGE
 - I. DIESEL FUEL TANK No. 1
 - J. DIESEL FUEL TANK No. 2
 - K. No. 5 FUEL OIL TANK

- STACKS**
- 1. STEAM ELECTRIC GENERATOR
 - 2. HIGH SPEED DIESEL No. 1
 - 3. HIGH SPEED DIESEL No. 2
 - 4. HIGH SPEED DIESEL No. 3
 - 5. MEDIUM SPEED DIESEL
 - 6. EXISTING COMBUSTION TURBINE
 - 7. PROPOSED COMBUSTION TURBINE No. 1
 - 8. PROPOSED COMBUSTION TURBINE No. 2

XREFS:

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REV	DATE	DES	CHK'D	APPROVALS	REVISION DESCRIPTION

DES	CIVIL	ELEC



FLORIDA MUNICIPAL POWER AGENCY
KEY WEST SYSTEM STEAM PLANT
FIGURE 2
 BOUNDARY AND LIMITED TOPOGRAPHICAL SURVEY

FILE NO	005186
W/O	
DWG NO	SK-1.

PURPOSE

In order to provide adequate electric generating capacity for the Key West, Florida electric system during peak load conditions and during emergency conditions, the Florida Municipal Power Agency ("FMPA") and the Utility Board of Key West ("Utility Board") are proposing to install two used combustion turbine units at the Utility Board's Stock Island Plant site. FMPA will own and finance the installation of the units and the Utility Board will operate and maintain the units along with the other existing generating units at the Stock Island site. Part of the need for the proposed CT's is to replace the electric generating capacity of the existing 37 MW steam electric generating unit at the Stock Island plant site which is being retired by the Utility Board. As part of the permitting action in this application, the Utility Board will officially retire the steam unit from the State of Florida's emission inventory. In addition to assure compliance with air quality standards, the stacks for the existing three high-speed diesel units at the site are being raised from an elevation of 16 feet to 40 feet.

PROJECT LOCATION

The Stock Island Power Plant site comprises roughly 50 acres and is located approximately one mile east of the City of Key West, Monroe County, Florida. The site is a peninsula bounded by Safe Harbor and Hawk Channel. Across Safe Harbor to the west of the site is Cow Key, and north of the site is the main portion of Stock Island. The latitude of the site is 24° 33' 49" N, and the longitude of the site is 81° 44' 03" W. In Universal Transverse Mercator ("UTM") coordinates, the site is located in Zone 17, 425 km East and 2716 km North. The surrounding topography is essentially flat and varies from sea level to approximately 5 feet above mean sea level ("msl") with a small plot of land rising to approximately 10 feet msl. Figure 3-1-1 is a proximity map of Key West and Stock Island.

EXISTING FACILITIES

The existing Stock Island Plant site includes the following electric generating units:

- One 37 MW steam electric generating unit;
- Two 8.8 MW medium speed diesel units;

- Three 2 MW high speed diesel units; and
- One 23.8 MW combustion turbine.

In addition the site includes the fuel storage and handling facilities, electric substation, warehouse, office space, demineralized water storage, and various support facilities.

Fuel storage in the past included both No. 6 fuel and No. 2 fuel. With the planned retirement, all fuel storage will be converted to No. 2 fuel, with a fuel sulfur content of 0.05 percent.

PROPOSED COMBUSTION TURBINE UNITS

The proposed CT's to be installed are each rated at 19.77 MW at peak load at a ambient temperature of 85° F. The following summarizes the ratings of each unit.

Parameter	Value for Peak Rating
Output @ 85°F/sea level/60%RH, KW	19,770
Heat Rate @ above conditions (LHV), Btu/kwh	14,467
Heat Input @ above conditions (LHV), MMBtu/hr	286
Heat Input @ 40° F/sea level/60% RH (LHV), MMBtu/hr	287.7

The proposed CT's will be located east of the existing combustion turbine as shown in Figure 3-1-2.

The CT's will be in the standard metal enclosure typical of the General Electric Frame 5 series combustion turbines. The building is approximately 28m long and 5.5m wide and 4.88m high from the existing site grade. The exhaust stack will be 12.02m in height above the grade of each units foundation. The foundation will be constructed with a height of 1.07m above the existing site grade. Thus the total height of the stack will be 13.08m above the existing site grade. The stack will be rectangular with dimensions of 3.05m by 3.81m, for a total cross section area of 11.62m².

PROPOSED COMBUSTION TURBINE UNIT EMISSIONS

Emissions from the proposed units are summarized in Table 3-1-1 at the various operating temperatures. Nitrogen oxide emissions will be controlled using water injection. All the emission values shown in Table 3-1-1 assume NO_x emissions will be at 75ppm. Sulfur dioxide emissions will be controlled by using 0.05

percent sulfur fuel. Particulates, carbon monoxide and volatile organic compounds will be controlled by using standard industry operating practices for the units.

PROJECT SCHEDULE

The schedule for installation of the used CT's is anticipated as follows:

Begin Site Work	December 1, 1997
Begin Foundation Construction	January 1, 1998 (or as soon as air emission permit is received)
Deliver CT's to site	February 15, 1998
Begin Testing of CT's	April 15, 1998
Commercial Operation	June 1, 1998

**TABLE 3-1-1
STEWART & STEVENSON
19.7 MW COMBUSTION TURBINE ELECTRIC GENERATORS
MODELING PARAMETERS**

UNIT	Stack Height (m)	Stack Diameter (m)	Load Condition		Heat Input (MMBtu/hr)*	Stack Temperature (K)	Stack Velocity (m/s)	Emission Rate (g/s)				
			Temperature (F)	Load (%)				NO _x	CO	PM	PM ₁₀	SO ₂ **
Stewart & Stevenson	13.08	3.85	40	100	327.4	749.9	26.26	12.71	2.08	2.39	2.39	2.28
				75	261.92	643.5	18.03	10.17	5.51	1.91	1.91	1.82
				50	198.08	593.6	12.58	7.69	8.47	1.44	1.44	1.38
			59	100	309.92	756	25.06	12.03	1.99	2.26	2.26	2.16
				75	247.94	676	17.93	9.63	5.27	1.81	1.81	1.73
				50	187.5	598	11.99	7.28	8.11	1.37	1.37	1.31
			85	100	286	764.3	23.38	10.8	1.97	2.08	2.08	1.99
				75	228.8	720.5	17.63	8.64	5.24	1.67	1.67	1.59
				50	173.03	604	11.18	6.53	8.06	1.26	1.26	1.20

*Based on Lower Heating Value (LHV).

**Based on firing No. 2 Oil containing 0.05% sulfur.

SECTION 3-2

NEW SOURCE PERFORMANCE STANDARDS

The CAA required USEPA to promulgate national emission standards for stationary sources of air pollution. The New Source Performance Standards (NSPS) are applicable to specific categories or sources, and apply to new sources of air pollution as well as to modified or reconstructed existing sources. NSPS refer to "affected facilities" and "existing facilities". An affected facility means any apparatus to which a standard is applicable. An existing facility means any apparatus of the type for which a standard has been developed, but was constructed before the date of that standard. NSPS applies to new, modified or reconstructed sources for which a standard applies.

For the purposes of the NSPS, a modification is a physical or operational change to an existing facility that causes an increase in the emission rate (in mass per unit time) of any pollutant to which a standard applies. Reconstruction means the replacement of components of an existing facility whose fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable, entirely new facility. A reconstructed facility becomes an affected facility irrespective of any changes in emission rates.

The NSPS appear in 40 CFR 60. Subpart GG, 40 CFR 60.330-60.335, consists of Standards of Performance for Stationary Gas Turbines. NSPS for gas turbines include standards for NO_x and SO₂ emissions.

NSPS - NO_x

The Standard for NO_x, 40 CFR 60.332, limits NO_x emissions. For gas turbines with heat input at peak load greater than 100 mm Btu/hr, based on the LHV of the fuel fired, the limit is a minimum level of 0.0075 percent by volume on a dry basis corrected to 15% O₂ at ISO conditions, plus an allowance for fuel-bound nitrogen:

$$STD = 0.0075 (14.4/Y) + F$$

where: STD = allowable NO_x emissions, percent by dry volume corrected to 15% O₂;

Y = manufacturer's rated or actual measured heat rate, kilojoules per watt-hour; and

F = allowance for fuel-bound nitrogen.

The minimum 0.0075 percent is increased depending on the particular turbine's rated or measured heat rate at peak load, in inverse proportion to the heat rate (Y) up to a maximum of 14.4 kilojoules per watt-hour (13,658 Btu/kWh) at ISO (59°F ambient temperature, 60% relative humidity). The proposed MS5001R units have a heat input at peak load of approximately 309.9 MMBtu/hr, LHV, and a heat rate of 15,675 Btu/kWh at ISO conditions. Therefore, the maximum heat rate of 13,658 Btu/kWh is exceeded, and the minimum NO_x standard of .0075 percent or 75 ppm applies.

The allowance (F) for fuel-bound nitrogen ranges from:

$$F = 0$$

for fuel-bound nitrogen content of the fuel (N) less than or equal to 0.015 percent by weight.

$$F = 0.04 (N)$$

for N greater than 0.015 and less than or equal to 0.1.

$$F = 0.004 + 0.0067 (N - 0.1)$$

for N greater than 0.1 and less than equal to 0.25.

$$F = 0.005$$

for N greater than 0.25.

A typical ultimate analysis for No. 2 fuel oil shows the nitrogen content to be 0.006% by weight. For this fuel, F would equal zero. NO_x emissions allowed by NSPS for the proposed gas turbines would be 0.0075%, or 75 ppmvd corrected to 15% O₂ and ISO conditions. It should be noted that while a typical analysis of No. 2 fuel oil shows a very small nitrogen content, it varies widely and could affect the standard. NO_x emissions from the proposed turbine will be less than the applicable NSPS through utilization of water injection.

NSPS - SO₂

The Standard for SO₂, 40 CFR 60.333, limits SO₂ emissions from turbines to a maximum of 0.015 percent by dry volume, or 150 ppmvd @ 15% O₂. The Standard also limits fuel sulfur content to a maximum of 0.8 percent by weight.

Sulfur content of the No. 2 fuel oil for use at the Stock Island Plant site will not exceed 0.05 percent by weight. SO₂ emissions from the proposed turbine will be well within this NSPS limit.

CONTEMPORANEOUS EMISSIONS, EMISSION OFF-SETS AND OPERATING LIMITATIONS

Since the installation of the proposed CT units will in part replace the capacity of the existing, to-be-retired, steam generating unit at the Stock Island Plant site, it is appropriate to consider emission off-sets from the steam unit in permitting the CT units. Application of emission off-sets was discussed with the FDEP and a determination was received from FDEP in a letter dated August 22, 1997. This determination indicates that in order to consider emission off-sets, FDEP requires "an analysis of contemporaneous emissions, i.e. any other increases and decreases in actual emissions at the source that are contemporaneous (five years prior to submission of a complete application) with the particular change", as stated in FDEP's rule 62-212.400(2)(e)3. Units that were permitted prior to the five-year period (September 1992) do not need to be included in the contemporaneous analysis. This includes the medium-speed diesel units and the high-speed diesel units. The two units that contemporaneous applies to are: 1) the relocated gas turbine that was moved to the Stock Island Plant site in 1996 from the old Key West power plant site; and 2) the Stock Island Steam Unit, which is proposed for retirement.

The gas turbine relocation was permitted by FDEP in September 1995. This relocation permit was a PSD permit for the pollutant NO_x and non-PSD for SO₂, Particulate (PM), PM₁₀ and CO emissions. Since contemporaneous applies to only non-PSD pollutants, the only contemporaneous emissions are emissions of SO₂, PM, PM₁₀ and CO from the relocated gas turbine during 1996 and the first seven months of 1997. Table 3-3-1 summarizes the actual emissions during this time period for the combustion turbine. The average emissions during the 1996 and 1997 time period were:

Average Annual SO ₂ Emissions	0.12 tons/year
Average Annual Particulate Emissions	0.13 tons/year
Average Annual PM ₁₀ Emissions	0.13 tons/year
Average Annual CO Emissions	0.45 tons/year

With respect to the steam unit, Table 3-3-2 summarizes the annual operations and emission for the period 1987 through 1997. FDEP has reviewed this information and provided a preliminary determination in a letter dated August 22, 1997, indicating that the contemporaneous emissions are considered to be the average of 1993 and 1994 emissions, which were the last two years of normal operations for the steam unit. Therefore, the contemporaneous emissions that can be used for off-sets are:

SECTION 3-3

Average Annual NO _x Emissions	134.5 tons/year
Average Annual SO ₂ Emissions	729 tons/year
Average Annual Particulate Emissions	30.5 tons/year
Average Annual PM ₁₀ Emissions	30.5 tons/year
Average Annual CO Emissions	10.1 tons/year

Therefore, the following table provides the calculated allowable emission off-sets taking into account the contemporaneous emission increases of the relocated gas turbine and the contemporaneous emission decreases of the steam unit.

Contemporaneous Emission Increases and (Decreases) (tons/year)			
Pollutant	Gas Turbine	Steam Unit	Allowable Emission Off-Set (tons/year)
NO _x	-	(134.5)	(134.5)
SO ₂	0.12	(729.0)	(728.88)
PM	0.13	(30.5)	(30.37)
PM ₁₀	0.13	(30.5)	(30.37)
CO	0.45	(10.1)	(9.65)

Taking into account these emission off-sets and the desire to permit the proposed two CT's as non-PSD sources, the emissions from the CT's must be less than the following annual emission levels:

Pollutant	Allowable Emission Off-Set (tons/year)	Emission Threshold for PSD Applicability (tons/year)	Total Allowable Emissions (tons/year)
NO _x	134.5	40	< 174.5
SO ₂	728.9	40	< 768.9
PM	30.4	25	< 55.4
PM ₁₀	30.4	15	< 45.4
CO	9.7	100	< 109.7

**CONTEMPORANEOUS EMISSION, EMISSION
OFF-SETS AND OPERATING LIMITATIONS**

In order to assure compliance with the above allowable emission limits, the following limitations are proposed for each unit and the combined units at 40°F ambient temperature and the maximum heat input of 305 MMBtu/hr (HHV):

	Short-Term Limits (lbs/hr) For Each Unit	Annual Limits (tons/yr) ^[1] For Each Unit	Combined Annual Limits (tons/yr) ^[3] For Both Units
NO _x	93.84	172.00	172.00
CO ^[2]	25.24	50.48	100.96
PM	16.62	33.25	55.00
PM ₁₀	16.62	33.25	45.00
SO ₂	15.92	31.84	63.68
<p>[1] Based on a proposed annual operating hour limitation of 4,000 hours per year total for both units at 85°F ambient temperature and 86 lbs/hr NO_x emission rate. The 86 lbs/hr is based on a heat input of 303 mmBtu/hr and a combustion turbine output of 19.77 MW at 85°F.</p> <p>[2] Based on 50% load operating conditions.</p> <p>[3] Combined annual emission limits are dependent on the total allowable emissions from page 3-3-2 or are equal to the single unit annual emission limit multiplied by two.</p>			

The most restrictive annual operating limit for all pollutants for the combined emissions from both units is NO_x tons per year. We propose limiting each unit to 4,000 hours of operation and the combined operation of both units to 4,000 hours.

Note that the short-term limits for each unit are based on a conservative maximum fuel heat input of 305 MMBtu/hr, which is at an ambient temperature of 40°F. Actual operation of the units at typical ambient temperatures of 85°F would reflect a reduced fuel heat input of 303 MMBtu/hr and reduced emissions. This is the reason for using a slightly lower pounds per hour NO_x value of 86 lbs/hr in calculating the annual tons per year NO_x limit of 172 tons per year.

TABLE 3-3-1

STOCK ISLAND GAS TURBINE
Annual Operations
1996 - 1997

Year	Gas Turbine ^[1] Gross Generation (KWH)	Gas Turbine ^[1] Fuel Consumed (gallons)	Gas Turbine ^[1] Fuel Consumed (pounds)	Gas Turbine ^[1] Fuel Heat Value (Btu/gal.)	Gas Turbine Air Emissions (tons/yr)	
					SO2 ^[2]	Particulates ^[3]
1996	259,000	22,208	156,300	136,228	0.08	0.1
1997	302,000	45,851	320,891	135,887	0.16	0.2
Average					0.12	0.13

[1] Data based on calendar 1996 year-end production report and 1997 year-to-date production report (through July 1997) for Stock Island Gas Turbine unit.

[2] Based on a fuel sulfur content of 0.05 percent sulfur.

[3] Based on an emission rate of 0.0545 lbs. per MMBtu.

TABLE 3-3-2

STOCK ISLAND STEAM UNIT
Annual Operations
1987 - 1996

Year	Steam Unit ^[1] Annual Gross Generation (KWH)	Steam Unit ^[1] Annual Fuel Consumed (gallons)	Steam Unit ^[1] Annual Fuel Consumed (pounds)	Steam Unit ^[2] Annual Fuel Heat Value (Btu/gal.)	Steam Unit Air Emissions (tons/yr)		
					No _x ^[3]	SO ₂ ^[4]	Particulates ^[5]
1987	61,456,000	5,580,306	45,840,107	151,315	187	1008	42.2
1988	68,766,000	5,918,157	49,065,295	151,315	198	1079	44.8
1989	128,378,000	10,969,883	89,578,431	151,315	367	1971	83.0
1990	90,897,000	7,911,166	65,235,472	151,315	265	1435	59.9
1991	113,731,000	9,865,331	81,181,809	151,315	330	1786	74.6
1992	65,897,000	5,883,816	48,353,200	151,178	197	1064	44.5
1993	40,961,000	3,805,456	31,315,097	151,315	127	689	28.8
1994	44,567,000	4,239,081	34,934,270	151,470	142	769	32.1
1995	0	0	0	0	0	0	0.0
1996	0	0	0	0	0	0	0.0
1997	0	0	0	0	0	0	0.0
Ten Year Average					181	980	41

^[1] Data based on calendar year end production report for Stock Island Steam Unit.

^[2] Average #6 fuel heat value has been assumed at 151,315 Btu/gal based on typical fuel delivery values, except for years 1992, 1993 and 1994 which are based on actual fuel heating value measurements.

^[3] Based on an emission rate of 67 lbs. of NO_x per 1000 gallons of fuel burned.

^[4] Based on a fuel sulfur content of 2.2 percent.

^[5] Based on an emission rate of 0.1 pounds per MM Btu.

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AIR QUALITY IMPACT ASSESSMENT

INTRODUCTION

The addition of the two 19.7 MW combustion turbine electric generating units, upon the approval of the retirement of the 37 MW Steam Electric Generator, at the Utility Board's Stock Island Power Plant will constitute a construction/modification of a major source. The primary objective of this air quality assessment is to demonstrate compliance with National Ambient Air Quality Standards (NAAQS).

Dispersion modeling has been conducted to determine the significance of the impacts from the two used 19.77 MW CT's and the existing sources on the regional ambient air quality. In order to assure compliance with NAAQS, the elevation of the stacks for the three high speed diesel units are being raised from 16 feet to 40 feet as part of this construction permit application. This assessment presents the results of the comprehensive air quality evaluation which indicates that the addition of the CT's will not cause or contribute to a violation of the NAAQS.

ENVIRONMENTAL BASELINE CONDITIONS**TOPOGRAPHICAL FEATURES**

The Stock Island Plant site is located on the southern end of Stock Island and to the east of Key West, as shown in Figure 3-1-1. The surrounding islands are essentially flat. The site is at approximately 2 m msl. One point on Key West, seven km from the project site, rises to 3 m. Since the variation in terrain is minimal and is less than the height of the exhaust stacks on the CT's (13.08 m), the use of a flat terrain dispersion model is appropriate for the analysis.

METEOROLOGICAL LAND USE CLASSIFICATION

The meteorological land use classification is used to determine the profile of the vertical wind speed and associated mechanical turbulence due to surface roughness. The wind speed profile is then used to extrapolate wind speeds at various heights for use in the estimates of atmospheric pollutant dispersion. USEPA's *Guideline on Air Quality Models* stipulates that the land use within the total area circumscribed by a 3-km radius around the source can be classified using Auer's scheme of meteorological land use typing proposed in the *Journal of Applied Meteorology* (1976). Auer's classifications are as follows:

Type	Description
I1	Heavy Industrial
I2	Light/Moderate Industrial
C1	Commercial
R1	Common Residential
R2/R3	Compact Residential
R4	Estate Residential
A1	Metropolitan Natural
A2	Agricultural Rural
A3/A4	Undeveloped
A5	Water Surfaces

According to the Guidelines, if more than 50 percent of the total area in the circle is classified by land use as I1, I2, C1, R2, or R3, urban dispersion coefficients should be used in the modeling, otherwise, appropriate rural dispersion coefficients should be used. A USGS 7.5-minute series topographical map was used to estimate the land use around the project site as more than 50% in type "A5: Water Surfaces". Therefore, default rural dispersion coefficients were used in the analysis.

BACKGROUND AMBIENT AIR QUALITY

Stock Island is designated attainment or unclassified for all criteria pollutants. This designation is consistent with several features of the area. First, there are no large sources of air pollution nearby. Second, there is no significant terrain which could trap pollution and cause exceedances of the NAAQS. Third, the prevailing winds are east and southeast bringing clean air in the absence of sources in those directions from Key West.

MODELING METHOD

MODEL SELECTION

Mathematical models are the primary tools for air quality assessments to simulate the dispersion of the effluent plumes into the atmosphere. It is, therefore, important to choose models which will appropriately simulate the actual physical situation in the region of the project. The choice of models is primarily based on two considerations: 1) the level of detail and accuracy needed for the analysis, and 2) the topographical characteristics of the area. Analyses requiring extensive detail and accuracy require increasingly sophisticated models.

An advanced model, USEPA's Industrial Source Complex-Short Term (ISCST), was used for this air dispersion analysis. The most current version, ISCST3, was utilized for the air modeling. This steady-state Gaussian plume model contains algorithms for predicting area and volume source impacts, modified downwash algorithms for non-buoyant plumes, and an Huber-Snyder algorithm which incorporates wind-direction-specific building heights and widths similar to the Schulman-Scire algorithm. This software also allows each model run to include several averaging intervals and multiple receptors.

METEOROLOGICAL DATA

The refined analysis presented herein used five complete years (1987 through 1991) of wind and stability data consisting of actual surface observations in Key West and twice-per-day upper air soundings concurrently recorded from a station in Miami. Default wind speed profile exponents (indicative of increasing wind speed with increasing distance from the surface) and vertical potential temperature gradients (indicative of decreasing temperature with increasing distance above the surface) were used in the modeling. Five years of meteorology were processed using unrestricted source parameters. After reviewing the first-high concentration results for each of the five years, it was determined that 1987 had the highest concentration, and therefore, would be used in further analyses (Table 3-4-1).

SOURCE DATA

Emissions of NO_x from the CT units will be controlled by water injection and SO_2 emissions will be controlled by firing No. 2 fuel with a sulfur content not exceed 0.05 percent. According to design, each CT will have a single exhaust. The modeling parameters presented in Table 3-1-1 represent the proposed units operating at 40°F, 59°F and 85°F, and 100%, 75% and 50% of capacity.

The source parameters for the existing sources at the Stock Island Power Plant are presented in Table 3-4-2.

STACK HEIGHT CONSIDERATIONS

According to 40 CFR 51.100(hh), a good engineering practice (GEP) stack height is the greater of:

65 meters

or

$$H_g = H_b + 1.5L$$

where: H_g = the GEP stack height;
 H_b = the height of the dominant nearby building; and
 L = the lesser dimension of the height or projected width of the dominant nearby building.

As shown in Tables 3-1-1 and 3-4-2, the stacks of the proposed 19.7 MW CT's and the stacks of the existing units are less than 65 m. Therefore, the stacks conform to the regulations and guidelines. This, in combination with the building dimensions indicate the potential for building downwash. For this reason, building downwash analysis was included in the dispersion modeling.

Structures tend to disrupt air flow across a region and create turbulence around the structure. This disruption is referred to as the building wake effect or building downwash effect. This effect can result in high local ground-level pollutant concentrations if the emission point of the source is not far enough above or away from the structure to avoid the effect. A stack constructed at a height approximately 2.5 times the height of a nearby building is not likely to be affected by structural turbulence. If a stack is located within 5L of a building, and the building height is greater than approximately 40 percent of the stack height, then the stack is considered to be affected by building downwash.

The ISCST model used in the ambient air quality assessment uses a combination of two algorithms for predicting building wake effects. The Schulman-Scire algorithm is applicable when the stack height is less than $1.5 H_b$ and takes into account wind-direction-specific building heights and widths when determining wake effects. The Huber-Snyder algorithm is applicable when the stack height is between $1.5 H_b$ and $2.5 H_b$ and uses the actual building height and maximum projected width for all wind directions. Software packages are available to determine the values of the building heights and widths which can influence each stack. Building Profile Input Program (BPIP), has been used for this analysis to estimate the wake effects caused by the structures at the Stock Island Plant site.

All significant structures and units at the Stock Island Plant site were included in the downwash analysis. With the large number of buildings and units on-site, the default values in the BPIP program had to be changed in order to accommodate all the inputs. The layout of the buildings and units can be viewed in Figure 3-1-2. The results of BPIP can be found in the input for the modeling run (Attachment 1).

Initial modeling investigations conducted for this application indicated potential high ambient impacts occurring at the property line and approximately 250 meters in a northeast direction from the plant site. Comparison of impacts with and without the proposed combustion turbine units indicates that these impacts are due to the short stack emissions and associated downwash from the three high speed diesel units. For this reason final modeling results, discussed below and included herein, reflect a commitment to raise the stack elevation of the three existing high speed diesel units to 40 feet above grade.

RECEPTOR NETWORKS

The receptor grid for the refined air quality analysis consists of a polar coordinate system centered at 425.65 km East and 2716.67 km North, the center of the Stock

Island Plant site. The grid system consisted of 36 direction radials separated by 10-degree increments. Receptors were placed at ground level at 150, 200, 250, 300, 400, 500, 750 and 1000m intervals, and along the Plant's property boundary. This grid analysis provided sufficient resolution and downwind coverage to identify the areas of expected maximum concentrations.

RESULTS OF MODELING ANALYSIS

REFINED ANALYSIS

ISCST was used with real-time meteorological data to account for the consistency of the meteorology from the east and southeast. Further, the influence of structural downwash on the exhaust plumes was included in the refined calculations.

NAAQS have been established as a guide to assist in the evaluation of a source's impact on ambient air quality (40 CFR 51.165(b)(2)). Air quality impacts below the Standards are not considered to cause or contribute to any violations of ambient air quality. These NAAQS's are presented in Table 3-4-3 for the pollutants assessed in this analysis.

The preliminary analysis that was conducted to determine the year of meteorology (1987) which resulted in the significant impact (Table 3-4-1), also showed that the highest impacts resulting from all sources, in general, were in a northeasterly direction. This was found for both annual impacts for NO_x and for 24-hour impacts for PM and PM_{10} emissions. Impacts for SO_2 and CO were well below NAAQS for all averaging intervals. In general, the maximum impacts for NO_x and PM/ PM_{10} were in a sector from 60° to 70° . In this direction, the property line of the Stock Island Plant site is at the edge of South Bay, as shown in the aerial photo, Figure 3-4-1. A modeling run was also performed to determine if there were any significant impacts along the populated land areas to the north, south and west of the plant site. All maximum impacts were found to occur to the east and northeast in South Bay. It was discovered during these initial modeling evaluations that the high concentrations were not caused by the proposed combustion turbine units. Instead, the three high speed diesels were creating high impacts due to their short stacks and orientation with respect to the medium-speed diesel plant building. This is verified in Table 3-4-4 which presents the first and second high concentrations for the site when the high speed units are not included.

In order to determine compliance in the northeast direction across South Bay, impacts at the property line and at distances of 150 and 200 through 1000 meters at 100 meter increments were evaluated (see Figure 3-4-1). Initial modeling runs (included in the initial application dated September 10, 1997) indicated, high values for both NO_x annual impacts and PM/ PM_{10} 24-hour impacts at the property line and at 150m and 200m distances with the high speed diesel unit's stacks at their existing elevation of 16 feet. However, with the proposed stack

height modification increase to 40 feet for each of three diesel units, impacts are significantly reduced and compliance is demonstrated at the property line and beyond. Tables 3-4-4 (property line to 1000 meter receptors) and 3-4-5 (150 meters to 1000 meter receptors) summarize these results. Beyond 150 meters the modeling indicates decay of concentrations with distance. These tables demonstrate that the addition of the proposed CT's at the Stock Island Plant site and raising the three high speed diesel units stacks to an elevation of 40 feet, will assure compliance with NAAQS, considering all existing sources at the plant site.

TABLE 3-4-1
AMBIENT AIR QUALITY STANDARDS
NO_x (UNRESTRICTED)
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT)

ANNUAL		
YEAR	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
1987	275.84	151.37
1988	192.49	126.39
1989	146.59	145.64
1990	168.18	140.86
1991	245.77	167.52
24-HOUR^[1]		
YEAR	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
1987	6929.42	6589.71
1988	5759.37	5604.04
1989	6658.76	5643.57
1990	6547.92	5047.76
1991	6390.42	6068.14

[1] 24-hour concentrations are only used for a reference for other pollutants.
There are no 24-hour standards for No_x.

**TABLE 3-4-2
EXISTING STOCK ISLAND EMISSION SOURCE
MODELING PARAMETERS**

UNIT	Stack Height (m)	Stack Diameter (m)	Load Condition		Heat Input (MMBtu/hr) ⁽¹⁾	Stack Temperature (K)	Stack Velocity (m/s)	Emission Rate (g/s)					
			Temperature (F)	Load (%)				NO _x	CO	PM	PM ₁₀	SO ₂ ⁽²⁾	
EXISTING													
High Speed Diesel #1	12.2 ⁽³⁾	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15	
High Speed Diesel #2	12.2	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15	
High Speed Diesel #3	12.2	0.76			23	660.8	20.38	8.98	2.35	1.05	0.97	0.15	
MSD Stack	30.49	1.74			85	588.6	30.5	20.27	6.76	1.08	1.08	0.56	
Gas Turbine	11.77	3.93	59	100	311.6	756	25.2	12.05	1.96	2.27	2.27	2.122	
				75	249.3	676	18	9.64	5.48	2.27	2.27	1.698	
				50	188.5	598	15.9	7.29	8.05	2.27	2.27	1.283	
			90	100	283	766	24	10.94	1.33	2.27	2.27	1.927	
				75	226.4	729	18.3	8.76	3.27	2.27	2.27	1.542	
				50	171.2	605	15.1	6.62	5.37	2.27	2.27	1.167	

⁽¹⁾ Based on Lower Heating Value (LHV).

⁽²⁾ Based on firing No. 2 Oil containing 0.05% sulfur.

⁽³⁾ High speed diesel unit stack height elevation is proposed to be increased to 12.2 meters from its existing 4.88 meter elevation.

Date: 11/7/97

**TABLE 3-4-3
NATIONAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Interval	Primary Standard	Secondary Standard
NO _x	Annual	100	Same as Primary
CO	1-Hour	40,000	Same as Primary
	8-Hour	10,000	Same as Primary
PM	24-Hour	150	Same as Primary
	Annual	75	60
PM ₁₀	24-Hour	150	Same as Primary
	Annual	50	Same as Primary
SO ₂	3-Hour	-	1,300
	24-Hour	365	-
	Annual	80	-

TABLE 3-4-4
UNRESTRICTED (1987)
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT and HIGH SPEED DIESELS)

ANNUAL		
POLLUTANT	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
NO _x	1.04	0.97
PM	0.07	0.064
PM ₁₀	0.07	0.064
24-HOUR		
POLLUTANT	1ST HIGH CONCENTRATION (ug/m³)	2ND HIGH CONCENTRATION (ug/m³)
NO _x	-	-
PM	1.83	1.16
PM ₁₀	1.83	1.16

TABLE 3-4-5
UNRESTRICTED (1987)
RECEPTORS AT NORTHEAST PROPERTY LINE TO 1000M
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT)

ANNUAL				
POLLUTANT	1st High (ug/m³)		2nd High (ug/m³)	
	Concentration	Standard	Concentration	Standard
NO _x	28.89	100	28.29	100
PM	3.38	75	3.31	60
PM ₁₀	3.12	50	3.06	50
SO ₂	0.48	80	0.47	-
24-HOUR				
PM	229.25	260	124.94	150
PM ₁₀	211.83	150	115.44	150
SO ₂	32.78	365	17.87	-
CO	512.86	10,000 ^[1]	279.51	10,000 ^[1]
3-HOUR				
SO ₂	59.45	-	51.83	1,300
CO	930.07	40,000 ^[2]	810.87	40,000 ^[2]

[1] 8-hour standard

[2] 1-hour standard

Date: 11/7/97

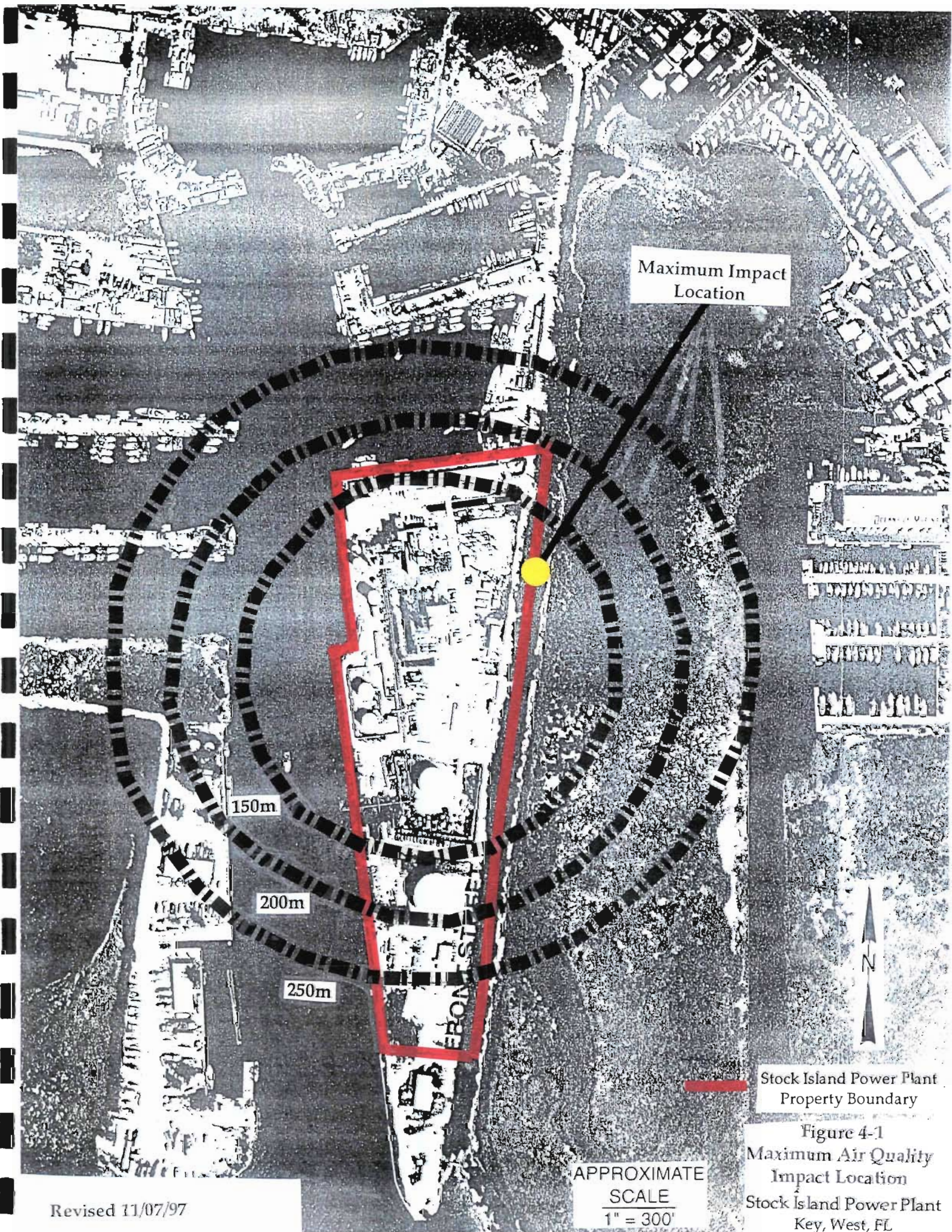
TABLE 3-4-6
UNRESTRICTED (1987)
RECEPTORS AT 150M TO 1000M
FIRST AND SECOND HIGH CONCENTRATIONS
(ALL UNITS, except STEAM UNIT)

ANNUAL				
POLLUTANT	1st High (ug/m³)		2nd High (ug/m³)	
	Concentration	Standard	Concentration	Standard
NO _x	28.89	100	25.73	100
PM	3.38	75	3.01	60
PM ₁₀	3.12	50	2.78	50
SO ₂	0.48	80	0.43	-
24-HOUR				
PM	187.77	260	98.23	150
PM ₁₀	173.5	150	90.76	150
SO ₂	26.85	365	14.05	-
CO	420.07	10,000 ^[1]	219.75	10,000 ^[1]
3-HOUR				
SO ₂	59.45	-	46.68	1,300
CO	930.07	40,000 ^[2]	630.31	40,000 ^[2]

[1] 8-hour standard

[2] 1-hour standard

Date: 11/7/97



Maximum Impact
Location

150m

200m

250m



Stock Island Power Plant
Property Boundary

Figure 4-1
Maximum Air Quality
Impact Location
Stock Island Power Plant
Key, West, FL

APPROXIMATE
SCALE
1" = 300'

STARTING
 TITLEONE 1987 STOCK ISLAND-NO BOUNDARY-HSD STACKS RAISED(7.32M)(12.2M TOTAL)-11/06/97
 CO TITLETWO ANN 24&3-HR-ALL-SS UNITS-PM-40F & 100%-CTS IN NEW LOCATION(PMCT732B.IN)
 CO MODELOPT DFAULT CONC RURAL
 AVERTIME 3 24 PERIOD
 POLLUTID OTHER
 CO DCAYCOEF .000000
 CO RUNORNOT RUN
 FINISHED

SO STARTING
 SO LOCATION HSD1 POINT 56.6 63.2 0.0
 SO LOCATION HSD2 POINT 55.6 55.6 0.0
 SO LOCATION HSD3 POINT 54.7 48.4 0.0
 SO LOCATION MSD POINT -7.2 35.88 0.0
 SO LOCATION GT POINT 26.2 -56.8 0.0
 SO LOCATION SS1GT POINT 38.9 -58.4 0.0
 SO LOCATION SS2GT POINT 53.1 -60.1 0.0

** POINT: SRCID QS HS TS VS DS
 SO SRCPARAM HSD1 1.05 12.20 660.8 20.38 0.76
 SO SRCPARAM HSD2 1.05 12.20 660.8 20.38 0.76
 SO SRCPARAM HSD3 1.05 12.20 660.8 20.38 0.76
 SO SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74
 SO SRCPARAM GT 2.27 11.77 766 24.0 3.93
 SO SRCPARAM SS1GT 2.10 13.08 801.0 24.65 3.85
 SO SRCPARAM SS2GT 2.10 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79
 SO BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
 SO BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
 SO BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD2 3.14 3.14 3.14 3.14 3.14 3.14
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 SO BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79
 SO BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
 SO BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79
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 SO BUILDHGT HSD3 5.79 5.79 5.79 5.79 5.79 5.79
 SO BUILDWID HSD3 12.30 12.53 12.37 11.80 35.76 29.40
 SO BUILDWID HSD3 27.09 23.96 25.29 28.10 32.60 32.48
 SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69
 SO BUILDWID HSD3 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD3 8.07 6.28 4.30 3.73 32.60 32.48
 SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97
 SO BUILDHGT MSD 10.97 10.97 10.97 10.97 15.26 15.26
 SO BUILDHGT MSD 15.26 10.97 16.15 16.15 16.15 10.97
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SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 11.46 11.75
SO BUILDWID MSD 12.11 30.35 18.94 18.93 18.34 30.59
SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 30.06 31.10
SO BUILDWID MSD 31.20 30.35 28.58 32.08 30.84 30.59

SO BUILDHGT GT 12.19 12.19 12.19 4.88 4.88 4.88
SO BUILDHGT GT 4.88 4.88 4.88 4.88 4.88 4.88
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SO BUILDWID GT 27.65 28.61 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID GT 6.97 11.73 16.13 19.98 23.27 25.85
SO BUILDWID GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90

SO BUILDHGT SS1GT 4.88 12.19 12.19 12.19 4.88 4.88
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SO BUILDWID SS1GT 6.95 25.74 26.49 27.32 23.26 25.85
SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID SS1GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90

SO BUILDHGT SS2GT 4.88 4.88 4.88 4.88 4.88 4.88
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SO BUILDWID SS2GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS2GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00
SO BUILDWID SS2GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS2GT 27.64 28.60 28.69 28.54 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
*GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)
RE GRIDPOLR POL ORIC 0.0 0.0
RE GRIDPOLR POL DIST 150. 200. 300. 400. 500. 750. 1000.
RE GRIDPOLR POL GDIR 36 10.0 10.0
RE GRIDPOLR POL END
RE FINISHED

ME STARTING
ME INPUTFIL KYWPRE87.LST
ME ANEMHIGHT 6.700 METERS
ME SURFDATA 12836 1987 KEY WEST
ME UAIRDATA 12844 1987 MIAMI
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

*** SETUP Finishes Successfully ***

MODELOPTS: CONC RURAL FLAT DEFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

*Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

*Model Uses NO WET DEPLETION. WDPLETE = F

*NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

*Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

*Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

*Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR and Calculates PERIOD Averages

*This Run Includes: 7 Source(s); 1 Source Group(s); and 252 Receptor(s)

*The Model Assumes A Pollutant Type of: OTHER

*Model Set To Continue RUNning After the Setup Testing.

