Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

March 31, 1995

Mr. Gary Kuberski
Compliance Division
Florida Department of Environmental Protection
Central District
Suite 232
3319 Maguire Blvd.
Orlando, Florida 32803

COPY

RE: Air Permit No. AC 05-229322
FGT Compressor Station No. 19, Brevard County
Operating Permit Application

Dear Mr. Kuberski:

Enclosed is one application for an air operating permit for the facilities constructed under the above referenced Air Construction Permit. This application is for a state operating permit only. It is not an application for a Title V permit. A Title V permit application for the entire facility will be submitted by the required submittal date for a Title V permit application.

The short form has been used for this application. This was chosen based on discussions with several Florida Department of Environmental Protection District offices and local program offices. There were differences of opinions as to which form was the appropriate form. The majority of opinions were for the short form. Our analysis of the regulations, the forms and the directions to the forms lead us to conclude that the short form is the most appropriate.

Emissions testing was performed on January 30, 1995, and the test report was submitted to your office on March 15, 1995, by Cubix Corporation.

We understand that a fee is not required since we have paid an annual operating fee for this facility.

We will be requesting an extension for our construction permit to a date 60 days past the due date for our Title V permit application. This will be done through the Department of

Environmental Protection in Tallahassee since they issued the Construction Permit. We will copy you on this request.

If you have any questions or need further information, please call me at (713) 646-7323 or Mr. Allan Weatherford at (407) 875-5816.

Sincerely,

V. Duane Pierce

V. Duane Pierce, Ph.D.
Air Quality Supervisor
Phase III Expansion Project

cc: Clair Fancy - FDEP - Tallahassee

William Rome - FGT - w/o attachments

Allan Weatherford - FGT

FGT Melbourne Compressor Station No. 19 File

FILE: 19opapp.doc

COPY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - SHORT FORM

I. APPLICATION INFORMATION

Identification of Facility Addressed in This Application

Compressor Station No. 19
Florida Gas Transmission Company
4.5 miles west of the town of Melbourne
Brevard County, Florida

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official :

Name : William E. Rome
Title : Vice President, Operations

2. Owner or Authorized Representative or Responsible Official Mailing Address :

Organization/Firm : Florida Gas Transmission Company
Street Address : 1400 Smith Street
City : Houston
State : TX Zip Code : 77002-____

3. Owner/Authorized Representative or Responsible Official Telephone Numbers :

Telephone : 7138536071 Fax :

4. Owner/Authorized Representative or Responsible Official Statement :

I, the undersigned, am the owner or authorized representative of the facility (non-Title V source) addressed in this Application for Air Permit or the responsible official, as defined in Chapter 62-213, 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. Further, I agree to operate and maintain the air pollutant emissions units and air pollution control equipment described in this application 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. If the purpose of this application is to obtain an air operation permit or operation permit revision for one or more emissions units which have undergone construction or modification, I certify that, with the exception of any changes detailed as part of this application, each such emissions unit 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. 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 unit.*

W. E. Rome — 3/31/95

Signature Date

Scope of Application

Emissions Unit ID	Description of Emissions Unit
03	Compressor Engine No. 1903
Unknown	Fugitive Emissions

Purpose of Application

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 for one or more existing, but previously unpermitted, emissions units.

[X] Initial air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number :
AC 05-229322

[ ] Air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number :

Operation permit to be revised :

[ ] Air operation permit renewal.

Operation permit to be renewed :

Application Processing Fee

Attached - Amount : NA

Construction/Modification Information

1. Description of Alterations : No Alterations
2. Date of Commencement of Construction : 3/ 5/94

Professional Engineer Certification

1. Professional Engineer Name : Jimmy D. Harp

   Registration Number : 17362

2. Professional Engineer Mailing Address :

   Organization/Firm : Florida Gas Transmission Company
   Street Address : 1400 Smith Street
   City : Houston
   State : TX Zip Code : 77002-____

3. Professional Engineer Telephone Numbers :

   Telephone : 7138531619 Fax : 7138532723

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 (a) 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 in the Florida Statues 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.

   Jimmy D. Harp
   Signature

   3/30/95
   Date

Application Contact

1. Name and Title of Application Contact :

Name : Allan Weatherford
Title : Division Environmental Specialist

2. Application Contact Mailing Address :

Organization/Firm : Florida Gas Transmission Company
Street Address : 601 South Lake Destiny Drive
City : Maitland
State : FL Zip Code : 32751-____

3. Application Contact Telephone Numbers :

Telephone : 4078755816 Fax : 4078755896

Application Comment

This application is for a non-Title V operating permit for new sources. ATitle V application will be submitted for this facility by the appropriate due date.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Name, Location, and Type

1. Facility Owner or Operator :
   Florida Gas Transmission Company

2. Facility Name : Compressor Station No. 19

3. Facility Identification Number : 30ORL05010

4. Facility Location Information :

   Compressor Station No. 19
   Florida Gas Transmission Company
   4.5 miles west of the town of Melbourne
   Brevard County, Florida

   Facility Street Address : 3400 Ranch Road
   City : West Melbourne
   County : Brevard Zip Code : 32904-3518

5. Facility UTM Coordinates :

   Zone : 17 East (km) : 528.67 North (km) : 3101.64

6. Facility Latitude/Longitude :

   Latitude (DD/MM/SS) : 28 2 30 Longitude (DD/MM/SS) : 80 42 30

7. Governmental Facility Code :	8. Facility Status Code :	9. Relocatable Facility ?	10. Facility Major Group SIC Code :
0	A	N	49

11. Facility Comment :

Facility Contact

1. Name and Title of Facility Contact :

Name : Riley Jackson
Title : Area leader

2. Facility Contact Mailing Address :

Organization/Firm : Florida Gas Transmission Company
Street Address : 3400 Ranch Road
City : West Melbourne
State : FL Zip Code : 32904-3518

3. Facility Contact Telephone Numbers :

Telephone : 4077238998 Fax : 4079514178

Facility Regulatory Classifications

1. Small Business Stationary Source?	N
2. Title V Source?	
3. Synthetic Non-Title V Source by Virtue of Previous Air Construction Permit? Construction Permit Number/Issue Date : AC 05-299322 09/23/93	N
4. Facility Regulatory Classifications Comment : Facility is a Title V facility. This application is for a non-Title V operating permit.	

D. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements for All Applications

1. Area Map Showing Facility Location :	Attachment 1
2. Facility Plot Plan :	Attachment 2
3. Process Flow Diagram(s) :	Attachment 3
4. Precautions to Prevent Emissions of Unconfined Particulate Matter :	NA

III. EMISSIONS UNIT INFORMATION

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Information Section 1

Type of Emissions Unit Addressed in This Section

[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, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated 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 only.

[ ] 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.

Emissions Unit Information Section 1

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Compressor Engine No. 1903	
2. ARMS Identification Number : 03	
3. Emissions Unit Status Code : A	4. Emissions Unit Major Group SIC Code : 49
5. Initial Startup Date : 11/15/94	
6. Long-term Reserve Shutdown Date :	
7. Package Unit : Manufacturer : Dresser Rand Model Number : TCVD-10	
8. Generator Nameplate Rating : MW	
9. Incinerator Information : Dwell Temperature : °F Dwell Time : seconds Incinerator Afterburner Temperature : °F	
10. Emissions Unit Comment :	

Emissions Unit Information Section 1

Emissions Unit Control Equipment 1

1. Description : Lean burn engine.
2. Control Device or Method Code :

Emissions Unit Information Section 1

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	46 mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr tons/day
3. Maximum Process or Throughput Rate : Units :	
4. Maximum Production Rate : Units :	
5. Operating Capacity Comment : Manufacturer rated at 5000 bhp.	

Emissions Unit Information Section 1

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 1

Supplemental Requirements for All Applications

1. Process Flow Diagram :	Attachment 1
2. Fuel Analysis or Specification :	Attachment 2
3. Detailed Description of Control Equipment :	NA
4. Description of Stack Sampling Facilities :	Attachment 3
5. Compliance Test Report :	03/16/95
6. Procedures for Startup and Shutdown :	NA
7. Operation and Maintenance Plan :	NA
8. Other Information Required by Rule or Statue :	NA

III. EMISSIONS UNIT INFORMATION

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Information Section 2

Type of Emissions Unit Addressed in This Section

[ ] 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, an individually-regulated emission point (stack or vent) serving a single process or production unit, or activity, which also has other individually-regulated emission points.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated 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 only.

[X] 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.

Emissions Unit Information Section 2

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section : Fugitive Emissions	
2. ARMS Identification Number : Unknown	
3. Emissions Unit Status Code : A	4. Emissions Unit Major Group SIC Code : 49
5. Initial Startup Date :	
6. Long-term Reserve Shutdown Date :	
7. Package Unit : Manufacturer : Various Model Number : Various	
8. Generator Nameplate Rating : MW	
9. Incinerator Information : Dwell Temperature : °F Dwell Time : seconds Incinerator Afterburner Temperature : °F	
10. Emissions Unit Comment : Potential fugitive emissions from Compressor Station No. 19 include fugitive emissions from the new valves and flanges that are in gas service.	

Emissions Unit Information Section 2

Emissions Unit Control Equipment 1

1. Description : N/A
2. Control Device or Method Code :

Emissions Unit Information Section 2

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :	mmBtu/hr
2. Maximum Incinerator Rate :	lb/hr tons/day
3. Maximum Process or Throughput Rate : Units :	
4. Maximum Production Rate : Units :	
5. Operating Capacity Comment : This section is not applicable to fugitive emissions.	

Emissions Unit Information Section 2

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :	
24 hours/day	7 days/week
52 weeks/year	8760 hours/year

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Emissions Unit Information Section 2

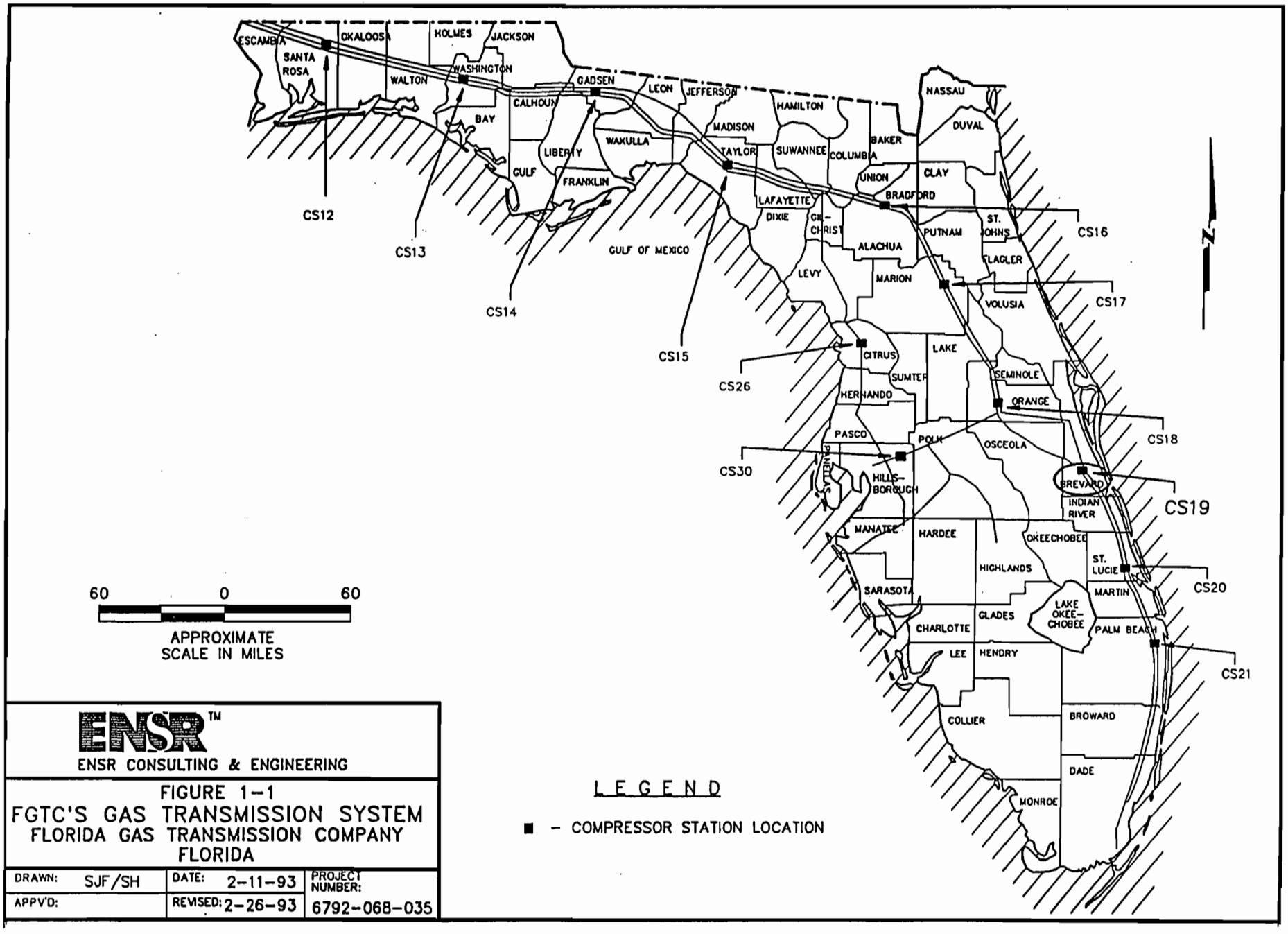
Supplemental Requirements for All Applications