*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

*Misc. Inputs: Anem. Hgt. (m) = 6.70 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS/CUBIC-METER)

*Input Runstream File: PMCT732B.IN ; **Output Print File: PMCT732B.OUT

*MODELOPTs: CONC

RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	PART. CATS.	NUMBER EMISSION RATE (METERS)	BASE X (METERS)	STACK Y (METERS)	STACK ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR	VARY BY
HSD1	0	0.10500E+01	56.6	63.2	0.0	12.20	660.80	20.38	0.76	YES		
HSD2	0	0.10500E+01	55.6	55.6	0.0	12.20	660.80	20.38	0.76	YES		
HSD3	0	0.10500E+01	54.7	48.4	0.0	12.20	660.80	20.38	0.76	YES		
MSD	0	0.10800E+01	-7.2	35.9	0.0	30.49	588.60	30.50	1.74	YES		
GT	0	0.22700E+01	26.2	-56.8	0.0	11.77	766.00	24.00	3.93	YES		
SS1GT	0	0.21000E+01	38.9	-58.4	0.0	13.08	801.00	24.65	3.85	YES		
SS2GT	0	0.21000E+01	53.1	-60.1	0.0	13.08	801.00	24.65	3.85	YES		

MODELOPTs: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: HSD1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	3.1	4.4	0	10	3.1	3.6	0	11	3.1	5.7	0	12	3.1	7.5	0
13	3.1	9.1	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.9	0	23	3.1	10.9	0	24	3.1	9.7	0
25	3.1	8.2	0	26	3.1	6.4	0	27	3.1	4.4	0	28	3.1	3.6	0	29	3.1	5.7	0	30	3.1	7.5	0
31	3.1	9.1	0	32	3.1	10.4	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	3.1	3.5	0	11	3.1	5.5	0	12	3.1	7.4	0
13	5.8	31.4	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.2	0	26	3.1	6.5	0	27	3.1	4.5	0	28	3.1	3.5	0	29	3.1	5.5	0	30	3.1	7.4	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	3.1	11.8	0	5	7.6	35.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	5.8	32.6	0	12	5.8	32.5	0
13	5.8	31.4	0	14	5.8	29.3	0	15	5.8	26.4	0	16	5.8	22.6	0	17	5.8	18.2	0	18	5.8	15.7	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.1	0	26	3.1	6.3	0	27	3.1	4.3	0	28	3.1	3.7	0	29	5.8	32.6	0	30	5.8	32.5	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: MSD

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	11.0	27.1	0	2	11.0	29.4	0	3	11.0	30.8	0	4	11.0	31.3	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	15.3	11.5	0	12	15.3	11.8	0
13	15.3	12.1	0	14	11.0	30.3	0	15	16.1	18.9	0	16	16.1	18.9	0	17	16.1	18.3	0	18	11.0	30.6	0
19	11.0	27.1	0	20	11.0	29.4	0	21	11.0	30.8	0	22	11.0	31.3	0	23	11.0	30.8	0	24	11.0	29.4	0
25	11.0	27.1	0	26	11.0	24.0	0	27	11.0	25.3	0	28	11.0	28.1	0	29	11.0	30.1	0	30	11.0	31.1	0
31	11.0	31.2	0	32	11.0	30.3	0	33	11.0	28.6	0	34	11.0	32.1	0	35	11.0	30.8	0	36	11.0	30.6	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	12.2	27.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS1GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	12.2	27.3	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS2GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	4.9	11.7	0	3	4.9	16.1	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.8	0	17	4.9	13.6	0	18	4.9	9.0	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.8	0	35	4.9	13.6	0	36	4.9	9.0	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

150.0, 200.0, 300.0, 400.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(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,

*MODELOPTS: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: KYWPRE87.LST FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
 SURFACE STATION NO.: 12836 UPPER AIR STATION NO.: 12844
 NAME: KEY NAME: MIAMI
 YEAR: 1987 YEAR: 1987

FLOW SPEED TEMP STAB MIXING HEIGHT (M) USTAR M-O LENGTH Z-0 IPCODE PRATE
 YEAR MONTH DAY HOUR VECTOR (M/S) (K) CLASS RURAL URBAN (M/S) (M) (M) (mmv/HR)

YEAR	MONTH	DAY	HOUR	FLOW VECTOR (M/S)	TEMP (K)	STAB	MIXING HEIGHT (M) CLASS	RURAL	URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mmv/HR)
87	1	1	1	51.0	7.20	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	2	38.0	8.75	294.3	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	3	84.0	6.69	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	4	73.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	5	63.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	6	72.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	7	75.0	10.29	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	8	93.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	9	117.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	10	131.0	6.17	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	11	144.0	8.75	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	12	136.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	13	143.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	14	149.0	9.26	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	15	142.0	9.77	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	16	144.0	8.75	295.4	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	17	161.0	9.26	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	18	157.0	8.75	293.7	4	423.3	423.3	0.0000	0.0	0.0000	0	0.00
87	1	1	19	184.0	8.23	293.7	4	436.9	436.9	0.0000	0.0	0.0000	0	0.00
87	1	1	20	187.0	7.72	293.7	4	450.6	450.6	0.0000	0.0	0.0000	0	0.00
87	1	1	21	170.0	5.66	293.7	4	464.2	464.2	0.0000	0.0	0.0000	0	0.00
87	1	1	22	152.0	6.17	293.7	4	477.8	477.8	0.0000	0.0	0.0000	0	0.00
87	1	1	23	170.0	5.66	293.2	4	491.5	491.5	0.0000	0.0	0.0000	0	0.00
87	1	1	24	160.0	4.12	293.2	5	505.1	681.0	0.0000	0.0	0.0000	0	0.00

** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
 FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)						
	150.00	200.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	0.06383	0.06957	0.30038	0.52095	0.59869	0.53965	0.42366
20.00 |	0.05930	0.01672	0.18833	0.35729	0.40304	0.35357	0.27817
30.00 |	0.00210	0.01260	0.15701	0.33387	0.40333	0.38534	0.31725
40.00 |	0.39415	0.36868	0.33943	0.43017	0.47830	0.42019	0.32873
50.00 |	2.57011	1.54255	0.70749	0.58148	0.57171	0.43909	0.32575
60.00 |	1.83303	1.59835	0.87770	0.70724	0.67960	0.51941	0.39228
70.00 |	0.53843	0.54342	0.42428	0.36598	0.35642	0.28845	0.22832
80.00 |	0.13001	0.21432	0.14144	0.13923	0.15598	0.15532	0.13547
90.00 |	0.00780	0.02157	0.06413	0.08948	0.10351	0.10410	0.09253
100.00 |	0.03623	0.03043	0.06572	0.09393	0.10558	0.09683	0.08120
110.00 |	0.05756	0.07768	0.18050	0.19216	0.18414	0.15752	0.13637
120.00 |	0.10136	0.13374	0.31046	0.37344	0.37312	0.29364	0.22420
130.00 |	0.09749	0.20817	0.45130	0.55370	0.57412	0.48198	0.37611
140.00 |	0.15625	0.25350	0.55236	0.69517	0.72873	0.63274	0.50380
150.00 |	0.21898	0.38912	0.67965	0.77560	0.79970	0.72132	0.60469
160.00 |	0.26603	0.51392	0.89430	1.04617	1.07469	0.91661	0.73192
170.00 |	0.24444	0.55379	1.08560	1.33181	1.38746	1.20693	0.97466
180.00 |	0.20818	0.46820	0.91187	1.18510	1.31120	1.28787	1.11959
190.00 |	0.20840	0.44725	0.80090	1.00115	1.07950	1.02526	0.87862
200.00 |	0.23988	0.49087	0.81111	0.97922	1.03890	0.97704	0.83918
210.00 |	0.26965	0.55767	0.93584	1.14049	1.21281	1.13700	0.97575
220.00 |	0.28337	0.58257	0.97283	1.18694	1.26526	1.18927	1.01566
230.00 |	0.30393	0.63940	1.09201	1.35061	1.45044	1.37404	1.17853
240.00 |	0.28341	0.60091	1.01640	1.24836	1.33509	1.26474	1.09436
250.00 |	0.22244	0.46920	0.77359	0.93239	0.98585	0.92823	0.81072
260.00 |	0.15739	0.33953	0.58095	0.71553	0.76971	0.74155	0.65080
270.00 |	0.11579	0.26702	0.50227	0.65531	0.74012	0.77728	0.71855
280.00 |	0.09812	0.26556	0.62035	0.86197	0.98127	0.98346	0.86353
290.00 |	0.10575	0.32657	0.82375	1.14608	1.30934	1.32588	1.16804
300.00 |	0.12175	0.41563	1.19262	1.76393	2.12058	2.33611	2.14732
310.00 |	0.14119	0.55474	1.99241	3.00968	3.38365	2.98447	2.32533
320.00 |	0.16783	0.73702	2.18362	2.55500	2.54916	2.14901	1.74325
330.00 |	0.18196	0.59780	1.66211	2.17479	2.31806	1.97378	1.53298
340.00 |	0.11893	0.38528	1.40403	1.71093	1.64567	1.20294	0.88236
350.00 |	0.08446	0.29707	0.80460	0.94514	0.92590	0.74423	0.58916
360.00 |	0.12856	0.12488	0.42709	0.63175	0.69785	0.63244	0.51971

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,CT ,SS1CT ,SS2CT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	64.21064 (87101209)	32.44912 (87101212)	36.40551 (87010409)	28.59572 (87012012)	32.66168 (87062706)
20.0 |	65.42378 (87010409)	11.34847 (87010409)	16.85702 (87062512)	26.84388 (87062512)	27.32710 (87062512)
30.0 |	1.05419 (87062412)	4.62078 (87062412)	22.77519 (87062512)	31.63866 (87062512)	32.06987 (87110424)
40.0 |	59.55728 (87110503)	47.60922 (87071415)	30.07510 (87071415)	31.46141 (87022212)	36.33973 (87021618)
50.0 |	415.74484 (87030803)	214.15034 (87030803)	60.89510 (87041815)	48.42847 (87071515)	46.60410 (87071515)
60.0 |	286.70074 (87010106)	334.11923 (87041709)	169.32381 (87041709)	89.78634 (87041709)	76.91801 (87030806)
70.0 |	211.26855 (87041821)	196.28345 (87010415)	95.30588 (87010415)	70.35683 (87100103)	64.86654 (87010106)
80.0 |	68.89469 (87041706)	68.76691 (87041818)	55.66579 (87041821)	34.85255 (87041821)	42.11558 (87010415)
90.0 |	6.10767 (87010506)	12.80535 (87011106)	33.50860 (87041706)	38.16780 (87041706)	34.86241 (87041706)
100.0 |	47.84341 (87010509)	9.39406 (87010503)	12.53730 (87081112)	29.97027 (87010424)	36.04874 (87010424)
110.0 |	17.83150 (87020818)	44.01016 (87010509)	24.84115 (87041612)	23.55671 (87081115)	28.99012 (87020903)
120.0 |	21.38878 (87010515)	21.73483 (87012221)	33.55326 (87010509)	42.87154 (87042512)	38.95435 (87042512)
130.0 |	16.64358 (87033118)	22.41851 (87033118)	33.45794 (87012221)	36.80703 (87020818)	39.70103 (87020818)
140.0 |	26.43047 (87010518)	15.41096 (87042215)	33.06202 (87033118)	35.69099 (87033109)	33.16374 (87012615)
150.0 |	20.96103 (87101215)	31.77955 (87010518)	30.93776 (87042412)	33.73858 (87042215)	35.07702 (87042621)
160.0 |	21.69602 (87112021)	25.81526 (87040415)	32.54963 (87040415)	43.31681 (87010518)	43.56068 (87010518)
170.0 |	14.96423 (87042112)	27.16658 (87042112)	38.00127 (87042115)	38.19384 (87112021)	36.29950 (87022315)
180.0 |	14.02272 (87051215)	24.68130 (87102615)	39.28301 (87042112)	41.43962 (87042112)	38.20088 (87102015)
190.0 |	22.40857 (87042715)	28.34035 (87042715)	30.92261 (87110615)	38.76197 (87110615)	38.27805 (87110615)
200.0 |	23.79439 (87042715)	33.83721 (87042715)	38.05014 (87042715)	34.04047 (87042715)	32.14627 (87112124)
210.0 |	14.51912 (87042715)	21.19025 (87042715)	27.85157 (87031406)	34.37634 (87103118)	37.77932 (87103118)
220.0 |	15.19261 (87042712)	21.65526 (87042712)	33.15166 (87100912)	37.86729 (87100912)	37.61200 (87100912)
230.0 |	22.49465 (87091512)	31.56932 (87091512)	36.22379 (87091512)	38.11499 (87100412)	37.63105 (87103024)
240.0 |	23.07839 (87091512)	30.06605 (87091512)	32.41120 (87110715)	39.09896 (87110715)	39.95039 (87110715)
250.0 |	15.96650 (87091512)	21.89202 (87110718)	35.51876 (87102324)	40.10306 (87102324)	38.04822 (87102324)
260.0 |	8.05065 (87122312)	16.04574 (87030518)	30.91605 (87030515)	36.08364 (87030515)	34.21787 (87030515)
270.0 |	8.29350 (87091615)	19.12562 (87091615)	30.07435 (87091615)	30.35330 (87091615)	26.85464 (87112715)
280.0 |	8.92751 (87070615)	14.97634 (87091615)	26.09546 (87072312)	26.98228 (87052403)	33.40694 (87060818)
290.0 |	10.35672 (87052215)	18.03224 (87052415)	26.87251 (87122412)	36.52164 (87122412)	37.02813 (87122412)
300.0 |	9.52526 (87052415)	20.34979 (87051715)	33.55322 (87112615)	38.75660 (87112615)	36.72932 (87080615)
310.0 |	8.70240 (87111621)	18.81081 (87052512)	37.41491 (87080615)	39.40456 (87111624)	45.67517 (87111624)
320.0 |	8.62411 (87022606)	23.44212 (87111624)	38.29976 (87110306)	37.16529 (87051915)	41.97071 (87121924)
330.0 |	27.47823 (87110306)	26.66412 (87111703)	31.42516 (87082415)	37.20337 (87082415)	37.97599 (87122003)
340.0 |	35.23784 (87111703)	26.20162 (87030624)	32.56285 (87051812)	42.45014 (87061615)	40.50952 (87081812)
350.0 |	39.37159 (87030624)	34.10618 (87101206)	27.57229 (87091312)	37.74250 (87022812)	36.16033 (87091312)
360.0 |	47.62486 (87101206)	39.37442 (87101209)	28.72379 (87101209)	33.14057 (87061515)	36.65770 (87011815)

MODFLOP: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	40.57704 (87062706)	32.87939 (87062706)
20.0	21.96384 (87010412)	17.18491 (87020215)
30.0	39.29692 (87110424)	33.29222 (87110424)
40.0	40.08261 (87021618)	34.69569 (87021618)
50.0	36.72168 (87090418)	29.69379 (87090418)
60.0	54.48035 (87030803)	39.90858 (87030803)
70.0	43.07314 (87010106)	29.94309 (87010106)
80.0	39.59623 (87010415)	31.06146 (87010415)
90.0	20.84506 (87041624)	16.40670 (87041624)
100.0	22.57714 (87010424)	13.73033 (87011106)
110.0	24.46331 (87020903)	19.13162 (87111018)
120.0	33.19909 (87020724)	32.94273 (87020724)
130.0	31.79230 (87081118)	24.12735 (87042418)
140.0	32.14345 (87042321)	30.32075 (87042321)
150.0	38.16702 (87042618)	32.52205 (87042618)
160.0	37.62454 (87040418)	28.89399 (87040418)
170.0	36.88522 (87022315)	28.08013 (87112012)
180.0	33.80417 (87031218)	31.43530 (87031218)
190.0	32.31048 (87100812)	27.87382 (87100812)
200.0	29.45008 (87053109)	24.24299 (87053109)
210.0	34.89769 (87103118)	29.64803 (87120218)
220.0	31.55805 (87111306)	26.12503 (87120312)
230.0	35.68559 (87103024)	29.57080 (87103024)
240.0	35.57960 (87120618)	29.62276 (87120618)
250.0	35.63805 (87123021)	29.85397 (87123021)
260.0	30.57780 (87060624)	26.45748 (87060624)
270.0	30.29175 (87072221)	28.79088 (87072221)
280.0	32.96737 (87060818)	25.62901 (87060818)
290.0	32.45125 (87060921)	27.37066 (87060921)
300.0	32.71237 (87031621)	31.43103 (87061324)
310.0	39.12637 (87121415)	33.36677 (87061318)
320.0	34.56830 (87031803)	32.26838 (87111818)
330.0	36.01752 (87011806)	30.82889 (87080609)
340.0	37.76197 (87032724)	32.01097 (87012121)
350.0	28.80300 (87011612)	23.17767 (87030106)
360.0	37.25159 (87010409)	30.34151 (87010409)

*MODELOPTs: CONC RURAL FLAT DFAULT

***THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	41.24142 (87032703)	28.66881 (87010409)	19.56042 (87061515)	27.76231 (87050812)	32.17418 (87011012)
20.0 |	34.76525 (87010412)	5.73026 (87010412)	15.10234 (87062612)	24.73187 (87062315)	26.53672 (87062315)
30.0 |	0.82113 (87043012)	3.46050 (87043012)	17.81120 (87040315)	28.60179 (87040315)	30.55792 (87011015)
40.0 |	54.62689 (87100106)	47.46753 (87110503)	27.44522 (87041515)	29.09325 (87021618)	35.92080 (87022212)
50.0 |	326.45395 (87030806)	158.88295 (87030806)	60.07003 (87030803)	43.95979 (87041815)	40.32128 (87062509)
60.0 |	265.11121 (87100103)	270.09543 (87010106)	120.14394 (87030721)	88.44552 (87030721)	76.14614 (87030721)
70.0 |	165.66272 (87041624)	112.31649 (87041703)	93.60538 (87041703)	68.96366 (87010106)	62.04944 (87100103)
80.0 |	47.01286 (87030706)	64.79492 (87041706)	35.47414 (87041624)	32.07494 (87010415)	36.08609 (87092318)
90.0 |	5.34893 (87010503)	8.50202 (87030706)	16.00892 (87030706)	20.49614 (87041818)	24.63845 (87041818)
100.0 |	20.85596 (87010512)	9.00626 (87010506)	11.71596 (87010506)	17.86777 (87010418)	23.16278 (87010418)
110.0 |	16.03256 (87012221)	16.71407 (87010512)	23.26420 (87041615)	22.11275 (87020903)	22.77572 (87010506)
120.0 |	18.02785 (87012221)	18.46473 (87012224)	30.56121 (87042512)	42.45279 (87010509)	34.23042 (87010509)
130.0 |	12.58732 (87012215)	20.15807 (87010515)	26.18987 (87033112)	31.55341 (87012221)	34.61903 (87012618)
140.0 |	21.57818 (87122915)	14.70681 (87042212)	31.54741 (87042415)	35.12564 (87042415)	32.00667 (87033109)
150.0 |	17.55750 (87122912)	25.88455 (87122915)	26.97425 (87042215)	32.61391 (87042412)	31.59195 (87042218)
160.0 |	21.41604 (87101218)	25.23477 (87112021)	29.96508 (87122912)	35.28338 (87102812)	40.54057 (87102812)
170.0 |	11.64412 (87101218)	24.91625 (87042115)	35.55751 (87050912)	36.43605 (87112103)	33.82345 (87112021)
180.0 |	13.65428 (87031115)	22.31361 (87042112)	34.42521 (87102015)	40.11409 (87102015)	37.18885 (87042112)
190.0 |	14.86698 (87053112)	22.94697 (87031115)	30.55116 (87102615)	36.57620 (87102615)	36.32037 (87102615)
200.0 |	14.74786 (87053112)	21.88725 (87053112)	27.28194 (87112124)	32.34391 (87112124)	30.44138 (87053109)
210.0 |	14.32475 (87091412)	20.42309 (87091412)	25.62024 (87103118)	33.92229 (87031406)	34.83893 (87031406)
220.0 |	12.85760 (87091512)	20.15611 (87100912)	26.91646 (87042712)	31.64364 (87110621)	34.26431 (87111306)
230.0 |	16.79348 (87100412)	25.98424 (87100412)	35.36459 (87100412)	35.35788 (87100906)	37.22496 (87100412)
240.0 |	13.48559 (87042012)	22.21767 (87040212)	30.71763 (87040212)	32.65085 (87040212)	36.82853 (87120618)
250.0 |	13.44056 (87040212)	21.27213 (87040212)	34.32988 (87110718)	34.97583 (87110718)	35.42118 (87123021)
260.0 |	7.64084 (87091512)	14.15046 (87030515)	28.58927 (87030518)	28.93101 (87091615)	30.33045 (87111518)
270.0 |	8.07825 (87070615)	15.77004 (87112715)	26.02780 (87112715)	27.91163 (87112715)	26.33564 (87091615)
280.0 |	8.32435 (87091615)	14.95282 (87072312)	21.49299 (87110303)	25.89555 (87072312)	27.01076 (87052415)
290.0 |	8.75409 (87082112)	16.99541 (87072312)	26.24295 (87051715)	34.85384 (87052318)	36.11868 (87060803)
300.0 |	8.77392 (87052215)	17.21026 (87082712)	33.39639 (87022015)	36.70542 (87022015)	33.76853 (87112615)
310.0 |	7.76086 (87051715)	17.03279 (87082615)	35.84278 (87092815)	39.02961 (87070812)	41.95916 (87022609)
320.0 |	8.01110 (87030621)	21.45890 (87060715)	34.16707 (87080612)	35.45481 (87061315)	39.03099 (87121424)
330.0 |	27.02206 (87111624)	25.03396 (87110306)	30.67273 (87061715)	35.93974 (87051812)	37.61481 (87051812)
340.0 |	18.88636 (87110306)	19.36851 (87101206)	31.21094 (87090112)	37.02858 (87022815)	40.05026 (87061615)
350.0 |	21.50407 (87101206)	34.04929 (87030624)	27.25824 (87080515)	37.18863 (87091312)	32.48713 (87101209)
360.0 |	37.16450 (87101209)	33.21274 (87032703)	25.51790 (87091312)	30.66709 (87011815)	34.50623 (87061515)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	26.83184 (87011012)	22.53573 (87090503)
20.0	21.67050 (87011015)	16.83444 (87011015)
30.0	25.25085 (87092315)	21.26157 (87110509)
40.0	32.04677 (87110503)	29.14268 (87110503)
50.0	30.89132 (87071515)	21.35250 (87092409)
60.0	53.72160 (87030806)	38.02285 (87030806)
70.0	40.01266 (87030818)	29.74469 (87030818)
80.0	32.04839 (87031918)	30.97617 (87031918)
90.0	20.11848 (87030912)	15.46128 (87031921)
100.0	15.64304 (87010418)	11.87457 (87010424)
110.0	21.61302 (87010506)	17.53587 (87010506)
120.0	27.45422 (87031003)	17.81350 (87010503)
130.0	27.48454 (87020824)	22.02685 (87081118)
140.0	30.60132 (87012615)	23.07455 (87010115)
150.0	36.93105 (87042621)	26.86545 (87042621)
160.0	31.51648 (87102812)	25.36769 (87040521)
170.0	33.32859 (87112012)	27.92674 (87022315)
180.0	32.41917 (87011109)	30.45013 (87120121)
190.0	30.86155 (87121715)	26.56448 (87121715)
200.0	26.56775 (87101524)	23.20450 (87101524)
210.0	33.13390 (87050509)	28.43965 (87103118)
220.0	31.22196 (87101021)	25.88290 (87101021)
230.0	34.00053 (87112406)	28.61604 (87021206)
240.0	33.50309 (87110715)	26.74349 (87112512)
250.0	29.71589 (87110815)	24.86917 (87060421)
260.0	27.31377 (87111512)	22.94773 (87111512)
270.0	28.35470 (87052121)	26.95586 (87052121)
280.0	25.76650 (87072118)	24.47759 (87072103)
290.0	31.14958 (87060803)	22.74886 (87051818)
300.0	31.56925 (87061106)	31.29646 (87031621)
310.0	38.76405 (87061318)	32.24446 (87121415)
320.0	33.14150 (87111818)	31.71827 (87010403)
330.0	35.92405 (87022709)	29.98434 (87022709)
340.0	30.09092 (87061509)	31.39834 (87032724)
350.0	25.70496 (87032412)	22.81654 (87011612)
360.0	29.24730 (87011815)	21.69934 (87091209)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	10.24829 (87101224)	5.75858 (87101224)	6.87320 (87010424)	7.39155 (87032824)	9.29021 (87062624)
20.0 |	12.52363 (87010424)	2.13484 (87010424)	3.49184 (87062324)	6.63650 (87062624)	7.74676 (87062624)
30.0 |	0.17748c(87062424)	0.83074c(87062424)	5.80562 (87062524)	10.61086 (87062524)	11.78812 (87062524)
40.0 |	13.34049 (87062524)	10.18511 (87110524)	9.50105 (87062524)	11.46154 (87062524)	11.86027 (87062524)
50.0 |	187.77187 (87030824)	89.52917 (87030824)	27.25340 (87030824)	16.24847c(87093024)	16.80110c(87093024)
60.0 |	74.96295 (87030824)	97.60209 (87030824)	63.20465 (87030824)	50.61959 (87030824)	46.38968 (87030824)
70.0 |	49.79925 (87041824)	28.13402 (87041824)	16.90654 (87010124)	14.83148 (87010124)	13.67126 (87030824)
80.0 |	10.71497 (87041724)	13.48116 (87041824)	13.14921 (87041824)	9.79243 (87041824)	8.60429 (87041824)
90.0 |	2.34006 (87010524)	1.60067 (87011124)	5.42605 (87041724)	6.85506 (87041724)	6.76249 (87041724)
100.0 |	11.06054 (87010524)	4.06193 (87010524)	2.52028 (87081124)	7.13161 (87010424)	9.14662 (87010424)
110.0 |	5.05110 (87033124)	8.89866 (87010524)	7.40792 (87010524)	6.14209 (87041624)	5.27833 (87041624)
120.0 |	9.21000 (87033124)	6.60333 (87012224)	9.31555 (87042924)	11.36325 (87042924)	10.62677 (87041624)
130.0 |	6.20790 (87033124)	10.26448 (87033124)	11.89397 (87033124)	14.64614 (87020824)	15.88188 (87020824)
140.0 |	6.74342 (87010524)	5.59278 (87033124)	14.51423 (87033124)	18.87280 (87033124)	17.59986 (87033124)
150.0 |	4.99199 (87122924)	8.08083 (87010524)	11.11166 (87042224)	16.06845 (87042224)	16.77437 (87042224)
160.0 |	5.30691 (87112024)	8.82082 (87112024)	14.18926 (87112024)	15.85135 (87040424)	16.96890 (87040424)
170.0 |	3.90971 (87040124)	7.41342 (87040124)	12.80166 (87112024)	18.09218 (87112024)	20.00274 (87112024)
180.0 |	2.90954 (87031124)	5.81615 (87102624)	10.68326 (87121724)	13.09561 (87101424)	14.68124 (87101424)
190.0 |	3.95948 (87042724)	6.69170 (87031124)	10.20478 (87031124)	11.18308 (87031124)	11.73552 (87100824)
200.0 |	4.73268 (87042724)	6.85522 (87042724)	9.55773 (87112124)	12.29958 (87101524)	13.66617 (87101524)
210.0 |	4.67092 (87042724)	7.81926 (87042724)	10.68139 (87103124)	13.58223 (87021024)	14.59166 (87021024)
220.0 |	3.55799 (87042724)	6.27249 (87042724)	10.39843 (87100424)	12.75302 (87100424)	13.52372 (87100424)
230.0 |	4.65461 (87100924)	9.81458 (87100924)	16.31322 (87100924)	18.93981 (87100924)	19.09882 (87100924)
240.0 |	3.61899c(87040224)	7.06849 (87110724)	12.87377 (87110724)	15.46607 (87110724)	15.81814 (87110724)
250.0 |	3.76899 (87110724)	7.21664 (87110724)	13.24928 (87110824)	17.29986 (87110824)	18.66951 (87110824)
260.0 |	2.25268 (87110824)	5.54740 (87110824)	9.43611 (87030524)	10.53781 (87111524)	11.08105 (87111524)
270.0 |	1.44080 (87030524)	3.61402 (87111524)	6.15006 (87111524)	8.25122 (87052224)	9.73469 (87052424)
280.0 |	1.67394 (87052224)	4.51005 (87052224)	8.58823 (87052224)	11.56948 (87052424)	12.04039 (87052424)
290.0 |	2.16014 (87052224)	4.23157 (87052224)	12.06705 (87060824)	15.69469 (87060824)	16.10728 (87060824)
300.0 |	1.99930 (87060824)	5.78359 (87060824)	10.13056 (87060824)	12.91598 (87060924)	15.46665 (87061124)
310.0 |	1.94479 (87060824)	4.66286 (87052524)	13.91389 (87061124)	21.37631 (87031724)	23.80351 (87031724)
320.0 |	2.75101 (87111624)	7.30439 (87111624)	13.02892 (87111724)	17.46243 (87121424)	20.89513 (87031824)
330.0 |	7.05764 (87111624)	6.27711 (87111724)	10.84785 (87031824)	13.66925 (87032624)	16.69436 (87032624)
340.0 |	6.04240 (87111724)	3.63292 (87030624)	10.03531 (87022824)	14.81201 (87022824)	15.97244 (87022824)
350.0 |	5.86268 (87030624)	7.72633 (87030624)	8.23502 (87022824)	9.75190 (87062224)	11.01572 (87033024)
360.0 |	10.59870 (87101224)	7.87965 (87101224)	4.87800 (87101224)	6.75663 (87011524)	8.72656 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)	
	750.00	1000.00
10.0 |	10.80109 (87062624)	9.53150 (87090524)
20.0 |	7.33094 (87062624)	5.87104 (87062624)
30.0 |	9.69553 (87062524)	7.32822 (87062524)
40.0 |	10.70668 (87110524)	9.33204 (87110524)
50.0 |	13.01383(87093024)	9.48871(87093024)
60.0 |	31.70515 (87030824)	22.44893 (87030824)
70.0 |	11.04714 (87030824)	8.30502 (87030824)
80.0 |	6.41546 (87041824)	4.84514 (87041824)
90.0 |	4.94703 (87041824)	4.41437 (87041824)
100.0 |	6.59859 (87010424)	3.90572 (87010424)
110.0 |	4.58579 (87010424)	4.59092 (87010424)
120.0 |	8.15786 (87041624)	6.11075 (87041624)
130.0 |	11.22644 (87012624)	8.97365 (87120424)
140.0 |	14.32187 (87012624)	12.26913 (87012624)
150.0 |	12.51174 (87042624)	9.59369 (87042624)
160.0 |	14.28852 (87102824)	11.17243 (87102824)
170.0 |	17.30782 (87112024)	13.12315 (87112024)
180.0 |	13.94701 (87101424)	11.41010 (87101424)
190.0 |	12.13930 (87101424)	10.44606 (87101424)
200.0 |	12.87093 (87101524)	10.53230 (87101524)
210.0 |	13.32844 (87021024)	11.02740 (87021024)
220.0 |	12.18816 (87100424)	9.87309 (87100424)
230.0 |	16.22911 (87112324)	13.03544 (87112324)
240.0 |	13.27697 (87110724)	10.40726 (87110724)
250.0 |	16.70109 (87110824)	13.30280 (87110824)
260.0 |	9.69619 (87111524)	7.69815 (87111524)
270.0 |	10.41652 (87052424)	9.18381 (87052424)
280.0 |	11.55441 (87060824)	9.92171 (87060824)
290.0 |	12.63571 (87060824)	11.02679 (87060924)
300.0 |	16.41496 (87061124)	14.18476 (87061124)
310.0 |	21.84947 (87060224)	16.15907 (87060224)
320.0 |	22.09454 (87031824)	17.27811 (87031824)
330.0 |	15.43204 (87032424)	12.32488 (87032424)
340.0 |	12.97969 (87022824)	9.57751 (87022824)
350.0 |	10.55191 (87033024)	8.78938 (87033024)
360.0 |	9.15520 (87032824)	7.17110 (87032824)

MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	5.23688 (87032724)	5.39880 (87010424)	4.15684 (87050824)	6.90835 (87091924)	9.08904 (87090524)
20.0 |	4.08369 (87101224)	0.28488 (87030124)	3.36551 (87062624)	5.57430 (87031924)	6.36440 (87011924)
30.0 |	0.13279c(87043024)	0.62240c(87043024)	3.70815c(87040324)	6.66923 (87062624)	7.97176 (87062624)
40.0 |	12.05856c(87100124)	10.11191 (87062524)	7.32227 (87062724)	9.52383c(87043024)	10.32209c(87043024)
50.0 |	98.22907 (87030724)	44.96640 (87030724)	19.48316c(87093024)	15.83187 (87030824)	12.80573 (87030824)
60.0 |	71.62622 (87041724)	61.61695 (87041724)	34.13909 (87030724)	25.94062 (87030724)	22.99283 (87030724)
70.0 |	20.70784 (87041624)	24.54942 (87010424)	15.69067 (87041824)	12.64723 (87030824)	12.54432 (87010124)
80.0 |	5.87815 (87030724)	13.18725 (87041724)	6.61056 (87010124)	5.40017 (87010124)	5.32555 (87010424)
90.0 |	0.14158 (87092524)	1.13996 (87041724)	2.74434 (87010424)	3.50880 (87041824)	4.66798 (87041824)
100.0 |	0.59307 (87033124)	1.28864 (87041624)	2.32278 (87010424)	3.29948 (87092524)	3.53991 (87092524)
110.0 |	4.66678 (87012224)	2.95552 (87041624)	6.93514 (87041624)	5.70082 (87010524)	4.94871 (87010524)
120.0 |	5.93606 (87012224)	6.45597 (87033124)	8.11930 (87042524)	10.73580 (87041624)	10.48923 (87042924)
130.0 |	3.31429 (87101224)	4.58981 (87012224)	11.15069 (87012224)	13.23763 (87012624)	14.40342 (87012624)
140.0 |	5.04851 (87122924)	5.13488 (87042224)	9.80422 (87042224)	10.49099 (87012724)	12.57636 (87012724)
150.0 |	4.58193 (87010524)	7.20424 (87122924)	8.45932 (87040424)	11.03132 (87042624)	13.14872 (87042624)
160.0 |	4.50565 (87040124)	7.65894 (87040424)	12.57969 (87040424)	14.34695 (87111124)	15.73529 (87102824)
170.0 |	3.41025 (87042124)	7.27775 (87042124)	11.16386 (87121624)	13.83386 (87011124)	14.16656 (87011124)
180.0 |	2.73002 (87102624)	4.95808 (87031124)	9.50204 (87101424)	13.02866 (87121724)	13.14533 (87010624)
190.0 |	3.33950 (87031124)	5.04985 (87042724)	9.01421 (87102624)	11.12535 (87102624)	11.54750 (87102924)
200.0 |	3.90206 (87053124)	6.47459 (87053124)	9.35627 (87053124)	11.09980 (87031124)	11.84724 (87031124)
210.0 |	2.72128 (87053124)	5.75231 (87103124)	10.61105 (87021024)	13.40706 (87103124)	14.31125 (87103124)
220.0 |	3.10049 (87100424)	6.18121 (87100424)	9.74842 (87042724)	11.99726 (87103124)	12.71170 (87103124)
230.0 |	3.32847 (87100424)	7.46914 (87112324)	13.95917 (87112324)	17.39736 (87112324)	18.36477 (87112324)
240.0 |	3.25979 (87100924)	6.71772 (87112324)	11.37225 (87112324)	13.54718 (87120624)	14.33859 (87120624)
250.0 |	3.19469c(87040224)	6.36205 (87110824)	9.59223 (87110724)	11.63228 (87112524)	12.43475 (87112524)
260.0 |	1.99585c(87040224)	5.12145 (87030524)	8.49340 (87111524)	9.97064 (87030524)	8.82199 (87030524)
270.0 |	1.43435 (87091624)	3.44210 (87091624)	5.79306 (87112724)	8.17149 (87052424)	9.71804 (87052224)
280.0 |	1.63812 (87082124)	3.31166 (87082124)	8.49445 (87052424)	9.71392 (87052224)	10.56208 (87060824)
290.0 |	1.86581 (87082124)	4.16092 (87052424)	7.31790 (87052424)	9.91185 (87111624)	11.37471 (87111624)
300.0 |	1.75152 (87052224)	3.83515 (87052424)	9.67810 (87060924)	12.39439 (87061124)	12.89653 (87060924)
310.0 |	1.56524 (87052424)	3.98595 (87071024)	12.06330 (87022624)	19.70339 (87061124)	22.26066 (87060224)
320.0 |	1.71381 (87111724)	5.88818 (87061124)	11.83463 (87060224)	17.24990 (87111724)	19.10563 (87121424)
330.0 |	3.43599 (87110324)	3.48504 (87061124)	9.54385 (87051924)	13.55947 (87031824)	15.21215 (87022824)
340.0 |	3.14788 (87101224)	3.26153 (87022824)	9.28413 (87061624)	11.15673 (87061624)	11.02180 (87073024)
350.0 |	4.64935 (87022824)	7.48995 (87101224)	8.20509 (87062224)	9.48374 (87033024)	8.80239 (87062224)
360.0 |	8.27018 (87030624)	4.66152 (87032724)	4.76382 (87091324)	6.35468 (87061524)	7.03861 (87012024)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)	
	750.00	1000.00
10.0 |	10.79799 (87090524)	8.81680 (87062624)
20.0 |	6.16379 (87012224)	5.64832 (87012224)
30.0 |	7.81458 (87012224)	6.35089c(87110424)
40.0 |	9.53230 (87062524)	7.55203 (87021624)
50.0 |	10.30172c(87110424)	7.75167c(87043024)
60.0 |	16.21074c(87093024)	12.26312c(87093024)
70.0 |	7.81721 (87030924)	6.52917 (87030924)
80.0 |	4.95829 (87010424)	3.90288 (87031924)
90.0 |	4.44057 (87041724)	2.71259 (87041724)
100.0 |	3.37066 (87041624)	2.68701 (87041624)
110.0 |	4.39330 (87010524)	3.56073 (87010524)
120.0 |	7.13442 (87010524)	5.54345 (87020724)
130.0 |	11.21121 (87020824)	7.74223 (87042524)
140.0 |	11.73100 (87042324)	10.19451 (87042324)
150.0 |	12.37334 (87042224)	9.42344 (87033124)
160.0 |	14.13591 (87040424)	10.65511 (87040424)
170.0 |	14.49501 (87111124)	12.71856 (87111124)
180.0 |	13.12733 (87011324)	11.30608 (87031224)
190.0 |	10.70498 (87121724)	9.01678 (87121724)
200.0 |	11.10612 (87031124)	9.98630 (87102924)
210.0 |	12.93936 (87103124)	10.49586 (87103124)
220.0 |	11.28737 (87103124)	9.65460 (87101124)
230.0 |	15.88603 (87100924)	12.56073 (87111324)
240.0 |	12.78370 (87120624)	10.24108 (87120624)
250.0 |	11.51791 (87111524)	9.65911 (87111524)
260.0 |	6.93994 (87031524)	5.87231 (87031524)
270.0 |	9.63775 (87052224)	7.99545 (87052224)
280.0 |	9.43248 (87052324)	8.04689 (87052324)
290.0 |	12.62084 (87060924)	9.06706 (87060824)
300.0 |	13.84984 (87051624)	13.98287 (87051624)
310.0 |	19.02138 (87061924)	15.41173 (87061924)
320.0 |	14.72474 (87121424)	12.90840 (87032524)
330.0 |	15.03545 (87032624)	11.42383 (87032624)
340.0 |	10.51801 (87032724)	9.43686 (87012124)
350.0 |	8.54395 (87030124)	7.53871 (87011524)
360.0 |	7.63556 (87012524)	6.50178 (87012524)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
----------	--------------	---	---------	---------