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

ATTACHMENT 1

Area Map

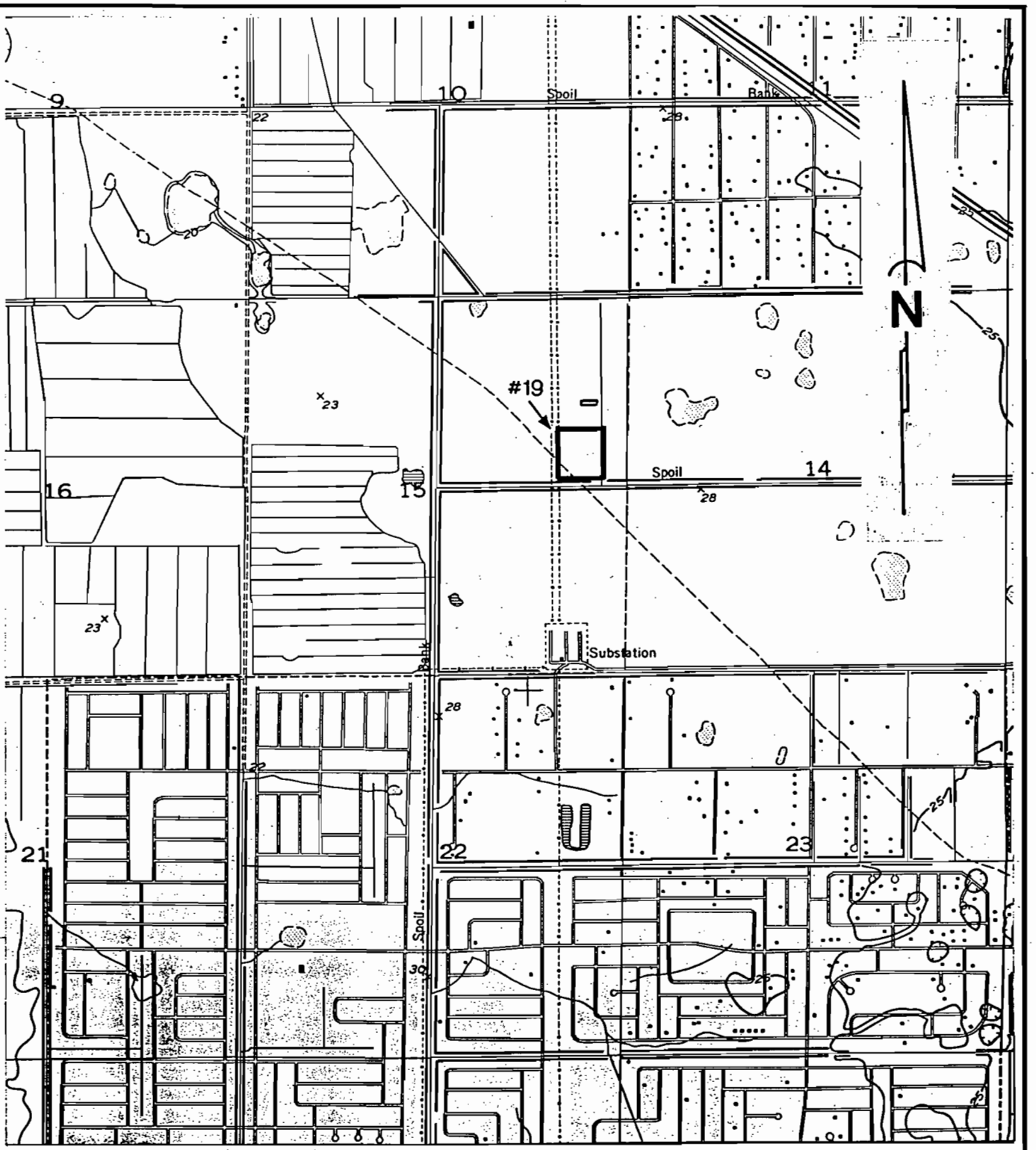
CE679264
12-15-92



ENSR™
ENSR CONSULTING & ENGINEERING

FIGURE 1-1
FGTC'S GAS TRANSMISSION SYSTEM
FLORIDA GAS TRANSMISSION COMPANY
FLORIDA

DRAWN: SJF/SH	DATE: 2-11-93	PROJECT NUMBER:
APPV'D:	REVISED: 2-26-93	6792-068-035



REFERENCE: U.S.G.S. Quadrangle Map for Melbourne West, Florida, 1988.

TOPO

ENSR™

ENSR CONSULTING AND ENGINEERING

FIGURE 1-2

SITE LOCATION MAP

COMPRESSOR STATION #19

FLORIDA GAS TRANSMISSION COMPANY

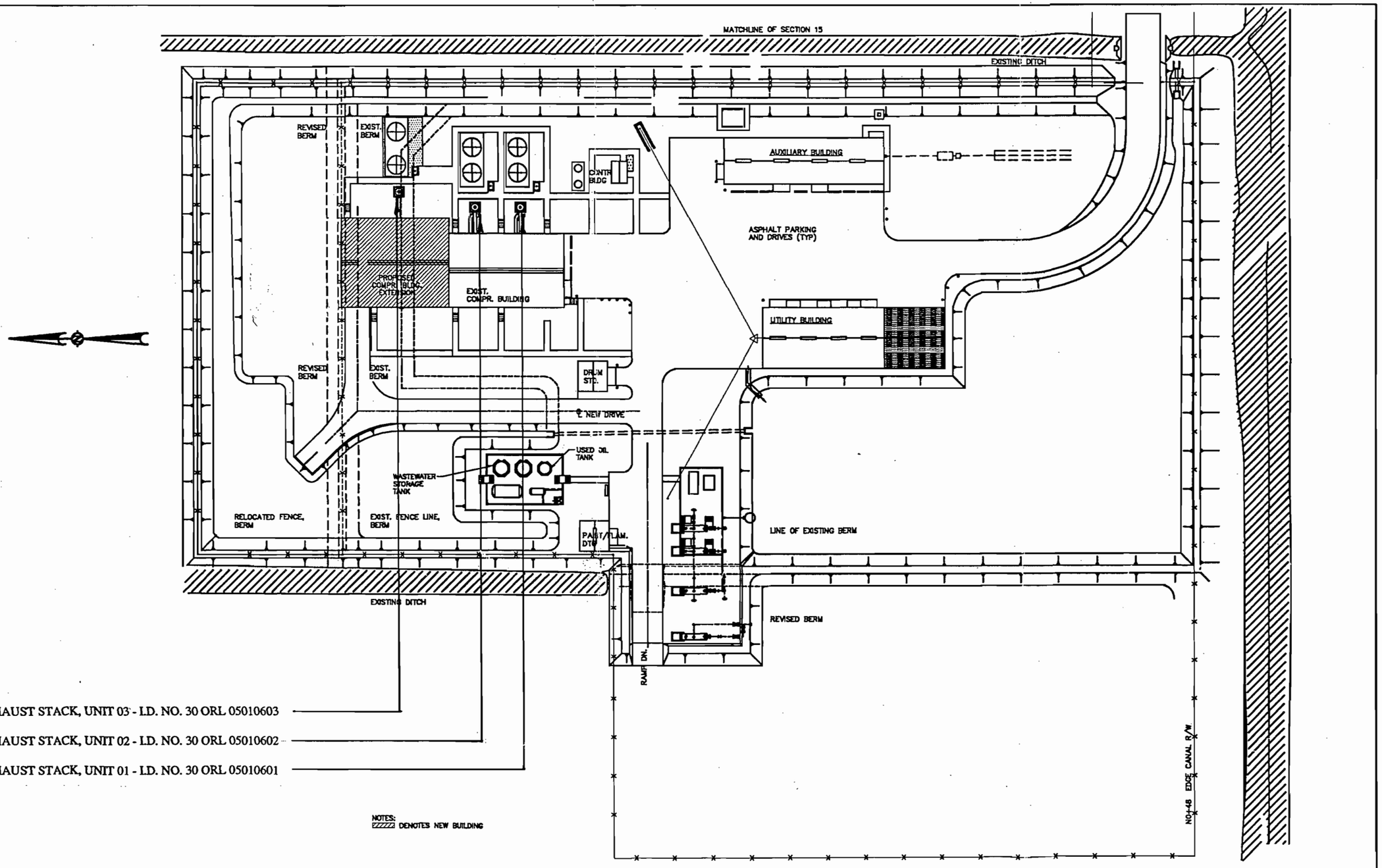
MELBOURNE, FLORIDA

DRAWN BY: SJF/SH	DATE: 12-16-92	PROJECT NUMBER:
CHK'D.BY:	REVISED:	6792-068-035

ATTACHMENT 2

Plot Plan

AIR EMISSIONS PLOT PLAN C/S 19
Source I.D. No. 30 ORL 05010601 through 05010603



NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	APPROVED BY	APPROVED DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE: 04/08/93 DWG. I:\WORK\S22137\PERMIT2					

WORK ORDER NUMBER: S22137
F.G. OR ENR. ACCOUNT NUMBER:

DESIGNATION	BY	DATE
DESIGN	RRL	03/01/93
DRAWN	LRH	03/01/93
AS BUILT		
MICROFILM		
APPVD FGT ENG.		
SCALE	1"=30'	