LL	1ST HIGHEST VALUE IS	3.38365 AT (-383.02, 321.39, 0.00, 0.00)	GP	POL
	2ND HIGHEST VALUE IS	3.00968 AT (-306.42, 257.11, 0.00, 0.00)	GP	POL
	3RD HIGHEST VALUE IS	2.98447 AT (-574.53, 482.09, 0.00, 0.00)	GP	POL
	4TH HIGHEST VALUE IS	2.57011 AT (114.91, 96.42, 0.00, 0.00)	GP	POL
	5TH HIGHEST VALUE IS	2.55500 AT (-257.12, 306.42, 0.00, 0.00)	GP	POL
	6TH HIGHEST VALUE IS	2.54916 AT (-321.39, 383.02, 0.00, 0.00)	GP	POL

** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
----------	---------------------------------	--	---------	---------

ALL	HIGH 1ST HIGH VALUE IS 415.74484 ON 87030803: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 326.45395 ON 87030806: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
----------	---------------------------------	--	---------	---------

ALL	HIGH 1ST HIGH VALUE IS 187.77187 ON 87030824: AT (114.91, 96.42, 0.00, 0.00)	GP POL		
	HIGH 2ND HIGH VALUE IS 98.22907 ON 87030724: AT (114.91, 96.42, 0.00, 0.00)	GP POL		

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

MODELOPTs: CONC RURAL FLAT DFAULT

* Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----

Total of	0 Fatal Error Message(s)
Total of	0 Warning Message(s)
A Total of	123 Informational Message(s)

Total of 123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

*** NONE ***

 *** ISCST3 Finishes Successfully ***

MODELOPTs: CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----

Total of	0 Fatal Error Message(s)
Total of	0 Warning Message(s)
A Total of	123 Informational Message(s)
Total of	123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
 *** NONE ***

***** WARNING MESSAGES *****
 *** NONE ***

 *** ISCST3 Finishes Successfully ***

CO STARTING
CO TITLEONE 1987 STOCK ISLAND-NO BOUNDARY-HSD STACKS RAISED(7.32M)(12.2M TOTAL)-11/06/97
CO TITLETWO ANN 24&3-HR-ALL-SS UNITS-PM10-40F & 100%-CTS IN NEW LOCATION(10CT732B.IN)
CO MODELOPT DFAULT CONC RURAL
CO AVERTIME 3 24 PERIOD
CO POLLUTID OTHER
CO DCAYCOEF .000000
CO RUNORNOR RUN
CO FINISHED

SO STARTING
SO LOCATION HSD1 POINT 56.6 63.2 0.0
SO LOCATION HSD2 POINT 55.6 55.6 0.0
SO LOCATION HSD3 POINT 54.7 48.4 0.0
SO LOCATION MSD POINT -7.2 35.88 0.0
SO LOCATION GT POINT 26.2 -56.8 0.0
SO LOCATION SS1GT POINT 38.9 -58.4 0.0
SO LOCATION SS2GT POINT 53.1 -60.1 0.0

** POINT: SRCID QS HS TS VS DS
SO SRCPARAM HSD1 0.97 12.20 660.8 20.38 0.76
SO SRCPARAM HSD2 0.97 12.20 660.8 20.38 0.76
SO SRCPARAM HSD3 0.97 12.20 660.8 20.38 0.76
SO SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74
SO SRCPARAM GT 2.27 11.77 766 24.0 3.93
SO SRCPARAM SS1GT 2.10 13.08 801.0 24.65 3.85
SO SRCPARAM SS2GT 2.10 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
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SO BILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
SO BILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
SO BILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
SO BILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
SO BILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
SO BILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
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SO BILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
SO BILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
SO BILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
SO BILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
SO BILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
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SO BILDWID HSD3 12.30 12.53 12.37 11.80 35.76 29.40
SO BILDWID HSD3 27.09 23.96 25.29 28.10 32.60 32.48
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SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97
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SO BUILDWID MSD 12.11 30.35 18.94 18.93 18.34 30.59
SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 30.06 31.10
SO BUILDWID MSD 31.20 30.35 28.58 32.08 30.84 30.59

SO BUILDHGT GT 12.19 12.19 12.19 4.88 4.88 4.88
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SO BUILDWID GT 26.98 25.74 26.49 19.98 23.27 25.85
SO BUILDWID GT 27.65 28.61 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID GT 6.97 11.73 16.13 19.98 23.27 25.85
SO BUILDWID GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90

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SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID SS1GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90

SO BUILDHGT SS2GT 4.88 4.88 4.88 4.88 4.88 4.88
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SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00
SO BUILDWID SS2GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS2GT 27.64 28.60 28.69 28.54 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
*GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)
RE GRIDPOLR POL ORIC 0.0 0.0
RE GRIDPOLR POL DIST 150. 200. 300. 400. 500. 750. 1000.
RE GRIDPOLR POL GDIR 36 10.0 10.0
RE GRIDPOLR POL END
RE FINISHED

ME STARTING
ME INPUTFIL KYWPRE87.LST
ME ANEMHGT 6.700 METERS
ME SURFDATA 12836 1987 KEY WEST
ME UAIRDATA 12844 1987 MIAMI
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

*** SETUP Finishes Successfully ***

**MODELOPTs: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

*Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --

*Model Uses NO DRY DEPLETION. DDPLETE = F

*Model Uses NO WET DEPLETION. WDPLETE = F

*NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

*Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

*Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

*Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR and Calculates PERIOD Averages

*This Run Includes: 7 Source(s); 1 Source Group(s); and 252 Receptor(s)

*The Model Assumes A Pollutant Type of: OTHER

*Model Set To Continue RUNNING After the Setup Testing.

*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

*Misc. Inputs: Anem. Hgt. (m) = 6.70; Decay Coef. = 0.0000 ; Rot. Angle = 0.0

Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07

Output Units = (MICROGRAMS/CUBIC-METER)

*Input Runstream File: 10ct732b.in ; **Output Print File: 10ct732b.out

*MODELOPTs: CONC

RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	PART. CATS.	NUMBER EMISSION RATE		X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE	
		(METERS)	(METERS)									SCALAR	VARY BY
HSD1	0	0.97000E+00	56.6	63.2	0.0	12.20	660.80	20.38	0.76	0.76	YES		
HSD2	0	0.97000E+00	55.6	55.6	0.0	12.20	660.80	20.38	0.76	0.76	YES		
HSD3	0	0.97000E+00	54.7	48.4	0.0	12.20	660.80	20.38	0.76	0.76	YES		
MSD	0	0.10800E+01	-7.2	35.9	0.0	30.49	588.60	30.50	1.74	1.74	YES		
GT	0	0.22700E+01	26.2	-56.8	0.0	11.77	766.00	24.00	3.93	3.93	YES		
SS1GT	0	0.21000E+01	38.9	-58.4	0.0	13.08	801.00	24.65	3.85	3.85	YES		
SS2GT	0	0.21000E+01	53.1	-60.1	0.0	13.08	801.00	24.65	3.85	3.85	YES		

*MODELOPTs: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: HSD1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	3.1	4.4	0	10	3.1	3.6	0	11	3.1	5.7	0	12	3.1	7.5	0
13	3.1	9.1	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.9	0	23	3.1	10.9	0	24	3.1	9.7	0
25	3.1	8.2	0	26	3.1	6.4	0	27	3.1	4.4	0	28	3.1	3.6	0	29	3.1	5.7	0	30	3.1	7.5	0
31	3.1	9.1	0	32	3.1	10.4	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	3.1	3.5	0	11	3.1	5.5	0	12	3.1	7.4	0
13	5.8	31.4	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.2	0	26	3.1	6.5	0	27	3.1	4.5	0	28	3.1	3.5	0	29	3.1	5.5	0	30	3.1	7.4	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	3.1	11.8	0	5	7.6	35.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	5.8	32.6	0	12	5.8	32.5	0
13	5.8	31.4	0	14	5.8	29.3	0	15	5.8	26.4	0	16	5.8	22.6	0	17	5.8	18.2	0	18	5.8	15.7	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.1	0	26	3.1	6.3	0	27	3.1	4.3	0	28	3.1	3.7	0	29	5.8	32.6	0	30	5.8	32.5	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: MSD

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	11.0	27.1	0	2	11.0	29.4	0	3	11.0	30.8	0	4	11.0	31.3	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	15.3	11.5	0	12	15.3	11.8	0
13	15.3	12.1	0	14	11.0	30.3	0	15	16.1	18.9	0	16	16.1	18.9	0	17	16.1	18.3	0	18	11.0	30.6	0
19	11.0	27.1	0	20	11.0	29.4	0	21	11.0	30.8	0	22	11.0	31.3	0	23	11.0	30.8	0	24	11.0	29.4	0
25	11.0	27.1	0	26	11.0	24.0	0	27	11.0	25.3	0	28	11.0	28.1	0	29	11.0	30.1	0	30	11.0	31.1	0
31	11.0	31.2	0	32	11.0	30.3	0	33	11.0	28.6	0	34	11.0	32.1	0	35	11.0	30.8	0	36	11.0	30.6	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	12.2	27.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS1CT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	12.2	27.3	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS2CT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	4.9	11.7	0	3	4.9	16.1	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.8	0	17	4.9	13.6	0	18	4.9	9.0	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.8	0	35	4.9	13.6	0	36	4.9	9.0	0

MODELOPTs: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

150.0, 200.0, 300.0, 400.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(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,

*MODELOPTS: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: KYWPRE87.LST FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,F9.4,F10.1,F8.4,I4,I7.2)
 SURFACE STATION NO.: 12836 UPPER AIR STATION NO.: 12844
 NAME: KEY NAME: MIAMI
 YEAR: 1987 YEAR: 1987

YEAR	MONTH	DAY	FLOW	SPEED	TEMP	STAB	MIXING	HEIGHT (M)	USTAR	M-O	LENGTH	Z-0	IPCODE	PRATE
			VECTOR	(M/S)	(K)	CLASS	RURAL	URBAN	(M/S)	(M)	(M)	(M)	(M)	(mm/HR)
87	1	1	1	51.0	7.20	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	2	38.0	8.75	294.3	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	3	84.0	6.69	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	4	73.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	5	63.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	6	72.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	7	75.0	10.29	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	8	93.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	9	117.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	10	131.0	6.17	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	11	144.0	8.75	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	12	136.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	13	143.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	14	149.0	9.26	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	15	142.0	9.77	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	16	144.0	8.75	295.4	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	17	161.0	9.26	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	18	157.0	8.75	293.7	4	423.3	423.3	0.0000	0.0	0.0000	0	0.00
87	1	1	19	184.0	8.23	293.7	4	436.9	436.9	0.0000	0.0	0.0000	0	0.00
87	1	1	20	187.0	7.72	293.7	4	450.6	450.6	0.0000	0.0	0.0000	0	0.00
87	1	1	21	170.0	5.66	293.7	4	464.2	464.2	0.0000	0.0	0.0000	0	0.00
87	1	1	22	152.0	6.17	293.7	4	477.8	477.8	0.0000	0.0	0.0000	0	0.00
87	1	1	23	170.0	5.66	293.2	4	491.5	491.5	0.0000	0.0	0.0000	0	0.00
87	1	1	24	160.0	4.12	293.2	5	505.1	681.0	0.0000	0.0	0.0000	0	0.00

** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
 FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)						
	150.00	200.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	0.05904	0.06437	0.27760	0.48138	0.55323	0.49914	0.39245
20.00 |	0.05485	0.01552	0.17405	0.33014	0.37243	0.32710	0.25781
30.00 |	0.00200	0.01170	0.14510	0.30849	0.37270	0.35646	0.29395
40.00 |	0.36417	0.34065	0.31362	0.39746	0.44196	0.38862	0.30450
50.00 |	2.37434	1.42509	0.65366	0.53725	0.52826	0.40604	0.30165
60.00 |	1.69349	1.47670	0.81088	0.65340	0.62789	0.48014	0.36297
70.00 |	0.49758	0.50206	0.39199	0.33813	0.32931	0.26665	0.21126
80.00 |	0.12012	0.19802	0.13070	0.12866	0.14415	0.14360	0.12534
90.00 |	0.00721	0.01995	0.05930	0.08272	0.09570	0.09627	0.08562
100.00 |	0.03347	0.02813	0.06077	0.08684	0.09760	0.08953	0.07511
110.00 |	0.05317	0.07178	0.16681	0.17759	0.17020	0.14566	0.12619
120.00 |	0.09364	0.12357	0.28689	0.34508	0.34481	0.27154	0.20752
130.00 |	0.09018	0.19236	0.41701	0.51162	0.53053	0.44569	0.34813
140.00 |	0.14563	0.23499	0.51074	0.64255	0.67354	0.58510	0.46629
150.00 |	0.20447	0.36118	0.62914	0.71757	0.73974	0.66732	0.55994
160.00 |	0.24793	0.47641	0.82738	0.96749	0.99378	0.84778	0.67754
170.00 |	0.22828	0.51354	1.00436	1.23160	1.28295	1.11628	0.90223
180.00 |	0.19322	0.43319	0.84292	1.09527	1.21185	1.19092	1.03619
190.00 |	0.19259	0.41329	0.74011	0.92514	0.99763	0.94813	0.81326
200.00 |	0.22164	0.45362	0.74959	0.90492	0.96016	0.90353	0.77670
210.00 |	0.24918	0.51538	0.86486	1.05392	1.12082	1.05134	0.90298
220.00 |	0.26186	0.53839	0.89907	1.09687	1.16930	1.09964	0.93988
230.00 |	0.28086	0.59090	1.00918	1.24811	1.34042	1.27039	1.09048
240.00 |	0.26191	0.55534	0.93929	1.15366	1.23387	1.16941	1.01269
250.00 |	0.20558	0.43364	0.71492	0.86169	0.91114	0.85831	0.75027
260.00 |	0.14548	0.31381	0.53691	0.66132	0.71143	0.68573	0.60231
270.00 |	0.10705	0.24680	0.46418	0.60564	0.68407	0.71880	0.66511
280.00 |	0.09072	0.24544	0.57325	0.79655	0.90685	0.90949	0.79952
290.00 |	0.09778	0.30182	0.76120	1.05909	1.21006	1.22635	1.08188
300.00 |	0.11257	0.38411	1.10199	1.62990	1.95962	2.16062	1.98873
310.00 |	0.13054	0.51264	1.84085	2.78072	3.12642	2.75952	2.15278
320.00 |	0.15516	0.68104	2.01749	2.36066	2.35546	1.98758	1.61478
330.00 |	0.16821	0.55241	1.53568	2.00935	2.14185	1.82530	1.41977
340.00 |	0.10997	0.35607	1.29722	1.58075	1.52054	1.11247	0.81729
350.00 |	0.07811	0.27457	0.74343	0.87327	0.85556	0.68839	0.54582
360.00 |	0.11885	0.11548	0.39468	0.58376	0.64489	0.58505	0.48151

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	59.31841 (87101209)	29.97681 (87101212)	33.63176 (87010409)	26.41701 (87012012)	30.17343 (87062706)
20.0 |	60.43912 (87010409)	10.48383 (87010409)	15.57446 (87062512)	24.80474 (87062512)	25.26569 (87062512)
30.0 |	0.97387 (87062412)	4.26872 (87062412)	21.04229 (87062512)	29.23434 (87062512)	29.62656 (87110424)
40.0 |	55.01958 (87110503)	43.98185 (87071415)	27.78369 (87071415)	29.06452 (87022212)	33.57104 (87021618)
50.0 |	384.06906 (87030803)	197.83415 (87030803)	56.25548 (87041815)	44.74006 (87071515)	43.06304 (87071515)
60.0 |	264.85690 (87010106)	308.66254 (87041709)	156.42296 (87041709)	82.94550 (87041709)	71.05769 (87030806)
70.0 |	195.17189 (87041821)	181.32860 (87010415)	88.04449 (87010415)	64.99633 (87100103)	59.92474 (87010106)
80.0 |	63.64558 (87041706)	63.52753 (87041818)	51.42462 (87041821)	32.19835 (87041821)	38.90694 (87010415)
90.0 |	5.64232 (87010506)	11.82970 (87011106)	30.95557 (87041706)	35.25979 (87041706)	32.20643 (87041706)
100.0 |	44.19820 (87010509)	8.67832 (87010503)	11.58208 (87081112)	27.68686 (87010424)	33.30265 (87010424)
110.0 |	16.47292 (87020818)	40.65700 (87010509)	22.94850 (87041612)	21.76217 (87081115)	26.78163 (87020903)
120.0 |	19.75918 (87010515)	20.07884 (87012221)	30.99682 (87010509)	39.60569 (87042512)	35.98959 (87042512)
130.0 |	15.39172 (87033118)	20.71563 (87033118)	30.90979 (87012221)	34.00276 (87020818)	36.67677 (87020818)
140.0 |	24.41673 (87010518)	14.23710 (87042215)	30.59819 (87033118)	32.99786 (87033109)	30.67983 (87012615)
150.0 |	19.52283 (870101215)	29.36051 (87010518)	28.58062 (87042412)	31.17629 (87042215)	32.42109 (87042621)
160.0 |	20.04529 (87112021)	23.84838 (87040415)	30.06972 (87040415)	40.07109 (87010518)	40.28391 (87010518)
170.0 |	13.82410 (87042112)	25.09675 (87042112)	35.10602 (87042115)	35.31189 (87112021)	33.53402 (87022315)
180.0 |	12.95433 (87051215)	22.80083 (87102615)	36.29005 (87042112)	38.28327 (87042112)	35.29526 (87102015)
190.0 |	20.70125 (87042715)	26.18109 (87042715)	28.56660 (87110615)	35.80869 (87110615)	35.36182 (87110615)
200.0 |	21.98149 (87042715)	31.25913 (87042715)	35.15124 (87042715)	31.44994 (87042715)	29.69726 (87112124)
210.0 |	13.41291 (87042715)	19.57576 (87042715)	25.72955 (87031406)	31.75722 (87103118)	34.90137 (87103118)
220.0 |	14.03508 (87042712)	20.00533 (87042712)	30.62582 (87100912)	34.98222 (87100912)	34.74700 (87100912)
230.0 |	20.78077 (87091512)	29.16405 (87091512)	33.46397 (87091512)	35.21342 (87100412)	34.76421 (87103024)
240.0 |	21.32004 (87091512)	27.77530 (87091512)	29.94178 (87110715)	36.12010 (87110715)	36.90798 (87110715)
250.0 |	14.75001 (87091512)	20.22406 (87110718)	32.81257 (87102324)	37.04766 (87102324)	35.15029 (87102324)
260.0 |	7.43727 (87122312)	14.82321 (87030518)	28.56054 (87030515)	33.33445 (87030515)	31.61144 (87030515)
270.0 |	7.66162 (87091615)	17.66843 (87091615)	27.78297 (87091615)	28.04099 (87091615)	24.80967 (87112715)
280.0 |	8.24732 (87070615)	13.83529 (87091615)	24.10724 (87072312)	24.92649 (87052403)	30.86197 (87060818)
290.0 |	9.56763 (87052215)	16.65835 (87052415)	24.82508 (87122412)	33.73909 (87122412)	34.20791 (87122412)
300.0 |	8.79953 (87052415)	18.79933 (87051715)	30.99679 (87112615)	35.80384 (87112615)	33.93412 (87080615)
310.0 |	8.03936 (87111621)	17.37761 (87052512)	34.56425 (87080615)	36.40235 (87111624)	42.19571 (87111624)
320.0 |	7.96703 (87022606)	21.65606 (87111624)	35.38169 (87110306)	34.33371 (87051915)	38.77305 (87121924)
330.0 |	25.38465 (87110306)	24.63257 (87111703)	29.03087 (87082415)	34.36915 (87082415)	35.08268 (87122003)
340.0 |	32.55306 (87111703)	24.20531 (87030624)	30.08187 (87051812)	39.21624 (87061615)	37.42387 (87081812)
350.0 |	36.37185 (87030624)	31.50762 (87101206)	25.47156 (87091312)	34.86689 (87022812)	33.41153 (87091312)
360.0 |	43.99630 (87101206)	36.37446 (87101209)	26.53531 (87101209)	30.61593 (87061515)	33.86540 (87011815)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)	
	750.00	1000.00
10.0 |	37.49239 (87062706)	30.39749 (87062706)
20.0 |	20.29365 (87010412)	15.89215 (87020215)
30.0 |	36.30756 (87110424)	30.77186 (87110424)
40.0 |	37.03328 (87021618)	32.06819 (87021618)
50.0 |	33.93733 (87090418)	27.46181 (87090418)
60.0 |	50.33585 (87030803)	36.88935 (87030803)
70.0 |	39.80256 (87010106)	27.69171 (87010106)
80.0 |	36.58587 (87010415)	28.71359 (87010415)
90.0 |	19.26644 (87041624)	15.17207 (87041624)
100.0 |	20.86223 (87010424)	12.68787 (87011106)
110.0 |	22.60414 (87020903)	17.69236 (87111018)
120.0 |	30.67797 (87020724)	30.45208 (87020724)
130.0 |	29.38113 (87081118)	22.30940 (87042418)
140.0 |	29.69708 (87042321)	28.01575 (87042321)
150.0 |	35.27472 (87042618)	30.06804 (87042618)
160.0 |	34.77511 (87040418)	26.71542 (87040418)
170.0 |	34.07943 (87022315)	26.00036 (87112012)
180.0 |	31.23299 (87031218)	29.05028 (87031218)
190.0 |	29.86510 (87100812)	25.78763 (87100812)
200.0 |	27.21654 (87053109)	22.42021 (87053109)
210.0 |	32.24987 (87103118)	27.40343 (87120218)
220.0 |	29.16183 (87111306)	24.16016 (87120312)
230.0 |	32.97610 (87103024)	27.34261 (87103024)
240.0 |	32.87793 (87120618)	27.39106 (87120618)
250.0 |	32.93209 (87123021)	27.60599 (87123021)
260.0 |	28.25471 (87060624)	24.46109 (87060624)
270.0 |	27.99105 (87072221)	26.61932 (87072221)
280.0 |	30.46536 (87060818)	23.70208 (87060818)
290.0 |	29.98934 (87060921)	25.31413 (87060921)
300.0 |	30.22721 (87031621)	29.05348 (87061324)
310.0 |	36.15113 (87121415)	30.83748 (87061318)
320.0 |	31.93896 (87031803)	29.83084 (87111818)
330.0 |	33.27544 (87011806)	28.48673 (87080609)
340.0 |	34.88687 (87032724)	29.58487 (87012121)
350.0 |	26.62303 (87011612)	21.43315 (87030106)
360.0 |	34.42590 (87010409)	28.06913 (87010409)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	38.09922 (87032703)	26.48452 (87010409)	18.07010 (87061515)	25.64798 (87050812)	29.72380 (87011012)
20.0 |	32.11862 (87010412)	5.29551 (87010412)	13.95300 (87062612)	22.84759 (87062315)	24.51601 (87062315)
30.0 |	0.75857 (87043012)	3.19685 (87043012)	16.45523 (87040315)	26.42662 (87040315)	28.23080 (87011015)
40.0 |	50.46484 (87100106)	43.85096 (87110503)	25.35423 (87041515)	26.87662 (87021618)	33.18626 (87022212)
50.0 |	301.58133 (87030806)	146.77759 (87030806)	55.49327 (87030803)	40.61082 (87041815)	37.25051 (87062509)
60.0 |	244.91748 (87100103)	249.51674 (87010106)	110.99012 (87030721)	81.70683 (87030721)	70.34468 (87030721)
70.0 |	153.04079 (87041624)	103.75906 (87041703)	86.47355 (87041703)	63.70931 (87010106)	57.32224 (87100103)
80.0 |	43.43093 (87030706)	59.85817 (87041706)	32.77135 (87041624)	29.63114 (87010415)	33.33788 (87092318)
90.0 |	4.94139 (87010503)	7.85425 (87030706)	14.78919 (87030706)	18.93454 (87041818)	22.76132 (87041818)
100.0 |	19.26694 (87010512)	8.32007 (87010506)	10.82331 (87010506)	16.50642 (87010418)	21.39813 (87010418)
110.0 |	14.81103 (87012221)	15.44062 (87010512)	21.49170 (87041615)	20.42799 (87020903)	21.04122 (87010506)
120.0 |	16.65438 (87012221)	17.05789 (87012224)	28.23276 (87042512)	39.21837 (87010509)	31.62285 (87010509)
130.0 |	11.64452 (87012215)	18.62605 (87010515)	24.19450 (87033112)	29.14969 (87012221)	31.98176 (87012618)
140.0 |	19.93413 (87122915)	13.61941 (87012215)	29.14381 (87042415)	32.44982 (87042415)	29.58607 (87033109)
150.0 |	16.24384 (87122912)	23.91493 (87122915)	24.92941 (87042215)	30.12950 (87042412)	29.18753 (87042218)
160.0 |	19.84491 (87101218)	23.31329 (87112021)	27.75141 (87122912)	32.59551 (87102812)	37.45397 (87102812)
170.0 |	10.75870 (87101218)	23.01787 (87042115)	32.84839 (87050912)	33.65999 (87112103)	31.26979 (87112021)
180.0 |	12.61395 (87031115)	20.61353 (87042112)	31.80236 (87102015)	37.05857 (87102015)	34.36072 (87042112)
190.0 |	13.73426 (87053112)	21.19863 (87031115)	28.22346 (87102615)	33.79010 (87102615)	33.55783 (87102615)
200.0 |	13.62421 (87053112)	20.21965 (87053112)	25.20331 (87112124)	29.87963 (87112124)	28.12254 (87053109)
210.0 |	13.23334 (87091412)	18.86704 (87091412)	23.66822 (87103118)	31.33775 (87031406)	32.18479 (87031406)
220.0 |	11.87797 (87091512)	18.62040 (87100912)	24.86578 (87042712)	29.23277 (87110621)	31.65398 (87111306)
230.0 |	15.51397 (87100412)	24.00449 (87100412)	32.67028 (87100412)	32.66407 (87100906)	34.39854 (87100412)
240.0 |	12.45812 (87042012)	20.52489 (87040212)	28.37726 (87040212)	30.16423 (87040212)	34.02281 (87120618)
250.0 |	12.41652 (87040212)	19.65140 (87040212)	31.71427 (87110718)	32.31110 (87110718)	32.72267 (87123021)
260.0 |	7.05868 (87091512)	13.07233 (87030515)	26.41104 (87030518)	26.72703 (87091615)	28.01996 (87111518)
270.0 |	7.46277 (87070615)	14.56852 (87112715)	24.04473 (87112715)	25.78514 (87112715)	24.33222 (87091615)
280.0 |	7.69012 (87091615)	13.81356 (87072312)	19.85543 (87110303)	23.92296 (87072312)	24.96021 (87052415)
290.0 |	8.08711 (87082112)	15.70052 (87072312)	24.24350 (87051715)	32.19831 (87052318)	33.36694 (87060803)
300.0 |	8.10544 (87052215)	15.89900 (87082712)	30.85191 (87022015)	33.90888 (87022015)	31.19720 (87112615)
310.0 |	7.16956 (87051715)	15.73506 (87082615)	33.11191 (87092815)	36.05622 (87070812)	38.76264 (87022609)
320.0 |	7.40074 (87030621)	19.82393 (87060715)	31.56387 (87080612)	32.75380 (87061315)	36.05729 (87121424)
330.0 |	24.96324 (87111624)	23.12661 (87110306)	28.33576 (87061715)	33.20206 (87051812)	34.75407 (87051812)
340.0 |	17.44740 (87110306)	17.89281 (87101206)	28.83296 (87090112)	34.20736 (87022815)	37.00235 (87061615)
350.0 |	19.86567 (87101206)	31.45506 (87030624)	25.18143 (87080515)	34.35595 (87091312)	30.01221 (87101209)
360.0 |	34.33292 (87101209)	30.68225 (87032703)	23.57368 (87091312)	28.33058 (87011815)	31.88140 (87061515)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 (DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	24.80447 (87011012)	20.83208 (87090503)
20.0	20.04360 (87011015)	15.60098 (87011015)
30.0	23.34720 (87092315)	19.66559 (87110509)
40.0	29.61188 (87110503)	26.93924 (87110503)
50.0	28.59447 (87071515)	19.75428 (87092409)
60.0	49.63371 (87030806)	35.14215 (87030806)
70.0	36.96767 (87030818)	27.48952 (87030818)
80.0	29.60862 (87031918)	28.62178 (87031918)
90.0	18.58771 (87030912)	14.28611 (87031921)
100.0	14.45331 (87010418)	10.97859 (87010424)
110.0	19.97788 (87010506)	16.22540 (87010506)
120.0	25.36459 (87031003)	16.47907 (87010503)
130.0	25.39372 (87020824)	20.36750 (87081118)
140.0	28.28937 (87012615)	21.35070 (87010115)
150.0	34.12749 (87042621)	24.83227 (87042621)
160.0	29.12854 (87102812)	23.45327 (87040521)
170.0	30.83716 (87112012)	25.80890 (87022315)
180.0	29.96076 (87011109)	28.13594 (87120121)
190.0	28.51892 (87121715)	24.56154 (87121715)
200.0	24.55435 (87101524)	21.45371 (87101524)
210.0	30.61293 (87050509)	26.30038 (87103118)
220.0	28.84884 (87101021)	23.92641 (87101021)
230.0	31.41905 (87112406)	26.44254 (87021206)
240.0	30.97356 (87110715)	24.72988 (87112512)
250.0	27.46177 (87110815)	22.98813 (87060421)
260.0	25.24115 (87111512)	21.22225 (87111512)
270.0	26.20132 (87052121)	24.92407 (87052121)
280.0	23.80722 (87072118)	22.62770 (87072103)
290.0	28.78148 (87060803)	21.03371 (87051818)
300.0	29.16825 (87061106)	28.93494 (87031621)
310.0	35.81484 (87061318)	29.80482 (87121415)
320.0	30.62279 (87111818)	29.31796 (87010403)
330.0	33.18937 (87022709)	27.70770 (87022709)
340.0	27.81196 (87061509)	29.01321 (87032724)
350.0	23.74822 (87032412)	21.11519 (87011612)
360.0	27.03148 (87011815)	20.07696 (87091209)

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,CT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION-| (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	9.46747 (87101224)	5.31983 (87101224)	6.34955 (87010424)	6.82839 (87032824)	8.58361 (87062624)
20.0 |	11.56972 (87010424)	1.97242 (87010424)	3.22581 (87062324)	6.13139 (87062624)	7.15815 (87062624)
30.0 |	0.16406d(87062424)	0.76769d(87062424)	5.36385 (87062524)	9.80354 (87062524)	10.89322 (87062524)
40.0 |	12.32410 (87062524)	9.40964 (87110524)	8.77776 (87062524)	10.58993 (87062524)	10.95999 (87062524)
50.0 |	173.46545 (87030824)	82.70789 (87030824)	25.17694 (87030824)	15.01167d(87093024)	15.52230d(87093024)
60.0 |	69.25149 (87030824)	90.16575 (87030824)	58.38906 (87030824)	46.76287 (87030824)	42.85529 (87030824)
70.0 |	46.00502 (87041824)	25.99048 (87041824)	15.61842 (87010124)	13.70147 (87010124)	12.62966 (87030824)
80.0 |	9.89859 (87041724)	12.45403 (87041824)	12.14737 (87041824)	9.04651 (87041824)	7.94932 (87041824)
90.0 |	2.16177 (87010524)	1.47871 (87011124)	5.01263 (87041724)	6.33280 (87041724)	6.24755 (87041724)
100.0 |	10.21784 (87010524)	3.75245 (87010524)	2.33045 (87081124)	6.58826 (87010424)	8.44983 (87010424)
110.0 |	4.66625 (87033124)	8.22066 (87010524)	6.84350 (87010524)	5.67417 (87041624)	4.87637 (87041624)
120.0 |	8.50831 (87033124)	6.10022 (87012224)	8.60775 (87042924)	10.49972 (87042924)	9.81993 (87041624)
130.0 |	5.74096 (87033124)	9.48424 (87033124)	10.98809 (87033124)	13.53030 (87020824)	14.67204 (87020824)
140.0 |	6.27009 (87010524)	5.21629 (87033124)	13.43306 (87033124)	17.45023 (87033124)	16.27012 (87033124)
150.0 |	4.61974 (87122924)	7.49599 (87010524)	10.26721 (87042224)	14.84583 (87042224)	15.49892 (87042224)
160.0 |	4.94224 (87112024)	8.17735 (87112024)	13.12668 (87112024)	14.65733 (87040424)	15.68760 (87040424)
170.0 |	3.63450 (87040124)	6.86633 (87040124)	11.88085 (87112024)	16.75673 (87112024)	18.51460 (87112024)
180.0 |	2.68786 (87031124)	5.37301 (87102624)	9.87234 (87121724)	12.09787 (87101424)	13.56284 (87101424)
190.0 |	3.65781 (87042724)	6.18186 (87031124)	9.42740 (87031124)	10.33188 (87031124)	10.84284 (87100824)
200.0 |	4.37210 (87042724)	6.33292 (87042724)	8.82952 (87112124)	11.36250 (87101524)	12.62538 (87101524)
210.0 |	4.31504 (87042724)	7.22350 (87042724)	9.86757 (87103124)	12.54759 (87021024)	13.48095 (87021024)
220.0 |	3.28690 (87042724)	5.79459 (87042724)	9.60618 (87100424)	11.78146 (87100424)	12.49389 (87100424)
230.0 |	4.29998 (87100924)	9.06680 (87100924)	15.07031 (87100924)	17.49682 (87100924)	17.64427 (87100924)
240.0 |	3.34398d(87040224)	6.52994 (87110724)	11.89291 (87110724)	14.28773 (87110724)	14.61338 (87110724)
250.0 |	3.48183 (87110724)	6.66680 (87110724)	12.23981 (87110824)	15.98179 (87110824)	17.24727 (87110824)
260.0 |	2.08105 (87110824)	5.12474 (87110824)	8.71717 (87030524)	9.73494 (87111524)	10.23691 (87111524)
270.0 |	1.33103 (87030524)	3.33866 (87111524)	5.68148 (87111524)	7.62275 (87052224)	8.99344 (87052424)
280.0 |	1.54640 (87052224)	4.16642 (87052224)	7.93390 (87052224)	10.68820 (87052424)	11.12421 (87052424)
290.0 |	1.99556 (87052224)	3.90916 (87052224)	11.14767 (87060824)	14.49921 (87060824)	14.88168 (87060824)
300.0 |	1.84697 (87060824)	5.34294 (87060824)	9.35871 (87060824)	11.93235 (87060924)	14.29002 (87061124)
310.0 |	1.79662 (87060824)	4.30759 (87052524)	12.85379 (87061124)	19.74790 (87031724)	21.99104 (87031724)
320.0 |	2.54141 (87111624)	6.74786 (87111624)	12.03624 (87111724)	16.13196 (87121424)	19.30399 (87031824)
330.0 |	6.51992 (87111624)	5.79886 (87111724)	10.02135 (87031824)	12.62779 (87032624)	15.42245 (87032624)
340.0 |	5.58203 (87111724)	3.35613 (87030624)	9.27071 (87022824)	13.68347 (87022824)	14.75559 (87022824)
350.0 |	5.41600 (87030624)	7.13766 (87030624)	7.60759 (87022824)	9.00903 (87062224)	10.17668 (87033024)
360.0 |	9.79118 (87101224)	7.27930 (87101224)	4.50634 (87101224)	6.24407 (87011524)	8.06189 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,CT ,SS1CT ,SS2CT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)	
	750.00	1000.00
10.0 |	9.98551 (87062624)	8.81878 (87090524)
20.0 |	6.78106 (87062624)	5.43896 (87062624)
30.0 |	8.97336 (87062524)	6.79734 (87062524)
40.0 |	9.89479 (87110524)	8.62901 (87110524)
50.0 |	12.02773(87093024)	8.77626(87093024)
60.0 |	29.29289 (87030824)	20.74908 (87030824)
70.0 |	10.20649 (87030824)	7.67562 (87030824)
80.0 |	5.92964 (87041824)	4.48206 (87041824)
90.0 |	4.57358 (87041824)	4.08442 (87041824)
100.0 |	6.09728 (87010424)	3.61090 (87010424)
110.0 |	4.23944 (87010424)	4.24898 (87010424)
120.0 |	7.54469 (87041624)	5.65696 (87041624)
130.0 |	10.37317 (87012624)	8.29533 (87120424)
140.0 |	13.23874 (87012624)	11.34890 (87012624)
150.0 |	11.56662 (87042624)	8.87442 (87042624)
160.0 |	13.20514 (87102824)	10.33058 (87102824)
170.0 |	16.00980 (87112024)	12.14893 (87112024)
180.0 |	12.88799 (87101424)	10.54904 (87101424)
190.0 |	11.21895 (87101424)	9.66036 (87101424)
200.0 |	11.89454 (87101524)	9.73880 (87101524)
210.0 |	12.31930 (87021024)	10.20097 (87021024)
220.0 |	11.26472 (87100424)	9.13256 (87100424)
230.0 |	14.99837 (87112324)	12.05724 (87112324)
240.0 |	12.27300 (87110724)	9.63308 (87110724)
250.0 |	15.43407 (87110824)	12.30333 (87110824)
260.0 |	8.96083 (87111524)	7.12041 (87111524)
270.0 |	9.62753 (87052424)	8.49587 (87052424)
280.0 |	10.68420 (87060824)	9.18823 (87060824)
290.0 |	11.68202 (87060824)	10.20385 (87060924)
300.0 |	15.17886 (87061124)	13.13591 (87061124)
310.0 |	20.19190 (87060224)	14.94334 (87060224)
320.0 |	20.41950 (87031824)	15.98073 (87031824)
330.0 |	14.25952 (87032424)	11.39610 (87032424)
340.0 |	11.99414 (87022824)	8.85828 (87022824)
350.0 |	9.75147 (87033024)	8.12878 (87033024)
360.0 |	8.46275 (87032824)	6.63730 (87032824)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	4.83788 (87032724)	4.98747 (87010424)	3.84086 (87050824)	6.38216 (87091924)	8.39842 (87090524)
20.0 |	3.77255 (87101224)	0.26318 (87030124)	3.10930 (87062624)	5.14961 (87031924)	5.88123 (87011924)
30.0 |	0.12268(87043024)	0.57511(87043024)	3.42578(87040324)	6.16143 (87062624)	7.36524 (87062624)
40.0 |	11.13981(87100124)	9.34156 (87062524)	6.76449 (87062724)	8.79953(87043024)	9.53847(87043024)
50.0 |	90.74528 (87030724)	41.54215 (87030724)	18.00003(87093024)	14.62564 (87030824)	11.83009 (87030824)
60.0 |	66.16900 (87041724)	56.92233 (87041724)	31.53838 (87030724)	23.96422 (87030724)	21.24107 (87030724)
70.0 |	19.13010 (87041624)	22.67900 (87010424)	14.49519 (87041824)	11.68363 (87030824)	11.58868 (87010124)
80.0 |	5.43041 (87030724)	12.18250 (87041724)	6.10690 (87010124)	4.98873 (87010124)	4.91982 (87010424)
90.0 |	0.13079 (87092524)	1.05311 (87041724)	2.53525 (87010424)	3.24189 (87041824)	4.31369 (87041824)
100.0 |	0.54788 (87033124)	1.19046 (87041624)	2.14580 (87010424)	3.04966 (87092524)	3.27182 (87092524)
110.0 |	4.31122 (87012224)	2.73034 (87041624)	6.40675 (87041624)	5.26648 (87010524)	4.57181 (87010524)
120.0 |	5.48383 (87012224)	5.96409 (87033124)	7.50070 (87042524)	9.91854 (87041624)	9.69274 (87042924)
130.0 |	3.06321 (87101224)	4.24248 (87012224)	10.30161 (87012224)	12.22928 (87012624)	13.30622 (87012624)
140.0 |	4.66397 (87122924)	4.74371 (87042224)	9.05725 (87042224)	9.69786 (87012724)	11.62250 (87012724)
150.0 |	4.26730 (87010524)	6.65966 (87122924)	7.81690 (87040424)	10.19703 (87042624)	12.15298 (87042624)
160.0 |	4.17119 (87040124)	7.10156 (87040424)	11.63909 (87040424)	13.26837 (87111124)	14.53782 (87102824)
170.0 |	3.16035 (87042124)	6.73093 (87042124)	10.35340 (87121624)	12.79473 (87011124)	13.09961 (87011124)
180.0 |	2.52202 (87102624)	4.58032 (87031124)	8.77808 (87101424)	12.03817 (87121724)	12.14426 (87010624)
190.0 |	3.08506 (87031124)	4.66510 (87042724)	8.32744 (87102624)	10.27901 (87102624)	10.66831 (87102924)
200.0 |	3.60476 (87053124)	5.98129 (87053124)	8.64343 (87053124)	10.25514 (87031124)	10.94727 (87031124)
210.0 |	2.51395 (87053124)	5.31404 (87103124)	9.80259 (87021024)	12.38558 (87103124)	13.22103 (87103124)
220.0 |	2.86426 (87100424)	5.71026 (87100424)	9.00571 (87042724)	11.08320 (87103124)	11.74344 (87103124)
230.0 |	3.07487 (87100424)	6.90006 (87112324)	12.89562 (87112324)	16.07187 (87112324)	16.96580 (87112324)
240.0 |	3.01142 (87100924)	6.20589 (87112324)	10.50580 (87112324)	12.51506 (87120624)	13.24662 (87120624)
250.0 |	2.95158(87040224)	5.87732 (87110824)	8.86140 (87110724)	10.74619 (87112524)	11.48876 (87112524)
260.0 |	1.84386(87040224)	4.73124 (87030524)	7.84629 (87111524)	9.21099 (87030524)	8.14998 (87030524)
270.0 |	1.32506 (87091624)	3.17985 (87091624)	5.35278 (87112724)	7.54896 (87052424)	8.97879 (87052224)
280.0 |	1.51332 (87082124)	3.05938 (87082124)	7.84726 (87052424)	8.97399 (87052224)	9.75879 (87060824)
290.0 |	1.72366 (87082124)	3.84390 (87052424)	6.76035 (87052424)	9.15667 (87111624)	10.50825 (87111624)
300.0 |	1.61807 (87052224)	3.54295 (87052424)	8.94074 (87060924)	11.45029 (87061124)	11.91605 (87060924)
310.0 |	1.44598 (87052424)	3.68226 (87071024)	11.14419 (87022624)	18.20247 (87061124)	20.56518 (87060224)
320.0 |	1.58323 (87111724)	5.43955 (87061124)	10.93294 (87060224)	15.93563 (87111724)	17.65002 (87121424)
330.0 |	3.17420 (87110324)	3.21952 (87061124)	8.81672 (87051924)	12.52647 (87031824)	14.05331 (87022824)
340.0 |	2.90804 (87101224)	3.01303 (87022824)	8.57678 (87061624)	10.30687 (87061624)	10.18604 (87073024)
350.0 |	4.29511 (87022824)	6.91929 (87101224)	7.57994 (87062224)	8.76119 (87033024)	8.13278 (87062224)
360.0 |	7.64008 (87030624)	4.30635 (87032724)	4.40086 (87091324)	5.87059 (87061524)	6.50442 (87012024)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	9.98235 (87090524)	8.15903 (87062624)
20.0	5.69617 (87012224)	5.22405 (87012224)
30.0	7.22139 (87012224)	5.87528 (87110424)
40.0	8.81918 (87062524)	6.98243 (87021624)
50.0	9.52259 (87110424)	7.18488 (87043024)
60.0	14.98055 (87093024)	11.33845 (87093024)
70.0	7.22463 (87030924)	6.03814 (87030924)
80.0	4.58133 (87010424)	3.60624 (87031924)
90.0	4.10336 (87041724)	2.50773 (87041724)
100.0	3.11464 (87041624)	2.48375 (87041624)
110.0	4.06074 (87010524)	3.29420 (87010524)
120.0	6.59502 (87010524)	5.12541 (87020724)
130.0	10.35947 (87020824)	7.16993 (87042524)
140.0	10.84515 (87042324)	9.43018 (87042324)
150.0	11.43936 (87042224)	8.74568 (87033124)
160.0	13.06755 (87040424)	9.85508 (87040424)
170.0	13.40725 (87111124)	11.77135 (87111124)
180.0	12.13453 (87011324)	10.45272 (87031224)
190.0	9.89629 (87121724)	8.34364 (87121724)
200.0	10.27193 (87031124)	9.23382 (87102924)
210.0	11.95729 (87103124)	9.70554 (87103124)
220.0	10.43219 (87103124)	8.92326 (87101124)
230.0	14.68467 (87100924)	11.61485 (87111324)
240.0	11.81567 (87120624)	9.47347 (87120624)
250.0	10.64448 (87111524)	8.93395 (87111524)
260.0	6.41456 (87031524)	5.43055 (87031524)
270.0	8.91134 (87052224)	7.40176 (87052224)
280.0	8.71651 (87052324)	7.44191 (87052324)
290.0	11.66658 (87060924)	8.39340 (87060824)
300.0	12.80398 (87051624)	12.94064 (87051624)
310.0	17.57806 (87061924)	14.25197 (87061924)
320.0	13.66525 (87121424)	11.94043 (87032524)
330.0	13.89238 (87032624)	10.56176 (87032624)
340.0	9.72155 (87032724)	8.72426 (87012124)
350.0	7.89474 (87030124)	6.97981 (87011524)
360.0	7.05645 (87012524)	6.01327 (87012524)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	NETWORK	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
----------	--------------	---------	---------------------------------	---------	---------

ALL	1ST HIGHEST VALUE IS	3.12642 AT (	-383.02,	321.39,	0.00,	0.00)	GP	POL
	2ND HIGHEST VALUE IS	2.78072 AT (	-306.42,	257.11,	0.00,	0.00)	GP	POL
	3RD HIGHEST VALUE IS	2.75952 AT (	-574.53,	482.09,	0.00,	0.00)	GP	POL
	4TH HIGHEST VALUE IS	2.37434 AT (	114.91,	96.42,	0.00,	0.00)	GP	POL
	5TH HIGHEST VALUE IS	2.36066 AT (	-257.12,	306.42,	0.00,	0.00)	GP	POL
	6TH HIGHEST VALUE IS	2.35546 AT (	-321.39,	383.02,	0.00,	0.00)	GP	POL

*** RECEPTOR TYPES: GC = GRIDCART

- GP = GRIDPOLR
- DC = DISCCART
- DP = DISCPOLR
- BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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ALL	HIGH 1ST HIGH VALUE IS 384.06906 ON 87030803: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 301.58133 ON 87030806: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
----------	---------------------------------	--	---------	---------

ALL	HIGH 1ST HIGH VALUE IS 173.46545 ON 87030824: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 90.74528 ON 87030724: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	

*** RECEPTOR TYPES: GC = GRIDCART

GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 123 Informational Message(s)

A Total of 123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****

*** NONE ***

***** WARNING MESSAGES *****

*** NONE ***

*** ISCST3 Finishes Successfully ***

SO STARTING
 CO TITLEONE 1987 STOCK ISLAND-NO BOUNDARY-HSD STACKS RAISED(7.32M)(12.2M TOTAL)-11/06/97
 CO TITLETWO ANN 24&3-HR-ALL-SS UNITS-NOX-40F & 100%-CTS IN NEW LOCATION(NXCT732B.IN)
 CO MODELOPT DFAULT CONC RURAL
 CO AVERTIME 3 24 PERIOD
 CO POLLUTID OTHER
 CO DCAYCOEF .000000
 CO RUNORNOT RUN
 SO FINISHED

SO STARTING
 SO LOCATION HSD1 POINT 56.6 63.2 0.0
 SO LOCATION HSD2 POINT 55.6 55.6 0.0
 SO LOCATION HSD3 POINT 54.7 48.4 0.0
 SO LOCATION MSD POINT -7.2 35.88 0.0
 SO LOCATION GT POINT 26.2 -56.8 0.0
 SO LOCATION SS1GT POINT 38.9 -58.4 0.0
 SO LOCATION SS2GT POINT 53.1 -60.1 0.0

** POINT: SRCID QS HS TS VS DS
 SO SRCPARAM HSD1 8.98 12.20 660.8 20.38 0.76
 SO SRCPARAM HSD2 8.98 12.20 660.8 20.38 0.76
 SO SRCPARAM HSD3 8.98 12.20 660.8 20.38 0.76
 SO SRCPARAM MSD 20.27 30.49 588.6 30.5 1.74
 SO SRCPARAM GT 10.94 11.77 766 24.0 3.93
 SO SRCPARAM SS1GT 11.82 13.08 801.0 24.65 3.85
 SO SRCPARAM SS2GT 11.82 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14
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 SO BUILDHGT HSD1 3.14 3.14 3.14 3.14 3.14 3.14
 SO BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79
 SO BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
 SO BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
 SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
 SO BUILDHGT HSD2 5.79 3.14 3.14 3.14 3.14 3.14
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 SO BUILDHGT HSD2 5.79 5.79 5.79 5.79 5.79 5.79
 SO BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
 SO BUILDHGT HSD3 10.97 10.97 10.97 10.97 5.79 5.79
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 SO BUILDWID HSD3 12.30 12.53 12.37 11.80 35.76 29.40
 SO BUILDWID HSD3 27.09 23.96 25.29 28.10 32.60 32.48
 SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69
 SO BUILDWID HSD3 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD3 8.07 6.28 4.30 3.73 32.60 32.48
 SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97
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SO BUILDWID MSD 12.11 30.35 18.94 18.93 18.34 30.59
SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 30.06 31.10
SO BUILDWID MSD 31.20 30.35 28.58 32.08 30.84 30.59

SO BUILDHGT GT 12.19 12.19 12.19 4.88 4.88 4.88
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SO BUILDWID GT 27.65 28.61 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID GT 6.97 11.73 16.13 19.98 23.27 25.85
SO BUILDWID GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90

SO BUILDHGT SS1GT 4.88 12.19 12.19 12.19 4.88 4.88
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SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID SS1GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90

SO BUILDHGT SS2GT 4.88 4.88 4.88 4.88 4.88 4.88
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SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00
SO BUILDWID SS2GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS2GT 27.64 28.60 28.69 28.54 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00

SO EMISUNIT .10000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
*GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)
RE GRIDPOLR POL ORIG 0.0 0.0
RE GRIDPOLR POL DIST 150. 200. 300. 400. 500. 750. 1000.
RE GRIDPOLR POL GDIR 36 10.0 10.0
RE GRIDPOLR POL END
RE FINISHED

ME STARTING
ME INPUTFIL KYWPRE87.LST
ME ANEMHIGHT 6.700 METERS
ME SURFDATA 12836 1987 KEY WEST
ME UAIRDATA 12844 1987 MIAMI
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

*** SETUP Finishes Successfully ***

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

*Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --

*Model Uses NO DRY DEPLETION. DDPLETE = F

*Model Uses NO WET DEPLETION. WDPLETE = F

*NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

*Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

*Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

*Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR and Calculates PERIOD Averages

*This Run Includes: 7 Source(s); 1 Source Group(s); and 252 Receptor(s)

*The Model Assumes A Pollutant Type of: OTHER

*Model Set To Continue RUNning After the Setup Testing.

*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

*Misc. Inputs: Anem. Hgt. (m) = 6.70; Decay Coef. = 0.0000 ; Rot. Angle = 0.0

Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07

Output Units = (MICROGRAMS/CUBIC-METER)

*Input Runstream File: NXCT732B.IN ; **Output Print File: NXCT732B.OUT

MODELOPTs: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	PART. CATS.	NUMBER EMISSION RATE (METERS)	BASE (METERS)	STACK X (METERS)	STACK Y (METERS)	STACK ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR	VARY BY
HSD1	0	0.89800E+01	56.6	63.2	0.0	12.20	660.80	20.38	0.76	YES			
HSD2	0	0.89800E+01	55.6	55.6	0.0	12.20	660.80	20.38	0.76	YES			
HSD3	0	0.89800E+01	54.7	48.4	0.0	12.20	660.80	20.38	0.76	YES			
MSD	0	0.20270E+02	-7.2	35.9	0.0	30.49	588.60	30.50	1.74	YES			
GT	0	0.10940E+02	26.2	-56.8	0.0	11.77	766.00	24.00	3.93	YES			
SS1GT	0	0.11820E+02	38.9	-58.4	0.0	13.08	801.00	24.65	3.85	YES			
SS2GT	0	0.11820E+02	53.1	-60.1	0.0	13.08	801.00	24.65	3.85	YES			

*MODELOPTs: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: HSD1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	3.1	4.4	0	10	3.1	3.6	0	11	3.1	5.7	0	12	3.1	7.5	0
13	3.1	9.1	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.9	0	23	3.1	10.9	0	24	3.1	9.7	0
25	3.1	8.2	0	26	3.1	6.4	0	27	3.1	4.4	0	28	3.1	3.6	0	29	3.1	5.7	0	30	3.1	7.5	0
31	3.1	9.1	0	32	3.1	10.4	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	3.1	3.5	0	11	3.1	5.5	0	12	3.1	7.4	0
13	5.8	31.4	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.2	0	26	3.1	6.5	0	27	3.1	4.5	0	28	3.1	3.5	0	29	3.1	5.5	0	30	3.1	7.4	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	3.1	11.8	0	5	7.6	35.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	5.8	32.6	0	12	5.8	32.5	0
13	5.8	31.4	0	14	5.8	29.3	0	15	5.8	26.4	0	16	5.8	22.6	0	17	5.8	18.2	0	18	5.8	15.7	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.1	0	26	3.1	6.3	0	27	3.1	4.3	0	28	3.1	3.7	0	29	5.8	32.6	0	30	5.8	32.5	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: MSD

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	11.0	27.1	0	2	11.0	29.4	0	3	11.0	30.8	0	4	11.0	31.3	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	15.3	11.5	0	12	15.3	11.8	0
13	15.3	12.1	0	14	11.0	30.3	0	15	16.1	18.9	0	16	16.1	18.9	0	17	16.1	18.3	0	18	11.0	30.6	0
19	11.0	27.1	0	20	11.0	29.4	0	21	11.0	30.8	0	22	11.0	31.3	0	23	11.0	30.8	0	24	11.0	29.4	0
25	11.0	27.1	0	26	11.0	24.0	0	27	11.0	25.3	0	28	11.0	28.1	0	29	11.0	30.1	0	30	11.0	31.1	0
31	11.0	31.2	0	32	11.0	30.3	0	33	11.0	28.6	0	34	11.0	32.1	0	35	11.0	30.8	0	36	11.0	30.6	0

*MODELOPTS: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	12.2	27.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS1GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	12.2	27.3	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS2GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	4.9	11.7	0	3	4.9	16.1	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.8	0	17	4.9	13.6	0	18	4.9	9.0	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.8	0	35	4.9	13.6	0	36	4.9	9.0	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

150.0, 200.0, 300.0, 400.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(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,

MODELOPTS: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: KYWPRE87.LST FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,F9.4,F10.1,F8.4,I4,F7.2)
 SURFACE STATION NO.: 12836 UPPER AIR STATION NO.: 12844
 NAME: KEY NAME: MIAMI
 YEAR: 1987 YEAR: 1987

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	TEMP	STAB	MIXING HEIGHT (M)	USTAR	M-O LENGTH	Z-0	IPCODE	PRATE		
						(M/S)	(K)	CLASS	RURAL	URBAN	(M/S)	(M)	(M)	(mm/HR)
87	1	1	1	51.0	7.20	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	2	38.0	8.75	294.3	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	3	84.0	6.69	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	4	73.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	5	63.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	6	72.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	7	75.0	10.29	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	8	93.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	9	117.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	10	131.0	6.17	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	11	144.0	8.75	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	12	136.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	13	143.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	14	149.0	9.26	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	15	142.0	9.77	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	16	144.0	8.75	295.4	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	17	161.0	9.26	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	18	157.0	8.75	293.7	4	423.3	423.3	0.0000	0.0	0.0000	0	0.00
87	1	1	19	184.0	8.23	293.7	4	436.9	436.9	0.0000	0.0	0.0000	0	0.00
87	1	1	20	187.0	7.72	293.7	4	450.6	450.6	0.0000	0.0	0.0000	0	0.00
87	1	1	21	170.0	5.66	293.7	4	464.2	464.2	0.0000	0.0	0.0000	0	0.00
87	1	1	22	152.0	6.17	293.7	4	477.8	477.8	0.0000	0.0	0.0000	0	0.00
87	1	1	23	170.0	5.66	293.2	4	491.5	491.5	0.0000	0.0	0.0000	0	0.00
87	1	1	24	160.0	4.12	293.2	5	505.1	681.0	0.0000	0.0	0.0000	0	0.00

** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
 FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*MODELOPTS: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)						
	150.00	200.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	0.54267	0.59093	2.56463	4.45133	5.12201	4.66529	3.70583
20.00 |	0.50439	0.14000	1.60782	3.05362	3.44977	3.06715	2.44777
30.00 |	0.01562	0.10540	1.34052	2.85363	3.45248	3.34208	2.79188
40.00 |	3.36892	3.15073	2.90059	3.67704	4.09341	3.63825	2.88621
50.00 |	21.97814	13.18943	6.04747	4.97062	4.89197	3.79697	2.85580
60.00 |	15.67184	13.66459	7.50407	6.04717	5.81400	4.47339	3.41045
70.00 |	4.59809	4.64579	3.62709	3.12866	3.04842	2.48330	1.98296
80.00 |	1.11105	1.83207	1.20826	1.18910	1.33263	1.33330	1.16974
90.00 |	0.06646	0.18364	0.54641	0.76249	0.88242	0.89072	0.79534
100.00 |	0.30967	0.25923	0.55963	0.80064	0.90070	0.82987	0.69966
110.00 |	0.49213	0.66335	1.54100	1.64070	1.57324	1.35431	1.18085
120.00 |	0.86692	1.14294	2.65202	3.19118	3.19166	2.53301	1.95318
130.00 |	0.84886	1.78444	3.85729	4.73310	4.91282	4.16137	3.28208
140.00 |	1.50908	2.27331	4.77364	5.97542	6.25841	5.46877	4.40117
150.00 |	2.16458	3.55434	5.96884	6.75502	6.94535	6.27143	5.30974
160.00 |	2.56503	4.61302	7.79318	9.05757	9.28703	7.94019	6.40034
170.00 |	2.42042	4.99055	9.45959	11.52733	11.98753	10.45333	8.52149
180.00 |	1.89915	4.08204	7.83939	10.16356	11.24556	11.12897	9.76948
190.00 |	1.78777	3.82338	6.84117	8.55521	9.23594	8.85757	7.67078
200.00 |	2.04986	4.19190	6.92536	8.36461	8.88312	8.42661	7.30532
210.00 |	2.30336	4.76120	7.99026	9.74321	10.37033	9.79489	8.47864
220.00 |	2.42007	4.97342	8.30494	10.13867	10.81664	10.24253	8.82755
230.00 |	2.59576	5.45939	9.32385	11.53594	12.39724	11.82648	10.23646
240.00 |	2.42008	5.13055	8.67890	10.66101	11.40807	10.87924	9.49562
250.00 |	1.89854	4.00498	6.60456	7.96076	8.42155	7.97998	7.02690
260.00 |	1.34239	2.89736	4.95902	6.10737	6.57319	6.37385	5.63910
270.00 |	0.98699	2.27841	4.28791	5.59426	6.32315	6.69102	6.23822
280.00 |	0.83585	2.26629	5.29836	7.36279	8.39001	8.48521	7.52925
290.00 |	0.90071	2.78757	7.03621	9.78991	11.19826	11.46697	10.22916
300.00 |	1.03706	3.54832	10.18993	15.07369	18.14541	20.21907	18.82424
310.00 |	1.20295	4.73736	17.02973	25.72909	28.95176	25.77049	20.32384
320.00 |	1.43058	6.29604	18.66504	21.84038	21.81179	18.60178	15.30446
330.00 |	1.55151	5.10574	14.20623	18.59168	19.83657	17.07311	13.44028
340.00 |	1.01281	3.28885	12.00109	14.62697	14.08163	10.40396	7.73508
350.00 |	0.71828	2.53515	6.87577	8.07823	7.92224	6.43972	5.16108
360.00 |	1.09580	1.06302	3.64722	5.39748	5.96976	5.47025	4.54834

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,CT ,SS1CT ,SS2CT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	549.15381 (87101209)	277.51730 (87101212)	311.35379 (87010409)	244.56288 (87012012)	279.34625 (87062706)
20.0 |	559.52917 (87010409)	97.05645 (87010409)	144.09076 (87062512)	229.56187 (87062512)	234.77925 (87062512)
30.0 |	9.01587 (87062412)	39.51867 (87062412)	194.67967 (87062512)	270.44812 (87062512)	274.28137 (87110424)
40.0 |	509.35654 (87110503)	407.17215 (87071415)	257.21786 (87071415)	269.09280 (87022212)	310.79816 (87021618)
50.0 |	3555.60815 (87030803)	1831.49524 (87030803)	520.79840 (87041815)	414.36331 (87071515)	399.87976 (87071515)
60.0 |	2451.97388 (87010106)	2857.51489 (87041709)	1448.12158 (87041709)	767.89032 (87041709)	657.84418 (87030806)
70.0 |	1806.84900 (87041821)	1678.68811 (87010415)	815.09204 (87010415)	601.72058 (87100103)	554.81848 (87010106)
80.0 |	589.21368 (87041706)	588.12091 (87041818)	476.07385 (87041821)	298.01785 (87041821)	360.20999 (87010415)
90.0 |	52.23509 (87010506)	109.51620 (87011106)	286.57837 (87041706)	326.42722 (87041706)	298.18451 (87041706)
100.0 |	409.17508 (87010509)	80.34160 (87010503)	107.22501 (87081112)	256.32278 (87010424)	308.36581 (87010424)
110.0 |	152.50182 (87020818)	376.39163 (87010509)	212.45313 (87041612)	201.50078 (87081115)	247.97243 (87020903)
120.0 |	182.92854 (87010515)	185.88525 (87012221)	286.96048 (87010509)	366.72769 (87042512)	333.57971 (87042512)
130.0 |	144.51746 (87033118)	192.42836 (87033118)	286.28165 (87012221)	314.79730 (87020818)	339.61493 (87020818)
140.0 |	226.04443 (87010518)	137.39815 (87012215)	290.15793 (87033118)	308.75272 (87033109)	289.37521 (87012615)
150.0 |	200.56389 (87101215)	272.09332 (87010518)	264.59360 (87042412)	289.65369 (87042215)	302.21783 (87042621)
160.0 |	191.27905 (87101218)	220.78197 (87040415)	278.38437 (87040415)	377.78427 (87010518)	378.19662 (87010518)
170.0 |	127.97977 (87042112)	232.33894 (87042112)	325.01242 (87042115)	330.41110 (87112021)	310.47458 (87022315)
180.0 |	119.92768 (87051215)	211.08391 (87102615)	335.96759 (87042112)	354.53479 (87042112)	327.36765 (87102015)
190.0 |	191.64662 (87042715)	242.37750 (87042715)	264.46191 (87110615)	331.50900 (87110615)	327.39505 (87110615)
200.0 |	203.49873 (87042715)	289.38870 (87042715)	325.44052 (87042715)	291.53336 (87042715)	274.95639 (87112124)
210.0 |	124.17307 (87042715)	181.22711 (87042715)	238.19727 (87031406)	294.00330 (87103118)	323.16660 (87103118)
220.0 |	129.93303 (87042712)	185.20399 (87042712)	283.52567 (87100912)	323.86163 (87100912)	321.76248 (87100912)
230.0 |	192.38277 (87091512)	269.99289 (87091512)	309.81082 (87091512)	326.29953 (87100412)	321.87299 (87103024)
240.0 |	197.37517 (87091512)	257.13632 (87091512)	277.19302 (87110715)	334.40329 (87110715)	341.86243 (87110715)
250.0 |	136.55164 (87091512)	187.22894 (87110718)	303.76999 (87102324)	342.98535 (87102324)	325.53458 (87102324)
260.0 |	68.85226 (87122312)	137.22931 (87030518)	264.40582 (87030515)	308.60617 (87030515)	292.72974 (87030515)
270.0 |	70.92918 (87091615)	163.56963 (87091615)	257.20776 (87091615)	259.63626 (87091615)	229.81862 (87112715)
280.0 |	76.35148 (87070615)	128.08339 (87091615)	223.17891 (87072312)	230.76311 (87052403)	285.75052 (87060818)
290.0 |	88.57458 (87052215)	154.21855 (87052415)	229.82396 (87122412)	312.35443 (87122412)	316.80911 (87122412)
300.0 |	81.46365 (87052415)	174.03918 (87051715)	286.95999 (87112615)	331.47787 (87112615)	314.55591 (87080615)
310.0 |	74.42627 (87111621)	160.87721 (87052512)	319.98654 (87080615)	337.00745 (87111624)	390.70505 (87111624)
320.0 |	73.75666 (87022606)	200.48596 (87111624)	327.55414 (87110306)	317.85800 (87051915)	358.96301 (87121924)
330.0 |	235.00427 (87110306)	228.04176 (87111703)	268.76016 (87082415)	318.21939 (87082415)	324.79874 (87122003)
340.0 |	301.36749 (87111703)	224.08623 (87030624)	278.48996 (87051812)	363.10269 (87061615)	346.55820 (87081812)
350.0 |	336.72083 (87030624)	291.68906 (87101206)	235.80957 (87091312)	322.78830 (87022812)	310.09180 (87091312)
360.0 |	407.30600 (87101206)	336.74496 (87101209)	245.65678 (87101209)	283.47916 (87061515)	313.59921 (87011815)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	347.91342 (87062706)	283.91104 (87062706)
20.0	188.52779 (87011015)	150.34392 (87011015)
30.0	336.69821 (87110424)	286.80371 (87110424)
40.0	343.41370 (87021618)	298.79874 (87021618)
50.0	315.86258 (87090418)	257.88815 (87090418)
60.0	466.78738 (87030803)	343.98013 (87030803)
70.0	369.86902 (87010106)	259.87271 (87010106)
80.0	339.51181 (87010415)	268.09665 (87010415)
90.0	178.19633 (87041624)	140.50594 (87041624)
100.0	193.79292 (87010424)	117.91190 (87011106)
110.0	209.84993 (87020903)	164.83713 (87111018)
120.0	285.04785 (87020724)	284.28146 (87020724)
130.0	273.38724 (87081118)	209.01274 (87042418)
140.0	275.25928 (87042321)	259.99350 (87042321)
150.0	328.51776 (87042618)	281.27185 (87042618)
160.0	324.08527 (87040418)	250.09227 (87040418)
170.0	316.06125 (87022315)	247.87495 (87112012)
180.0	289.69199 (87031218)	270.15512 (87031218)
190.0	278.52289 (87100812)	243.18872 (87100812)
200.0	253.24278 (87053109)	210.45427 (87053109)
210.0	299.93625 (87103118)	255.42751 (87120218)
220.0	270.99402 (87111306)	226.79060 (87120312)
230.0	306.45667 (87103024)	256.13202 (87103024)
240.0	305.51495 (87120618)	256.61954 (87120618)
250.0	306.03665 (87123021)	258.75201 (87123021)
260.0	262.40103 (87060624)	228.76424 (87060624)
270.0	260.03351 (87072221)	249.03542 (87072221)
280.0	283.25500 (87060818)	222.47337 (87060818)
290.0	278.93970 (87060921)	237.72223 (87060921)
300.0	280.72607 (87031621)	270.97067 (87061324)
310.0	335.39401 (87121415)	286.98843 (87061318)
320.0	296.22604 (87031803)	278.52670 (87111818)
330.0	308.31369 (87011806)	264.46463 (87080609)
340.0	323.21591 (87032724)	275.31464 (87012121)
350.0	248.26161 (87011612)	200.74663 (87030106)
360.0	320.09558 (87010409)	263.21671 (87010409)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,CT ,SS1CT ,SS2CT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	352.71237 (87032703)	245.18652 (87010409)	167.28816 (87061515)	237.55328 (87050812)	275.29489 (87011012)
20.0 |	297.22073 (87010412)	48.91740 (87010412)	129.10365 (87062612)	211.52321 (87062315)	227.10426 (87062315)
30.0 |	7.02263 (87043012)	29.59551 (87043012)	152.28194 (87040315)	244.60817 (87040315)	261.45139 (87011015)
40.0 |	467.18997 (87100106)	405.96042 (87110503)	234.71870 (87041515)	248.81665 (87021618)	307.51440 (87022212)
50.0 |	2791.95874 (87030806)	1358.82751 (87030806)	513.74182 (87030803)	376.00525 (87041815)	345.02026 (87062509)
60.0 |	2267.13159 (87100103)	2309.95874 (87010106)	1027.51672 (87030721)	756.42041 (87030721)	651.25000 (87030721)
70.0 |	1416.81042 (87041624)	960.57349 (87041703)	800.54877 (87041703)	589.80591 (87010106)	530.72040 (87100103)
80.0 |	402.07193 (87030706)	554.15088 (87041706)	303.38831 (87041624)	274.31778 (87010415)	308.78305 (87092318)
90.0 |	45.74605 (87010503)	72.71253 (87030706)	136.91438 (87030706)	175.29121 (87041818)	210.72809 (87041818)
100.0 |	178.36815 (87010512)	77.02494 (87010506)	100.19934 (87010506)	152.81306 (87010418)	198.11440 (87010418)
110.0 |	137.11655 (87012221)	142.94505 (87010512)	198.96581 (87041615)	189.11931 (87020903)	194.89232 (87010506)
120.0 |	154.19101 (87012221)	157.91737 (87012224)	261.37317 (87042512)	363.08212 (87010509)	292.81326 (87010509)
130.0 |	109.82832 (87012215)	172.91359 (87010515)	223.99152 (87033112)	269.90283 (87012221)	296.12537 (87012618)
140.0 |	184.54591 (87122915)	131.84181 (87042215)	269.80710 (87042415)	300.46289 (87042415)	276.12262 (87033109)
150.0 |	153.38301 (87122912)	221.71428 (87122915)	232.08083 (87042215)	278.98828 (87042412)	270.79797 (87042215)
160.0 |	185.85991 (87112021)	215.97444 (87112021)	265.57510 (87122912)	304.20651 (87122915)	347.01248 (87102812)
170.0 |	99.81919 (87101218)	213.09325 (87042115)	304.10461 (87050912)	311.61691 (87112103)	292.40311 (87112021)
180.0 |	116.77658 (87031115)	190.83453 (87042112)	294.42050 (87102015)	343.17746 (87102015)	318.76465 (87042112)
190.0 |	127.14806 (87053112)	196.25122 (87031115)	261.28696 (87102615)	312.90143 (87102615)	311.25980 (87102615)
200.0 |	126.12931 (87053112)	187.18806 (87053112)	233.32552 (87112124)	276.61920 (87112124)	260.41293 (87053109)
210.0 |	122.51068 (87091412)	174.66602 (87091412)	219.11406 (87103118)	290.11816 (87031406)	297.98926 (87031406)
220.0 |	109.96310 (87091512)	172.38269 (87100912)	230.21269 (87042712)	270.63831 (87110621)	293.07889 (87111306)
230.0 |	143.62421 (87100412)	222.22713 (87100412)	302.46906 (87100412)	302.40961 (87100906)	319.67062 (87100412)
240.0 |	115.33395 (87042012)	190.01393 (87040212)	262.71274 (87040212)	279.38498 (87040212)	315.00641 (87120618)
250.0 |	114.94880 (87040212)	181.92737 (87040212)	293.60223 (87110718)	299.13867 (87110718)	302.96829 (87123021)
260.0 |	65.34737 (87091512)	121.02009 (87030515)	244.50627 (87030518)	247.46722 (87091615)	259.45090 (87111518)
270.0 |	69.08831 (87070615)	134.87144 (87112715)	222.59972 (87112715)	238.72417 (87112715)	225.64905 (87091615)
280.0 |	71.19305 (87091615)	127.88220 (87072312)	183.81622 (87110303)	221.52324 (87072312)	231.99689 (87052415)
290.0 |	74.86832 (87082112)	145.35118 (87072312)	224.44106 (87051715)	298.08371 (87052318)	308.92166 (87060803)
300.0 |	75.03795 (87052215)	147.18871 (87082712)	285.61868 (87022015)	313.92673 (87022015)	289.00360 (87112615)
310.0 |	66.37382 (87051715)	145.67096 (87082615)	306.54141 (87092815)	333.83530 (87070812)	358.89987 (87022609)
320.0 |	68.51402 (87030621)	183.52464 (87060715)	292.20987 (87080612)	303.26511 (87061315)	333.81985 (87121424)
330.0 |	231.10295 (87111624)	214.09993 (87110306)	262.32504 (87061715)	307.44815 (87051812)	322.38287 (87051812)
340.0 |	161.52332 (87110306)	165.64687 (87101206)	266.92841 (87090112)	316.68320 (87022815)	342.99692 (87061615)
350.0 |	183.91101 (87101206)	291.20255 (87030624)	233.12285 (87080515)	318.14975 (87091312)	277.88010 (87101209)
360.0 |	317.84494 (87101209)	284.04800 (37032703)	218.23888 (87091312)	262.28073 (87011815)	295.67355 (87061515)