Florida Gas Transmission Company
Houston, Texas

PHASE III EXPANSION
COMPRESSOR STATION NO. 19
PERMIT SITE PLAN

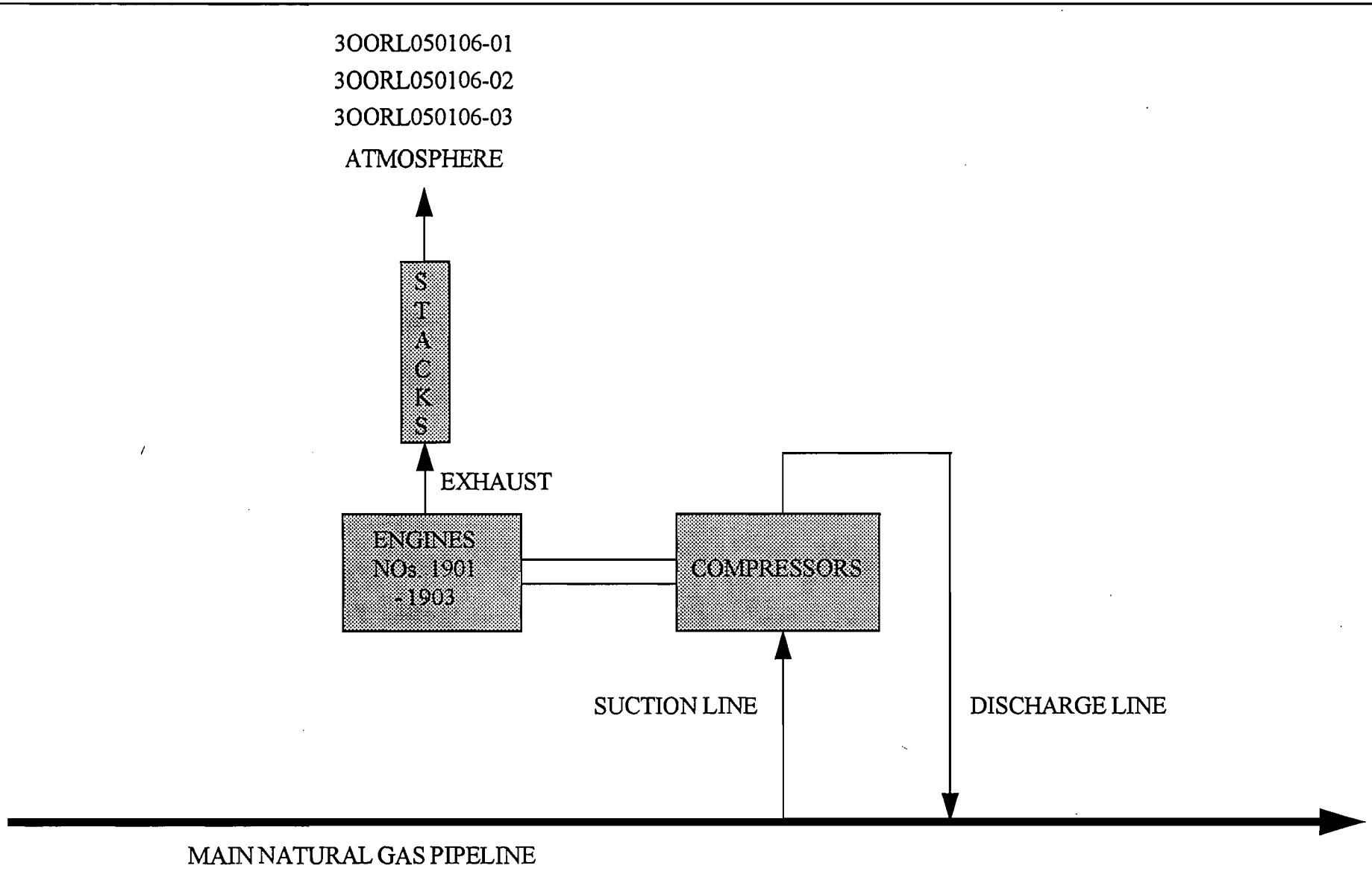
MELBOURNE, FLORIDA

ENRON GAS PIPELINE GROUP

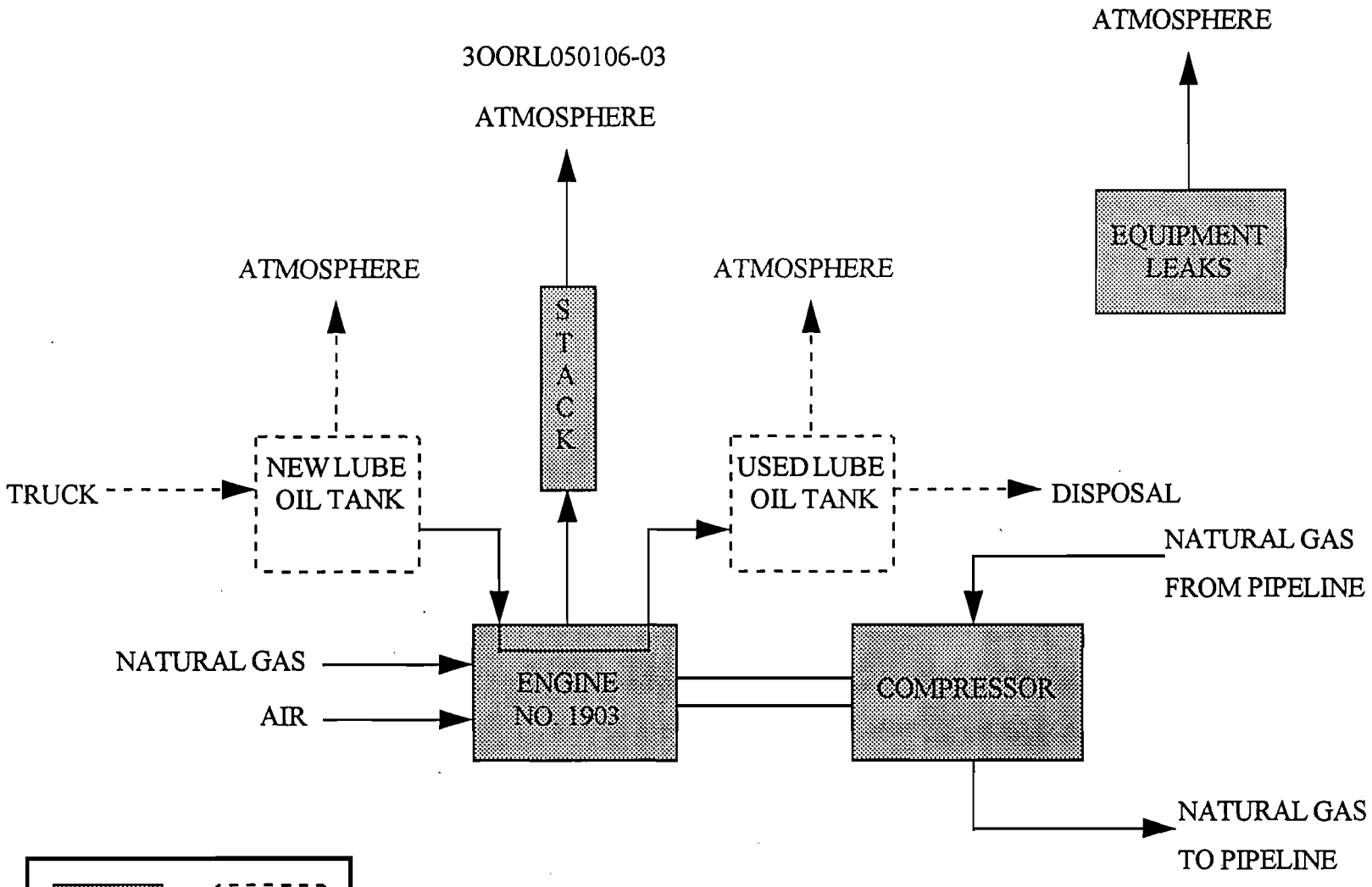
DRAWING NUMBER: PERMIT2

ATTACHMENT 3

Process Flow Diagrams



AQMcs	DATE: 29 MAR 95	VDP
PROCESS FLOW DIAGRAM FOR STATION 19		



AQMcs	DATE: 27 MAR 95	VDP
PROCESS FLOW DIAGRAM FOR UNIT 1903		

ATTACHMENT 4

Typical Fuel Analyses

ANALYSIS

DATE: 05/03/94 ANALYSIS TIME: 345 STREAM SEQUENCE: 1
TIME: 11:07 CYCLE TIME: 360 STREAM#: 1
ANALYZER#: 1 MODE: RUN CYCLE START TIME: 11:01

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
HEXANE +	151	0.087	0.0381	4.49	0.0028
PROPANE	152	0.437	0.1204	11.02	0.0067
I-BUTANE	153	0.101	0.0331	3.30	0.0020
N-BUTANE	154	0.092	0.0291	3.02	0.0019
IPENTANE	155	0.040	0.0147	1.61	0.0010
NPENTANE	156	0.025	0.0081	1.01	0.0006
NITROGEN	157	0.385	0.0421	0.00	0.0037
METHANE	158	95.242	16.1435	964.13	0.5275
CO2	159	0.742	0.1265	0.00	0.0113
ETHANE	160	2.848	0.7619	50.52	0.0298
TOTALS		100.000	17.3185	1039.10	0.5871

* @ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0022
DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1041.4
REAL RELATIVE DENSITY = 0.5861
UNNORMALIZED TOTAL = 100.00
ANALOG INPUT CHANNEL 1 = H 2 S 140 = .15023
ANALOG INPUT CHANNEL 2 = WATER 144 = 3.7902

ACTIVE ALARMS

NONE

FLORIDA GAS TRANSMISSION CO.
BROOKER LAB- Main Line
STANDARD GAS 1041.8 / 0.5939
CERTIFIED VALUE BTU 1041.9 GRAV. 0.5939
TOTAL SULFUR 0.03 GR/CCF H^2S 0.02 GR/CCF
H^2O 2.6 #/MMCF BY Ron Stotler

ANALYSIS

DATE: 12/01/93 ANALYSIS TIME: 345 STREAM SEQUENCE: 12
TIME: 12:38 CYCLE TIME: 360 STREAM#: 1
ANALYZER#: 1 MODE: RUN CYCLE START TIME: 12:32

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
HEXANE +	151	0.076	0.0333	3.92	0.0025
PROPANE	152	0.580	0.1599	14.64	0.0088
I-BUTANE	153	0.119	0.0388	3.87	0.0024
N-BUTANE	154	0.126	0.0398	4.12	0.0025
IPENTANE	155	0.041	0.0150	1.64	0.0010
NPENTANE	156	0.026	0.0094	1.04	0.0006
NITROGEN	157	0.460	0.0504	0.00	0.0044
METHANE	158	94.190	15.9651	953.48	0.5217
CO2	159	0.747	0.1273	0.00	0.0114
ETHANE	160	3.635	0.9724	64.48	0.0377
TOTALS		100.000	17.4114	1047.20	0.5931

* @ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0023
DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1049.6
REAL RELATIVE DENSITY = 0.5942
UNNORMALIZED TOTAL = 99.97

ACTIVE ALARMS

NONE

FLORIDA GAS TRANSMISSION CO.
BROOKER LAB- Wet
STANDARD GAS 1049 0.5940
CERTIFIED VALUE BTU 1042.0 GRAV. 0.5940
TOTAL SULFUR 0.15 GR/CCF H^2S 0.08 GR/CCF
H^2O 28 #/MMCF BY Gordon Lack

ANALYSIS.