**MODELOPTS: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES | 750.00 1000.00

DIRECTION |	750.00	1000.00
10.0 |	231.69612 (87011012)	192.77765 (87090503)
20.0 |	188.18916 (87010412)	149.09050 (87020215)
30.0 |	218.32509 (87092315)	184.99878 (87110509)
40.0 |	274.31750 (87110503)	250.38240 (87110503)
50.0 |	271.59229 (87071515)	186.28203 (87092409)
60.0 |	460.13925 (87030806)	327.27414 (87030806)
70.0 |	342.68433 (87030818)	255.80864 (87030818)
80.0 |	274.35931 (87031918)	265.66837 (87031918)
90.0 |	172.33783 (87030912)	132.60626 (87031921)
100.0 |	134.06892 (87010418)	102.71906 (87010424)
110.0 |	186.39136 (87010506)	153.29012 (87010506)
120.0 |	235.08241 (87031003)	156.29063 (87041615)
130.0 |	235.49226 (87020824)	190.86024 (87081118)
140.0 |	264.33810 (87012615)	201.73083 (87010115)
150.0 |	317.22012 (87042621)	231.56261 (87042621)
160.0 |	271.32156 (87102812)	218.03319 (87040521)
170.0 |	291.45444 (87112012)	240.10699 (87022315)
180.0 |	278.81805 (87011109)	261.18237 (87120121)
190.0 |	265.10794 (87121715)	229.91219 (87121715)
200.0 |	227.37480 (87101524)	199.22551 (87101524)
210.0 |	283.84393 (87050509)	246.74516 (87103118)
220.0 |	267.78409 (87101021)	223.33376 (87101021)
230.0 |	291.99536 (87112406)	245.61354 (87021206)
240.0 |	289.58929 (87110715)	232.64966 (87110715)
250.0 |	255.46204 (87110815)	215.40973 (87110815)
260.0 |	234.72292 (87111512)	199.17419 (87111512)
270.0 |	243.42969 (87052121)	233.30934 (87052121)
280.0 |	220.88441 (87072118)	211.22400 (87072103)
290.0 |	267.09747 (87060803)	196.79358 (87051818)
300.0 |	270.56107 (87061106)	270.53958 (87031621)
310.0 |	332.08957 (87061318)	277.89951 (87121415)
320.0 |	284.27710 (87111818)	273.26578 (87010403)
330.0 |	307.55026 (87022709)	257.37534 (87022709)
340.0 |	259.15012 (87061509)	269.36069 (87032724)
350.0 |	220.06258 (87032412)	199.74626 (87011612)
360.0 |	251.76247 (87011815)	189.00475 (87091209)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	87.64729 (87101224)	49.24954 (87101224)	58.78137 (87010424)	63.21582 (87032824)	79.53420 (87062624)
20.0 |	107.09374 (87010424)	18.24675 (87010424)	29.86289 (87062324)	56.74989 (87062624)	66.32233 (87062624)
30.0 |	1.51383d(87062424)	7.09462d(87062424)	49.62800 (87062524)	90.72791 (87062524)	100.95399 (87062524)
40.0 |	114.09204 (87062524)	87.08338 (87110524)	81.23230 (87062524)	97.96686 (87062524)	101.44640 (87062524)
50.0 |	1605.89612 (87030824)	765.68750 (87030824)	233.08141 (87030824)	138.91818d(87093024)	143.68594d(87093024)
60.0 |	641.11176 (87030824)	834.73022 (87030824)	540.55011 (87030824)	432.91830 (87030824)	396.75040 (87030824)
70.0 |	425.90213 (87041824)	240.61287 (87041824)	144.59114 (87010124)	126.84534 (87010124)	116.92411 (87030824)
80.0 |	91.63849 (87041724)	115.29605 (87041824)	112.45693 (87041824)	83.74334 (87041824)	73.59140 (87041824)
90.0 |	20.01311 (87010524)	13.68953 (87011124)	46.40560 (87041724)	58.62605 (87041724)	57.82893 (87041724)
100.0 |	94.59396 (87010524)	34.73916 (87010524)	21.46305 (87081124)	60.99331 (87010424)	78.23885 (87010424)
110.0 |	43.19889 (87033124)	76.10471 (87010524)	63.35534 (87010524)	52.53492 (87041624)	45.15968 (87041624)
120.0 |	78.77059 (87033124)	56.47466 (87012224)	79.58727 (87042924)	97.11008 (87042924)	91.14146 (87041624)
130.0 |	53.90291 (87033124)	88.02914 (87033124)	101.76590 (87033124)	125.26678 (87020824)	135.85489 (87020824)
140.0 |	63.09728 (87010524)	54.48657 (87033124)	127.44056 (87033124)	163.46687 (87033124)	152.02336 (87033124)
150.0 |	54.01544 (87033124)	73.24564 (87010524)	95.31991 (87042224)	137.64423 (87042224)	143.80855 (87042224)
160.0 |	50.70430 (87112024)	79.27371 (87112024)	123.83340 (87112024)	137.23019 (87040424)	146.48851 (87040424)
170.0 |	36.47700 (87040124)	65.78115 (87040124)	116.79840 (87112024)	160.49808 (87112024)	175.88165 (87112024)
180.0 |	24.88353 (87031124)	49.74192 (87102624)	91.77624 (87121724)	112.00024 (87101424)	125.58233 (87101424)
190.0 |	33.86301 (87042724)	57.23000 (87031124)	87.27116 (87031124)	95.64373 (87031124)	100.34113 (87100824)
200.0 |	40.47569 (87042724)	58.62848 (87042724)	81.74133 (87112124)	105.19101 (87101524)	116.88509 (87101524)
210.0 |	39.94749 (87042724)	66.87326 (87042724)	91.35129 (87103124)	116.15872 (87021024)	124.81828 (87021024)
220.0 |	30.42928 (87042724)	53.64476 (87042724)	88.93195 (87100424)	109.08239 (87100424)	115.73370 (87100424)
230.0 |	39.80803 (87100924)	83.93803 (87100924)	139.51691 (87100924)	161.98698 (87100924)	163.42052 (87100924)
240.0 |	30.92012d(87040224)	60.45245 (87110724)	110.10137 (87110724)	132.27583 (87110724)	135.34140 (87110724)
250.0 |	32.23381 (87110724)	61.71941 (87110724)	113.31284 (87110824)	147.95622 (87110824)	159.69508 (87110824)
260.0 |	19.26579 (87110824)	47.44349 (87110824)	80.70121 (87030524)	90.12409 (87111524)	94.78577 (87111524)
270.0 |	12.32227 (87030524)	30.90846 (87111524)	52.59763 (87111524)	70.59312 (87052224)	83.31384 (87052424)
280.0 |	14.31616 (87052224)	38.57162 (87052224)	73.45033 (87052224)	98.97326 (87052424)	103.13242 (87052424)
290.0 |	18.47434 (87052224)	36.18999 (87052224)	103.20310 (87060824)	134.26883 (87060824)	137.97066 (87060824)
300.0 |	17.09878 (87060824)	49.46349 (87060824)	86.64096 (87060824)	110.47761 (87060924)	132.51289 (87061124)
310.0 |	16.63259 (87060824)	39.87853 (87052524)	118.99743 (87061124)	182.81804 (87031724)	203.64296 (87031724)
320.0 |	23.52767 (87111624)	62.46990 (87111624)	111.42825 (87111724)	149.34557 (87121424)	178.81874 (87031824)
330.0 |	60.35965 (87111624)	53.68429 (87111724)	92.77511 (87031824)	116.90479 (87032624)	142.78249 (87032624)
340.0 |	51.67696 (87111724)	31.07012 (87030624)	85.82574 (87022824)	126.67831 (87022824)	136.61497 (87022824)
350.0 |	50.13989 (87030624)	66.07853 (87030624)	70.42899 (87022824)	83.41560 (87062224)	94.24453 (87033024)
360.0 |	90.64413 (87101224)	67.38978 (87101224)	41.71852 (87101224)	57.69257 (87011524)	74.66142 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	93.15008 (87062624)	82.83681 (87090524)
20.0	63.52297 (87062624)	51.69783 (87062624)
30.0	84.48122 (87062524)	65.15568 (87062524)
40.0	91.77451 (87110524)	80.45147 (87110524)
50.0	111.85751c(87093024)	82.32515c(87093024)
60.0	271.60400 (87030824)	193.34052 (87030824)
70.0	94.61625 (87030824)	71.42771 (87030824)
80.0	55.13786 (87041824)	41.98143 (87041824)
90.0	42.45308 (87041824)	38.15298 (87041824)
100.0	56.62745 (87010424)	33.76666 (87010424)
110.0	39.62534 (87010424)	40.25621 (87010424)
120.0	70.71810 (87041624)	53.51303 (87041624)
130.0	96.29058 (87012624)	77.44984 (87120424)
140.0	123.56616 (87012624)	106.82578 (87012624)
150.0	107.80112 (87042624)	85.59631 (87033124)
160.0	122.74252 (87102824)	96.61246 (87102824)
170.0	150.79103 (87112024)	115.52554 (87112024)
180.0	119.76330 (87101424)	98.64505 (87101424)
190.0	104.42941 (87101424)	90.65982 (87101424)
200.0	110.48421 (87101524)	91.03950 (87101524)
210.0	114.69482 (87021024)	95.86349 (87021024)
220.0	104.90639 (87100424)	85.72918 (87100424)
230.0	139.56642 (87112324)	113.34754 (87112324)
240.0	114.55783 (87110724)	91.26260 (87110724)
250.0	143.56149 (87110824)	115.56525 (87110824)
260.0	83.37784 (87111524)	66.95559 (87111524)
270.0	89.64579 (87052424)	79.69729 (87052424)
280.0	100.03204 (87060824)	87.03403 (87060824)
290.0	109.16303 (87060824)	96.08060 (87060924)
300.0	142.14047 (87061124)	124.41714 (87061124)
310.0	187.79527 (87060224)	140.02254 (87060224)
320.0	189.97224 (87031824)	149.69920 (87031824)
330.0	132.40292 (87032424)	106.58475 (87032424)
340.0	111.43581 (87022824)	83.05039 (87022824)
350.0	90.68742 (87033024)	76.13140 (87033024)
360.0	78.97144 (87032824)	62.85962 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	44.78781 (87032724)	46.17202 (87010424)	35.52008 (87050824)	59.10365 (87091924)	77.70148 (87090524)
20.0 |	34.92529 (87101224)	2.43610 (87030124)	28.77421 (87062624)	47.67372 (87031924)	54.37736 (87011924)
30.0 |	1.13537c(87043024)	5.31690c(87043024)	31.70665c(87040324)	57.02717 (87062624)	68.19500 (87062624)
40.0 |	103.12939c(87100124)	86.47723 (87062524)	62.61864 (87062724)	81.41731c(87043024)	88.41795c(87043024)
50.0 |	840.08051 (87030724)	384.50235 (87030724)	166.57265c(87093024)	135.40036 (87030824)	109.52390 (87030824)
60.0 |	612.57471 (87041724)	526.97168 (87041724)	291.95682 (87030724)	221.85329 (87030724)	196.65327 (87030724)
70.0 |	177.10130 (87041624)	209.95570 (87010424)	134.19261 (87041824)	108.16398 (87030824)	107.29893 (87010124)
80.0 |	50.26768 (87030724)	112.78236 (87041724)	56.53601 (87010124)	46.18440 (87010124)	45.54885 (87010424)
90.0 |	1.21083 (87092524)	9.74939 (87041724)	23.47066 (87010424)	29.99071 (87041824)	39.87983 (87041824)
100.0 |	5.07217 (87033124)	11.02097 (87041624)	19.86528 (87010424)	28.15532 (87092524)	30.22956 (87092524)
110.0 |	39.91210 (87012224)	25.27676 (87041624)	59.31242 (87041624)	48.75721 (87010524)	42.34253 (87010524)
120.0 |	50.77304 (87012224)	55.21416 (87033124)	69.43967 (87042524)	91.89140 (87041624)	89.74371 (87042924)
130.0 |	28.53693 (87101224)	39.57040 (87012224)	95.43055 (87012224)	113.23257 (87012624)	123.20901 (87012624)
140.0 |	50.38568 (87033124)	43.92309 (87042224)	83.85102 (87042224)	90.55127 (87012724)	108.13919 (87012724)
150.0 |	43.80786 (87010524)	62.19137 (87122924)	72.51167 (87040424)	95.16759 (87042624)	113.16102 (87042624)
160.0 |	39.84703 (87040424)	69.00777 (87040424)	109.81650 (87040424)	124.64742 (87111124)	134.65347 (87102824)
170.0 |	34.76339 (87112024)	63.27074 (87042124)	100.85690 (87121624)	120.30585 (87011124)	122.82124 (87011124)
180.0 |	23.34814 (87102624)	42.40340 (87031124)	81.26504 (87101424)	111.71488 (87121724)	112.48228 (87010624)
190.0 |	28.56065 (87031124)	43.18827 (87042724)	77.09209 (87102624)	95.11591 (87102624)	98.74075 (87102924)
200.0 |	33.37193 (87053124)	55.37319 (87053124)	80.01984 (87053124)	94.94037 (87031124)	101.51450 (87031124)
210.0 |	23.27345 (87053124)	49.19596 (87103124)	90.74967 (87021024)	114.66358 (87103124)	122.41638 (87103124)
220.0 |	26.51658 (87100424)	52.86406 (87100424)	83.37585 (87042724)	102.60740 (87103124)	108.74862 (87103124)
230.0 |	28.46630 (87100424)	63.87893 (87112324)	119.38412 (87112324)	148.79085 (87112324)	157.09590 (87112324)
240.0 |	27.87894 (87100924)	57.45250 (87112324)	97.25983 (87112324)	115.86782 (87120624)	122.69473 (87120624)
250.0 |	27.30999c(87040224)	54.41063 (87110824)	82.03644 (87110724)	99.47672 (87112524)	106.30674 (87112524)
260.0 |	17.06597c(87040224)	43.80056 (87030524)	72.63882 (87111524)	85.27386 (87030524)	75.46746 (87030524)
270.0 |	12.26708 (87091624)	29.43809 (87091624)	49.49823 (87112724)	69.89421 (87052424)	83.26879 (87052224)
280.0 |	14.00972 (87082124)	28.32137 (87082124)	72.64836 (87052424)	83.10123 (87052224)	90.52148 (87060824)
290.0 |	15.95666 (87082124)	35.58577 (87052424)	62.58589 (87052424)	84.77100 (87111624)	97.30566 (87111624)
300.0 |	14.97963 (87052224)	32.79967 (87052424)	82.77020 (87060924)	106.03295 (87061124)	110.47135 (87060924)
310.0 |	13.38653 (87052424)	34.08940 (87071024)	103.16993 (87022624)	168.55019 (87061124)	190.44574 (87060224)
320.0 |	14.65714 (87111724)	50.35793 (87061124)	101.21427 (87060224)	147.52809 (87111724)	163.40569 (87121424)
330.0 |	29.38576 (87110324)	29.80544 (87061124)	81.62215 (87051924)	115.97840 (87031824)	130.12422 (87022824)
340.0 |	26.92188 (87101224)	27.89386 (87022824)	79.40105 (87061624)	95.42287 (87061624)	94.42815 (87073024)
350.0 |	39.76300 (87022824)	64.05694 (87101224)	70.17297 (87062224)	81.11134 (87033024)	75.42094 (87062224)
360.0 |	70.72977 (87030624)	39.86708 (87032724)	40.74191 (87091324)	54.35876 (87061524)	60.14272 (87012024)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,CT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

10.0	92.96136 (87090524)	76.84982 (87062624)
20.0	52.98118 (87012224)	49.10062 (87012224)
30.0	67.07900 (87012224)	55.29320c(87110424)
40.0	82.61449 (87062524)	65.26609 (87021624)
50.0	88.66483c(87110424)	68.68605c(87043024)
60.0	139.02058c(87093024)	105.87695c(87093024)
70.0	67.00442 (87030924)	56.25626 (87030924)
80.0	42.51403 (87010424)	33.52969 (87010424)
90.0	38.06954 (87041724)	23.40941 (87041724)
100.0	28.90151 (87041624)	23.16091 (87041624)
110.0	37.86415 (87010524)	31.07295 (87010524)
120.0	61.57415 (87010524)	47.97760 (87020724)
130.0	96.20904 (87020824)	68.33168 (87042524)
140.0	101.21580 (87042324)	88.56284 (87042324)
150.0	106.98862 (87042224)	83.15819 (87042624)
160.0	121.83202 (87040424)	92.36625 (87040424)
170.0	126.16656 (87111124)	111.59302 (87111124)
180.0	112.92794 (87011324)	97.87724 (87011324)
190.0	92.32995 (87121724)	78.78785 (87121724)
200.0	96.37003 (87031124)	86.26560 (87102924)
210.0	111.16770 (87103124)	90.93161 (87103124)
220.0	97.17623 (87103124)	83.09363 (87101124)
230.0	137.06390 (87100924)	108.83425 (87100924)
240.0	110.12670 (87120624)	89.18909 (87120624)
250.0	98.93736 (87111524)	83.74552 (87111524)
260.0	59.61450 (87031524)	50.76958 (87031524)
270.0	83.42719 (87052224)	70.05296 (87052224)
280.0	81.18954 (87052424)	69.76208 (87052324)
290.0	108.84165 (87060924)	79.26428 (87060824)
300.0	119.66831 (87051624)	122.26243 (87051624)
310.0	163.44844 (87061924)	133.49434 (87061924)
320.0	126.24454 (87121424)	112.14452 (87032524)
330.0	128.91350 (87032624)	98.67108 (87032624)
340.0	90.57499 (87032724)	81.32716 (87012124)
350.0	73.44277 (87011524)	65.81319 (87011524)
360.0	65.64864 (87012524)	56.40669 (87012524)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

NETWORK

GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 28.95176 AT (	-383.02, 321.39, 0.00, 0.00)	GP	POL
	2ND HIGHEST VALUE IS 25.77049 AT (	-574.53, 482.09, 0.00, 0.00)	GP	POL
	3RD HIGHEST VALUE IS 25.72909 AT (	-306.42, 257.11, 0.00, 0.00)	GP	POL
	4TH HIGHEST VALUE IS 21.97814 AT (	114.91, 96.42, 0.00, 0.00)	GP	POL
	5TH HIGHEST VALUE IS 21.84038 AT (	-257.12, 306.42, 0.00, 0.00)	GP	POL
	6TH HIGHEST VALUE IS 21.81179 AT (	-321.39, 383.02, 0.00, 0.00)	GP	POL

** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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ALL	HIGH 1ST HIGH VALUE IS 3555.60815 ON 87030803: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 2791.95874 ON 87030806: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

MODELOPTS: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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LL	HIGH 1ST HIGH VALUE IS 1605.89612 ON 87030824: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 840.08051 ON 87030724: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	

** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

MODELOPTs: CONC RURAL FLAT DFAULT

** Message Summary : ISCST3 Model Execution **

----- Summary of Total Messages -----

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 123 Informational Message(s)

Total of 123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

SO STARTING
 CO TITLEONE 1987 STOCK ISLAND POWER PLANT-HSD STACKS RAISED(7.32M)(12.2M TOTAL)-11/06/97
 CO TITLETWO ANN 24&3-HR-ALL-SS UNITS-PM-40F & 100%-CTS IN NEW LOCATION(PMCT732.IN)
 CO MODELOPT DFAULT CONC RURAL
 CO AVERTIME 3 24 PERIOD
 CO POLLUTID OTHER
 CO DCAYCOEF .000000
 CO RUNORNOT RUN
 SO FINISHED

SO STARTING
 SO LOCATION HSD1 POINT 56.6 63.2 0.0
 SO LOCATION HSD2 POINT 55.6 55.6 0.0
 SO LOCATION HSD3 POINT 54.7 48.4 0.0
 SO LOCATION MSD POINT -7.2 35.88 0.0
 SO LOCATION GT POINT 26.2 -56.8 0.0
 SO LOCATION SS1GT POINT 38.9 -58.4 0.0
 SO LOCATION SS2GT POINT 53.1 -60.1 0.0

** POINT: SRCID QS HS TS VS DS
 SO SRCPARAM HSD1 1.05 12.20 660.8 20.38 0.76
 SO SRCPARAM HSD2 1.05 12.20 660.8 20.38 0.76
 SO SRCPARAM HSD3 1.05 12.20 660.8 20.38 0.76
 SO SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74
 SO SRCPARAM GT 2.27 11.77 766 24.0 3.93
 SO SRCPARAM SS1GT 2.10 13.08 801.0 24.65 3.85
 SO SRCPARAM SS2GT 2.10 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
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 SO BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
 SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
 SO BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
 SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
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 SO BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
 SO BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
 SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
 SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
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SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 30.06 31.10
SO BUILDWID MSD 31.20 30.35 28.58 32.08 30.84 30.59

SO BUILDHGT GT 12.19 12.19 12.19 4.88 4.88 4.88
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SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID GT 6.97 11.73 16.13 19.98 23.27 25.85
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SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID SS1GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90

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SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00
SO BUILDWID SS2GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS2GT 27.64 28.60 28.69 28.54 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
*GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)
RE GRIDPOLR POL ORIC 0.0 0.0
RE GRIDPOLR POL DIST 150. 200. 300. 400. 500. 750. 1000.
RE GRIDPOLR POL GDIR 36 10.0 10.0
RE BOUNDARY MSD 187.6 202.2 226.7 183.6 145.8 124.0 110.9 103.1
RE BOUNDARY MSD 99.1 98.3 100.5 106.1 116.2 132.8 160.4 196.5 302.1
RE BOUNDARY MSD 291.9 291.0 192.3 146.9 121.8 106.8 97.7 92.7 90.8
RE BOUNDARY MSD 91.6 95.5 102.9 115.4 136.0 171.9 192.0 182.2 178.3 180.1
RE GRIDPOLR POL END
RE FINISHED

ME STARTING
ME INPUTFIL KYWPRE87.LST
ME ANEMHGT 6.700 METERS
ME SURFDATA 12836 1987 KEY WEST
ME UAIRDATA 12844 1987 MIAMI
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

** SETUP Finishes Successfully **



MODELOPTs: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

*Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

*Model Uses NO WET DEPLETION. WDPLETE = F

*NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

*Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

*Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

*Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR
and Calculates PERIOD Averages

*This Run Includes: 7 Source(s); 1 Source Group(s); and 288 Receptor(s)

*The Model Assumes A Pollutant Type of: OTHER

*Model Set To Continue RUNning After the Setup Testing.

*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

*Misc. Inputs: Anem. Hgt. (m) = 6.70 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0

Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07

Output Units = (MICROGRAMS/CUBIC-METER)

*Input Runstream File: PMCT732.IN ; **Output Print File: PMCT732.OUT

*MODELOPTs: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	PART. CATS.	NUMBER EMISSION RATE		X	Y	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR	EMISSION RATE VARY BY
		(USER UNITS)	(METERS)										
HSD1	0	0.10500E+01	56.6	63.2	0.0	12.20	660.80	20.38	0.76	YES			
HSD2	0	0.10500E+01	55.6	55.6	0.0	12.20	660.80	20.38	0.76	YES			
HSD3	0	0.10500E+01	54.7	48.4	0.0	12.20	660.80	20.38	0.76	YES			
MSD	0	0.10800E+01	-7.2	35.9	0.0	30.49	588.60	30.50	1.74	YES			
GT	0	0.22700E+01	26.2	-56.8	0.0	11.77	766.00	24.00	3.93	YES			
SS1GT	0	0.21000E+01	38.9	-58.4	0.0	13.08	801.00	24.65	3.85	YES			
SS2GT	0	0.21000E+01	53.1	-60.1	0.0	13.08	801.00	24.65	3.85	YES			

*MODELOPTs: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: HSD1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	3.1	4.4	0	10	3.1	3.6	0	11	3.1	5.7	0	12	3.1	7.5	0
13	3.1	9.1	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.9	0	23	3.1	10.9	0	24	3.1	9.7	0
25	3.1	8.2	0	26	3.1	6.4	0	27	3.1	4.4	0	28	3.1	3.6	0	29	3.1	5.7	0	30	3.1	7.5	0
31	3.1	9.1	0	32	3.1	10.4	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	3.1	3.5	0	11	3.1	5.5	0	12	3.1	7.4	0
13	5.8	31.4	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.2	0	26	3.1	6.5	0	27	3.1	4.5	0	28	3.1	3.5	0	29	3.1	5.5	0	30	3.1	7.4	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	3.1	11.8	0	5	7.6	35.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	5.8	32.6	0	12	5.8	32.5	0
13	5.8	31.4	0	14	5.8	29.3	0	15	5.8	26.4	0	16	5.8	22.6	0	17	5.8	18.2	0	18	5.8	15.7	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.1	0	26	3.1	6.3	0	27	3.1	4.3	0	28	3.1	3.7	0	29	5.8	32.6	0	30	5.8	32.5	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: MSD

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	11.0	27.1	0	2	11.0	29.4	0	3	11.0	30.8	0	4	11.0	31.3	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	15.3	11.5	0	12	15.3	11.8	0
13	15.3	12.1	0	14	11.0	30.3	0	15	16.1	18.9	0	16	16.1	18.9	0	17	16.1	18.3	0	18	11.0	30.6	0
19	11.0	27.1	0	20	11.0	29.4	0	21	11.0	30.8	0	22	11.0	31.3	0	23	11.0	30.8	0	24	11.0	29.4	0
25	11.0	27.1	0	26	11.0	24.0	0	27	11.0	25.3	0	28	11.0	28.1	0	29	11.0	30.1	0	30	11.0	31.1	0
31	11.0	31.2	0	32	11.0	30.3	0	33	11.0	28.6	0	34	11.0	32.1	0	35	11.0	30.8	0	36	11.0	30.6	0

**MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	12.2	27.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS1GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	12.2	27.3	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS2GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	4.9	11.7	0	3	4.9	16.1	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.8	0	17	4.9	13.6	0	18	4.9	9.0	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.8	0	35	4.9	13.6	0	36	4.9	9.0	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

150.0, 200.0, 300.0, 400.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(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,

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: KYWPRE87.LST FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
 SURFACE STATION NO.: 12836 UPPER AIR STATION NO.: 12844
 NAME: KEY NAME: MIAMI
 YEAR: 1987 YEAR: 1987

FLOW SPEED TEMP STAB MIXING HEIGHT (M) USTAR M-O LENGTH Z-0 IPCODE PRATE
 YEAR MONTH DAY HOUR VECTOR (M/S) (K) CLASS RURAL URBAN (M/S) (M) (M) (mm/HR)

YEAR	MONTH	DAY	HOUR	FLOW VECTOR (M/S)	SPEED (K)	TEMP	STAB	MIXING HEIGHT (M) CLASS	RURAL	URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
87	1	1	1	51.0	7.20	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	2	38.0	8.75	294.3	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	3	84.0	6.69	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	4	73.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	5	63.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	6	72.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	7	75.0	10.29	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	8	93.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	9	117.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	10	131.0	6.17	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	11	144.0	8.75	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	12	136.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	13	143.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	14	149.0	9.26	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	15	142.0	9.77	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	16	144.0	8.75	295.4	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	17	161.0	9.26	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00	
87	1	1	18	157.0	8.75	293.7	4	423.3	423.3	0.0000	0.0	0.0000	0	0.00	
87	1	1	19	184.0	8.23	293.7	4	436.9	436.9	0.0000	0.0	0.0000	0	0.00	
87	1	1	20	187.0	7.72	293.7	4	450.6	450.6	0.0000	0.0	0.0000	0	0.00	
87	1	1	21	170.0	5.66	293.7	4	464.2	464.2	0.0000	0.0	0.0000	0	0.00	
87	1	1	22	152.0	6.17	293.7	4	477.8	477.8	0.0000	0.0	0.0000	0	0.00	
87	1	1	23	170.0	5.66	293.2	4	491.5	491.5	0.0000	0.0	0.0000	0	0.00	
87	1	1	24	160.0	4.12	293.2	5	505.1	681.0	0.0000	0.0	0.0000	0	0.00	

** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
 FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)						
	150.00	200.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	0.06383	0.06957	0.30038	0.52095	0.59869	0.53965	0.42366
20.00 |	0.05930	0.01672	0.18833	0.35729	0.40304	0.35357	0.27817
30.00 |	0.00210	0.01260	0.15701	0.33387	0.40333	0.38534	0.31725
40.00 |	0.39415	0.36868	0.33943	0.43017	0.47830	0.42019	0.32873
50.00 |	2.57011	1.54255	0.70749	0.58148	0.57171	0.43909	0.32575
60.00 |	1.83303	1.59835	0.87770	0.70724	0.67960	0.51941	0.39228
70.00 |	0.53843	0.54342	0.42428	0.36598	0.35642	0.28845	0.22832
80.00 |	0.13001	0.21432	0.14144	0.13923	0.15598	0.15532	0.13547
90.00 |	0.00780	0.02157	0.06413	0.08948	0.10351	0.10410	0.09253
100.00 |	0.03623	0.03043	0.06572	0.09393	0.10558	0.09683	0.08120
110.00 |	0.05756	0.07768	0.18050	0.19216	0.18414	0.15752	0.13637
120.00 |	0.10136	0.13374	0.31046	0.37344	0.37312	0.29364	0.22420
130.00 |	0.09749	0.20817	0.45130	0.55370	0.57412	0.48198	0.37611
140.00 |	0.15625	0.25350	0.55236	0.69517	0.72873	0.63274	0.50380
150.00 |	0.21898	0.38912	0.67965	0.77560	0.79970	0.72132	0.60469
160.00 |	0.26603	0.51392	0.89430	1.04617	1.07469	0.91661	0.73192
170.00 |	0.24444	0.55379	1.08560	1.33181	1.38746	1.20693	0.97466
180.00 |	0.20818	0.46820	0.91187	1.18510	1.31120	1.28787	1.11959
190.00 |	0.20840	0.44725	0.80090	1.00115	1.07950	1.02526	0.87862
200.00 |	0.23988	0.49087	0.81111	0.97922	1.03890	0.97704	0.83918
210.00 |	0.26965	0.55767	0.93584	1.14049	1.21281	1.13700	0.97575
220.00 |	0.28337	0.58257	0.97283	1.18694	1.26526	1.18927	1.01566
230.00 |	0.30393	0.63940	1.09201	1.35061	1.45044	1.37404	1.17853
240.00 |	0.28341	0.60091	1.01640	1.24836	1.33509	1.26474	1.09436
250.00 |	0.22244	0.46920	0.77359	0.93239	0.98585	0.92823	0.81072
260.00 |	0.15739	0.33953	0.58095	0.71553	0.76971	0.74155	0.65080
270.00 |	0.11579	0.26702	0.50227	0.65531	0.74012	0.77728	0.71855
280.00 |	0.09812	0.26556	0.62035	0.86197	0.98127	0.98346	0.86353
290.00 |	0.10575	0.32657	0.82375	1.14608	1.30934	1.32588	1.16804
300.00 |	0.12175	0.41563	1.19262	1.76393	2.12058	2.33611	2.14732
310.00 |	0.14119	0.55474	1.99241	3.00968	3.38365	2.98447	2.32533
320.00 |	0.16783	0.73702	2.18362	2.55500	2.54916	2.14901	1.74325
330.00 |	0.18196	0.59780	1.66211	2.17479	2.31806	1.97378	1.53298
340.00 |	0.11893	0.38528	1.40403	1.71093	1.64567	1.20294	0.88236
350.00 |	0.08446	0.29707	0.80460	0.94514	0.92590	0.74423	0.58916
360.00 |	0.12856	0.12488	0.42709	0.63175	0.69785	0.63244	0.51971

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	64.21064 (87101209)	32.44912 (87101212)	36.40551 (87010409)	28.59572 (87012012)	32.66168 (87062706)
20.0 |	65.42378 (87010409)	11.34847 (87010409)	16.85702 (87062512)	26.84388 (87062512)	27.32710 (87062512)
30.0 |	1.05419 (87062412)	4.62078 (87062412)	22.77519 (87062512)	31.63866 (87062512)	32.06987 (87110424)
40.0 |	59.55728 (87110503)	47.60922 (87071415)	30.07510 (87071415)	31.46141 (87022212)	36.33973 (87021618)
50.0 |	415.74484 (87030803)	214.15034 (87030803)	60.89510 (87041815)	48.42847 (87071515)	46.60410 (87071515)
60.0 |	286.70074 (87010106)	334.11923 (87041709)	169.32381 (87041709)	89.78634 (87041709)	76.91801 (87030806)
70.0 |	211.26855 (87041821)	196.28345 (87010415)	95.30588 (87010415)	70.35683 (87100103)	64.86654 (87010106)
80.0 |	68.89469 (87041706)	68.76691 (87041818)	55.66579 (87041821)	34.85255 (87041821)	42.11558 (87010415)
90.0 |	6.10767 (87010506)	12.80535 (87011106)	33.50860 (87041706)	38.16780 (87041706)	34.86241 (87041706)
100.0 |	47.84341 (87010509)	9.39406 (87010503)	12.53730 (87081112)	29.97027 (87010424)	36.04874 (87010424)
110.0 |	17.83150 (87020818)	44.01016 (87010509)	24.84115 (87041612)	23.55671 (87081115)	28.99012 (87020903)
120.0 |	21.38878 (87010515)	21.73483 (87012221)	33.55326 (87010509)	42.87154 (87042512)	38.95435 (87042512)
130.0 |	16.64358 (87033118)	22.41851 (87033118)	33.45794 (87012221)	36.80703 (87020818)	39.70103 (87020818)
140.0 |	26.43047 (87010518)	15.41096 (87042215)	33.06202 (87033118)	35.69099 (87033109)	33.16374 (87012615)
150.0 |	20.96103 (87101215)	31.77955 (87010518)	30.93776 (87042412)	33.73858 (87042215)	35.07702 (87042621)
160.0 |	21.69602 (87112021)	25.81526 (87040415)	32.54963 (87040415)	43.31681 (87010518)	43.56068 (87010518)
170.0 |	14.96423 (87042112)	27.16658 (87042112)	38.00127 (87042115)	38.19384 (87112021)	36.29950 (87022315)
180.0 |	14.02272 (87051215)	24.68130 (87102615)	39.28301 (87042112)	41.43962 (87042112)	38.20088 (87102015)
190.0 |	22.40857 (87042715)	28.34035 (87042715)	30.92261 (87110615)	38.76197 (87110615)	38.27805 (87110615)
200.0 |	23.79439 (87042715)	33.83721 (87042715)	38.05014 (87042715)	34.04047 (87042715)	32.14627 (87112124)
210.0 |	14.51912 (87042715)	21.19025 (87042715)	27.85157 (87031406)	34.37634 (87103118)	37.77932 (87103118)
220.0 |	15.19261 (87042712)	21.65526 (87042712)	33.15166 (87100912)	37.86729 (87100912)	37.61200 (87100912)
230.0 |	22.49465 (87091512)	31.56932 (87091512)	36.22379 (87091512)	38.11499 (87100412)	37.63105 (87103024)
240.0 |	23.07839 (87091512)	30.06605 (87091512)	32.41120 (87110715)	39.09896 (87110715)	39.95039 (87110715)
250.0 |	15.96650 (87091512)	21.89202 (87110718)	35.51876 (87102324)	40.10306 (87102324)	38.04822 (87102324)
260.0 |	8.05065 (87122312)	16.04574 (87030518)	30.91605 (87030515)	36.08364 (87030515)	34.21787 (87030515)
270.0 |	8.29350 (87091615)	19.12562 (87091615)	30.07435 (87091615)	30.35330 (87091615)	26.85464 (87112715)
280.0 |	8.92751 (87070615)	14.97634 (87091615)	26.09546 (87072312)	26.98228 (87052403)	33.40694 (87060818)
290.0 |	10.35672 (87052215)	18.03224 (87052415)	26.87251 (87122412)	36.52164 (87122412)	37.02813 (87122412)
300.0 |	9.52526 (87052415)	20.34979 (87051715)	33.55322 (87112615)	38.75660 (87112615)	36.72932 (87080615)
310.0 |	8.70240 (87111621)	18.81081 (87052512)	37.41491 (87080615)	39.40456 (87111624)	45.67517 (87111624)
320.0 |	8.62411 (87022606)	23.44212 (87111624)	38.29976 (87110306)	37.16529 (87051915)	41.97071 (87121924)
330.0 |	27.47823 (87110306)	26.66412 (87111703)	31.42516 (87082415)	37.20337 (87082415)	37.97599 (87122003)
340.0 |	35.23784 (87111703)	26.20162 (87030624)	32.56285 (87051812)	42.45014 (87061615)	40.50952 (87081812)
350.0 |	39.37159 (87030624)	34.10618 (87101206)	27.57229 (87091312)	37.74250 (87022812)	36.16033 (87091312)
360.0 |	47.62486 (87101206)	39.37442 (87101209)	28.72379 (87101209)	33.14057 (87061515)	36.65770 (87011815)