DATE: 01/12/93 ANALYSIS TIME: 345 STREAM SEQUENCE: 12
TIME: 12:32 CYCLE TIME: 360 STREAM#: 1
ANALYZER#: 1 MODE: RUN CYCLE START TIME: 12:26

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	SP. GR.*
HEXANE +	151	0.073	0.0319	3.76	0.0024
PROPANE	152	0.930	0.2561	23.44	0.0142
I-BUTANE	153	0.189	0.0618	6.16	0.0038
N-BUTANE	154	0.228	0.0718	7.45	0.0046
IPENTANE	155	0.057	0.0210	2.31	0.0014
NPENTANE	156	0.040	0.0144	1.60	0.0010
NITROGEN	157	0.810	0.0000	0.00	0.0078
METHANE	158	93.511	0.0000	946.61	0.5180
CO2	159	0.774	0.0000	0.00	0.0118
ETHANE	160	3.388	0.9064	60.10	0.0352
NMHC		4.905			
TOTALS		100.000	1.3634	1051.41	0.6000

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0023
DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1053.8
SAT B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1035.5
REAL SPECIFIC GRAVITY = 0.6011
UNNORMALIZED TOTAL = 100.17

ACTIVE ALARMS

NONE

FLORIDA GAS TRANSMISSION CO.
BROOKER LAB- WET
STANDARD GAS 1041.9 / 0.5940
CERTIFIED VALUE BTU 1042.0 GRAV. 0.5940
TOTAL SULFUR 0.48 GR/CCF H^2S 0.03 GR/CCF
H^2O 2.7 #/MMCF BY Bill Stinson

RECEIVED
JAN 14 1993
TECH OPERATIONS

ATTACHMENT 5

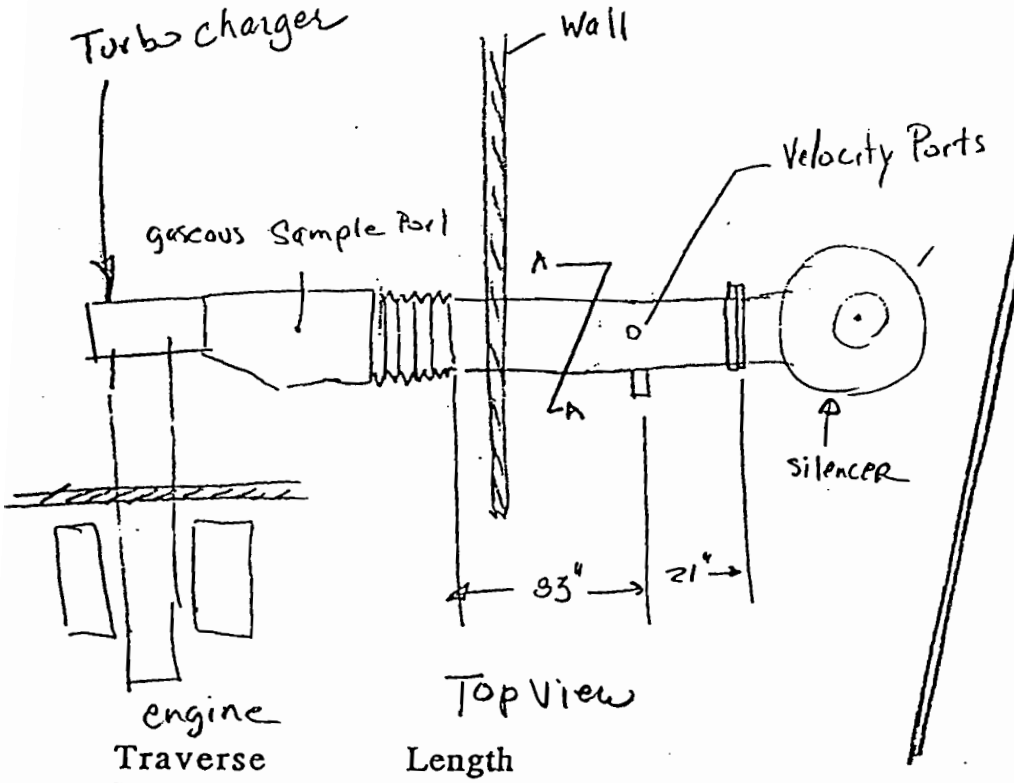
Sampling Facility Drawings

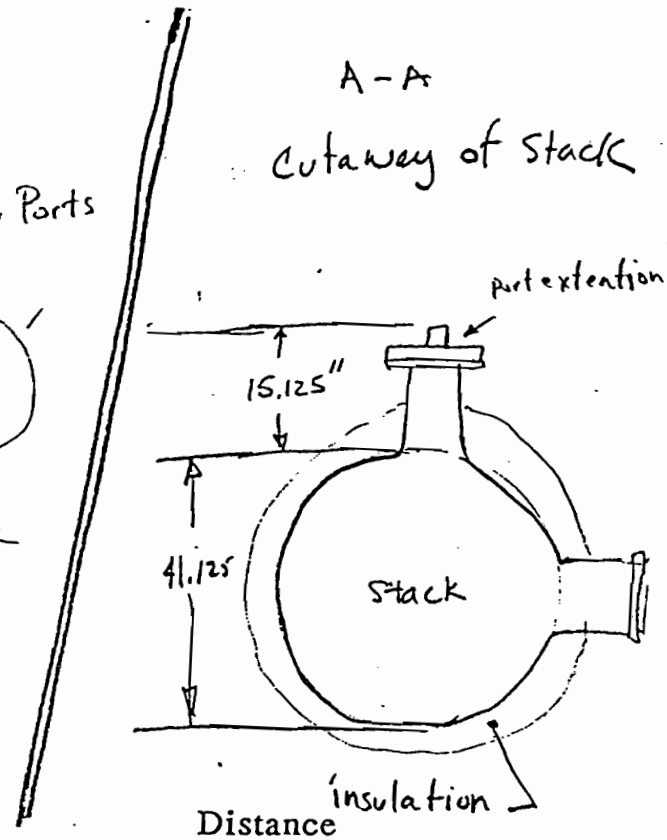
Circular Stack Sampling Traverse Point Layout
(EPA Method 1)

Date: 1-26-95
Plant: Sta. 19
Source: 1903
Technician(s) CC / RJK / TSU / LB

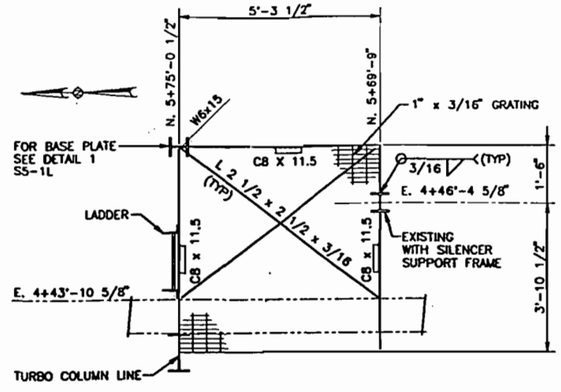
Port + Stack ID: 56.25 in.
Port Extension 15.125 in.
Stack ID: 41.125 in.
Stack Area 9.22 ft²
Total Req'd Traverse Pts. 16
No. of Traverse Pts. 8 /diam.
No. of Traverse Pts. 8 /port

Stack Diagram (Side View showing major unit components, dimensions and nearest upstream & downstream flow disturbances)

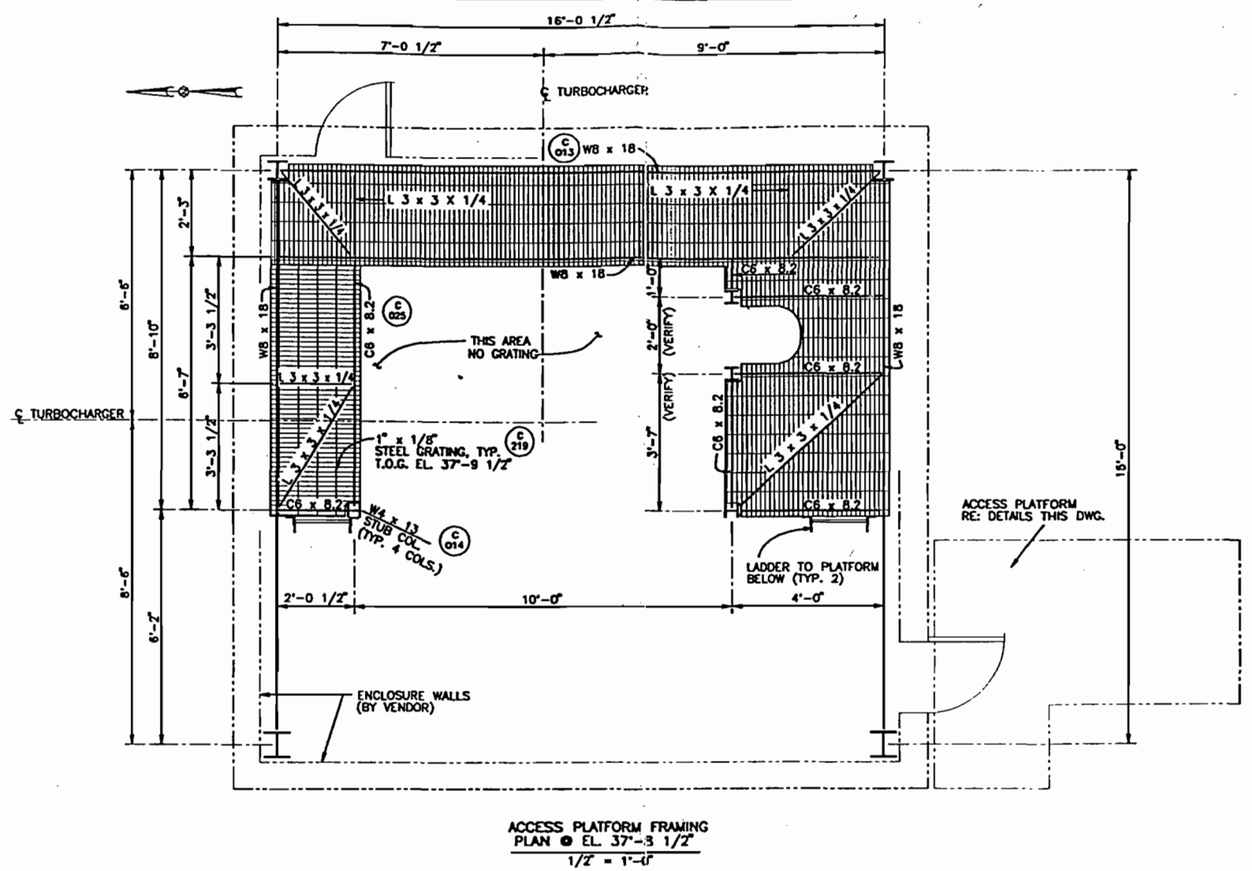




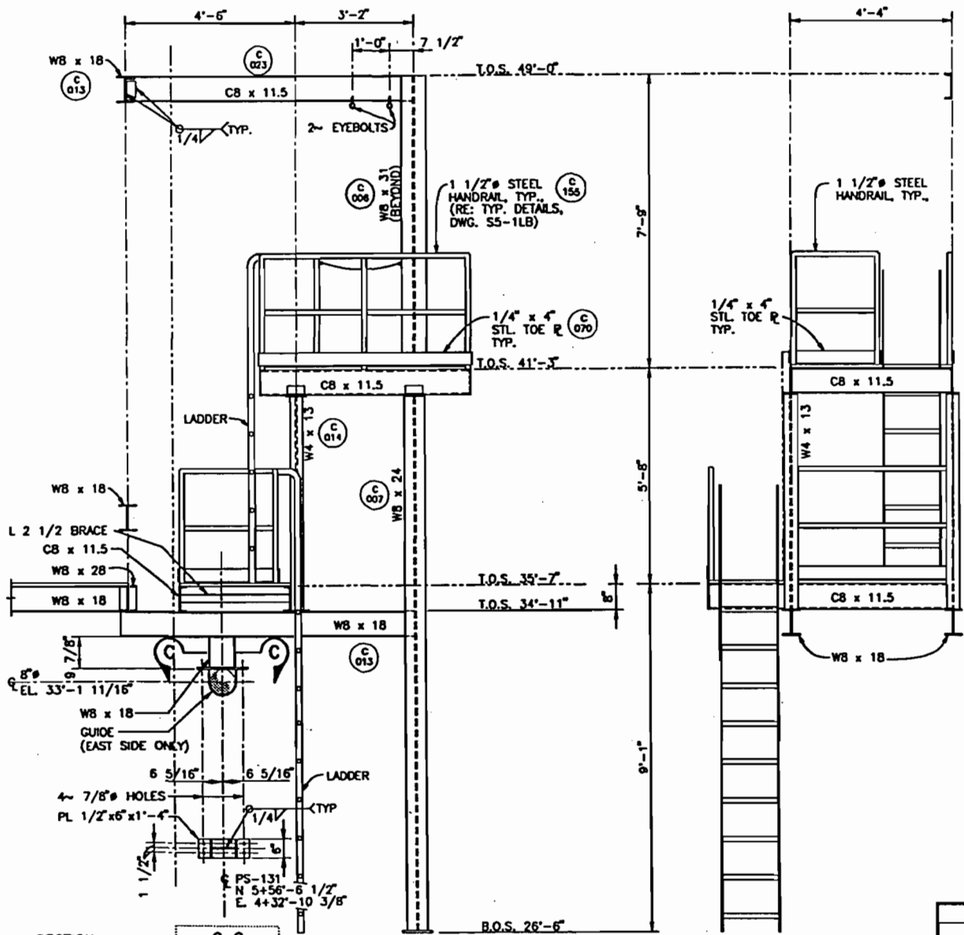
Traverse Point Number	Length Factor (% of diameter) Number of traverse pts./diameter 4	6	8	12	Distance from Reference Point (inches)
1	6.7	4.4	3.2	2.1	1.32
2	25.0	14.6	10.5	8.2	4.32
3	75.0	29.6	19.4	11.8	7.99
4	93.3	70.4	32.3	17.7	13.28
5		85.4	67.7	25.0	27.8
6		95.6	80.6	35.6	33.15
7			89.5	64.4	36.81
8			96.8	75.0	39.81
9				82.3	
10				88.2	
11				93.3	
12				97.9	



TURBOCHARGER EAST SIDE PLATFORM STEEL (OUTSIDE)
PLAN @ EL. 37'-8 1/2"
1/2" = 1'-0"



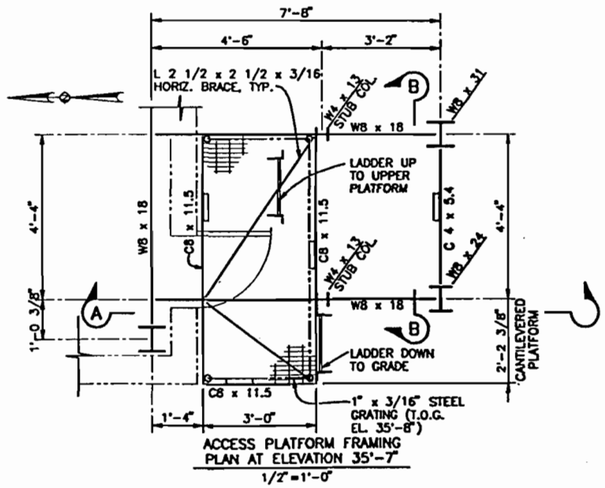
ACCESS PLATFORM FRAMING
PLAN @ EL. 37'-3 1/2"
1/2" = 1'-0"



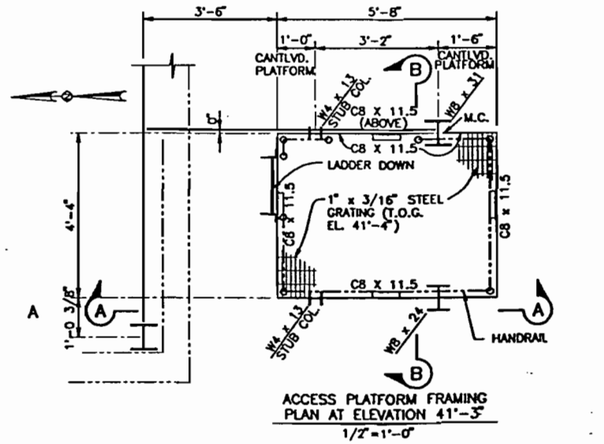
SECTION C-C
SCALE : 1/2" = 1'-0"

SECTION A-A
SCALE : 1/2" = 1'-0"

SECTION B-B
SCALE : 1/2" = 1'-0"



ACCESS PLATFORM FRAMING
PLAN AT ELEVATION 35'-7"
1/2"=1'-0"



ACCESS PLATFORM FRAMING
PLAN AT ELEVATION 41'-3"
1/2"=1'-0"

NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
1	ISSUED FOR CONSTRUCTION	JHB	11/1/93		
0	ISSUED FOR BID	LRH	9/1/93		

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	APPROVED BY	APPROVED DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE: DWG. \S22137\S\S5-1KB					

WORK ORDER NUMBER: S22137
P.I. OR SAL ACCOUNT NUMBER:

CONSTRUCTION	BY	DATE
DESIGN	VK	8/3/93
DRAWN	LRH	8/4/93
AS BUILT		
MICROFILM		
FIELD REL.		
SCALE	1/2" = 1'-0"	

Florida Gas Transmission Company
Houston, Texas

PHASE III EXPANSION
COMPRESSOR STATION NO. 19
TURBOCHARGER ENCLOSURE
SUPPORT STRUCTURE
MELBOURNE, FLORDIA

ENRON GAS PIPELINE GROUP

DRAWING NUMBER: S5-1KB 1

MATCHLINE E4+66'-0" FOR CONT. SEE DWG. M3-2B

MATCHLINE N5+92'-0"

MATCHLINE N5+25'-0"

PS-122 E.4+55'-0"

PS-123 E.4+42'-6"

PS-124 E.4+31'-0"

PS-125 E.4+25'-0"

PS-129 E.4+25'-4"

PS-130 E 4+51'-0"

PS-131 E 4+44'-8 1/2"

PS-128 N.5+35'-0"

M-0077

M-0059

M-0054

M-0046

M-0249

M-0253(2)

M-0241

M-0241(2)

M-0744

M-1007

M-0398
M-0459(4)
M-0508

M-0281
M-0397
M-0454(8)
M-0507

M-0059(2)
M-0527(2)
M-0379(2)
M-0450(8)
M-0502(2)
M-0378(2)

M-0258

M-0053

M-0064

M-0068

M-0261

M-0222

M-0257

M-0257(2)

M-1000

M-1009

M-1001
M-1002

M-0250

M-0261(TYP. 5)

V-740 6'0.D. x 20' S/S E4+48'-6"

V-740

V-3572 E 4+25'-4"

INLET AIR SILENCER N5+68'-0"

EXHAUST SILENCER N5+48'-11"

DUMMY LEG SUPPORT

TI 1709

PSV 740

PI 740

LCV 740

B.O.P. EL.23'-0"

BOP EL. 37'-6 7/16"

BOP EL. 33'-1 11/16"

BOP EL. 23'-0 3/16"

BOP EL. 41'-10 1/2"

BOP EL. 35'-6"

BOP EL. 34'-6"

BOP EL. 32'-4 13/16"

BOP EL. 29'-8 1/4"

BOP EL. 22'-0"

BOP EL. 22'-7 5/8" (ON 4" DRAIN)

BOP EL. 22'-5 1/2"

BOP EL. 22'-2 3/8"

BOP EL. 29'-8 1/2"

4"-.337 PVC(OW-0)950A

42"-.322 B(UA-1)3822

42"-.237 B(SA-1)1237

42"-.250 B(EX-1)3812

6'-.280 B(AW-1)3659

6'-.280 B(SA-1)741

6'-.280 B(SA-1)702

2'-.218 B(AW-1)3654

2'-.218 B(LO-1)3855

2'-.218 B(AW-1)3653

2'-.218 B(AW-1)3652

2'-.218 B(AW-1)3660

2'-.218 B(AW-1)3659

2'-.218 B(AW-1)3607

2'-.218 B(AW-1)3609

2'-.218 B(AW-1)3593

2'-.218 B(AW-1)3591

2'-.218 B(AW-1)3562

2'-.218 B(AW-1)3576

2'-.218 B(AW-1)3853

2'-.218 B(AW-1)3731

2'-.218 B(UA-1)703

2'-.218 B(OW-1)850

2'-.218 B(OW-1)953

2'-.218 B(OW-1)969

3'-.218 B(LO-1)3565

3'-.218 B(LO-1)3611

3'-.218 B(LO-1)3571

3'-.218 B(LO-1)3804

3'-.218 B(OW-1)3853

3'-.218 B(OW-1)3710

3'-.218 B(LO-1)3681

3'-.179 B(AW-1)3611

3'-.179 B(AW-1)3660

3'-.179 B(HO-3)3591

3'-.179 B(HO-3)3593

3'-.179 B(EA-1)760

4'-.237 B(HO-3)3591

4'-.237 B(SA-1)736

4'-.237 B(OW-1)3710

4'-.322 B(OW-1)3611

4'-.322 B(OW-1)3607

4'-.322 B(OW-1)3653

20'-.250 B(FA-1)3805

20'-.250 B(FA-1)3804

6"-.250 B(AW-1)3658

4"-.337 PVC(OW-0)950

FLANGED ENDS TO EXTEND 2'-0" BEYOND BLDG. WALL

TO ESD STATION #8

MATCHLINE E4+17'-4 1/2" FOR CONT. SEE DWG. M4-2A AND M4-2B.

MATCHLINE E4+17'-4 1/2" FOR CONT. SEE DWG. M4-2C & M4-2D

MATCHLINE E4+17'-4 1/2" FOR CONT. SEE DWG. M3-2W

NOTES:

1. 1/2" GAP IN LINE TO BE COVERED WITH 40" LD. NEOPRENE RUBBER BOOT AND S/S HOSE CLAMPS.
2. EXHAUST LINES TO BE INSULATED WITH 5" CALCIUM SILICATE AND COVERED WITH ALUMINUM JACKET IN ACCORDANCE WITH E.S.5210.
3. STATION PROCESS GAS PIPING MAOP IS 1000 PSIG.
4. SEE DRAWING M1-0 FOR GENERAL NOTES.
5. FOR PIPE SUPPORT FOUNDATION DETAILS, SEE DRAWINGS S5-1F, S5-1FA, S5-1FB, S5-1FC AND S5-1FD.
6. FOR PIPE SUPPORT STRUCTURE DETAILS, SEE DRAWINGS S5-1M AND S5-1MA.
7. 4" ANSI 150 EPA TEST CONNECTIONS, 11" OUTSIDE PROJECTION, F/F.
8. FOR TURBO CHARGER ENCLOSURE SEE DWG. S5-1DA.

NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
1	ISSUED FOR CONSTRUCTION	D.F.	11/1/93		
0	ISSUED FOR BID	TOW	9/1/93		

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	APPROVED BY	APPROVED DATE
PREL'Y						
BID						
CONSTR.						

CADDS: PLOT DATE: 10/1/93; DWG. S22137\M\M3-2C

WORK ORDER NUMBER: S22137

P.L. OR STA. ACCOUNT NUMBER:

CONSTRUCTION	BY	DATE
DESIGN		
DRAWN	G.R.R.	5/20/93
AS BUILT		
MICROFILM		
MICROFILM AS BUILT		
SCALE	3/8"=1'-0"	

Florida Gas Transmission Company
Houston, Texas

PHASE III EXPANSION
COMPRESSOR STATION NO. 19
PIPING PLAN
MUFFLER/TURBOCHARGER/AIR INTAKE AREA
MELBOURNE, FLORIDA

ENRON GAS PIPELINE GROUP

DRAWING NUMBER: M3-2C

Extra

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

October 9, 1995

See AC62-229319 for original request

Mr. V. Duane Pierce, Ph.D.
Florida Gas Transmission Company
Post Office Box 1188
Houston, Texas 77251-1188

Re: Status of Construction Permits Numbered AC62-229319, AC05-229322, AC56-230129

Dear Mr. Pierce:

In response to your letter dated September 1, 1995 enclosed are the current rules regarding Operation Permits for Major Sources of Air Pollution. Rule 62-213.420 (1) (b) 2. and 62-213.420 (1) (b) 3. should answer your question. Also enclosed is a recent Guidance Memo about Extension of the Expiration Date of Construction Permits that may clarify the enclosed rules.