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)	
	750.00	1000.00
10.0 |	40.57704 (87062706)	32.87939 (87062706)
20.0 |	21.96384 (87010412)	17.18491 (87020215)
30.0 |	39.29692 (87110424)	33.29222 (87110424)
40.0 |	40.08261 (87021618)	34.69569 (87021618)
50.0 |	36.72168 (87090418)	29.69379 (87090418)
60.0 |	54.48035 (87030803)	39.90858 (87030803)
70.0 |	43.07314 (87010106)	29.94309 (87010106)
80.0 |	39.59623 (87010415)	31.06146 (87010415)
90.0 |	20.84506 (87041624)	16.40670 (87041624)
100.0 |	22.57714 (87010424)	13.73033 (87011106)
110.0 |	24.46331 (87020903)	19.13162 (87111018)
120.0 |	33.19909 (87020724)	32.94273 (87020724)
130.0 |	31.79230 (87081118)	24.12735 (87042418)
140.0 |	32.14345 (87042321)	30.32075 (87042321)
150.0 |	38.16702 (87042618)	32.52205 (87042618)
160.0 |	37.62454 (87040418)	28.89399 (87040418)
170.0 |	36.88522 (87022315)	28.08013 (87112012)
180.0 |	33.80417 (87031218)	31.43530 (87031218)
190.0 |	32.31048 (87100812)	27.87382 (87100812)
200.0 |	29.45008 (87053109)	24.24299 (87053109)
210.0 |	34.89769 (87103118)	29.64803 (87120218)
220.0 |	31.55805 (87111306)	26.12503 (87120312)
230.0 |	35.68559 (87103024)	29.57080 (87103024)
240.0 |	35.57960 (87120618)	29.62276 (87120618)
250.0 |	35.63805 (87123021)	29.85397 (87123021)
260.0 |	30.57780 (87060624)	26.45748 (87060624)
270.0 |	30.29175 (87072221)	28.79088 (87072221)
280.0 |	32.96737 (87060818)	25.62901 (87060818)
290.0 |	32.45125 (87060921)	27.37066 (87060921)
300.0 |	32.71237 (87031621)	31.43103 (87061324)
310.0 |	39.12637 (87121415)	33.36677 (87061318)
320.0 |	34.56830 (87031803)	32.26838 (87111818)
330.0 |	36.01752 (87011806)	30.82889 (87080609)
340.0 |	37.76197 (87032724)	32.01097 (87012121)
350.0 |	28.80300 (87011612)	23.17767 (87030106)
360.0 |	37.25159 (87010409)	30.34151 (87010409)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	41.24142 (87032703)	28.66881 (87010409)	19.56042 (87061515)	27.76231 (87050812)	32.17418 (87011012)
20.0 |	34.76525 (87010412)	5.73026 (87010412)	15.10234 (87062612)	24.73187 (87062315)	26.53672 (87062315)
30.0 |	0.82113 (87043012)	3.46050 (87043012)	17.81120 (87040315)	28.60179 (87040315)	30.55792 (87011015)
40.0 |	54.62689 (87100106)	47.46753 (87110503)	27.44522 (87041515)	29.09325 (87021618)	35.92080 (87022212)
50.0 |	326.45395 (87030806)	158.88295 (87030806)	60.07003 (87030803)	43.95979 (87041815)	40.32128 (87062509)
60.0 |	265.11121 (87100103)	270.09543 (87010106)	120.14394 (87030721)	88.44552 (87030721)	76.14614 (87030721)
70.0 |	165.66272 (87041624)	112.31649 (87041703)	93.60538 (87041703)	68.96366 (87010106)	62.04944 (87100103)
80.0 |	47.01286 (87030706)	64.79492 (87041706)	35.47414 (87041624)	32.07494 (87010415)	36.08609 (87092318)
90.0 |	5.34893 (87010503)	8.50202 (87030706)	16.00892 (87030706)	20.49614 (87041818)	24.63845 (87041818)
100.0 |	20.85596 (87010512)	9.00626 (87010506)	11.71596 (87010506)	17.86777 (87010418)	23.16278 (87010418)
110.0 |	16.03256 (87012221)	16.71407 (87010512)	23.26420 (87041615)	22.11275 (87020903)	22.77572 (87010506)
120.0 |	18.02785 (87012221)	18.46473 (87012224)	30.56121 (87042512)	42.45279 (87010509)	34.23042 (87010509)
130.0 |	12.58732 (87012215)	20.15807 (87010515)	26.18987 (87033112)	31.55341 (87012221)	34.61903 (87012618)
140.0 |	21.57818 (87122915)	14.70681 (87042212)	31.54741 (87042415)	35.12564 (87042415)	32.00687 (87033109)
150.0 |	17.55750 (87122912)	25.88455 (87122915)	26.97425 (87042215)	32.61391 (87042412)	31.59195 (87042218)
160.0 |	21.41604 (87101218)	25.23477 (87112021)	29.96508 (87122912)	35.28338 (87102812)	40.54057 (87102812)
170.0 |	11.64412 (87101218)	24.91625 (87042115)	35.55751 (87050912)	36.43605 (87112103)	33.82345 (87112021)
180.0 |	13.65428 (87031115)	22.31361 (87042112)	34.42521 (87102015)	40.11409 (87102015)	37.18885 (87042112)
190.0 |	14.86698 (87053112)	22.94697 (87031115)	30.55116 (87102615)	36.57620 (87102615)	36.32037 (87102615)
200.0 |	14.74786 (87053112)	21.88725 (87053112)	27.28194 (87112124)	32.34391 (87112124)	30.44138 (87053109)
210.0 |	14.32475 (87091412)	20.42309 (87091412)	25.62024 (87103118)	33.92229 (87031406)	34.83893 (87031406)
220.0 |	12.85760 (87091512)	20.15611 (87100912)	26.91646 (87042712)	31.64364 (87110621)	34.26431 (87111306)
230.0 |	16.79348 (87100412)	25.98424 (87100412)	35.36459 (87100412)	35.35788 (87100906)	37.22496 (87100412)
240.0 |	13.48559 (87042012)	22.21767 (87040212)	30.71763 (87040212)	32.65085 (87040212)	36.82853 (87120618)
250.0 |	13.44056 (87040212)	21.27213 (87040212)	34.32988 (87110718)	34.97583 (87110718)	35.42118 (87123021)
260.0 |	7.64084 (87091512)	14.15046 (87030515)	28.58927 (87030518)	28.93101 (87091615)	30.33045 (87111518)
270.0 |	8.07825 (87070615)	15.77004 (87112715)	26.02780 (87112715)	27.91163 (87112715)	26.33564 (87091615)
280.0 |	8.32435 (87091615)	14.95282 (87072312)	21.49299 (87110303)	25.89555 (87072312)	27.01076 (87052415)
290.0 |	8.75409 (87082112)	16.99541 (87072312)	26.24295 (87051715)	34.85384 (87052318)	36.11868 (87060803)
300.0 |	8.77392 (87052215)	17.21026 (87082712)	33.39639 (87022015)	36.70542 (87022015)	33.76853 (87112615)
310.0 |	7.76086 (87051715)	17.03279 (87082615)	35.84278 (87092815)	39.02961 (87070812)	41.95916 (87022609)
320.0 |	8.01110 (87030621)	21.45890 (87060715)	34.16707 (87080612)	35.45481 (87061315)	39.03099 (87121424)
330.0 |	27.02206 (87111624)	25.03396 (87110306)	30.67273 (87061715)	35.93974 (87051812)	37.61481 (87051812)
340.0 |	18.88636 (87110306)	19.36851 (87101206)	31.21094 (87090112)	37.02858 (87022815)	40.05026 (87061615)
350.0 |	21.50407 (87101206)	34.04929 (87030624)	27.25824 (87080515)	37.18863 (87091312)	32.48713 (87101209)
360.0 |	37.16450 (87101209)	33.21274 (87032703)	25.51790 (87091312)	30.66709 (87011815)	34.50623 (87061515)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	26.83184 (87011012)	22.53573 (87090503)
20.0	21.67050 (87011015)	16.83444 (87011015)
30.0	25.25085 (87092315)	21.26157 (87110509)
40.0	32.04677 (87110503)	29.14268 (87110503)
50.0	30.89132 (87071515)	21.35250 (87092409)
60.0	53.72160 (87030806)	38.02285 (87030806)
70.0	40.01266 (87030818)	29.74469 (87030818)
80.0	32.04839 (87031918)	30.97617 (87031918)
90.0	20.11848 (87030912)	15.46128 (87031921)
100.0	15.64304 (87010418)	11.87457 (87010424)
110.0	21.61302 (87010506)	17.53587 (87010506)
120.0	27.45422 (87031003)	17.81350 (87010503)
130.0	27.48454 (87020824)	22.02685 (87081118)
140.0	30.60132 (87012615)	23.07455 (87010115)
150.0	36.93105 (87042621)	26.86545 (87042621)
160.0	31.51648 (87102812)	25.36769 (87040521)
170.0	33.32859 (87112012)	27.92674 (87022315)
180.0	32.41917 (87011109)	30.45013 (87120121)
190.0	30.86155 (87121715)	26.56448 (87121715)
200.0	26.56775 (87101524)	23.20450 (87101524)
210.0	33.13390 (87050509)	28.43965 (87103118)
220.0	31.22196 (87101021)	25.88290 (87101021)
230.0	34.00053 (87112406)	28.61604 (87021206)
240.0	33.50309 (87110715)	26.74349 (87112512)
250.0	29.71589 (87110815)	24.86917 (87060421)
260.0	27.31377 (87111512)	22.94773 (87111512)
270.0	28.35470 (87052121)	26.95586 (87052121)
280.0	25.76650 (87072118)	24.47759 (87072103)
290.0	31.14958 (87060803)	22.74886 (87051818)
300.0	31.56925 (87061106)	31.29646 (87031621)
310.0	38.76405 (87061318)	32.24446 (87121415)
320.0	33.14150 (87111818)	31.71827 (87010403)
330.0	35.92405 (87022709)	29.98434 (87022709)
340.0	30.09092 (87061509)	31.39834 (87032724)
350.0	25.70496 (87032412)	22.81654 (87011612)
360.0	29.24730 (87011815)	21.69934 (87091209)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	10.24829 (87101224)	5.75858 (87101224)	6.87320 (87010424)	7.39155 (87032824)	9.29021 (87062624)
20.0 |	12.52363 (87010424)	2.13484 (87010424)	3.49184 (87062324)	6.63650 (87062624)	7.74676 (87062624)
30.0 |	0.17748c(87062424)	0.83074c(87062424)	5.80562 (87062524)	10.61086 (87062524)	11.78812 (87062524)
40.0 |	13.34049 (87062524)	10.18511 (87110524)	9.50105 (87062524)	11.46154 (87062524)	11.86027 (87062524)
50.0 |	187.77187 (87030824)	89.52917 (87030824)	27.25340 (87030824)	16.24847c(87093024)	16.80110c(87093024)
60.0 |	74.96295 (87030824)	97.60209 (87030824)	63.20465 (87030824)	50.61959 (87030824)	46.38968 (87030824)
70.0 |	49.79925 (87041824)	28.13402 (87041824)	16.90654 (87010124)	14.83148 (87010124)	13.67126 (87030824)
80.0 |	10.71497 (87041724)	13.48116 (87041824)	13.14921 (87041824)	9.79243 (87041824)	8.60429 (87041824)
90.0 |	2.34006 (87010524)	1.60067 (87011124)	5.42605 (87041724)	6.85506 (87041724)	6.76249 (87041724)
100.0 |	11.06054 (87010524)	4.06193 (87010524)	2.52028 (87081124)	7.13161 (87010424)	9.14662 (87010424)
110.0 |	5.05110 (87033124)	8.89866 (87010524)	7.40792 (87010524)	6.14209 (87041624)	5.27833 (87041624)
120.0 |	9.21000 (87033124)	6.60333 (87012224)	9.31555 (87042924)	11.36325 (87042924)	10.62677 (87041624)
130.0 |	6.20790 (87033124)	10.26448 (87033124)	11.89397 (87033124)	14.64614 (87020824)	15.88188 (87020824)
140.0 |	6.74342 (87010524)	5.59278 (87033124)	14.51423 (87033124)	18.87280 (87033124)	17.59986 (87033124)
150.0 |	4.99199 (87122924)	8.08083 (87010524)	11.11166 (87042224)	16.06845 (87042224)	16.77437 (87042224)
160.0 |	5.30691 (87112024)	8.82082 (87112024)	14.18926 (87112024)	15.85135 (87040424)	16.96890 (87040424)
170.0 |	3.90971 (87040124)	7.41342 (87040124)	12.80166 (87112024)	18.09218 (87112024)	20.00274 (87112024)
180.0 |	2.90954 (87031124)	5.81615 (87102624)	10.68326 (87121724)	13.09561 (87101424)	14.68124 (87101424)
190.0 |	3.95948 (87042724)	6.69170 (87031124)	10.20478 (87031124)	11.18308 (87031124)	11.73552 (87100824)
200.0 |	4.73268 (87042724)	6.85522 (87042724)	9.55773 (87112124)	12.29958 (87101524)	13.66617 (87101524)
210.0 |	4.67092 (87042724)	7.81926 (87042724)	10.68139 (87103124)	13.58223 (87021024)	14.59166 (87021024)
220.0 |	3.55799 (87042724)	6.27249 (87042724)	10.39843 (87100424)	12.75302 (87100424)	13.52372 (87100424)
230.0 |	4.65461 (87100924)	9.81458 (87100924)	16.31322 (87100924)	18.93981 (87100924)	19.09882 (87100924)
240.0 |	3.61899c(87040224)	7.06849 (87110724)	12.87377 (87110724)	15.46607 (87110724)	15.81814 (87110724)
250.0 |	3.76899 (87110724)	7.21664 (87110724)	13.24928 (87110824)	17.29986 (87110824)	18.66951 (87110824)
260.0 |	2.25268 (87110824)	5.54740 (87110824)	9.43611 (87030524)	10.53781 (87111524)	11.08105 (87111524)
270.0 |	1.44080 (87030524)	3.61402 (87111524)	6.15006 (87111524)	8.25122 (87052224)	9.73469 (87052424)
280.0 |	1.67394 (87052224)	4.51005 (87052224)	8.58823 (87052224)	11.56948 (87052424)	12.04039 (87052424)
290.0 |	2.16014 (87052224)	4.23157 (87052224)	12.06705 (87060824)	15.69469 (87060824)	16.10728 (87060824)
300.0 |	1.99930 (87060824)	5.78359 (87060824)	10.13056 (87060824)	12.91598 (87060924)	15.46665 (87061124)
310.0 |	1.94479 (87060824)	4.66286 (87052524)	13.91389 (87061124)	21.37631 (87031724)	23.80351 (87031724)
320.0 |	2.75101 (87111624)	7.30439 (87111624)	13.02892 (87111724)	17.46243 (87121424)	20.89513 (87031824)
330.0 |	7.05764 (87111624)	6.27711 (87111724)	10.84785 (87031824)	13.66925 (87032624)	16.69436 (87032624)
340.0 |	6.04240 (87111724)	3.63292 (87030624)	10.03531 (87022824)	14.81201 (87022824)	15.97244 (87022824)
350.0 |	5.86268 (87030624)	7.72633 (87030624)	8.23502 (87022824)	9.75190 (87062224)	11.01572 (87033024)
360.0 |	10.59870 (87101224)	7.87965 (87101224)	4.87800 (87101224)	6.75663 (87011524)	8.72656 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)	
	750.00	1000.00
10.0 |	10.80109 (87062624)	9.53150 (87090524)
20.0 |	7.33094 (87062624)	5.87104 (87062624)
30.0 |	9.69553 (87062524)	7.32822 (87062524)
40.0 |	10.70668 (87110524)	9.33204 (87110524)
50.0 |	13.01383 (87093024)	9.48871 (87093024)
60.0 |	31.70515 (87030824)	22.44893 (87030824)
70.0 |	11.04714 (87030824)	8.30502 (87030824)
80.0 |	6.41546 (87041824)	4.84514 (87041824)
90.0 |	4.94703 (87041824)	4.41437 (87041824)
100.0 |	6.59859 (87010424)	3.90572 (87010424)
110.0 |	4.58579 (87010424)	4.59092 (87010424)
120.0 |	8.15786 (87041624)	6.11075 (87041624)
130.0 |	11.22644 (87012624)	8.97365 (87120424)
140.0 |	14.32187 (87012624)	12.26913 (87012624)
150.0 |	12.51174 (87042624)	9.59369 (87042624)
160.0 |	14.28852 (87102824)	11.17243 (87102824)
170.0 |	17.30782 (87112024)	13.12315 (87112024)
180.0 |	13.94701 (87101424)	11.41010 (87101424)
190.0 |	12.13930 (87101424)	10.44606 (87101424)
200.0 |	12.87093 (87101524)	10.53230 (87101524)
210.0 |	13.32844 (87021024)	11.02740 (87021024)
220.0 |	12.18816 (87100424)	9.87309 (87100424)
230.0 |	16.22911 (87112324)	13.03544 (87112324)
240.0 |	13.27697 (87110724)	10.40726 (87110724)
250.0 |	16.70109 (87110824)	13.30280 (87110824)
260.0 |	9.69619 (87111524)	7.69815 (87111524)
270.0 |	10.41652 (87052424)	9.18381 (87052424)
280.0 |	11.55441 (87060824)	9.92171 (87060824)
290.0 |	12.63571 (87060824)	11.02679 (87060924)
300.0 |	16.41496 (87061124)	14.18476 (87061124)
310.0 |	21.84947 (87060224)	16.15907 (87060224)
320.0 |	22.09454 (87031824)	17.27811 (87031824)
330.0 |	15.43204 (87032424)	12.32488 (87032424)
340.0 |	12.97969 (87022824)	9.57751 (87022824)
350.0 |	10.55191 (87033024)	8.78938 (87033024)
360.0 |	9.15520 (87032824)	7.17110 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	5.23688 (87032724)	5.39880 (87010424)	4.15684 (87050824)	6.90835 (87091924)	9.08904 (87090524)
20.0 |	4.08369 (87101224)	0.28488 (87030124)	3.36551 (87062624)	5.57430 (87031924)	6.36440 (87011924)
30.0 |	0.13279c(87043024)	0.62240c(87043024)	3.70815c(87040324)	6.66923 (87062624)	7.97176 (87062624)
40.0 |	12.05856c(87100124)	10.11191 (87062524)	7.32227 (87062724)	9.52383c(87043024)	10.32209c(87043024)
50.0 |	98.22907 (87030724)	44.96640 (87030724)	19.48316c(87093024)	15.83187 (87030824)	12.80573 (87030824)
60.0 |	71.62622 (87041724)	61.61695 (87041724)	34.13909 (87030724)	25.94062 (87030724)	22.99283 (87030724)
70.0 |	20.70784 (87041624)	24.54942 (87010424)	15.69067 (87041824)	12.64723 (87030824)	12.54432 (87010124)
80.0 |	5.87815 (87030724)	13.18725 (87041724)	6.61056 (87010124)	5.40017 (87010124)	5.32555 (87010424)
90.0 |	0.14158 (87092524)	1.13996 (87041724)	2.74434 (87010424)	3.50880 (87041824)	4.66798 (87041824)
100.0 |	0.59307 (87033124)	1.28864 (87041624)	2.32278 (87010424)	3.29948 (87092524)	3.53991 (87092524)
110.0 |	4.66678 (87012224)	2.95552 (87041624)	6.93514 (87041624)	5.70082 (87010524)	4.94871 (87010524)
120.0 |	5.93606 (87012224)	6.45597 (87033124)	8.11930 (87042524)	10.73580 (87041624)	10.48923 (87042924)
130.0 |	3.31429 (87101224)	4.58981 (87012224)	11.15069 (87012224)	13.23763 (87012624)	14.40342 (87012624)
140.0 |	5.04851 (87122924)	5.13488 (87042224)	9.80422 (87042224)	10.49099 (87012724)	12.57636 (87012724)
150.0 |	4.58193 (87010524)	7.20424 (87122924)	8.45932 (87040424)	11.03132 (87042624)	13.14872 (87042624)
160.0 |	4.50565 (87040124)	7.65894 (87040424)	12.57969 (87040424)	14.34695 (87111124)	15.73529 (87102824)
170.0 |	3.41025 (87042124)	7.27775 (87042124)	11.16386 (87121624)	13.83386 (87011124)	14.16656 (87011124)
180.0 |	2.73002 (87102624)	4.95808 (87031124)	9.50204 (87101424)	13.02866 (87121724)	13.14533 (87010624)
190.0 |	3.33950 (87031124)	5.04985 (87042724)	9.01421 (87102624)	11.12535 (87102624)	11.54750 (87102924)
200.0 |	3.90206 (87053124)	6.47459 (87053124)	9.35627 (87053124)	11.09980 (87031124)	11.84724 (87031124)
210.0 |	2.72128 (87053124)	5.75231 (87103124)	10.61105 (87021024)	13.40706 (87103124)	14.31125 (87103124)
220.0 |	3.10049 (87100424)	6.18121 (87100424)	9.74842 (87042724)	11.99726 (87103124)	12.71170 (87103124)
230.0 |	3.32847 (87100424)	7.46914 (87112324)	13.95917 (87112324)	17.39736 (87112324)	18.36477 (87112324)
240.0 |	3.25979 (87100924)	6.71772 (87112324)	11.37225 (87112324)	13.54718 (87120624)	14.33859 (87120624)
250.0 |	3.19469c(87040224)	6.36205 (87110824)	9.59223 (87110724)	11.63228 (87112524)	12.43475 (87112524)
260.0 |	1.99585c(87040224)	5.12145 (87030524)	8.49340 (87111524)	9.97064 (87030524)	8.82199 (87030524)
270.0 |	1.43435 (87091624)	3.44210 (87091624)	5.79306 (87112724)	8.17149 (87052424)	9.71804 (87052224)
280.0 |	1.63812 (87082124)	3.31166 (87082124)	8.49445 (87052424)	9.71392 (87052224)	10.56208 (87060824)
290.0 |	1.86581 (87082124)	4.16092 (87052424)	7.31790 (87052424)	9.91185 (87111624)	11.37471 (87111624)
300.0 |	1.75152 (87052224)	3.83515 (87052424)	9.67810 (87060924)	12.39439 (87061124)	12.89653 (87060924)
310.0 |	1.56524 (87052424)	3.98595 (87071024)	12.06330 (87022624)	19.70339 (87061124)	22.26066 (87060224)
320.0 |	1.71381 (87111724)	5.88818 (87061124)	11.83463 (87060224)	17.24990 (87111724)	19.10563 (87121424)
330.0 |	3.43599 (87110324)	3.48504 (87061124)	9.54385 (87051924)	13.55947 (87031824)	15.21215 (87022824)
340.0 |	3.14788 (87101224)	3.26153 (87022824)	9.28413 (87061624)	11.15673 (87061624)	11.02180 (87073024)
350.0 |	4.64935 (87022824)	7.48995 (87101224)	8.20509 (87062224)	9.48374 (87033024)	8.80239 (87062224)
360.0 |	8.27018 (87030624)	4.66152 (87032724)	4.76382 (87091324)	6.35468 (87061524)	7.03861 (87012024)

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
DEGREES | 750.00 1000.00

DIRECTION DEGREES	750.00	1000.00
10.0	10.79799 (87090524)	8.81680 (87062624)
20.0	6.16379 (87012224)	5.64832 (87012224)
30.0	7.81458 (87012224)	6.35089 (87110424)
40.0	9.53230 (87062524)	7.55203 (87021624)
50.0	10.30172 (87110424)	7.75167 (87043024)
60.0	16.21074 (87093024)	12.26312 (87093024)
70.0	7.81721 (87030924)	6.52917 (87030924)
80.0	4.95829 (87010424)	3.90288 (87031924)
90.0	4.44057 (87041724)	2.71259 (87041724)
100.0	3.37066 (87041624)	2.68701 (87041624)
110.0	4.39330 (87010524)	3.56073 (87010524)
120.0	7.13442 (87010524)	5.54345 (87020724)
130.0	11.21121 (87020824)	7.74223 (87042524)
140.0	11.73100 (87042324)	10.19451 (87042324)
150.0	12.37334 (87042224)	9.42344 (87033124)
160.0	14.13591 (87040424)	10.65511 (87040424)
170.0	14.49501 (87111124)	12.71856 (87111124)
180.0	13.12733 (87011324)	11.30608 (87031224)
190.0	10.70498 (87121724)	9.01678 (87121724)
200.0	11.10612 (87031124)	9.98630 (87102924)
210.0	12.93936 (87103124)	10.49586 (87103124)
220.0	11.28737 (87103124)	9.65460 (87101124)
230.0	15.88603 (87100924)	12.56073 (87111324)
240.0	12.78370 (87120624)	10.24108 (87120624)
250.0	11.51791 (87111524)	9.65911 (87111524)
260.0	6.93994 (87031524)	5.87231 (87031524)
270.0	9.63775 (87052224)	7.99545 (87052224)
280.0	9.43248 (87052324)	8.04689 (87052324)
290.0	12.62084 (87060924)	9.06706 (87060824)
300.0	13.84984 (87051624)	13.98287 (87051624)
310.0	19.02138 (87061924)	15.41173 (87061924)
320.0	14.72474 (87121424)	12.90840 (87032524)
330.0	15.03545 (87032624)	11.42383 (87032624)
340.0	10.51801 (87032724)	9.43686 (87012124)
350.0	8.54395 (87030124)	7.53871 (87011524)
360.0	7.63556 (87012524)	6.50178 (87012524)

MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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LL	1ST HIGHEST VALUE IS	3.38365 AT (-383.02, 321.39, 0.00, 0.00)	GP	POL
	2ND HIGHEST VALUE IS	3.30769 AT (97.01, 73.81, 0.00, 0.00)	GP	POL
	3RD HIGHEST VALUE IS	3.00968 AT (-306.42, 257.11, 0.00, 0.00)	GP	POL
	4TH HIGHEST VALUE IS	2.98447 AT (-574.53, 482.09, 0.00, 0.00)	GP	POL
	5TH HIGHEST VALUE IS	2.57011 AT (114.91, 96.42, 0.00, 0.00)	GP	POL
	6TH HIGHEST VALUE IS	2.55500 AT (-257.12, 306.42, 0.00, 0.00)	GP	POL

** RECEPTOR TYPES: GC = GRIDCART

- GP = GRIDPOLR
- DC = DISCCART
- DP = DISCPOLR
- BD = BOUNDARY

MODELOPTS: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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L	HIGH 1ST HIGH VALUE IS 415.74484 ON 87030803: AT (114.91, 96.42, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 362.45737 ON 87030721: AT (97.01, 73.81, 0.00, 0.00)	GP	POL	

** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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LL	HIGH 1ST HIGH VALUE IS 229.25468 ON 87030824: AT (97.01, 73.81, 0.00, 0.00)	GP POL		
	HIGH 2ND HIGH VALUE IS 124.94317 ON 87030724: AT (97.01, 73.81, 0.00, 0.00)	GP POL		

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

** Message Summary : ISCST3 Model Execution **

----- Summary of Total Messages -----

Total of	0 Fatal Error Message(s)
Total of	0 Warning Message(s)
A Total of	123 Informational Message(s)
Total of	123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

CO STARTING
CO TITLEONE 1987 STOCK ISLAND POWER PLANT-HSD STACKS RAISED(7.32M)(12.2M TOTAL)-11/06/97
CO TITLETWO ANN 24&3-HR-ALL-SS UNITS-PM10-40F & 100%-CTS IN NEW LOCATION(PM1CT732.IN)
CO MODELOPT DFAULT CONC RURAL
CO AVERTIME 3 24 PERIOD
CO POLLUTID OTHER
CO DCAYCOEF .000000
CO RUNORNOT RUN
CO FINISHED

CO STARTING
SO LOCATION HSD1 POINT 56.6 63.2 0.0
SO LOCATION HSD2 POINT 55.6 55.6 0.0
SO LOCATION HSD3 POINT 54.7 48.4 0.0
SO LOCATION MSD POINT -7.2 35.88 0.0
SO LOCATION GT POINT 26.2 -56.8 0.0
SO LOCATION SS1GT POINT 38.9 -58.4 0.0
SO LOCATION SS2GT POINT 53.1 -60.1 0.0

** POINT: SRCID QS HS TS VS DS
SO SRCPARAM HSD1 0.97 12.20 660.8 20.38 0.76
SO SRCPARAM HSD2 0.97 12.20 660.8 20.38 0.76
SO SRCPARAM HSD3 0.97 12.20 660.8 20.38 0.76
SO SRCPARAM MSD 1.08 30.49 588.6 30.5 1.74
SO SRCPARAM GT 2.27 11.77 766 24.0 3.93
SO SRCPARAM SS1GT 2.10 13.08 801.0 24.65 3.85
SO SRCPARAM SS2GT 2.10 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
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SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
SO BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
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SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
SO BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
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SO BUILDWID HSD3 12.30 12.53 12.37 11.80 35.76 29.40
SO BUILDWID HSD3 27.09 23.96 25.29 28.10 32.60 32.48
SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69
SO BUILDWID HSD3 12.30 12.53 12.37 11.80 10.88 9.62
SO BUILDWID HSD3 8.07 6.28 4.30 3.73 32.60 32.48
SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97
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SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 11.46 11.75
SO BUILDWID MSD 12.11 30.35 18.94 18.93 18.34 30.59
SO BUILDWID MSD 27.12 29.42 30.83 31.30 30.82 29.40
SO BUILDWID MSD 27.09 23.96 25.29 28.10 30.06 31.10
SO BUILDWID MSD 31.20 30.35 28.58 32.08 30.84 30.59

SO BUILDHGT GT 12.19 12.19 12.19 4.88 4.88 4.88
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SO BUILDWID GT 26.98 25.74 26.49 19.98 23.27 25.85
SO BUILDWID GT 27.65 28.61 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90
SO BUILDWID GT 6.97 11.73 16.13 19.98 23.27 25.85
SO BUILDWID GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID GT 26.70 24.42 21.40 17.73 13.52 8.90

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SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90
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SO BUILDWID SS1GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS1GT 26.70 24.42 21.40 17.73 13.52 8.90

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SO BUILDWID SS2GT 27.64 28.60 28.69 28.52 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00
SO BUILDWID SS2GT 6.95 11.69 16.08 19.97 23.26 25.85
SO BUILDWID SS2GT 27.64 28.60 28.69 28.54 28.78 28.17
SO BUILDWID SS2GT 26.70 24.42 21.40 17.82 13.62 9.00

SO EMISUNIT .100000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)
SO SRCCGROUP ALL
SO FINISHED

RE STARTING
RE GRIDPOLR POL STA
RE GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)
RE GRIDPOLR POL ORIG 0.0 0.0
RE GRIDPOLR POL DIST 150. 200. 300. 400. 500. 750. 1000.
RE GRIDPOLR POL GDIR 36 10.0 10.0
RE BOUNDARY MSD 187.6 202.2 226.7 183.6 145.8 124.0 110.9 103.1
RE BOUNDARY MSD 99.1 98.3 100.5 106.1 116.2 132.8 160.4 196.5 302.1
RE BOUNDARY MSD 291.9 291.0 192.3 146.9 121.8 106.8 97.7 92.7 90.8
RE BOUNDARY MSD 91.6 95.5 102.9 115.4 136.0 171.9 192.0 182.2 178.3 180.1
RE GRIDPOLR POL END
RE FINISHED

ME STARTING
ME INPUTFIL KYWPRE87.LST
ME ANEMHGHT 6.700 METERS
ME SURFDATA 12836 1987 KEY WEST
ME UAIRDATA 12844 1987 MIAMI
ME FINISHED

OU STARTING
OU RECTABLE ALLAVE FIRST-SECOND
OU FINISHED

** SETUP Finishes Successfully **



*MODELOPTs: CONC RURAL FLAT DEFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

*Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F

*Model Uses NO WET DEPLETION. WDPLETE = F

*NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

*Model Uses RURAL Dispersion.

*Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

*Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

*Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 7 Source(s); 1 Source Group(s); and 288 Receptor(s)

*The Model Assumes A Pollutant Type of: OTHER

**Model Set To Continue RUNning After the Setup Testing.

*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

*Misc. Inputs: Anem. Hgt. (m) = 6.70; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS/CUBIC-METER)

*Input Runstream File: pm1ct732.in ; **Output Print File: pm1ct732.out

*MODELOPTs: CONC

RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	PART. CATS.	NUMBER EMISSION RATE (USER UNITS) (METERS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR	VARY BY
HSD1	0	0.97000E+00	56.6	63.2	0.0	12.20	660.80	20.38	0.76	YES		
HSD2	0	0.97000E+00	55.6	55.6	0.0	12.20	660.80	20.38	0.76	YES		
HSD3	0	0.97000E+00	54.7	48.4	0.0	12.20	660.80	20.38	0.76	YES		
MSD	0	0.10800E+01	-7.2	35.9	0.0	30.49	588.60	30.50	1.74	YES		
GT	0	0.22700E+01	26.2	-56.8	0.0	11.77	766.00	24.00	3.93	YES		
SS1CT	0	0.21000E+01	38.9	-58.4	0.0	13.08	801.00	24.65	3.85	YES		
SS2CT	0	0.21000E+01	53.1	-60.1	0.0	13.08	801.00	24.65	3.85	YES		

*MODELOPTs: CONC

RURAL FLAT

DEFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID

SOURCE IDs

ALL HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: HSD1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	3.1	4.4	0	10	3.1	3.6	0	11	3.1	5.7	0	12	3.1	7.5	0
13	3.1	9.1	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.9	0	23	3.1	10.9	0	24	3.1	9.7	0
25	3.1	8.2	0	26	3.1	6.4	0	27	3.1	4.4	0	28	3.1	3.6	0	29	3.1	5.7	0	30	3.1	7.5	0
31	3.1	9.1	0	32	3.1	10.4	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	3.1	3.5	0	11	3.1	5.5	0	12	3.1	7.4	0
13	5.8	31.4	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.2	0	26	3.1	6.5	0	27	3.1	4.5	0	28	3.1	3.5	0	29	3.1	5.5	0	30	3.1	7.4	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	3.1	11.8	0	5	7.6	35.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	5.8	32.6	0	12	5.8	32.5	0
13	5.8	31.4	0	14	5.8	29.3	0	15	5.8	26.4	0	16	5.8	22.6	0	17	5.8	18.2	0	18	5.8	15.7	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.1	0	26	3.1	6.3	0	27	3.1	4.3	0	28	3.1	3.7	0	29	5.8	32.6	0	30	5.8	32.5	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: MSD

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	11.0	27.1	0	2	11.0	29.4	0	3	11.0	30.8	0	4	11.0	31.3	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	15.3	11.5	0	12	15.3	11.8	0
13	15.3	12.1	0	14	11.0	30.3	0	15	16.1	18.9	0	16	16.1	18.9	0	17	16.1	18.3	0	18	11.0	30.6	0
19	11.0	27.1	0	20	11.0	29.4	0	21	11.0	30.8	0	22	11.0	31.3	0	23	11.0	30.8	0	24	11.0	29.4	0
25	11.0	27.1	0	26	11.0	24.0	0	27	11.0	25.3	0	28	11.0	28.1	0	29	11.0	30.1	0	30	11.0	31.1	0
31	11.0	31.2	0	32	11.0	30.3	0	33	11.0	28.6	0	34	11.0	32.1	0	35	11.0	30.8	0	36	11.0	30.6	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: CT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	12.2	27.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS1CT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	12.2	27.3	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS2CT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	4.9	11.7	0	3	4.9	16.1	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.8	0	17	4.9	13.6	0	18	4.9	9.0	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.8	0	35	4.9	13.6	0	36	4.9	9.0	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00 ; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

150.0, 200.0, 300.0, 400.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(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,

*MODELOPTS: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: KYWPRE87.LST FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
 SURFACE STATION NO.: 12836 UPPER AIR STATION NO.: 12844
 NAME: KEY NAME: MIAMI
 YEAR: 1987 YEAR: 1987

YEAR	MONTH	DAY	FLOW	SPEED	TEMP	STAB	MIXING HEIGHT (M)	USTAR	M-O LENGTH	Z-0	IPCODE	PRATE
			VECTOR	(M/S)	(K)	CLASS	RURAL	URBAN	(M/S)	(M)	(M)	(mm/HR)
87	1	1	1	51.0	7.20	294.8	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	2	38.0	8.75	294.3	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	3	84.0	6.69	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	4	73.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	5	63.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	6	72.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	7	75.0	10.29	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	8	93.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	9	117.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	10	131.0	6.17	295.9	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	11	144.0	8.75	297.0	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	12	136.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	13	143.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	14	149.0	9.26	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	15	142.0	9.77	296.5	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	16	144.0	8.75	295.4	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	17	161.0	9.26	294.8	4	420.0	420.0	0.0000	0.0	0.0000 0 0.00
87	1	1	18	157.0	8.75	293.7	4	423.3	423.3	0.0000	0.0	0.0000 0 0.00
87	1	1	19	184.0	8.23	293.7	4	436.9	436.9	0.0000	0.0	0.0000 0 0.00
87	1	1	20	187.0	7.72	293.7	4	450.6	450.6	0.0000	0.0	0.0000 0 0.00
87	1	1	21	170.0	5.66	293.7	4	464.2	464.2	0.0000	0.0	0.0000 0 0.00
87	1	1	22	152.0	6.17	293.7	4	477.8	477.8	0.0000	0.0	0.0000 0 0.00
87	1	1	23	170.0	5.66	293.2	4	491.5	491.5	0.0000	0.0	0.0000 0 0.00
87	1	1	24	160.0	4.12	293.2	5	505.1	681.0	0.0000	0.0	0.0000 0 0.00

** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
 FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	150.00	200.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	0.05904	0.06437	0.27760	0.48138	0.55323	0.49914	0.39245
20.00 |	0.05485	0.01552	0.17405	0.33014	0.37243	0.32710	0.25781
30.00 |	0.00200	0.01170	0.14510	0.30849	0.37270	0.35646	0.29395
40.00 |	0.36417	0.34065	0.31362	0.39746	0.44196	0.38862	0.30450
50.00 |	2.37434	1.42509	0.65366	0.53725	0.52826	0.40604	0.30165
60.00 |	1.69349	1.47670	0.81088	0.65340	0.62789	0.48014	0.36297
70.00 |	0.49758	0.50206	0.39199	0.33813	0.32931	0.26665	0.21126
80.00 |	0.12012	0.19802	0.13070	0.12866	0.14415	0.14360	0.12534
90.00 |	0.00721	0.01995	0.05930	0.08272	0.09570	0.09627	0.08562
100.00 |	0.03347	0.02813	0.06077	0.08684	0.09760	0.08953	0.07511
110.00 |	0.05317	0.07178	0.16681	0.17759	0.17020	0.14566	0.12619
120.00 |	0.09364	0.12357	0.28689	0.34508	0.34481	0.27154	0.20752
130.00 |	0.09018	0.19236	0.41701	0.51162	0.53053	0.44569	0.34813
140.00 |	0.14563	0.23499	0.51074	0.64255	0.67354	0.58510	0.46629
150.00 |	0.20447	0.36118	0.62914	0.71757	0.73974	0.66732	0.55994
160.00 |	0.24793	0.47641	0.82738	0.96749	0.99378	0.84778	0.67754
170.00 |	0.22828	0.51354	1.00436	1.23160	1.28295	1.11628	0.90223
180.00 |	0.19322	0.43319	0.84292	1.09527	1.21185	1.19092	1.03619
190.00 |	0.19259	0.41329	0.74011	0.92514	0.99763	0.94813	0.81326
200.00 |	0.22164	0.45362	0.74959	0.90492	0.96016	0.90353	0.77670
210.00 |	0.24918	0.51538	0.86486	1.05392	1.12082	1.05134	0.90298
220.00 |	0.26186	0.53839	0.89907	1.09687	1.16930	1.09964	0.93988
230.00 |	0.28086	0.59090	1.00918	1.24811	1.34042	1.27039	1.09048
240.00 |	0.26191	0.55534	0.93929	1.15366	1.23387	1.16941	1.01269
250.00 |	0.20558	0.43364	0.71492	0.86169	0.91114	0.85831	0.75027
260.00 |	0.14548	0.31381	0.53691	0.66132	0.71143	0.68573	0.60231
270.00 |	0.10705	0.24680	0.46418	0.60564	0.68407	0.71880	0.66511
280.00 |	0.09072	0.24544	0.57325	0.79655	0.90685	0.90949	0.79952
290.00 |	0.09778	0.30182	0.76120	1.05909	1.21006	1.22635	1.08188
300.00 |	0.11257	0.38411	1.10199	1.62990	1.95962	2.16062	1.98873
310.00 |	0.13054	0.51264	1.84085	2.78072	3.12642	2.75952	2.15278
320.00 |	0.15516	0.68104	2.01749	2.36066	2.35546	1.98758	1.61478
330.00 |	0.16821	0.55241	1.53568	2.00935	2.14185	1.82530	1.41977
340.00 |	0.10997	0.35607	1.29722	1.58075	1.52054	1.11247	0.81729
350.00 |	0.07811	0.27457	0.74343	0.87327	0.85556	0.68839	0.54582
360.00 |	0.11885	0.11548	0.39468	0.58376	0.64489	0.58505	0.48151

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	59.31841 (87101209)	29.97681 (87101212)	33.63176 (87010409)	26.41701 (87012012)	30.17343 (87062706)
20.0 |	60.43912 (87010409)	10.48383 (87010409)	15.57446 (87062512)	24.80474 (87062512)	25.26569 (87062512)
30.0 |	0.97387 (87062412)	4.26872 (87062412)	21.04229 (87062512)	29.23434 (87062512)	29.62656 (87110424)
40.0 |	55.01958 (87110503)	43.98185 (87071415)	27.78369 (87071415)	29.06452 (87022212)	33.57104 (87021618)
50.0 |	384.06906 (87030803)	197.83415 (87030803)	56.25548 (87041815)	44.74006 (87071515)	43.06304 (87071515)
60.0 |	264.85690 (87010106)	308.66254 (87041709)	156.42296 (87041709)	82.94550 (87041709)	71.05769 (87030806)
70.0 |	195.17189 (87041821)	181.32860 (87010415)	88.04449 (87010415)	64.99633 (87100103)	59.92474 (87010106)
80.0 |	63.64558 (87041706)	63.52753 (87041818)	51.42462 (87041821)	32.19835 (87041821)	38.90694 (87010415)
90.0 |	5.64232 (87010506)	11.82970 (87011106)	30.95557 (87041706)	35.25979 (87041706)	32.20643 (87041706)
100.0 |	44.19820 (87010509)	8.67832 (87010503)	11.58208 (87081112)	27.68686 (87010424)	33.30265 (87010424)
110.0 |	16.47292 (87020818)	40.65700 (87010509)	22.94850 (87041612)	21.76217 (87081115)	26.78163 (87020903)
120.0 |	19.75918 (87010515)	20.07884 (87012221)	30.99682 (87010509)	39.60569 (87042512)	35.98959 (87042512)
130.0 |	15.39172 (87033118)	20.71563 (87033118)	30.90979 (87012221)	34.00276 (87020818)	36.67677 (87020818)
140.0 |	24.41673 (87010518)	14.23710 (87042215)	30.59819 (87033118)	32.99786 (87033109)	30.67983 (87012615)
150.0 |	19.52283 (87101215)	29.36051 (87010518)	28.58062 (87042412)	31.17629 (87042215)	32.42109 (87042621)
160.0 |	20.04529 (87112021)	23.84838 (87040415)	30.06972 (87040415)	40.07109 (87010518)	40.28391 (87010518)
170.0 |	13.82410 (87042112)	25.09675 (87042112)	35.10602 (87042115)	35.31189 (87112021)	33.53402 (87022315)
180.0 |	12.95433 (87051215)	22.80083 (87102615)	36.29005 (87042112)	38.28327 (87042112)	35.29526 (87102015)
190.0 |	20.70125 (87042715)	26.18109 (87042715)	28.56660 (87110615)	35.80869 (87110615)	35.36182 (87110615)
200.0 |	21.98149 (87042715)	31.25913 (87042715)	35.15124 (87042715)	31.44994 (87042715)	29.69726 (87112124)
210.0 |	13.41291 (87042715)	19.57576 (87042715)	25.72955 (87031406)	31.75722 (87103118)	34.90137 (87103118)
220.0 |	14.03508 (87042712)	20.00533 (87042712)	30.62582 (87100912)	34.98222 (87100912)	34.74700 (87100912)
230.0 |	20.78077 (87091512)	29.16405 (87091512)	33.46397 (87091512)	35.21342 (87100412)	34.76421 (87103024)
240.0 |	21.32004 (87091512)	27.77530 (87091512)	29.94178 (87110715)	36.12010 (87110715)	36.90798 (87110715)
250.0 |	14.75001 (87091512)	20.22406 (87110718)	32.81257 (87102324)	37.04766 (87102324)	35.15029 (87102324)
260.0 |	7.43727 (87122312)	14.82321 (87030518)	28.56054 (87030515)	33.33445 (87030515)	31.61144 (87030515)
270.0 |	7.66162 (87091615)	17.66843 (87091615)	27.78297 (87091615)	28.04099 (87091615)	24.80967 (87112715)
280.0 |	8.24732 (87070615)	13.83529 (87091615)	24.10724 (87072312)	24.92649 (87052403)	30.86197 (87060818)
290.0 |	9.56763 (87052215)	16.65835 (87052415)	24.82508 (87122412)	33.73909 (87122412)	34.20791 (87122412)
300.0 |	8.79953 (87052415)	18.79933 (87051715)	30.99679 (87112615)	35.80384 (87112615)	33.93412 (87080615)
310.0 |	8.03936 (87111621)	17.37761 (87052512)	34.56425 (87080615)	36.40235 (87111624)	42.19571 (87111624)
320.0 |	7.96703 (87022606)	21.65606 (87111624)	35.38169 (87110306)	34.33371 (87051915)	38.77305 (87121924)
330.0 |	25.38465 (87110306)	24.63257 (87111703)	29.03087 (87082415)	34.36915 (87082415)	35.08268 (87122003)
340.0 |	32.55306 (87111703)	24.20531 (87030624)	30.08187 (87051812)	39.21624 (87061615)	37.42387 (87081812)
350.0 |	36.37185 (87030624)	31.50762 (87101206)	25.47156 (87091312)	34.86689 (87022812)	33.41153 (87091312)
360.0 |	43.99630 (87101206)	36.37446 (87101209)	26.53531 (87101209)	30.61593 (87061515)	33.86540 (87011815)