In summary, if a timely and complete application for a Title V Operation permit is submitted by the applicable due date, then you may continue to operate the source under any existing valid permit or Florida Electrical Power Plant Siting Certification until action has been taken by the permitting authority on the Title V operation permit application.

It is important to note that the proposed rule change automatically extending valid construction permits has not yet been finalized. If you have any further questions regarding this matter, please call me at (904)488-1344.

Sincerely,

A A Linero 10/9

A. A. Linero, P.E. Administrator,
New Source Review Section

AAL/kw

cc: T. Heron, DEP

Department of Environmental Protection

files

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

Allen Weatherford, R.E.M.
Division Environmental Specialist
Florida Gas Transmission Company
Post Office Box 945100
Maitland, Florida 32794-5100

OCD-AP-95-109

Brevard County - AP
Station 19 - AC05-229322
Natural Gas Compressor Engine ID No. 1903
January 1995 Compliance Test

Dear Mr. Weatherford:

This is in response to your June 2, letter stating that Unit 1903 was tested at 98% of its permitted horsepower capacity.

Our permit modification to Mr. Carl Schultz mentions only the facts, which are that Unit 1903 was only tested at 83% of the permitted capacity of 45.96 MMBTU/hour, and then it is bound by the effective rule when this occurs. Please see Specific Condition #5 of your permit and Rule 62-297.310(2)(b).

Please be advised that the Department has been instructed by Clair Fancy, in the case of power plants to never place a limit on megawatts of electricity, but rather the heat input as the fuel is the pollution source. This was the result of a freeze condition years ago when it was said that the power companies stated that some permits limited the megawatts and therefore they could not meet the demand for more power.

The same logic applied at the time this permit was written. You will notice the same logic when all the Title V permits are issued, as Clair will ensure they are all alike.

Sincerely,

Charles M. Collins

Charles M. Collins, P.E.
Program Administrator
Air Resources Management

Date 7-5-95

CMC/j

cc: Clair Fancy, Tallahassee
Ed Middleswart, Pensacola
Bill Thomas, Tampa
Christopher Kirts, Jacksonville
David Knowles, Fort Myers
Isidore Goldman, West Palm Beach

R. File

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

May 30, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. V. Duane Pierce
Air Quality Supervisor
Phase III Expansion Project
Florida Gas Transmission Company
Post Office Box 1188
Houston, Texas 77251-1188

Dear Mr. Pierce:

Re: Request for Extensions to Air Construction Permits
AC 62-229319/PSD-FL-202-Taylor County
AC 05-229322-Brevard County
AC 56-230129/PSD-FL-203-St. Lucie County
AC 50-229440-Palm Beach County
AC 09-229441-Citrus County
AC 29-228821-Hillsborough

The Department is in receipt of your letter dated April 20, requesting to extend the expiration date of the above mentioned permits. The Bureau has evaluated your request and agrees to extend the expiration date of the permits as follows:

Expiration Date:

From: July 30, 1995
To: January 30, 1996

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes (F.S.). The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the applicant of the amendment request/application and the parties listed below must be filed within 14 days of receipt of this amendment. Petitions filed by other persons must be filed within 14 days of the amendment issuance or within 14 days of their receipt of this amendment, whichever occurs first. Petitioner

shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, F.S.

The Petition shall contain the following information:

(a) The name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and,
(g) A statement of the relief sought by petitioner, stating precisely the action the petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the amendment request/application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this amendment in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

A copy of this letter shall be filed with the referenced permits and become a part of the permits.

Sincerely,

Howard L. Rhodes

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/th/t

Enclosure: Mr. V. Duane Pierce's letter of April 20, 1995

cc: Ed Middleswart, NWD
Robert Leetch, NED
Charles Collins, CD
Isidore Goldman, SED
Jerry Campbell, EPCHC
Alan Weatherford, FGTC
Barry Andrews, ENRS
Jim Stormer, PBCHU

Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

April 20, 1995

Mr. C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RE: Extension of Construction Permits

Air Permit No. AC 62-229319/PSD-FL-202
FGT Compressor Station No. 15, Taylor County

Air Permit No. AC 05-229322
FGT Compressor Station No. 19, Brevard County

Air Permit No. AC 56-230129/PSD-FL-203
FGT Compressor Station No. 20, St. Lucie County

Air Permit No. AC 50-229440
FGT Compressor Station No. 21, Palm Beach County

Air Permit No. AC 09-229441
FGT Compressor Station No. 26, Citrus County

Air Permit No. AC 29-228821
FGT Compressor Station No. 30, Hillsborough County

Dear Mr. Fancy:

Florida Gas Transmission Company (FGT) requests an extension for each of the above referenced air construction permits to a date 60 days after the due date for the Title V permit application for the facility. A non-Title V operating permit application for each of the facilities was submitted on 31 March 1995.

If you have any questions or need additional information, please call me at (713) 646-7323 or Mr. Allan Weatherford at (407) 875/5816.

Sincerely,

V. Duane Pierce, Ph.D.
Air Quality Supervisor
Phase III Expansion Project

P 230 524 287

Receipt for Certified Mail
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to	Carl D Schulz
Street and No.	FIA GAS Trans.
P.O., State and ZIP Code	Houston, TX
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	9-24-93

AC 05-229329

PS Form 3800, June 1991

Your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
Carl D Schulz, VP
FIA GAS Transmission Co
PO Box 1188
Houston, TX
77251-1188

4a. Article Number
P 230 524 287

4b. Service Type
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
SEP 28 1993

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ☆U.S. GPO: 1992—323-402 **DOMESTIC RETURN RECEIPT**

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. **AC** 05-229322
Brevard County

Mr. Carl D. Schulz, Vice President
Florida Gas Transmission Company
P. O. Box 1188
Houston, Texas 77251-1188

_____/

Enclosed is Permit Number **AC** 05-229322 to construct a 5,000 bhp natural gas reciprocating engine at the Florida Gas Transmission Company's facility located 4.5 miles west of Melbourne, Brevard County, Florida. This permit is issued pursuant to Section(s) 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 9-24-93 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kim Tober (Clerk) 9-23-93 (Date)

Copies furnished to:
C. Collins, Central District
B. Andrews, P.E., ENSR

Final Determination

Florida Gas Transmission Company
Brevard County
Melbourne, Florida
Station No. 19

Natural Gas Compressor Engine
Permit No. AC 05-229322

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

September 23, 1993

FINAL DETERMINATION

The Technical Evaluation and Preliminary Determination for the permit to construct a 5000 bhp natural gas reciprocating engine at the Florida Gas Transmission Company facility located 4.5 miles west of Melbourne in Brevard County, Florida, was distributed on June 28, 1993. The Notice of Intent was published in the Orlando Sentinel on July 10, 1993. Copies of the evaluation were available for inspection at the Department's offices in Orlando and Tallahassee.

Florida Gas Transmission Company (FGTC's) application for a permit to construct a 5000 bhp natural gas reciprocating engine in Brevard County, Florida, has been reviewed by the Bureau of Air Regulation in Tallahassee.

Comments regarding the Permit Specific Conditions were submitted by Mr. V. Duane Pierce, Ph.D., Air Quality Supervisor for Florida Gas Transmission Company and Barry Andrews, P.E., representing FGTC as the professional engineer of record. The Bureau has considered Mr. Pierce's and Mr. Andrews' comments and agreed to the changes proposed to the draft specific conditions of the permit since these changes will not affect air quality analysis considered during the evaluation of this project. The amendments to the Specific Conditions of the permit are as follows:

SPECIFIC CONDITION No. 5:

FROM:

The permitted operating parameters and utilization rates for this natural gas compressor engine shall not exceed the values stated in the application. The parameters include, but are not limited to:

Maximum natural gas consumption shall not exceed 0.0368 MMCF/hr.
Maximum heat input shall not exceed 38.3 MMBTU/hr.

TO:

The permitted operating parameters and utilization rates for this natural gas compressor engine shall not exceed the values stated in the application. The parameters include, but are not limited to:

Maximum natural gas consumption shall not exceed **0.0442** MMCF/hr **(based on a fuel heating value of 1040 BTU/SCF).**
Maximum heat input shall not exceed **45.96** MMBTU/hr.

SPECIFIC CONDITION No. 1:

FROM:

Emission Limits

1. The maximum allowable emissions from this 5,000 bhp/hr engine shall not exceed the emission rates as follows:

Pollutant	lbs/hr	tons/yr	Emission Factor
Nitrogen Oxides	22.05	96.58	2.0 g/bhp-hr
Carbon Monoxide	30.87	135.21	2.8 g/bhp-hr
Volatile Organic Compounds (non-methane)	8.82	38.63	0.8 g/bhp-hr
Particulate Matter (TSP)	0.17	0.74	5 lbs/MMscf
Particulate Matter (PM_{10})	0.17	0.74	5 lbs/MMscf
Sulfur Dioxide	0.94	4.12	10 gr/100scf

TO:

Emission Limits

1. The maximum allowable emissions* from this 5,000 bhp/hr engine shall not exceed the emission rates as follows:

Pollutant	lbs/hr	tons/yr	Emission Factor
Nitrogen Oxides	22.05	96.58	2.0 g/bhp-hr
Carbon Monoxide	30.87	135.21	2.8 g/bhp-hr
Volatile Organic Compounds (non-methane)	8.82	38.63	0.8 g/bhp-hr
Particulate Matter (TSP)	**0.20**	**0.89**	5 lbs/MMscf
Particulate Matter (PM_{10})	**0.20**	**0.89**	5 lbs/MMscf
Sulfur Dioxide	**1.13**	**4.94**	10 gr S/100scf

*Based on 100% load conditions.

The final action of the Department will be to issue construction permit **AC** 05-229322 with the changes noted above.

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

PERMITTEE:
Florida Gas Transmission Company
P.O. Box 1188
Houston, Texas 77251-1188

Permit Number: AC 05-229322
Expiration Date: June 30, 1995
County: Brevard
Latitude/Longitude: 28°02'30"N
80°42'30"W
Project: Natural Gas Compressor Engines (ID No. 1903)
Station No. 19

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-210, 212, 272, 275, 296, and 297, and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of one natural gas fired engine to be located 4.5 miles west of the town of Melbourne. The UTM coordinates are Zone 17, 528.67 km East and 3101.64 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. DER Form 17-1.202(1) Application to Operate/Construct Air Pollution Sources.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Emission Limits

1. The maximum allowable emissions* from this 5,000 bhp/hr engine shall not exceed the emission rates as follows:

Pollutant	lbs/hr	tons/yr	Emission Factor
Nitrogen Oxides	22.05	96.58	2.0 g/bhp-hr
Carbon Monoxide	30.87	135.21	2.8 g/bhp-hr
Volatile Organic Compounds (non-methane)	8.82	38.63	0.8 g/bhp-hr
Particulate Matter (TSP)	0.20	0.89	5 lbs/MMscf
Particulate Matter (PM_{10})	0.20	0.89	5 lbs/MMscf
Sulfur Dioxide	1.13	4.94	10 gr S/100scf

*Based on 100% load conditions.

2. Visible emissions shall not exceed 10% opacity.

Operating Rates

3. This source is allowed to operate continuously (8760 hours per year).

4. This source is allowed to use natural gas only.

5. The permitted operating parameters and utilization rates for this 5000 bhp natural gas compressor engine shall not exceed the values stated in the application. The parameters include, but are not limited to:

- Maximum natural gas consumption shall not exceed 0.0442 MMCF/hr (based on a fuel heating value of 1040 BTU/SCF).
- Maximum heat input shall not exceed 45.96 MMBtu/hr.

6. Any change in the method of operation, equipment or operating hours shall be submitted to the DEP's Bureau of Air Regulation and Central District offices.

7. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

Compliance Determination

8. Compliance with the allowable emission limits shall be determined within 60 days after achieving the maximum production rate at which this facility will be operated, but not later than 180 days after initial start-up and annually thereafter except as provided in Specific Condition 10, below, by the following reference methods as desribed in 40 CFR 60, Appendix A (July 1992 version) and adopted by reference in Rule 17-297, F.A.C.

SPECIFIC CONDITION:

- Method 1	Sample and Velocity Traverses
- Method 2	Volumetric Flow Rate
- Method 3 or 3A	Gas Analysis
- Method 7E	Determination of Nitrogen Oxides Emissions from Stationary Sources
- Method 9	Determination of the Opacity of the Emissions from Stationary Sources
- Method 10	Determination of the Carbon Monoxide Emission from Stationary Sources
- Method 18	Measurements of Gaseous Organic Compound Emissions by Gas Chromatography
- Method 25A	Determination of Total Gaseous Nonmethane Organic Emissions Using a Flame Ionization Analyzer

9. Compliance with the SO_2 emission limit can be determined by calculations based on fuel analysis using ASTM D1072-80, D3031-81, D4084-82, or D3246-81 for sulfur content of gaseous fuels.

10. Initial compliance with the volatile organic compound (VOC) emissions limits will be demonstrated by EPA Method 25A or Method 18. Thereafter, except as provided in Rule 17-297.340(2), compliance with the VOC emission limits will be assumed, provided the CO allowable emission rate is achieved.

11. Stack sampling facilities shall be required and shall comply with the requirements of F.A.C. Rule 17-297.345. Test results will be the average of 3 valid runs. The Central District office will be notified in writing at least 15 days in advance of the compliance test. The source shall operate between 90% and 100% of permitted capacity during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion.

12. The permittee shall annually perform a visual inspection of the compressor engine, filters, associated piping system for rust spots cracks, leaks and odors. Also, ensure that safety valves and the stack are in proper order and working properly. The permittee shall document the findings and corrective action taken.

13. When the Department, after investigation, has good reason (such as odor complaints, increased visible emissions, excess emissions, etc.), to conclude that any applicable emission standard contained in this permit is being violated, it may require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of air pollutant emissions from the facility and to provide a report of said tests to the Department (F.A.C. Rule 17-297.340(2)).

SPECIFIC CONDITIONS:

Rule Requirements

14. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes, Chapters 17-209 through 17-297, Florida Administrative Code and 40 CFR 60 (July 1992 version).

15. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210.300(1)).

16. This source shall comply with all applicable provisions of F.A.C. Chapter 17-297 Stationary Sources-Emissions Monitoring.

17. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-296.320(2). Objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance pursuant to F.A.C. Rule 17-296.200(123).

18. Pursuant to F.A.C. Rule 17-210.300(2), Air Operating Permits, the permittee is required to submit annual reports on the actual operating rates and emissions from this facility. These reports shall include, but are not limited to the following: fuel usage, hours of operation, air to fuel ratio, air emissions limits, test results, etc. Annual reports shall be sent to the Department's Central District office.

19. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

20. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

PERMITTEE:
Florida Gas Transmission Company

Permit Number: AC 05-229322
Expiration Date: June 30, 1995

SPECIFIC CONDITIONS:

Issued this 23 day

of September, 1993

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Howard L. Rhodes, Director
Division of Air Resources Management

Memorandum

Florida Department of
Environmental Protection

TO: Howard L. Rhodes

FROM: C. H. Fancy

DATE: September 17, 1993

SUBJ: Approval of Construction Permit
Florida Gas Transmission Company
Air Permit AC 05-229322
Natural Gas Compressor Station No. 19, Brevard County

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a 5000 bhp natural gas reciprocating engine.

No adverse comments were received during the public notice period.

I recommend your approval and signature.

CHF/TH/bjb

Attachments

all these have Subpart GG turbines except this one—
Also, this one has higher emissions than the others. I am confused.

OK GPL 9/15

no N.S.P.S. for engines is the reason—per teresa

Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

August 11, 1993

Mr. Clair Fancy
Chief, Bureau of Air Regulations
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Changes to FGT Phase III Expansion Project Air Permits

Draft Air Permit AC 62-229319 / PSD-FL-202
Natural Gas Compressor Station No. 15, Taylor County

Draft Air Permit AC 05-229322
Natural Gas Compressor Station No. 19, Brevard County

Draft Air Permit AC 56-230129 / PSD-FL-203
Natural Gas Compressor Station No. 20, St. Lucie County

Draft Air Permit AC 50-229440
Natural Gas Compressor Station No. 21, Palm Beach County

Draft Air Permit AC 09-229441
Natural Gas Compressor Station No. 26, Citrus County

Draft Air Permit AC 29-228821
Natural Gas Compressor Station No. 30, Hillsborough County

Dear Mr. Fancy:

We respectfully propose the following changes to each of the above referenced draft permits.

Item A

We propose increasing the maximum heat inputs and maximum natural gas consumption rates for each engine (Specific condition #5). We are proposing this change as a result of test results

on our Phase II engines which indicate higher values than those provided by the engine manufacturers and used in the permits for Phase II engines. The values proposed in our applications for our Phase III engines are also based on values provided by the manufacturers. We believe it is necessary to increase these values for our Phase III engines, in order to prevent potential future compliance problems. We propose to increase these values by 20 %. We believe the new values will be more correct. Since the SO_2 and PM emission rates are based on fuel consumption, we are proposing to increase these also. These changes are provided in the attached table.

Item B

The emission limits in the permits (Specific Condition #1) represent the emission rates at 100% load conditions. We propose adding a statement or footnote to this emission limit table that indicates this.

Item C

On the same emission limit table the Emission Factor for SO_2 is given as "10 gr/100scf." This suggests that the factor is based upon 10 gr of SO_2 when it is actually sulfur. We suggest the following wording be used: "100 gr S/100/scf" to avoid confusion.

Item D

Specific Condition #12 (#11 for AC 56-230129 / PSD-FL-203 Compressor Station No. 20 and Ac 05-229322 Compressor Station No. 19) requires the source to be tested while operating "between 95% and 100% of maximum capacity." The permits for our Phase II engines require testing between 90% and 100% of maximum capacity. Due to the nature of our operations, it is sometimes difficult to reach even the 90% load on our engines when a test is scheduled. Raising this minimum level to 95% will make this a greater problem. We therefore request that this condition be changed to require testing "between 90% and 100% of maximum capacity" as required by our other permits.

Again FGT appreciates this opportunity to comment on these permit conditions and your consideration of our proposed changes. If you have any questions or need additional information, please do not hesitate to call me at (713) 853-3569.

Sincerely,

V. Duane Pierce

V. Duane Pierce, Ph.D.
Air Quality Supervisor
Phase III Expansion Project
Florida Gas Transmission Company

cc: Carlon Nelson
William Osborne
Allan Weatherford
Barry Andrews - ENSR
Files

FILE: 00FDER01.LTR

J. Heron
K. Zhang
G. Cole, NE Dist,
A. Zahm, C Dist,
B. Thomas, SW Dist,
S. Goldman, SE Dist

ORIGINALLY PROPOSED VALUES

STATION	MAXIMUM HEAT INPUT (MMBtu/hr)	MAXIMUM GAS CONSUMPTION (MMscf/hr)	SO_2 EMISSIONS		PM/PM_{10} EMISSIONS	
			lb/hr	T/yr	lb/hr	T/yr
15	109.66	0.1054	3.01	13.19	0.53	2.31
19	38.3	0.0368	0.94	4.12	0.17	0.74
20	27.8	0.0267	0.70	3.33	0.13	0.57
21	59.60	0.057	1.64	7.18	0.29	1.26
26	59.60	0.057	1.64	7.18	0.29	1.26
30	13.13	0.013	0.37	1.62	0.064	0.28

NEW VALUES

STATION	MAXIMUM HEAT INPUT (MMBtu/hr)	MAXIMUM GAS CONSUMPTION (MMscf/hr)	SO_2 EMISSIONS		PM/PM_{10} EMISSIONS	
			lb/hr	T/yr	lb/hr	T/yr
15	131.59	0.1265	3.61	15.83	0.64	2.77
19	45.96	0.0442	1.13	4.94	0.20	0.89
20	33.36	0.0320	0.84	4.00	0.16	0.68
21	71.52	0.0684	1.97	8.62	0.35	1.51
26	71.52	0.0684	1.97	8.62	0.35	1.51
30	15.76	0.0156	0.44	1.94	0.077	0.34

FILE: 00FDER01.LTR

Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

July 30, 1993

Mr. Clair Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Fancy:

Upon reviewing the Technical Evaluations and Preliminary Determinations for the proposed natural gas compressor engines located in Palm Beach County (Station No. 21) and Citrus County (Station No. 26), it was discovered that our draft permits contained the nominal lb/hr emission rates rather than the maximum emission rates which were presented in the Applications to Operate/Construct Air Pollution Sources. Further review indicates that this error also holds true for draft permits which have been received for proposed natural gas compressor engines located in Taylor County (Station No. 20).

Florida Gas Transmission Company (FGTC) requests that the permits be amended to include the maximum lb/hr emission levels for the natural gas compressor engines addressed above as follows:

	Pollutant (lb/hr)					
Station	No_x	CO	VOC	TSP	PM_{10}	SO_2
No. 15 - Taylor County (AC 62-229319)	18.66	13.49	0.76	0.53	0.53	3.01
No. 19 - Brevard County (AC 05-229322)	79.38	45.20	16.57	0.19	0.19	1.05
No. 20 - St. Lucie County (AC 56-230129)	52.92	26.46	12.35	0.15	0.15	0.84
No. 21 - Palm Beach County (AC 50-229440)	9.15	6.64	0.38	0.29	0.29	1.64
No. 26 -Citrus County (AC 09-229441)	9.15	6.64	0.38	0.29	0.29	1.64

These changes do not affect the TPY limits which are based on the nominal lb/hr emission rates. FGTC also discovered that for Station 21, the nominal lb/hr emission rates presented in Table 2-2 of our application were inadvertently transferred to the maximum lb/hr column on page 4A of the Application to Operate/Construct Air Pollution Sources. To resolve this error, FGTC has included a corrected page 4A and has had this transmittal letter signed and sealed by Barry Andrews (ENSR Consulting and Engineering) who is representing FGTC as the professional engineer of record. This procedure is consistent with instructions given by Mr. Preston Lewis of your bureau.

Please note that this letter is not intended to address all of FGTC's comments for Stations 20, 21 and 26. FGTC is presently reviewing the Technical Evaluations and Preliminary Determinations for each of these Stations and will be providing additional comments in the near future.

FGTC appreciates the opportunity to provide the Bureau of Air Regulation with these comments. Should you have any questions, please contact Duane Pierce at (713) 853-3569.

Sincerely,

V. Duane Pierce, Ph.D.
Air Quality Supervisor
Phase III Expansion Project
Florida Gas Transmission Company

Barry Andrews, P.E.
ENSR Consulting and Engineering

Enclosures

cc: Carlon Nelson EB0463
William R. Osborne EB0365
Files

VDP:meb
pierce\corres\073093

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

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

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

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

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

2. Product Weight (lbs/hr): _____

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

Emission Point 2101

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
NO_x	9.15	39.05			9.15	39.05	
CO	6.64	28.29			6.64	28.29	
NMHC	.38	1.62			.38	1.62	
SO_2	1.64	7.18			1.64	7.18	
PM	.29	1.26			.29	1.26	

[1]See Section V, Item 2.

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

[3]Calculated from operating rate and applicable standard.

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

Florida Gas Transmission Company

P. O. Box 945100 Maitland, Florida 32794-5100 (407) 875-5800

July 17, 1993 CERTIFIED MAIL

Mr. Clair Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Proof of Publication
Intent to Issue Permit
Florida Gas Transmission Company - Station 19
Brevard County, Melbourne, Florida

Dear Mr. Fancy:

An affidavit is attached as proof of public notice publication for the above referenced permit.