MODELOPTs: CONC

RURAL FLAT , DEFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 (DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	37.49239 (87062706)	30.39749 (87062706)
20.0	20.29365 (87010412)	15.89215 (87020215)
30.0	36.30756 (87110424)	30.77186 (87110424)
40.0	37.03328 (87021618)	32.06819 (87021618)
50.0	33.93733 (87090418)	27.46181 (87090418)
60.0	50.33585 (87030803)	36.88935 (87030803)
70.0	39.80256 (87010106)	27.69171 (87010106)
80.0	36.58587 (87010415)	28.71359 (87010415)
90.0	19.26644 (87041624)	15.17207 (87041624)
100.0	20.86223 (87010424)	12.68787 (87011106)
110.0	22.60414 (87020903)	17.69236 (87111018)
120.0	30.67797 (87020724)	30.45208 (87020724)
130.0	29.38113 (87081118)	22.30940 (87042418)
140.0	29.69708 (87042321)	28.01575 (87042321)
150.0	35.27472 (87042618)	30.06804 (87042618)
160.0	34.77511 (87040418)	26.71542 (87040418)
170.0	34.07943 (87022315)	26.00036 (87112012)
180.0	31.23299 (87031218)	29.05028 (87031218)
190.0	29.86510 (87100812)	25.78763 (87100812)
200.0	27.21654 (87053109)	22.42021 (87053109)
210.0	32.24987 (87103118)	27.40343 (87120218)
220.0	29.16183 (87111306)	24.16016 (87120312)
230.0	32.97610 (87103024)	27.34261 (87103024)
240.0	32.87793 (87120618)	27.39106 (87120618)
250.0	32.93209 (87123021)	27.60599 (87123021)
260.0	28.25471 (87060624)	24.46109 (87060624)
270.0	27.99105 (87072221)	26.61932 (87072221)
280.0	30.46536 (87060818)	23.70208 (87060818)
290.0	29.98934 (87060921)	25.31413 (87060921)
300.0	30.22721 (87031621)	29.05348 (87061324)
310.0	36.15113 (87121415)	30.83748 (87061318)
320.0	31.93896 (87031803)	29.83084 (87111818)
330.0	33.27544 (87011806)	28.48673 (87080609)
340.0	34.88687 (87032724)	29.58487 (87012121)
350.0	26.62303 (87011612)	21.43315 (87030106)
360.0	34.42590 (87010409)	28.06913 (87010409)

#MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	150.00	200.00	300.00	400.00	500.00
10.0 |	38.09922 (87032703)	26.48452 (87010409)	18.07010 (87061515)	25.64798 (87050812)	29.72380 (87011012)
20.0 |	32.11862 (87010412)	5.29551 (87010412)	13.95300 (87062612)	22.84759 (87062315)	24.51601 (87062315)
30.0 |	0.75857 (87043012)	3.19685 (87043012)	16.45523 (87040315)	26.42662 (87040315)	28.23080 (87011015)
40.0 |	50.46484 (87100106)	43.85096 (87110503)	25.35423 (87041515)	26.87662 (87021618)	33.18626 (87022212)
50.0 |	301.58133 (87030806)	146.77759 (87030806)	55.49327 (87030803)	40.61082 (87041815)	37.25051 (87062509)
60.0 |	244.91748 (87100103)	249.51674 (87010106)	110.99012 (87030721)	81.70683 (87030721)	70.34468 (87030721)
70.0 |	153.04079 (87041624)	103.75906 (87041703)	86.47355 (87041703)	63.70931 (87010106)	57.32224 (87100103)
80.0 |	43.43093 (87030706)	59.85817 (87041706)	32.77135 (87041624)	29.63114 (87010415)	33.33788 (87092318)
90.0 |	4.94139 (87010503)	7.85425 (87030706)	14.78919 (87030706)	18.93454 (87041818)	22.76132 (87041818)
100.0 |	19.26694 (87010512)	8.32007 (87010506)	10.82331 (87010506)	16.50642 (87010418)	21.39813 (87010418)
110.0 |	14.81103 (87012221)	15.44062 (87010512)	21.49170 (87041615)	20.42799 (87020903)	21.04122 (87010506)
120.0 |	16.65438 (87012221)	17.05789 (87012224)	28.23276 (87042512)	39.21837 (87010509)	31.62285 (87010509)
130.0 |	11.64452 (87012215)	18.62605 (87010515)	24.19450 (87033112)	29.14969 (87012221)	31.98176 (87012618)
140.0 |	19.93413 (87122915)	13.61941 (87012215)	29.14381 (87042415)	32.44982 (87042415)	29.58607 (87033109)
150.0 |	16.24384 (87122912)	23.91493 (87122915)	24.92941 (87042215)	30.12950 (87042412)	29.18753 (87042218)
160.0 |	19.84491 (87101218)	23.31329 (87112021)	27.75141 (87122912)	32.59551 (87102812)	37.45397 (87102812)
170.0 |	10.75870 (87101218)	23.01787 (87042115)	32.84839 (87050912)	33.65999 (87112103)	31.26979 (87112021)
180.0 |	12.61395 (87031115)	20.61353 (87042112)	31.80236 (87102015)	37.05857 (87102015)	34.36072 (87042112)
190.0 |	13.73426 (87053112)	21.19863 (87031115)	28.22346 (87102615)	33.79010 (87102615)	33.55783 (87102615)
200.0 |	13.62421 (87053112)	20.21965 (87053112)	25.20331 (87112124)	29.87963 (87112124)	28.12254 (87053109)
210.0 |	13.23334 (87091412)	18.86704 (87091412)	23.66822 (87103118)	31.33775 (87031406)	32.18479 (87031406)
220.0 |	11.87797 (87091512)	18.62040 (87100912)	24.86578 (87042712)	29.23277 (87110621)	31.65398 (87111306)
230.0 |	15.51397 (87100412)	24.00449 (87100412)	32.67028 (87100412)	32.66407 (87100906)	34.39854 (87100412)
240.0 |	12.45812 (87042012)	20.52489 (87040212)	28.37726 (87040212)	30.16423 (87040212)	34.02281 (87120618)
250.0 |	12.41652 (87040212)	19.65140 (87040212)	31.71427 (87110718)	32.31110 (87110718)	32.72267 (87123021)
260.0 |	7.05868 (87091512)	13.07233 (87030515)	26.41104 (87030518)	26.72703 (87091615)	28.01996 (87111518)
270.0 |	7.46277 (87070615)	14.56852 (87112715)	24.04473 (87112715)	25.78514 (87112715)	24.33222 (87091615)
280.0 |	7.69012 (87091615)	13.81356 (87072312)	19.85543 (87110303)	23.92296 (87072312)	24.96021 (87052415)
290.0 |	8.08711 (87082112)	15.70052 (87072312)	24.24350 (87051715)	32.19831 (87052318)	33.36694 (87060803)
300.0 |	8.10544 (87052215)	15.89900 (87082712)	30.85191 (87022015)	33.90888 (87022015)	31.19720 (87112615)
310.0 |	7.16956 (87051715)	15.73506 (87082615)	33.11191 (87092815)	36.05622 (87070812)	38.76264 (87022609)
320.0 |	7.40074 (87030621)	19.82393 (87060715)	31.56387 (87080612)	32.75380 (87061315)	36.05729 (87121424)
330.0 |	24.96324 (87111624)	23.12661 (87110306)	28.33576 (87061715)	33.20206 (87051812)	34.75407 (87051812)
340.0 |	17.44740 (87110306)	17.89281 (87101206)	28.83296 (87090112)	34.20736 (87022815)	37.00235 (87061615)
350.0 |	19.86567 (87101206)	31.45506 (87030624)	25.18143 (87080515)	34.35595 (87091312)	30.01221 (87101209)
360.0 |	34.33292 (87101209)	30.68225 (87032703)	23.57368 (87091312)	28.33058 (87011815)	31.88140 (87061515)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1CT , SS2CT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	24.80447 (87011012)	20.83208 (87090503)
20.0	20.04360 (87011015)	15.60098 (87011015)
30.0	23.34720 (87092315)	19.66559 (87110509)
40.0	29.61188 (87110503)	26.93924 (87110503)
50.0	28.59447 (87071515)	19.75428 (87092409)
60.0	49.63371 (87030806)	35.14215 (87030806)
70.0	36.96767 (87030818)	27.48952 (87030818)
80.0	29.60862 (87031918)	28.62178 (87031918)
90.0	18.58771 (87030912)	14.28611 (87031921)
100.0	14.45331 (87010418)	10.97859 (87010424)
110.0	19.97788 (87010506)	16.22540 (87010506)
120.0	25.36459 (87031003)	16.47907 (87010503)
130.0	25.39372 (87020824)	20.36750 (87081118)
140.0	28.28937 (87012615)	21.35070 (87010115)
150.0	34.12749 (87042621)	24.83227 (87042621)
160.0	29.12854 (87102812)	23.45327 (87040521)
170.0	30.83716 (87112012)	25.80890 (87022315)
180.0	29.96076 (87011109)	28.13594 (87120121)
190.0	28.51892 (87121715)	24.56154 (87121715)
200.0	24.55435 (87101524)	21.45371 (87101524)
210.0	30.61293 (87050509)	26.30038 (87103118)
220.0	28.84884 (87101021)	23.92641 (87101021)
230.0	31.41905 (87112406)	26.44254 (87021206)
240.0	30.97356 (87110715)	24.72988 (87112512)
250.0	27.46177 (87110815)	22.98813 (87060421)
260.0	25.24115 (87111512)	21.22225 (87111512)
270.0	26.20132 (87052121)	24.92407 (87052121)
280.0	23.80722 (87072118)	22.62770 (87072103)
290.0	28.78148 (87060803)	21.03371 (87051818)
300.0	29.16825 (87061106)	28.93494 (87031621)
310.0	35.81484 (87061318)	29.80482 (87121415)
320.0	30.62279 (87111818)	29.31796 (87010403)
330.0	33.18937 (87022709)	27.70770 (87022709)
340.0	27.81196 (87061509)	29.01321 (87032724)
350.0	23.74822 (87032412)	21.11519 (87011612)
360.0	27.03148 (87011815)	20.07696 (87091209)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	9.46747 (87101224)	5.31983 (87101224)	6.34955 (87010424)	6.82839 (87032824)	8.58361 (87062624)
20.0 |	11.56972 (87010424)	1.97242 (87010424)	3.22581 (87062324)	6.13139 (87062624)	7.15815 (87062624)
30.0 |	0.16406c(87062424)	0.76769c(87062424)	5.36385 (87062524)	9.80354 (87062524)	10.89322 (87062524)
40.0 |	12.32410 (87062524)	9.40964 (87110524)	8.77776 (87062524)	10.58993 (87062524)	10.95999 (87062524)
50.0 |	173.46545 (87030824)	82.70789 (87030824)	25.17694 (87030824)	15.01167c(87093024)	15.52230c(87093024)
60.0 |	69.25149 (87030824)	90.16575 (87030824)	58.38906 (87030824)	46.76287 (87030824)	42.85529 (87030824)
70.0 |	46.00502 (87041824)	25.99048 (87041824)	15.61842 (87010124)	13.70147 (87010124)	12.62966 (87030824)
80.0 |	9.89859 (87041724)	12.45403 (87041824)	12.14737 (87041824)	9.04651 (87041824)	7.94932 (87041824)
90.0 |	2.16177 (87010524)	1.47871 (87011124)	5.01263 (87041724)	6.33280 (87041724)	6.24755 (87041724)
100.0 |	10.21784 (87010524)	3.75245 (87010524)	2.33045 (87081124)	6.58826 (87010424)	8.44983 (87010424)
110.0 |	4.66625 (87033124)	8.22066 (87010524)	6.84350 (87010524)	5.67417 (87041624)	4.87637 (87041624)
120.0 |	8.50831 (87033124)	6.10022 (87012224)	8.60775 (87042924)	10.49972 (87042924)	9.81993 (87041624)
130.0 |	5.74096 (87033124)	9.48424 (87033124)	10.98809 (87033124)	13.53030 (87020824)	14.67204 (87020824)
140.0 |	6.27009 (87010524)	5.21629 (87033124)	13.43306 (87033124)	17.45023 (87033124)	16.27012 (87033124)
150.0 |	4.61974 (87122924)	7.49599 (87010524)	10.26721 (87042224)	14.84583 (87042224)	15.49892 (87042224)
160.0 |	4.94224 (87112024)	8.17735 (87112024)	13.12668 (87112024)	14.65733 (87040424)	15.68760 (87040424)
170.0 |	3.63450 (87040124)	6.86633 (87040124)	11.88085 (87112024)	16.75673 (87112024)	18.51460 (87112024)
180.0 |	2.68786 (87031124)	5.37301 (87102624)	9.87234 (87121724)	12.09787 (87101424)	13.56284 (87101424)
190.0 |	3.65781 (87042724)	6.18186 (87031124)	9.42740 (87031124)	10.33188 (87031124)	10.84284 (87100824)
200.0 |	4.37210 (87042724)	6.33292 (87042724)	8.82952 (87112124)	11.36250 (87101524)	12.62538 (87101524)
210.0 |	4.31504 (87042724)	7.22350 (87042724)	9.86757 (87103124)	12.54759 (87021024)	13.48095 (87021024)
220.0 |	3.28690 (87042724)	5.79459 (87042724)	9.60618 (87100424)	11.78146 (87100424)	12.49389 (87100424)
230.0 |	4.29998 (87100924)	9.06680 (87100924)	15.07031 (87100924)	17.49682 (87100924)	17.64427 (87100924)
240.0 |	3.34398c(87040224)	6.52994 (87110724)	11.89291 (87110724)	14.28773 (87110724)	14.61338 (87110724)
250.0 |	3.48183 (87110724)	6.66680 (87110724)	12.23981 (87110824)	15.98179 (87110824)	17.24727 (87110824)
260.0 |	2.08105 (87110824)	5.12474 (87110824)	8.71717 (87030524)	9.73494 (87111524)	10.23691 (87111524)
270.0 |	1.33103 (87030524)	3.33866 (87111524)	5.68148 (87111524)	7.62275 (87052224)	8.99344 (87052424)
280.0 |	1.54640 (87052224)	4.16642 (87052224)	7.93390 (87052224)	10.68820 (87052424)	11.12421 (87052424)
290.0 |	1.99556 (87052224)	3.90916 (87052224)	11.14767 (87060824)	14.49921 (87060824)	14.88168 (87060824)
300.0 |	1.84697 (87060824)	5.34294 (87060824)	9.35871 (87060824)	11.93235 (87060924)	14.29002 (87061124)
310.0 |	1.79662 (87060824)	4.30759 (87052524)	12.85379 (87061124)	19.74790 (87031724)	21.99104 (87031724)
320.0 |	2.54141 (87111624)	6.74786 (87111624)	12.03624 (87111724)	16.13196 (87121424)	19.30399 (87031824)
330.0 |	6.51992 (87111624)	5.79886 (87111724)	10.02135 (87031824)	12.62779 (87032624)	15.42245 (87032624)
340.0 |	5.58203 (87111724)	3.35613 (87030624)	9.27071 (87022824)	13.68347 (87022824)	14.75559 (87022824)
350.0 |	5.41600 (87030624)	7.13766 (87030624)	7.60759 (87022824)	9.00903 (87062224)	10.17668 (87033024)
360.0 |	9.79118 (87101224)	7.27930 (87101224)	4.50634 (87101224)	6.24407 (87011524)	8.06189 (87032824)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1CT ,SS2CT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 (DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	9.98551 (87062624)	8.81878 (87090524)
20.0	6.78106 (87062624)	5.43896 (87062624)
30.0	8.97336 (87062524)	6.79734 (87062524)
40.0	9.89479 (87110524)	8.62901 (87110524)
50.0	12.02773 (87093024)	8.77626 (87093024)
60.0	29.29289 (87030824)	20.74908 (87030824)
70.0	10.20649 (87030824)	7.67562 (87030824)
80.0	5.92964 (87041824)	4.48206 (87041824)
90.0	4.57358 (87041824)	4.08442 (87041824)
100.0	6.09728 (87010424)	3.61090 (87010424)
110.0	4.23944 (87010424)	4.24898 (87010424)
120.0	7.54469 (87041624)	5.65696 (87041624)
130.0	10.37317 (87012624)	8.29533 (87120424)
140.0	13.23874 (87012624)	11.34890 (87012624)
150.0	11.56662 (87042624)	8.87442 (87042624)
160.0	13.20514 (87102824)	10.33058 (87102824)
170.0	16.00980 (87112024)	12.14893 (87112024)
180.0	12.88799 (87101424)	10.54904 (87101424)
190.0	11.21895 (87101424)	9.66036 (87101424)
200.0	11.89454 (87101524)	9.73880 (87101524)
210.0	12.31930 (87021024)	10.20097 (87021024)
220.0	11.26472 (87100424)	9.13256 (87100424)
230.0	14.99837 (87112324)	12.05724 (87112324)
240.0	12.27300 (87110724)	9.63308 (87110724)
250.0	15.43407 (87110824)	12.30333 (87110824)
260.0	8.96083 (87111524)	7.12041 (87111524)
270.0	9.62753 (87052424)	8.49587 (87052424)
280.0	10.68420 (87060824)	9.18823 (87060824)
290.0	11.68202 (87060824)	10.20385 (87060924)
300.0	15.17886 (87061124)	13.13591 (87061124)
310.0	20.19190 (87060224)	14.94334 (87060224)
320.0	20.41950 (87031824)	15.98073 (87031824)
330.0	14.25952 (87032424)	11.39610 (87032424)
340.0	11.99414 (87022824)	8.85828 (87022824)
350.0	9.75147 (87033024)	8.12878 (87033024)
360.0	8.46275 (87032824)	6.63730 (87032824)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	4.83788 (87032724)	4.98747 (87010424)	3.84086 (87050824)	6.38216 (87091924)	8.39842 (87090524)
20.0 |	3.77255 (87101224)	0.26318 (87030124)	3.10930 (87062624)	5.14961 (87031924)	5.88123 (87011924)
30.0 |	0.12268c(87043024)	0.57511c(87043024)	3.42578c(87040324)	6.16143 (87062624)	7.36524 (87062624)
40.0 |	11.13981c(87100124)	9.34156 (87062524)	6.76449 (87062724)	8.79953c(87043024)	9.53847c(87043024)
50.0 |	90.74528 (87030724)	41.54215 (87030724)	18.00003c(87093024)	14.62564 (87030824)	11.83009 (87030824)
60.0 |	66.16900 (87041724)	56.92233 (87041724)	31.53838 (87030724)	23.96422 (87030724)	21.24107 (87030724)
70.0 |	19.13010 (87041624)	22.67900 (87010424)	14.49519 (87041824)	11.68363 (87030824)	11.58868 (87010124)
80.0 |	5.43041 (87030724)	12.18250 (87041724)	6.10690 (87010124)	4.98873 (87010124)	4.91982 (87010424)
90.0 |	0.13079 (87092524)	1.05311 (87041724)	2.53525 (87010424)	3.24189 (87041824)	4.31369 (87041824)
100.0 |	0.54788 (87033124)	1.19046 (87041624)	2.14580 (87010424)	3.04966 (87092524)	3.27182 (87092524)
110.0 |	4.31122 (87012224)	2.73034 (87041624)	6.40675 (87041624)	5.26648 (87010524)	4.57181 (87010524)
120.0 |	5.48383 (87012224)	5.96409 (87033124)	7.50070 (87042524)	9.91854 (87041624)	9.69274 (87042924)
130.0 |	3.06321 (87101224)	4.24248 (87012224)	10.30161 (87012224)	12.22928 (87012624)	13.30622 (87012624)
140.0 |	4.66397 (87122924)	4.74371 (87042224)	9.05725 (87042224)	9.69786 (87012724)	11.62250 (87012724)
150.0 |	4.26730 (87010524)	6.65966 (87122924)	7.81690 (87040424)	10.19703 (87042624)	12.15298 (87042624)
160.0 |	4.17119 (87040124)	7.10156 (87040424)	11.63909 (87040424)	13.26837 (87111124)	14.53782 (87102824)
170.0 |	3.16035 (87042124)	6.73093 (87042124)	10.35340 (87121624)	12.79473 (87011124)	13.09961 (87011124)
180.0 |	2.52202 (87102624)	4.58032 (87031124)	8.77808 (87101424)	12.03817 (87121724)	12.14426 (87010624)
190.0 |	3.08506 (87031124)	4.66510 (87042724)	8.32744 (87102624)	10.27901 (87102624)	10.66831 (87102924)
200.0 |	3.60476 (87053124)	5.98129 (87053124)	8.64343 (87053124)	10.25514 (87031124)	10.94727 (87031124)
210.0 |	2.51395 (87053124)	5.31404 (87103124)	9.80259 (87021024)	12.38558 (87103124)	13.22103 (87103124)
220.0 |	2.86426 (87100424)	5.71026 (87100424)	9.00571 (87042724)	11.08320 (87103124)	11.74344 (87103124)
230.0 |	3.07487 (87100424)	6.90006 (87112324)	12.89562 (87112324)	16.07187 (87112324)	16.96580 (87112324)
240.0 |	3.01142 (87100924)	6.20589 (87112324)	10.50580 (87112324)	12.51506 (87120624)	13.24662 (87120624)
250.0 |	2.95158c(87040224)	5.87732 (87110824)	8.86140 (87110724)	10.74619 (87112524)	11.48876 (87112524)
260.0 |	1.84386c(87040224)	4.73124 (87030524)	7.84629 (87111524)	9.21099 (87030524)	8.14998 (87030524)
270.0 |	1.32506 (87091624)	3.17985 (87091624)	5.35278 (87112724)	7.54896 (87052424)	8.97879 (87052224)
280.0 |	1.51332 (87082124)	3.05938 (87082124)	7.84726 (87052424)	8.97399 (87052224)	9.75879 (87060824)
290.0 |	1.72366 (87082124)	3.84390 (87052424)	6.76035 (87052424)	9.15667 (87111624)	10.50825 (87111624)
300.0 |	1.61807 (87052224)	3.54295 (87052424)	8.94074 (87060924)	11.45029 (87061124)	11.91605 (87060924)
310.0 |	1.44598 (87052424)	3.68226 (87071024)	11.14419 (87022624)	18.20247 (87061124)	20.56518 (87060224)
320.0 |	1.58323 (87111724)	5.43955 (87061124)	10.93294 (87060224)	15.93563 (87111724)	17.65002 (87121424)
330.0 |	3.17420 (87110324)	3.21952 (87061124)	8.81672 (87051924)	12.52647 (87031824)	14.05331 (87022324)
340.0 |	2.90804 (87101224)	3.01303 (87022824)	8.57678 (87061624)	10.30687 (87061624)	10.18604 (87073024)
350.0 |	4.29511 (87022824)	6.91929 (87101224)	7.57994 (87062224)	8.76119 (87033024)	8.13278 (87062224)
360.0 |	7.64008 (87030624)	4.30635 (87032724)	4.40086 (87091324)	5.87059 (87061524)	6.50442 (87012024)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 (DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	9.98235 (87090524)	8.15903 (87062624)
20.0	5.69617 (87012224)	5.22405 (87012224)
30.0	7.22139 (87012224)	5.87528 (87110424)
40.0	8.81918 (87062524)	6.98243 (87021624)
50.0	9.52259 (87110424)	7.18488 (87043024)
60.0	14.98055 (87093024)	11.33845 (87093024)
70.0	7.22463 (87030924)	6.03814 (87030924)
80.0	4.58133 (87010424)	3.60624 (87031924)
90.0	4.10336 (87041724)	2.50773 (87041724)
100.0	3.11464 (87041624)	2.48375 (87041624)
110.0	4.06074 (87010524)	3.29420 (87010524)
120.0	6.59502 (87010524)	5.12541 (87020724)
130.0	10.35947 (87020824)	7.16993 (87042524)
140.0	10.84515 (87042324)	9.43018 (87042324)
150.0	11.43936 (87042224)	8.74568 (87033124)
160.0	13.06755 (87040424)	9.85508 (87040424)
170.0	13.40725 (87111124)	11.77135 (87111124)
180.0	12.13453 (87011324)	10.45272 (87031224)
190.0	9.89629 (87121724)	8.34364 (87121724)
200.0	10.27193 (87031124)	9.23382 (87102924)
210.0	11.95729 (87103124)	9.70554 (87103124)
220.0	10.43219 (87103124)	8.92326 (87101124)
230.0	14.68467 (87100924)	11.61485 (87111324)
240.0	11.81567 (87120624)	9.47347 (87120624)
250.0	10.64448 (87111524)	8.93395 (87111524)
260.0	6.41456 (87031524)	5.43055 (87031524)
270.0	8.91134 (87052224)	7.40176 (87052224)
280.0	8.71651 (87052324)	7.44191 (87052324)
290.0	11.66658 (87060924)	8.39340 (87060824)
300.0	12.80398 (87051624)	12.94064 (87051624)
310.0	17.57806 (87061924)	14.25197 (87061924)
320.0	13.60525 (87121424)	11.94043 (87032524)
330.0	13.89238 (87032624)	10.56176 (87032624)
340.0	9.72155 (87032724)	8.72426 (87012124)
350.0	7.89474 (87030124)	6.97981 (87011524)
360.0	7.05645 (87012524)	6.01327 (87012524)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	NETWORK				RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID
		1	2	3	4	

ALL	1ST HIGHEST VALUE IS	3.12642 AT (	-383.02,	321.39,	0.00,	0.00) GP POL
	2ND HIGHEST VALUE IS	3.05573 AT (	97.01,	73.81,	0.00,	0.00) GP POL
	3RD HIGHEST VALUE IS	2.78072 AT (	-306.42,	257.11,	0.00,	0.00) GP POL
	4TH HIGHEST VALUE IS	2.75952 AT (	-574.53,	482.09,	0.00,	0.00) GP POL
	5TH HIGHEST VALUE IS	2.37434 AT (	114.91,	96.42,	0.00,	0.00) GP POL
	6TH HIGHEST VALUE IS	2.36066 AT (	-257.12,	306.42,	0.00,	0.00) GP POL

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID
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ALL	HIGH 1ST HIGH VALUE IS 384.06906 ON 87030803: AT (114.91, 96.42, 0.00, 0.00) GP POL	
	HIGH 2ND HIGH VALUE IS 334.84158 ON 87030721: AT (97.01, 73.81, 0.00, 0.00) GP POL	

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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ALL	HIGH 1ST HIGH VALUE IS 211.78764 ON 87030824: AT (97.01, 73.81, 0.00, 0.00)	GP POL		
	HIGH 2ND HIGH VALUE IS 115.42381 ON 87030724: AT (97.01, 73.81, 0.00, 0.00)	GP POL		

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----

Total of 0 Fatal Error Message(s)
Total of 0 Warning Message(s)
A Total of 123 Informational Message(s)

Total of 123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***

CO STARTING
CO TITLEONE 1987 STOCK ISLAND POWER PLANT-HSD STACKS RAISED(7.32M)(12.2M TOTAL)-11/06/97
CO TITLETWO ANN 24&3-HR-ALL-SS UNITS-NOX-40F & 100%-CTS IN NEW LOCATION(NOXCT732.IN)
CO MODELOPT DFAULT CONC RURAL
CO AVERTIME 3 24 PERIOD
CO POLLUTID OTHER
CO DCAYCOEF .000000
CO RUNORNOT RUN
CO FINISHED

SO STARTING
SO LOCATION HSD1 POINT 56.6 63.2 0.0
SO LOCATION HSD2 POINT 55.6 55.6 0.0
SO LOCATION HSD3 POINT 54.7 48.4 0.0
SO LOCATION MSD POINT -7.2 35.88 0.0
SO LOCATION GT POINT 26.2 -56.8 0.0
SO LOCATION SS1GT POINT 38.9 -58.4 0.0
SO LOCATION SS2GT POINT 53.1 -60.1 0.0

** POINT: SRCID QS HS TS VS DS
SO SRCPARAM HSD1 8.98 12.20 660.8 20.38 0.76
SO SRCPARAM HSD2 8.98 12.20 660.8 20.38 0.76
SO SRCPARAM HSD3 8.98 12.20 660.8 20.38 0.76
SO SRCPARAM MSD 20.27 30.49 588.6 30.5 1.74
SO SRCPARAM GT 10.94 11.77 766 24.0 3.93
SO SRCPARAM SS1GT 11.82 13.08 801.0 24.65 3.85
SO SRCPARAM SS2GT 11.82 13.08 801.0 24.65 3.85

SO BUILDHGT HSD1 3.14 3.14 3.14 7.62 10.97 10.97
SO BUILDHGT HSD1 10.97 10.97 3.14 3.14 3.14 3.14
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SO BUILDHGT HSD1 3.14 3.14 5.79 5.79 5.79 5.79
SO BUILDWID HSD1 12.30 12.53 12.37 37.48 30.82 29.40
SO BUILDWID HSD1 27.09 23.96 4.40 3.63 5.65 7.50
SO BUILDWID HSD1 9.12 10.41 11.47 12.16 12.47 12.40
SO BUILDWID HSD1 12.30 12.53 12.38 11.85 10.95 9.71
SO BUILDWID HSD1 8.17 6.38 4.40 3.63 5.65 7.50
SO BUILDWID HSD1 9.12 10.41 26.37 22.62 18.18 15.69

SO BUILDHGT HSD2 3.14 3.14 3.14 7.62 10.97 10.97
SO BUILDHGT HSD2 10.97 10.97 10.97 3.14 3.14 3.14
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SO BUILDWID HSD2 12.30 12.53 12.37 37.48 30.82 29.40
SO BUILDWID HSD2 27.09 23.96 25.29 3.45 5.49 7.37
SO BUILDWID HSD2 31.38 10.41 11.47 12.16 12.47 12.40
SO BUILDWID HSD2 12.30 12.53 12.37 11.80 10.88 9.62
SO BUILDWID HSD2 8.23 6.46 4.50 3.45 5.49 7.37
SO BUILDWID HSD2 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT HSD3 3.14 3.14 3.14 3.14 7.62 10.97
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SO BUILDHGT HSD3 5.79 5.79 5.79 5.79 5.79 5.79
SO BUILDWID HSD3 12.30 12.53 12.37 11.80 35.76 29.40
SO BUILDWID HSD3 27.09 23.96 25.29 28.10 32.60 32.48
SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69
SO BUILDWID HSD3 12.30 12.53 12.37 11.80 10.88 9.62
SO BUILDWID HSD3 8.07 6.28 4.30 3.73 32.60 32.48
SO BUILDWID HSD3 31.38 29.32 26.37 22.62 18.18 15.69

SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97
SO BUILDHGT MSD 10.97 10.97 10.97 10.97 15.26 15.26
SO BUILDHGT MSD 15.26 10.97 16.15 16.15 16.15 10.97
SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97
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SO BUILDHGT MSD 10.97 10.97 10.97 10.97 10.97 10.97

BEST AVAILABLE COPY

SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	11.46	11.75
SO BUILDWID MSD	12.11	30.35	18.94	18.93	18.34	30.59
SO BUILDWID MSD	27.12	29.42	30.83	31.30	30.82	29.40
SO BUILDWID MSD	27.09	23.96	25.29	28.10	30.06	31.10
SO BUILDWID MSD	31.20	30.35	28.58	32.08	30.84	30.59

SO BUILDHGT GT	12.19	12.19	12.19	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID GT	26.98	25.74	26.49	19.98	23.27	25.85
SO BUILDWID GT	27.65	28.61	28.69	28.52	28.78	28.17
SO BUILDWID GT	26.70	24.42	21.40	17.73	13.52	8.90
SO BUILDWID GT	6.97	11.73	16.13	19.98	23.27	25.85
SO BUILDWID GT	27.64	28.60	28.69	28.52	28.78	28.17
SO BUILDWID GT	26.70	24.42	21.40	17.73	13.52	8.90

SO BUILDHGT SS1GT	4.88	12.19	12.19	12.19	4.88	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS1GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID SS1GT	6.95	25.74	26.49	27.32	23.26	25.85
SO BUILDWID SS1GT	27.64	28.60	28.69	28.52	28.78	28.17
SO BUILDWID SS1GT	26.70	24.42	21.40	17.73	13.52	8.90
SO BUILDWID SS1GT	6.95	11.69	16.08	19.97	23.26	25.85
SO BUILDWID SS1GT	27.64	28.60	28.69	28.52	28.78	28.17
SO BUILDWID SS1GT	26.70	24.42	21.40	17.73	13.52	8.90

SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDHGT SS2GT	4.88	4.88	4.88	4.88	4.88	4.88
SO BUILDWID SS2GT	6.95	11.69	16.08	19.97	23.26	25.85
SO BUILDWID SS2GT	27.64	28.60	28.69	28.52	28.78	28.17
SO BUILDWID SS2GT	26.70	24.42	21.40	17.82	13.62	9.00
SO BUILDWID SS2GT	6.95	11.69	16.08	19.97	23.26	25.85
SO BUILDWID SS2GT	27.64	28.60	28.69	28.54	28.78	28.17
SO BUILDWID SS2GT	26.70	24.42	21.40	17.82	13.62	9.00

SO EMISUNIT .10000E+07 (GRAMS/SEC) (MICROGRAMS/CUBIC-METER)
 SO SRCGROUP ALL
 SO FINISHED

RE STARTING
 RE GRIDPOLR POL STA
 *GRID ORIGIN CENTERED ON THE SITE (E425650.0 N2716670.0)
 RE GRIDPOLR POL ORIG 0.0 0.0
 RE GRIDPOLR POL DIST 150. 200. 300. 400. 500. 750. 1000.
 RE GRIDPOLR POL GDIR 36 10.0 10.0
 RE BOUNDARY MSD 187.6 202.2 226.7 183.6 145.8 124.0 110.9 103.1
 RE BOUNDARY MSD 99.1 98.3 100.5 106.1 116.2 132.8 160.4 196.5 302.1
 RE BOUNDARY MSD 291.9 291.0 192.3 146.9 121.8 106.8 97.7 90.8
 RE BOUNDARY MSD 91.6 95.5 102.9 115.4 136.0 171.9 192.0 182.2 178.3 180.1
 RE GRIDPOLR POL END
 RE FINISHED

ME STARTING
 ME INPUTFIL KYWPRE87.LST
 ME ANEMHGT 6.700 METERS
 ME SURFDATA 12836 1987 KEY WEST
 ME UAIRDATA 12844 1987 MIAMI
 ME FINISHED

OU STARTING
 OU RECTABLE ALLAVE FIRST-SECOND
 OU FINISHED

** SETUP Finishes Successfully **



*MODELOPTs: CONC RURAL FLAT DEFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

*Model Is Setup For Calculation of Average CONCentration Values.

- SCAVENGING/DEPOSITION LOGIC -

**Model Uses NO DRY DEPLETION. DDPLETE = F

**Model Uses NO WET DEPLETION. WDPLETE = F

**NO WET SCAVENGING Data Provided.

**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

*Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

*Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

*Model Calculates 2 Short Term Average(s) of: 3-HR 24-HR and Calculates PERIOD Averages

**This Run Includes: 7 Source(s); 1 Source Group(s); and 288 Receptor(s)

*The Model Assumes A Pollutant Type of: OTHER

**Model Set To Continue RUNning After the Setup Testing.

*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

*Misc. Inputs: Anem. Hgt. (m) = 6.70 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = (GRAMS/SEC) ; Emission Rate Unit Factor = 0.10000E+07
Output Units = (MICROGRAMS/CUBIC-METER)

*Input Runstream File: NOXCT732.IN ; **Output Print File: NOXCT732.OUT

*MODELOPTs: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

NUMBER	EMISSION RATE	BASE	STACK	STACK	STACK	STACK	BUILDING	EMISSION RATE			
SOURCE ID	PART. CATS.	(USER UNITS)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	TEMP. (DEC.K)	EXIT VEL. (M/SEC)	DIAMETER (METERS)	EXISTS	SCALAR VARY BY
HSD1	0	0.89800E+01	56.6	63.2	0.0	12.20	660.80	20.38	0.76	YES	
HSD2	0	0.89800E+01	55.6	55.6	0.0	12.20	660.80	20.38	0.76	YES	
HSD3	0	0.89800E+01	54.7	48.4	0.0	12.20	660.80	20.38	0.76	YES	
MSD	0	0.20270E+02	-7.2	35.9	0.0	30.49	588.60	30.50	1.74	YES	
GT	0	0.10940E+02	26.2	-56.8	0.0	11.77	766.00	24.00	3.93	YES	
SS1GT	0	0.11820E+02	38.9	-58.4	0.0	13.08	801.00	24.65	3.85	YES	
SS2GT	0	0.11820E+02	53.1	-60.1	0.0	13.08	801.00	24.65	3.85	YES	

*MODELOPTs: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: HSD1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	3.1	4.4	0	10	3.1	3.6	0	11	3.1	5.7	0	12	3.1	7.5	0
13	3.1	9.1	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.9	0	23	3.1	10.9	0	24	3.1	9.7	0
25	3.1	8.2	0	26	3.1	6.4	0	27	3.1	4.4	0	28	3.1	3.6	0	29	3.1	5.7	0	30	3.1	7.5	0
31	3.1	9.1	0	32	3.1	10.4	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD2

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	7.6	37.5	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	3.1	3.5	0	11	3.1	5.5	0	12	3.1	7.4	0
13	5.8	31.4	0	14	3.1	10.4	0	15	3.1	11.5	0	16	3.1	12.2	0	17	3.1	12.5	0	18	3.1	12.4	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.2	0	26	3.1	6.5	0	27	3.1	4.5	0	28	3.1	3.5	0	29	3.1	5.5	0	30	3.1	7.4	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: HSD3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	3.1	12.3	0	2	3.1	12.5	0	3	3.1	12.4	0	4	3.1	11.8	0	5	7.6	35.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	5.8	32.6	0	12	5.8	32.5	0
13	5.8	31.4	0	14	5.8	29.3	0	15	5.8	26.4	0	16	5.8	22.6	0	17	5.8	18.2	0	18	5.8	15.7	0
19	3.1	12.3	0	20	3.1	12.5	0	21	3.1	12.4	0	22	3.1	11.8	0	23	3.1	10.9	0	24	3.1	9.6	0
25	3.1	8.1	0	26	3.1	6.3	0	27	3.1	4.3	0	28	3.1	3.7	0	29	5.8	32.6	0	30	5.8	32.5	0
31	5.8	31.4	0	32	5.8	29.3	0	33	5.8	26.4	0	34	5.8	22.6	0	35	5.8	18.2	0	36	5.8	15.7	0

SOURCE ID: MSD

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	11.0	27.1	0	2	11.0	29.4	0	3	11.0	30.8	0	4	11.0	31.3	0	5	11.0	30.8	0	6	11.0	29.4	0
7	11.0	27.1	0	8	11.0	24.0	0	9	11.0	25.3	0	10	11.0	28.1	0	11	15.3	11.5	0	12	15.3	11.8	0
13	15.3	12.1	0	14	11.0	30.3	0	15	16.1	18.9	0	16	16.1	18.9	0	17	16.1	18.3	0	18	11.0	30.6	0
19	11.0	27.1	0	20	11.0	29.4	0	21	11.0	30.8	0	22	11.0	31.3	0	23	11.0	30.8	0	24	11.0	29.4	0
25	11.0	27.1	0	26	11.0	24.0	0	27	11.0	25.3	0	28	11.0	28.1	0	29	11.0	30.1	0	30	11.0	31.1	0
31	11.0	31.2	0	32	11.0	30.3	0	33	11.0	28.6	0	34	11.0	32.1	0	35	11.0	30.8	0	36	11.0	30.6	0

*MODELOPTs: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	12.2	27.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS1GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	12.2	25.7	0	3	12.2	26.5	0	4	12.2	27.3	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.7	0	17	4.9	13.5	0	18	4.9	8.9	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.7	0	35	4.9	13.5	0	36	4.9	8.9	0

SOURCE ID: SS2GT

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK				
1	4.9	7.0	0	2	4.9	11.7	0	3	4.9	16.1	0	4	4.9	20.0	0	5	4.9	23.3	0	6	4.9	25.8	0
7	4.9	27.6	0	8	4.9	28.6	0	9	4.9	28.7	0	10	4.9	28.5	0	11	4.9	28.8	0	12	4.9	28.2	0
13	4.9	26.7	0	14	4.9	24.4	0	15	4.9	21.4	0	16	4.9	17.8	0	17	4.9	13.6	0	18	4.9	9.0	0
19	4.9	7.0	0	20	4.9	11.7	0	21	4.9	16.1	0	22	4.9	20.0	0	23	4.9	23.3	0	24	4.9	25.8	0
25	4.9	27.6	0	26	4.9	28.6	0	27	4.9	28.7	0	28	4.9	28.5	0	29	4.9	28.8	0	30	4.9	28.2	0
31	4.9	26.7	0	32	4.9	24.4	0	33	4.9	21.4	0	34	4.9	17.8	0	35	4.9	13.6	0	36	4.9	9.0	0

*MODELOPTs: CONC

RURAL FLAT

DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***

X-ORIG = 0.00; Y-ORIG = 0.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***

(METERS)

150.0, 200.0, 300.0, 400.0, 500.0, 750.0, 1000.0,

*** DIRECTION RADIALS OF NETWORK ***

(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,

*MODELOPTs: CONC

RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: KYWPRE87.LST FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
 SURFACE STATION NO.: 12836 UPPER AIR STATION NO.: 12844
 NAME: KEY NAME: MIAMI
 YEAR: 1987 YEAR: 1987

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	TEMP	STAB	MIXING HEIGHT (M)	USTAR	M-O LENGTH	Z-0	IPCODE	PRATE		
				(M/S)	(K)	(K)	RURAL	URBAN	(M/S)	(M)	(M)	(mm/HR)		
87	1	1	1	51.0	7.20	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	2	38.0	8.75	294.3	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	3	84.0	6.69	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	4	73.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	5	63.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	6	72.0	8.75	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	7	75.0	10.29	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	8	93.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	9	117.0	8.75	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	10	131.0	6.17	295.9	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	11	144.0	8.75	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	12	136.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	13	143.0	8.23	297.0	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	14	149.0	9.26	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	15	142.0	9.77	296.5	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	16	144.0	8.75	295.4	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	17	161.0	9.26	294.8	4	420.0	420.0	0.0000	0.0	0.0000	0	0.00
87	1	1	18	157.0	8.75	293.7	4	423.3	423.3	0.0000	0.0	0.0000	0	0.00
87	1	1	19	184.0	8.23	293.7	4	436.9	436.9	0.0000	0.0	0.0000	0	0.00
87	1	1	20	187.0	7.72	293.7	4	450.6	450.6	0.0000	0.0	0.0000	0	0.00
87	1	1	21	170.0	5.66	293.7	4	464.2	464.2	0.0000	0.0	0.0000	0	0.00
87	1	1	22	152.0	6.17	293.7	4	477.8	477.8	0.0000	0.0	0.0000	0	0.00
87	1	1	23	170.0	5.66	293.2	4	491.5	491.5	0.0000	0.0	0.0000	0	0.00
87	1	1	24	160.0	4.12	293.2	5	505.1	681.0	0.0000	0.0	0.0000	0	0.00

** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
 FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)						
	150.00	200.00	300.00	400.00	500.00	750.00	1000.00
10.00 |	0.54267	0.59093	2.56463	4.45133	5.12201	4.66529	3.70583
20.00 |	0.50439	0.14000	1.60782	3.05362	3.44977	3.06715	2.44777
30.00 |	0.01562	0.10540	1.34052	2.85363	3.45248	3.34208	2.79188
40.00 |	3.36892	3.15073	2.90059	3.67704	4.09341	3.63825	2.88621
50.00 |	21.97814	13.18943	6.04747	4.97062	4.89197	3.79697	2.85580
60.00 |	15.67184	13.66459	7.50407	6.04717	5.81400	4.47339	3.41045
70.00 |	4.59809	4.64579	3.62709	3.12866	3.04842	2.48330	1.98296
80.00 |	1.11105	1.83207	1.20826	1.18910	1.33263	1.33330	1.16974
90.00 |	0.06646	0.18364	0.54641	0.76249	0.88242	0.89072	0.79534
100.00 |	0.30967	0.25923	0.55963	0.80064	0.90070	0.82987	0.69966
110.00 |	0.49213	0.66335	1.54100	1.64070	1.57324	1.35431	1.18085
120.00 |	0.86692	1.14294	2.65202	3.19118	3.19166	2.53301	1.95318
130.00 |	0.84886	1.78444	3.85729	4.73310	4.91282	4.16137	3.28208
140.00 |	1.50908	2.27331	4.77364	5.97542	6.25841	5.46877	4.40117
150.00 |	2.16458	3.55434	5.96884	6.75502	6.94535	6.27143	5.30974
160.00 |	2.56503	4.61302	7.79318	9.05757	9.28703	7.94019	6.40034
170.00 |	2.42042	4.99055	9.45959	11.52733	11.98753	10.45333	8.52149
180.00 |	1.89915	4.08204	7.83939	10.16356	11.24556	11.12897	9.76948
190.00 |	1.78777	3.82338	6.84117	8.55521	9.23594	8.85757	7.67078
200.00 |	2.04986	4.19190	6.92536	8.36461	8.88312	8.42661	7.30532
210.00 |	2.30336	4.76120	7.99026	9.74321	10.37033	9.79489	8.47864
220.00 |	2.42007	4.97342	8.30494	10.13867	10.81664	10.24253	8.82755
230.00 |	2.59576	5.45939	9.32385	11.53594	12.39724	11.82648	10.23646
240.00 |	2.42008	5.13055	8.67890	10.66101	11.40807	10.87924	9.49562
250.00 |	1.89854	4.00498	6.60456	7.96076	8.42155	7.97998	7.02690
260.00 |	1.34239	2.89736	4.95902	6.10737	6.57319	6.37385	5.63910
270.00 |	0.98699	2.27841	4.28791	5.59426	6.32315	6.69102	6.23822
280.00 |	0.83585	2.26629	5.29836	7.36279	8.39001	8.48521	7.52925
290.00 |	0.90071	2.78757	7.03621	9.78991	11.19826	11.46697	10.22916
300.00 |	1.03706	3.54832	10.18993	15.07369	18.14541	20.21907	18.82424
310.00 |	1.20295	4.73736	17.02973	25.72909	28.95176	25.77049	20.32384
320.00 |	1.43058	6.29604	18.66504	21.84038	21.81179	18.60178	15.30446
330.00 |	1.55151	5.10574	14.20623	18.59168	19.83657	17.07311	13.44028
340.00 |	1.01281	3.28885	12.00109	14.62697	14.08163	10.40396	7.73508
350.00 |	0.71828	2.53515	6.87577	8.07823	7.92224	6.43972	5.16108
360.00 |	1.09580	1.06302	3.64722	5.39748	5.96976	5.47025	4.54834

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	150.00	200.00	300.00	400.00	500.00
10.0 |	549.15381 (87101209)	277.51730 (87101212)	311.35379 (87010409)	244.56288 (87012012)	279.34625 (87062706)
20.0 |	559.52917 (87010409)	97.05645 (87010409)	144.09076 (87062512)	229.56187 (87062512)	234.77925 (87062512)
30.0 |	9.01587 (87062412)	39.51867 (87062412)	194.67967 (87062512)	270.44812 (87062512)	274.28137 (87110424)
40.0 |	509.35654 (87110503)	407.17215 (87071415)	257.21786 (87071415)	269.09280 (87022212)	310.79816 (87021618)
50.0 |	3555.60815 (87030803)	1831.49524 (87030803)	520.79840 (87041815)	414.36331 (87071515)	399.87976 (87071515)
60.0 |	2451.97388 (87010106)	2857.51489 (87041709)	1448.12158 (87041709)	767.89032 (87041709)	657.84418 (87030806)
70.0 |	1806.84900 (87041821)	1678.68811 (87010415)	815.09204 (87010415)	601.72058 (87100103)	554.81848 (87010106)
80.0 |	589.21368 (87041706)	588.12091 (87041818)	476.07385 (87041821)	298.01785 (87041821)	360.20999 (87010415)
90.0 |	52.23509 (87010506)	109.51620 (87011106)	286.57837 (87041706)	326.42722 (87041706)	298.18451 (87041706)
100.0 |	409.17508 (87010509)	80.34160 (87010503)	107.22501 (87081112)	256.32278 (87010424)	308.36581 (87010424)
110.0 |	152.50182 (87020818)	376.39163 (87010509)	212.45313 (87041612)	201.50078 (87081115)	247.97243 (87020903)
120.0 |	182.92854 (87010515)	185.88525 (87012221)	286.96048 (87010509)	366.72769 (87042512)	333.57971 (87042512)
130.0 |	144.51746 (87033118)	192.42836 (87033118)	286.28165 (87012221)	314.79730 (87020818)	339.61493 (87020818)
140.0 |	226.04443 (87010518)	137.39815 (87012215)	290.15793 (87033118)	308.75272 (87033109)	289.37521 (87012615)
150.0 |	200.56389 (87101215)	272.09332 (87010518)	264.59360 (87042412)	289.65369 (87042215)	302.21783 (87042621)
160.0 |	191.27905 (87101218)	220.78197 (87040415)	278.38437 (87040415)	377.78427 (87010518)	378.19662 (87010518)
170.0 |	127.97977 (87042112)	232.33894 (87042112)	325.01242 (87042115)	330.41110 (87112021)	310.47458 (87022315)
180.0 |	119.92768 (87051215)	211.08391 (87102615)	335.96759 (87042112)	354.53479 (87042112)	327.36765 (87102015)
190.0 |	191.64662 (87042715)	242.37750 (87042715)	264.46191 (87110615)	331.50900 (87110615)	327.39505 (87110615)
200.0 |	203.49873 (87042715)	289.38870 (87042715)	325.44052 (87042715)	291.53336 (87042715)	274.95639 (87112124)
210.0 |	124.17307 (87042715)	181.22711 (87042715)	238.19727 (87031406)	294.00330 (87103118)	323.16660 (87103118)
220.0 |	129.93303 (87042712)	185.20399 (87042712)	283.52567 (87100912)	323.86163 (87100912)	321.76248 (87100912)
230.0 |	192.38277 (87091512)	269.99289 (87091512)	309.81082 (87091512)	326.29953 (87100412)	321.87299 (87103024)
240.0 |	197.37517 (87091512)	257.13632 (87091512)	277.19302 (87110715)	334.40329 (87110715)	341.86243 (87110715)
250.0 |	136.55164 (87091512)	187.22894 (87110718)	303.76999 (87102324)	342.98535 (87102324)	325.53458 (87102324)
260.0 |	68.85226 (87122312)	137.22931 (87030518)	264.40582 (87030515)	308.60617 (87030515)	292.72974 (87030515)
270.0 |	70.92918 (87091615)	163.56963 (87091615)	257.20776 (87091615)	259.63626 (87091615)	229.81862 (87112715)
280.0 |	76.35148 (87070615)	128.08339 (87091615)	223.17891 (87072312)	230.76311 (87052403)	285.75052 (87060818)
290.0 |	88.57458 (87052215)	154.21855 (87052415)	229.82396 (87122412)	312.35443 (87122412)	316.80911 (87122412)
300.0 |	81.46365 (87052415)	174.03918 (87051715)	286.95999 (87112615)	331.47787 (87112615)	314.55591 (87080615)
310.0 |	74.42627 (87111621)	160.87721 (87052512)	319.98654 (87080615)	337.00745 (87111624)	390.70505 (87111624)
320.0 |	73.75666 (87022606)	200.48596 (87111624)	327.55414 (87110306)	317.85800 (87051915)	358.96301 (87121924)
330.0 |	235.00427 (87110306)	228.04176 (87111703)	268.76016 (87082415)	318.21939 (87082415)	324.79874 (87122003)
340.0 |	301.36749 (87111703)	224.08623 (87030624)	278.48996 (87051812)	363.10269 (87061615)	346.55820 (87081812)
350.0 |	336.72083 (87030624)	291.68906 (87101206)	235.80957 (87091312)	322.78830 (87022812)	310.09180 (87091312)
360.0 |	407.30600 (87101206)	336.74496 (87101209)	245.65678 (87101209)	283.47916 (87061515)	313.59921 (87011815)

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	347.91342 (87062706)	283.91104 (87062706)
20.0	188.52779 (87011015)	150.34392 (87011015)
30.0	336.69821 (87110424)	286.80371 (87110424)
40.0	343.41370 (87021618)	298.79874 (87021618)
50.0	315.86258 (87090418)	257.88815 (87090418)
60.0	466.78738 (87030803)	343.98013 (87030803)
70.0	369.86902 (87010106)	259.87271 (87010106)
80.0	339.51181 (87010415)	268.09665 (87010415)
90.0	178.19633 (87041624)	140.50594 (87041624)
100.0	193.79292 (87010424)	117.91190 (87011106)
110.0	209.84993 (87020903)	164.83713 (87111018)
120.0	285.04785 (87020724)	284.28146 (87020724)
130.0	273.38724 (87081118)	209.01274 (87042418)
140.0	275.25928 (87042321)	259.99350 (87042321)
150.0	328.51776 (87042618)	281.27185 (87042618)
160.0	324.08527 (87040418)	250.09227 (87040418)
170.0	316.06125 (87022315)	247.87495 (87112012)
180.0	289.69199 (87031218)	270.15512 (87031218)
190.0	278.52289 (87100812)	243.18872 (87100812)
200.0	253.24278 (87053109)	210.45427 (87053109)
210.0	299.93625 (87103118)	255.42751 (87120218)
220.0	270.99402 (87111306)	226.79060 (87120312)
230.0	306.45667 (87103024)	256.13202 (87103024)
240.0	305.51495 (87120618)	256.61954 (87120618)
250.0	306.03665 (87123021)	258.75201 (87123021)
260.0	262.40103 (87060624)	228.76424 (87060624)
270.0	260.03351 (87072221)	249.03542 (87072221)
280.0	283.25500 (87060818)	222.47337 (87060818)
290.0	278.93970 (87060921)	237.72223 (87060921)
300.0	280.72607 (87031621)	270.97067 (87061324)
310.0	335.39401 (87121415)	286.98843 (87061318)
320.0	296.22604 (87031803)	278.52670 (87111818)
330.0	308.31369 (87011806)	264.46463 (87080609)
340.0	323.21591 (87032724)	275.31464 (87012121)
350.0	248.26161 (87011612)	200.74663 (87030106)
360.0	320.09558 (87010409)	263.21671 (87010409)

**MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , CT , SS1GT , SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION |	DISTANCE (METERS)				
(DEGREES) |	150.00	200.00	300.00	400.00	500.00
10.0 |	352.71237 (87032703)	245.18652 (87010409)	167.28816 (87061515)	237.55328 (87050812)	275.29489 (87011012)
20.0 |	297.22073 (87010412)	48.91740 (87010412)	129.10365 (87062612)	211.52321 (87062315)	227.10426 (87062315)
30.0 |	7.02263 (87043012)	29.59551 (87043012)	152.28194 (87040315)	244.60817 (87040315)	261.45139 (87011015)
40.0 |	467.18997 (87100106)	405.96042 (87110503)	234.71870 (87041515)	248.81665 (87021618)	307.51440 (87022212)
50.0 |	2791.95874 (87030806)	1358.82751 (87030806)	513.74182 (87030803)	376.00525 (87041815)	345.02026 (87062509)
60.0 |	2267.13159 (87100103)	2309.95874 (87010106)	1027.51672 (87030721)	756.42041 (87030721)	651.25000 (87030721)
70.0 |	1416.81042 (87041624)	960.57349 (87041703)	800.54877 (87041703)	589.80591 (87010106)	530.72040 (87100103)
80.0 |	402.07193 (87030706)	554.15088 (87041706)	303.38831 (87041624)	274.31778 (87010415)	308.78305 (87092318)
90.0 |	45.74605 (87010503)	72.71253 (87030706)	136.91438 (87030706)	175.29121 (87041818)	210.72809 (87041818)
100.0 |	178.36815 (87010512)	77.02494 (87010506)	100.19934 (87010506)	152.81306 (87010418)	198.11440 (87010418)
110.0 |	137.11655 (87012221)	142.94505 (87010512)	198.96581 (87041615)	189.11931 (87020903)	194.89232 (87010506)
120.0 |	154.19101 (87012221)	157.91737 (87012224)	261.37317 (87042512)	363.08212 (87010509)	292.81326 (87010509)
130.0 |	109.82832 (87012215)	172.91359 (87010515)	223.99152 (87033112)	269.90283 (87012221)	296.12537 (87012618)
140.0 |	184.54591 (87122915)	131.84181 (87042215)	269.80710 (87042415)	300.46289 (87042415)	276.12262 (87033109)
150.0 |	153.38301 (87122912)	221.71428 (87122915)	232.08083 (87042215)	278.98828 (87042412)	270.79797 (87042215)
160.0 |	185.85991 (87112021)	215.97444 (87112021)	265.57510 (87122912)	304.20651 (87122915)	347.01248 (87102812)
170.0 |	99.81919 (87101218)	213.09325 (87042115)	304.10461 (87050912)	311.61691 (87112103)	292.40311 (87112021)
180.0 |	116.77658 (87031115)	190.83453 (87042112)	294.42050 (87102015)	343.17746 (87102015)	318.76465 (87042112)
190.0 |	127.14806 (87053112)	196.25122 (87031115)	261.28696 (87102615)	312.90143 (87102615)	311.25980 (87102615)
200.0 |	126.12931 (87053112)	187.18806 (87053112)	233.32552 (87112124)	276.61920 (87112124)	260.41293 (87053109)
210.0 |	122.51068 (87091412)	174.66602 (87091412)	219.11406 (87103118)	290.11816 (87031406)	297.98926 (87031406)
220.0 |	109.96310 (87091512)	172.38269 (87100912)	230.21269 (87042712)	270.63831 (87110621)	293.07889 (87111306)
230.0 |	143.62421 (87100412)	222.22713 (87100412)	302.46906 (87100412)	302.40961 (87100906)	319.67062 (87100412)
240.0 |	115.33395 (87042012)	190.01393 (87040212)	262.71274 (87040212)	279.38498 (87040212)	315.00641 (87120618)
250.0 |	114.94880 (87040212)	181.92737 (87040212)	293.60223 (87110718)	299.13867 (87110718)	302.96829 (87123021)
260.0 |	65.34737 (87091512)	121.02009 (87030515)	244.50627 (87030518)	247.46722 (87091615)	259.45090 (87111518)
270.0 |	69.08831 (87070615)	134.87144 (87112715)	222.59972 (87112715)	238.72417 (87112715)	225.64905 (87091615)
280.0 |	71.19305 (87091615)	127.88220 (87072312)	183.81622 (87110303)	221.52324 (87072312)	231.99689 (87052415)
290.0 |	74.86832 (87082112)	145.35118 (87072312)	224.44106 (87051715)	298.08371 (87052318)	308.92166 (87060803)
300.0 |	75.03795 (87052215)	147.18871 (87082712)	285.61868 (87022015)	313.92673 (87022015)	289.00360 (87112615)
310.0 |	66.37382 (87051715)	145.67096 (87082615)	306.54141 (87092815)	333.83530 (87070812)	358.89987 (87022609)
320.0 |	68.51402 (87030621)	183.52464 (87060715)	292.20987 (87080612)	303.26511 (87061315)	333.81985 (87121424)
330.0 |	231.10295 (87111624)	214.09993 (87110306)	262.32504 (87061715)	307.44815 (87051812)	322.38287 (87051812)
340.0 |	161.52332 (87110306)	165.64687 (87101206)	266.92841 (87090112)	316.68320 (87022815)	342.99692 (87061615)
350.0 |	183.91101 (87101206)	291.20255 (87030624)	233.12285 (87080515)	318.14975 (87091312)	277.88010 (87101209)
360.0 |	317.84494 (87101209)	284.04800 (87032703)	218.23888 (87091312)	262.28073 (87011815)	295.67355 (87061515)

**MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 2ND HIGHEST 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 (DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	231.69612 (87011012)	192.77765 (87090503)
20.0	188.18916 (87010412)	149.09050 (87020215)
30.0	218.32509 (87092315)	184.99878 (87110509)
40.0	274.31750 (87110503)	250.38240 (87110503)
50.0	271.59229 (87071515)	186.28203 (87092409)
60.0	460.13925 (87030806)	327.27414 (87030806)
70.0	342.68433 (87030818)	255.80864 (87030818)
80.0	274.35931 (87031918)	265.66837 (87031918)
90.0	172.33783 (87030912)	132.60626 (87031921)
100.0	134.06892 (87010418)	102.71906 (87010424)
110.0	186.39136 (87010506)	153.29012 (87010506)
120.0	235.08241 (87031003)	156.29063 (87041615)
130.0	235.49226 (87020824)	190.86024 (87081118)
140.0	264.33810 (87012615)	201.73083 (87010115)
150.0	317.22012 (87042621)	231.56261 (87042621)
160.0	271.32156 (87102812)	218.03319 (87040521)
170.0	291.45444 (87112012)	240.10699 (87022315)
180.0	278.81805 (87011109)	261.18237 (87120121)
190.0	265.10794 (87121715)	229.91219 (87121715)
200.0	227.37480 (87101524)	199.22551 (87101524)
210.0	283.84393 (87050509)	246.74516 (87103118)
220.0	267.78409 (87101021)	223.33376 (87101021)
230.0	291.99536 (87112406)	245.61354 (87021206)
240.0	289.58929 (87110715)	232.64966 (87110715)
250.0	255.46204 (87110815)	215.40973 (87110815)
260.0	234.72292 (87111512)	199.17419 (87111512)
270.0	243.42969 (87052121)	233.30934 (87052121)
280.0	220.88441 (87072118)	211.22400 (87072103)
290.0	267.09747 (87060803)	196.79358 (87051818)
300.0	270.56107 (87061106)	270.53958 (87031621)
310.0	332.08957 (87061318)	277.89951 (87121415)
320.0	284.27710 (87111818)	273.26578 (87010403)
330.0	307.55026 (87022709)	257.37534 (87022709)
340.0	259.15012 (87061509)	269.36069 (87032724)
350.0	220.06258 (87032412)	199.74626 (87011612)
360.0	251.76247 (87011815)	189.00475 (87091209)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION |	DISTANCE (METERS)				
(DEGREES) |	150.00	200.00	300.00	400.00	500.00
10.0 |	87.64729 (87101224)	49.24954 (87101224)	58.78137 (87010424)	63.21582 (87032824)	79.53420 (87062624)
20.0 |	107.09374 (87010424)	18.24675 (87010424)	29.86289 (87062324)	56.74989 (87062624)	66.32233 (87062624)
30.0 |	1.51383d(87062424)	7.09462d(87062424)	49.62800 (87062524)	90.72791 (87062524)	100.95399 (87062524)
40.0 |	114.09204 (87062524)	87.08338 (87110524)	81.23230 (87062524)	97.96686 (87062524)	101.44640 (87062524)
50.0 |	1605.89612 (87030824)	765.68750 (87030824)	233.08141 (87030824)	138.91818c(87093024)	143.68594c(87093024)
60.0 |	641.11176 (87030824)	834.73022 (87030824)	540.55011 (87030824)	432.91830 (87030824)	396.75040 (87030824)
70.0 |	425.90213 (87041824)	240.61287 (87041824)	144.59114 (87010124)	126.84534 (87010124)	116.92411 (87030824)
80.0 |	91.63849 (87041724)	115.29605 (87041824)	112.45693 (87041824)	83.74334 (87041824)	73.59140 (87041824)
90.0 |	20.01311 (87010524)	13.68953 (87011124)	46.40560 (87041724)	58.62605 (87041724)	57.82893 (87041724)
100.0 |	94.59396 (87010524)	34.73916 (87010524)	21.46305 (87081124)	60.99331 (87010424)	78.23885 (87010424)
110.0 |	43.19889 (87033124)	76.10471 (87010524)	63.35534 (87010524)	52.53492 (87041624)	45.15968 (87041624)
120.0 |	78.77059 (87033124)	56.47466 (87012224)	79.58727 (87042924)	97.11008 (87042924)	91.14146 (87041624)
130.0 |	53.90291 (87033124)	88.02914 (87033124)	101.76590 (87033124)	125.26678 (87020824)	135.85489 (87020824)
140.0 |	63.09728 (87010524)	54.48657 (87033124)	127.44056 (87033124)	163.46687 (87033124)	152.02336 (87033124)
150.0 |	54.01544 (87033124)	73.24564 (87010524)	95.31991 (87042224)	137.64423 (87042224)	143.80855 (87042224)
160.0 |	50.70430 (87112024)	79.27371 (87112024)	123.83340 (87112024)	137.23019 (87040424)	146.48851 (87040424)
170.0 |	36.47700 (87040124)	65.78115 (87040124)	116.79840 (87112024)	160.49808 (87112024)	175.88165 (87112024)
180.0 |	24.88353 (87031124)	49.74192 (87102624)	91.77624 (87121724)	112.00024 (87101424)	125.58233 (87101424)
190.0 |	33.86301 (87042724)	57.23000 (87031124)	87.27116 (87031124)	95.64373 (87031124)	100.34113 (87100824)
200.0 |	40.47569 (87042724)	58.62848 (87042724)	81.74133 (87112124)	105.19101 (87101524)	116.88509 (87101524)
210.0 |	39.94749 (87042724)	66.87326 (87042724)	91.35129 (87103124)	116.15872 (87021024)	124.81828 (87021024)
220.0 |	30.42928 (87042724)	53.64476 (87042724)	88.93195 (87100424)	109.08239 (87100424)	115.73370 (87100424)
230.0 |	39.80803 (87100924)	83.93803 (87100924)	139.51691 (87100924)	161.98698 (87100924)	163.42052 (87100924)
240.0 |	30.92012d(87040224)	60.45245 (87110724)	110.10137 (87110724)	132.27583 (87110724)	135.34140 (87110724)
250.0 |	32.23381 (87110724)	61.71941 (87110724)	113.31284 (87110824)	147.95622 (87110824)	159.69508 (87110824)
260.0 |	19.26579 (87110824)	47.44349 (87110824)	80.70121 (87030524)	90.12409 (87111524)	94.78577 (87111524)
270.0 |	12.32227 (87030524)	30.90846 (87111524)	52.59763 (87111524)	70.59312 (87052224)	83.31384 (87052424)
280.0 |	14.31616 (87052224)	38.57162 (87052224)	73.45033 (87052224)	98.97326 (87052424)	103.13242 (87052424)
290.0 |	18.47434 (87052224)	36.18999 (87052224)	103.20310 (87060824)	134.26883 (87060824)	137.97066 (87060824)
300.0 |	17.09878 (87060824)	49.46349 (87060824)	86.64096 (87060824)	110.47761 (87060924)	132.51289 (87061124)
310.0 |	16.63259 (87060824)	39.87853 (87052524)	118.99743 (87061124)	182.81804 (87031724)	203.64296 (87031724)
320.0 |	23.52767 (87111624)	62.46990 (87111624)	111.42825 (87111724)	149.34557 (87121424)	178.81874 (87031824)
330.0 |	60.35965 (87111624)	53.68429 (87111724)	92.77511 (87031824)	116.90479 (87032624)	142.78249 (87032624)
340.0 |	51.67696 (87111724)	31.07012 (87030624)	85.82574 (87022824)	126.67831 (87022824)	136.61497 (87022824)
350.0 |	50.13989 (87030624)	66.07853 (87030624)	70.42899 (87022824)	83.41560 (87062224)	94.24453 (87033024)
360.0 |	90.64413 (87101224)	67.38978 (87101224)	41.71852 (87101224)	57.69257 (87011524)	74.66142 (87032824)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
 (DEGREES) | 750.00 1000.00

10.0	93.15008 (87062624)	82.83681 (87090524)
20.0	63.52297 (87062624)	51.69783 (87062624)
30.0	84.48122 (87062524)	65.15568 (87062524)
40.0	91.77451 (87110524)	80.45147 (87110524)
50.0	111.85751 (87093024)	82.32515 (87093024)
60.0	271.60400 (87030824)	193.34052 (87030824)
70.0	94.61625 (87030824)	71.42771 (87030824)
80.0	55.13786 (87041824)	41.98143 (87041824)
90.0	42.45308 (87041824)	38.15298 (87041824)
100.0	56.62745 (87010424)	33.76666 (87010424)
110.0	39.62534 (87010424)	40.25621 (87010424)
120.0	70.71810 (87041624)	53.51303 (87041624)
130.0	96.29058 (87012624)	77.44984 (87120424)
140.0	123.56616 (87012624)	106.82578 (87012624)
150.0	107.80112 (87042624)	85.59631 (87033124)
160.0	122.74252 (87102824)	96.61246 (87102824)
170.0	150.79103 (87112024)	115.52554 (87112024)
180.0	119.76330 (87101424)	98.64505 (87101424)
190.0	104.42941 (87101424)	90.65982 (87101424)
200.0	110.48421 (87101524)	91.03950 (87101524)
210.0	114.69482 (87021024)	95.86349 (87021024)
220.0	104.90639 (87100424)	85.72918 (87100424)
230.0	139.56642 (87112324)	113.34754 (87112324)
240.0	114.55783 (87110724)	91.26260 (87110724)
250.0	143.56149 (87110824)	115.56525 (87110824)
260.0	83.37784 (87111524)	66.95559 (87111524)
270.0	89.64579 (87052424)	79.69729 (87052424)
280.0	100.03204 (87060824)	87.03403 (87060824)
290.0	109.16303 (87060824)	96.08060 (87060924)
300.0	142.14047 (87061124)	124.41714 (87061124)
310.0	187.79527 (87060224)	140.02254 (87060224)
320.0	189.97224 (87031824)	149.69920 (87031824)
330.0	132.40292 (87032424)	106.58475 (87032424)
340.0	111.43581 (87022824)	83.05039 (87022824)
350.0	90.68742 (87033024)	76.13140 (87033024)
360.0	78.97144 (87032824)	62.85962 (87032824)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): HSD1 ,HSD2 ,HSD3 ,MSD ,GT ,SS1GT ,SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | (DEGREES) |	DISTANCE (METERS)				
	150.00	200.00	300.00	400.00	500.00
10.0 |	44.78781 (87032724)	46.17202 (87010424)	35.52008 (87050824)	59.10365 (87091924)	77.70148 (87090524)
20.0 |	34.92529 (87101224)	2.43610 (87030124)	28.77421 (87062624)	47.67372 (87031924)	54.37736 (87011924)
30.0 |	1.13537c(87043024)	5.31690c(87043024)	31.70665c(87040324)	57.02717 (87062624)	68.19500 (87062624)
40.0 |	103.12939c(87100124)	86.47723 (87062524)	62.61864 (87062724)	81.41731c(87043024)	88.41795c(87043024)
50.0 |	840.08051 (87030724)	384.50235 (87030724)	166.57265c(87093024)	135.40036 (87030824)	109.52390 (87030824)
60.0 |	612.57471 (87041724)	526.97168 (87041724)	291.95682 (87030724)	221.85329 (87030724)	196.65327 (87030724)
70.0 |	177.10130 (87041624)	209.95570 (87010424)	134.19261 (87041824)	108.16398 (87030824)	107.29893 (87010124)
80.0 |	50.26768 (87030724)	112.78236 (87041724)	56.53601 (87010124)	46.18440 (87010124)	45.54885 (87010424)
90.0 |	1.21083 (87092524)	9.74939 (87041724)	23.47066 (87010424)	29.99071 (87041824)	39.87983 (87041824)
100.0 |	5.07217 (87033124)	11.02097 (87041624)	19.86528 (87010424)	28.15532 (87092524)	30.22956 (87092524)
110.0 |	39.91210 (87012224)	25.27676 (87041624)	59.31242 (87041624)	48.75721 (87010524)	42.34253 (87010524)
120.0 |	50.77304 (87012224)	55.21416 (87033124)	69.43967 (87042524)	91.89140 (87041624)	89.74371 (87042924)
130.0 |	28.53693 (87101224)	39.57040 (87012224)	95.43055 (87012224)	113.23257 (87012624)	123.20901 (87012624)
140.0 |	50.38568 (87033124)	43.92309 (87042224)	83.85102 (87042224)	90.55127 (87012724)	108.13919 (87012724)
150.0 |	43.80786 (87010524)	62.19137 (87122924)	72.51167 (87040424)	95.16759 (87042624)	113.16102 (87042624)
160.0 |	39.84703 (87040424)	69.00777 (87040424)	109.81650 (87040424)	124.64742 (87111124)	134.65347 (87102824)
170.0 |	34.76339 (87112024)	63.27074 (87042124)	100.85690 (87121624)	120.30585 (87011124)	122.82124 (87011124)
180.0 |	23.34814 (87102624)	42.40340 (87031124)	81.26504 (87101424)	111.71488 (87121724)	112.48228 (87010624)
190.0 |	28.56065 (87031124)	43.18827 (87042724)	77.09209 (87102624)	95.11591 (87102624)	98.74075 (87102924)
200.0 |	33.37193 (87053124)	55.37319 (87053124)	80.01984 (87053124)	94.94037 (87031124)	101.51450 (87031124)
210.0 |	23.27345 (87053124)	49.19596 (87103124)	90.74967 (87021024)	114.66358 (87103124)	122.41638 (87103124)
220.0 |	26.51658 (87100424)	52.86406 (87100424)	83.37585 (87042724)	102.60740 (87103124)	108.74862 (87103124)
230.0 |	28.46630 (87100424)	63.87893 (87112324)	119.38412 (87112324)	148.79085 (87112324)	157.09590 (87112324)
240.0 |	27.87894 (87100924)	57.45250 (87112324)	97.25983 (87112324)	115.86782 (87120624)	122.69473 (87120624)
250.0 |	27.30999c(87040224)	54.41063 (87110824)	82.03644 (87110724)	99.47672 (87112524)	106.30674 (87112524)
260.0 |	17.06597c(87040224)	43.80056 (87030524)	72.63882 (87111524)	85.27386 (87030524)	75.46746 (87030524)
270.0 |	12.26708 (87091624)	29.43809 (87091624)	49.49823 (87112724)	69.89421 (87052424)	83.26879 (87052224)
280.0 |	14.00972 (87082124)	28.32137 (87082124)	72.64836 (87052424)	83.10123 (87052224)	90.52148 (87060824)
290.0 |	15.95666 (87082124)	35.58577 (87052424)	62.58589 (87052424)	84.77100 (87111624)	97.30566 (87111624)
300.0 |	14.97963 (87052224)	32.79967 (87052424)	82.77020 (87060924)	106.03295 (87061124)	110.47135 (87060924)
310.0 |	13.38653 (87052424)	34.08940 (87071024)	103.16993 (87022624)	168.55019 (87061124)	190.44574 (87060224)
320.0 |	14.65714 (87111724)	50.35793 (87061124)	101.21427 (87060224)	147.52809 (87111724)	163.40569 (87121424)
330.0 |	29.38576 (87110324)	29.80544 (87061124)	81.62215 (87051924)	115.97840 (87031824)	130.12422 (87022824)
340.0 |	26.92188 (87101224)	27.89386 (87022824)	79.40105 (87061624)	95.42287 (87061624)	94.42815 (87073024)
350.0 |	39.76300 (87022824)	64.05694 (87101224)	70.17297 (87062224)	81.11134 (87033024)	75.42094 (87062224)
360.0 |	70.72977 (87030624)	39.86708 (87032724)	40.74191 (87091324)	54.35876 (87061524)	60.14272 (87012024)

*MODELOPTs: CONC RURAL FLAT DEFAULT

*** THE 2ND HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): HSD1 , HSD2 , HSD3 , MSD , GT , SS1GT , SS2GT ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION | DISTANCE (METERS)
(DEGREES) | 750.00 1000.00

DIRECTION (DEGREES)	750.00	1000.00
10.0	92.96136 (87090524)	76.84982 (87062624)
20.0	52.98118 (87012224)	49.10062 (87012224)
30.0	67.07900 (87012224)	55.29320c(87110424)
40.0	82.61449 (87062524)	65.26609 (87021624)
50.0	88.66483c(87110424)	68.68605c(87043024)
60.0	139.02058c(87093024)	105.87695c(87093024)
70.0	67.00442 (87030924)	56.25626 (87030924)
80.0	42.51403 (87010424)	33.52969 (87010424)
90.0	38.06954 (87041724)	23.40941 (87041724)
100.0	28.90151 (87041624)	23.16091 (87041624)
110.0	37.86415 (87010524)	31.07295 (87010524)
120.0	61.57415 (87010524)	47.97760 (87020724)
130.0	96.20904 (87020824)	68.33168 (87042524)
140.0	101.21580 (87042324)	88.56284 (87042324)
150.0	106.98862 (87042224)	83.15819 (87042624)
160.0	121.83202 (87040424)	92.36625 (87040424)
170.0	126.16656 (87111124)	111.59302 (87111124)
180.0	112.92794 (87011324)	97.87724 (87011324)
190.0	92.32995 (87121724)	78.78785 (87121724)
200.0	96.37003 (87031124)	86.26560 (87102924)
210.0	111.16770 (87103124)	90.93161 (87103124)
220.0	97.17623 (87103124)	83.09363 (87101124)
230.0	137.06390 (87100924)	108.83425 (87100924)
240.0	110.12670 (87120624)	89.18909 (87120624)
250.0	98.93736 (87111524)	83.74552 (87111524)
260.0	59.61450 (87031524)	50.76958 (87031524)
270.0	83.42719 (87052224)	70.05296 (87052224)
280.0	81.18954 (87052424)	69.76208 (87052324)
290.0	108.84165 (87060924)	79.26428 (87060824)
300.0	119.66831 (87051624)	122.26243 (87051624)
310.0	163.44844 (87061924)	133.49434 (87061924)
320.0	126.24454 (87121424)	112.14452 (87032524)
330.0	128.91350 (87032624)	98.67108 (87032624)
340.0	90.57499 (87032724)	81.32716 (87012124)
350.0	73.44277 (87011524)	65.81319 (87011524)
360.0	65.64864 (87012524)	56.40669 (87012524)

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE GRID-ID
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ALL	1ST HIGHEST VALUE IS 28.95176 AT (-383.02, 321.39, 0.00, 0.00)	GP	POL
	2ND HIGHEST VALUE IS 28.28640 AT (97.01, 73.81, 0.00, 0.00)	GP	POL
	3RD HIGHEST VALUE IS 25.77049 AT (-574.53, 482.09, 0.00, 0.00)	GP	POL
	4TH HIGHEST VALUE IS 25.72909 AT (-306.42, 257.11, 0.00, 0.00)	GP	POL
	5TH HIGHEST VALUE IS 21.97814 AT (114.91, 96.42, 0.00, 0.00)	GP	POL
	6TH HIGHEST VALUE IS 21.84038 AT (-257.12, 306.42, 0.00, 0.00)	GP	POL

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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ALL HIGH 1ST HIGH VALUE IS 3555.60815 ON 87030803: AT (114.91, 96.42, 0.00, 0.00) GP POL
HIGH 2ND HIGH VALUE IS 3099.87329 ON 87030721: AT (97.01, 73.81, 0.00, 0.00) GP POL

*** RECEPTOR TYPES: CC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID	DATE AVERAGE CONC (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
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ALL	HIGH 1ST HIGH VALUE IS 1960.67297 ON 87030824: AT (97.01, 73.81, 0.00, 0.00)	GP	POL	
	HIGH 2ND HIGH VALUE IS 1068.55676 ON 87030724: AT (97.01, 73.81, 0.00, 0.00)	GP	POL	

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*MODELOPTs: CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 123 Informational Message(s)

A Total of 123 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** ISCST3 Finishes Successfully ***