Sincerely,

Allan Weatherford, REM
Compliance Environmentalist

cc: Raymond Young
Don Sterba
Riley Jackson
Duane Pierce
J. Kleon
A. Zahm

The Orlando Sentinel

Published Daily

$35.75

State of Florida } S.S.
COUNTY OF ORANGE

Before the undersigned authority personally appeared _____ JUANITA ROSADO _____, who on oath says that he/she is the Legal Advertising Representative of The Orlando Sentinel, a daily newspaper published at COCOA in BREVARD County, Florida; that the attached copy of advertisement, being a NOTICE OF INTENT TO ISSUE in the matter of FLORIDA GAS TRANSMISSION COMPANY in the BREVARD Court, was published in said newspaper in the issue; of 07/10/93

Affiant further says that the said Orlando Sentinel is a newspaper published at COCOA, in said BREVARD County, Florida, and that the said newspaper has heretofore been continuously published in said BREVARD County, Florida, each Week Day and has been entered as second-class mail matter at the post office in COCOA in said BREVARD County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he/she has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Juanita Rosado

The foregoing instrument was acknowledged before me this 14 day of _____, 19____, by _____, who is personally known to me and who did take an oath.

Beverly C. Simmons

(SEAL)

NOTARY PUBLIC STATE OF FLORIDA

BEVERLY C. SIMMONS
My Comm Exp. 3/10/97
Bonded By Service Ins
No. CC263839

[ ] Personally Known [ ] Other I. D.

INTENT TO ISSUE PERMIT
STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL
REGULATION
NOTICE OF INTENT
TO ISSUE PERMIT

The Department of Environmental Regulation gives notice of its intent to issue a permit to Florida Gas Transmission Company, Post Office Box 1188, Houston, Texas 77251-1188, to install one natural gas fired turbine. The Company's facility is located 4.5 miles west of the town of Melbourne, in Brevard County, Florida. Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determinatin.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes.

The petition shall contain the following information; (a) the name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed; (b) A statement of how and when each petitioner received notice of the department's action or proposed action; (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action; (d) A statement of the material facts disputed by Petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207 F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday except legal holidays, at:
Department of Environmental Regulation,
Bureau of Air Regulation
111 S. Magnolia Park Courtyard
Tallahassee, Florida
Department of Environmental Regulation
Central District Office
3319 Maguire Blvd, Suite 232,
Orlando, Florida 32803-3767

Any person may send written comments on the proposed action to Mr. Preston Lewis at the Department's Tallahassee address. All comments received within 14 days of the publication of this notice will be considered in the Department's final determination.

BRE7963004 Jul.10,1993

Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

July 16, 1993

Ms. Teresa Heron
Air Permitting and Standards
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Draft Air Permit AC 05-229322
Natural Gas Compressor Station No. 19, Brevard County

Dear Ms. Heron:

We have reviewed the draft permit provisions for the proposed new reciprocating engine at our Compressor Station No. 19. We respectfully propose the following modifications to the specific permit conditions.

SPECIFIC CONDITION:

5. The permitted operating parameters and utilization rates for this 5000 bhp/hr natural gas compressor engine shall not exceed the values stated in the application. The parameters include, but are not limited to:

~~- Maximum natural gas consumption shall not exceed 0.0368 MMCF/h~~
- Maximum heat input shall not exceed 38.3 MMBtu/hr

OR

- Maximum natural gas consumption shall not exceed 0.0368 MMSCF/h (based on a fuel heating value of 1040 Btu/SCF)

Rationale: The maximum natural gas consumption value will vary depending on what is used as the heating value of the natural gas. The maximum natural gas consumption value in MMSCF/hr is calculated from the maximum heat input value in Btu/SCF. The value calculated for the maximum natural gas consumption is dependent on the number used for the actual heating value of the gas which can vary. In the application a value of 1040 Btu/SCF was used in this calculation; however, at any point in time the actual heating value of the natural gas may differ from 1040 Btu/SCF.

Since the maximum natural gas consumption is dependent on the maximum heat input, it is not necessary to specify the maximum natural gas consumption value in the permit condition. If the maximum natural gas consumption value is specified in the permit condition, then the basis for the value should be stated.

8. Compliance with the allowable emission limits shall be determined within 60 days after achieving the maximum production rate at which this facility will be operated, but not later than 180 days after initial start-up and annually thereafter, by the following reference methods as described in 40 CFR 60, Appendix A (July 1992 version) and adopted by reference in Chapter 17-297, F.A.C.

- Method 1.	Sample and Velocity Traverse
- Method 2.	Volumetric Flow Rate
- Method 3.	Gas Analysis
or Method 3a	
- Method 9.	Determination of the Opacity of the Emissions from Stationary Sources
- Method 10.	Determination of the Carbon Monoxide Emissions from Stationary Sources
- Method 20.	Determination of the Nitrogen Oxides, Sulfur Dioxide and diluent Emissions from Gas Turbines
- Method 25A	Determination of Total Gaseous Organic Concentrations Using a Flame Ionization Analyzer

Rationale: Method 3A is an acceptable method and provides better data at lower costs.

FGT appreciates this opportunity to comment on these permit conditions and your consideration of our proposed changes. If you have any questions or need additional information, please do not hesitate to call me at (713) 853-3569.

Sincerely,

V. Duane Pierce

V. Duane Pierce, Ph.D.
Air Quality Supervisor
Phase III Expansion Project
Florida Gas Transmission Company

cc: William Osborne - FGT
Carlon Nelson - FGT
File Phase III Air CS 15
S. Dunn

FILE: 19FDER01.LTR

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee

To: _____ Location _____
To: _____ Location _____
To: _____ Location: _____
From: _____ Date: _____

Interoffice Memorandum

CENTRAL DISTRICT

TO: Teresa M. Heron, Eng. IV OCD-AP-93-100
Permitting and Standards Section
Air Resources Management

THROUGH: A. Alexander, District Director

FROM: Charles M. Collins, P. E. Administrator CMC

DATE: May 5, 1993

SUBJECT: FLORIDA GAS TRANSMISSION
COMPRESSOR STATION NO. 19

A preliminary review by Louis Brown, Eng. III, of the permit application for the Florida Gas Transmission, Compressor Station No. 19, has generated the following comments:

> The "Station Total" annual emission levels presented in Table 2-5 on page 2-8, indicate that the facility will be a major facility once the third compressor engine is installed. This conclusion is based on the fact that NO_x, CO and VOC emission levels each exceed 100 tons per year. Furthermore, since NO_x and VOC emission levels each exceed 100 tons per year, the facility will be a Title V facility once the third compressor is installed.

I hope that this input will be of some assistance in your evaluation of the permit application.

CMC/LMB/j

Attachments

Department of Environmental Regulation

Routing and Transmittal Slip

To: (Name, Office, Location)

1. Teresa M. Heron, Eng IV
2. Permitting + Standards Section
3. Air Resources Mgmt
4. Valley

Remarks:

File

RECEIVED

MAY 14 1993

Division of Air
Resources Management

CD

From: C. M. Collins, Air Program

Date: 5-12-93

Phone:

TABLE 2-5

Annual (TPY) Emission Levels
ENRON, Phase III
Compressor Station No. 19

SOURCE ID	DESCRIPTION	NO_x	CO	VOC (NM/NEHC)	SO_2	PM
EXISTING FACILITY						
	COMPRESSOR ENGINES:					
1901	2500 bhp Recip. Engine	48.29	67.61	41.05	2.25	0.39
1902	2500 bhp Recip. Engine	48.29	67.61	41.05	2.25	0.39
Generator	380 bhp	3.67	0.33	0.17	0.01	<0.01
	OTHER SOURCES: *	—	—	2.28	—	—
EXISTING TOTAL		100.25	135.55	84.55	4.51	0.78
PROJECT RELATED						
	COMPRESSOR ENGINE:					
1903	5000 bhp Recip. Engine	96.58	135.2	38.6	4.12	0.74
	FUGITIVE	—	—	0.12	—	—
PROJECT TOTAL		96.58	135.2	38.72	4.12	0.74
STATION TOTAL **		196.83	270.75	123.27	8.63	1.52

* - Other Sources includes; Ancillary equipment, storage tanks and fugitive equipment leaks.
** - STATION TOTAL = EXISTING + PROJECT

By this definition, and based on the emissions presented in Section 2.0, the existing Compressor Station No. 19 is not designated a major stationary source. Since the station is not one of the 28 named source categories, its emissions are compared to the 250 TPY threshold. Since the net emissions increase for each criteria pollutant is less than 250 TPY, the facility is classified as an ~~existing~~ minor stationary source.

3.1.3 Good Engineering Practice (GEP) Stack Height

The 1977 CAA Amendments require that the degree of emission limitation required for control of any pollutant not be affected by a stack which exceeds GEP height. Further, no dispersion credit is given during air quality modeling for stacks which exceed GEP. GEP stack height is defined as the highest of:

- 65 meters; or
- a height established by applying the formula

  $H_{GEP} = H + 1.5\ L$

  Where; H_{GEP} = GEP Stack Height,
  H = Height of the structure or nearby structure, and
  L = Lesser dimension (height or projected width) of the nearby structure;

- a height demonstrated by fluid modeling or field study.

A structure or terrain feature is considered nearby if a stack is within a distance of five times the structure's height or maximum projected width. Only the smaller value of the height or projected width is used and the distance to the structure cannot be the greater than 0.8 km. Although GEP stack height regulations require that the stack height used in modeling for determining compliance with National AAQS and PSD increments not exceed GEP stack height, the actual stack height may be greater.

The stack height regulations also increase GEP stack height beyond that resulting from the formula in cases where plume impaction occurs. Plume impaction is defined as concentrations measured or modeled to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain which exceeds the height calculated by the GEP stack height formula. Because terrain in the vicinity of the project site is generally flat, plume impaction is not considered in determining the GEP stack height.

Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

March 22, 1993

Mr. Clair Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Florida Gas Transmission Company, an ENRON/SONAT affiliate, is proposing to expand its existing pipeline system and has filed an application with the Federal Energy Regulatory Commission for a certificate of public convenience and necessity. This expansion will require the installation of three new compressor stations and the addition of new engines at eight existing stations. As discussed in a meeting on December 18, 1992, with you, Mr. Preston Lewis, and other members of your staff, two of the new stations and four of the existing stations requiring new engines are located in Florida. One of these is Compressor Station No. 19, located in Brevard County, near Melbourne, Florida.

Attached for your consideration is one original and three copies of an application for a State air permit for the addition of one new 5,000 bhp Dresser Rand engine at Compressor Station No. 19. A check for the permit fee in the amount of $5,000 is also attached.

Should you have any questions concerning this application, please call Dr. V. Duane Pierce at (713) 853-3569.

Sincerely,

C. D. Schulz
Vice President, Phase III Expansion
Florida Gas Transmission Company

CDS:DP
pierce\corrcs\0322.1
cc: Teresa Heinen 4-6-93 RRL
Clare Holladay
C. Collins, CD 4-9-93

CHECK NO.
0622083223

DATE OF CHECK
03-19-93

ENRON CORP

FLORIDA GAS TRANSMISSION COMPANY
P.O. BOX 1188
HOUSTON, TEXAS 77251-1188

VOID

This check is VOID unless printed on BLUE background

AMOUNT OF CHECK
$*****5,000.00

EXACTLY $*****5,000 DOLLARS 00 CENTS

PAY TO THE ORDER OF

FLORIDA DEPT OF ENVIRONMENTAL
REGULATION
2600 BLAIR STONE RD
TWIN TOWERS OFFICE BLDG
TALLAHASSEE, FL
32399-2400

BY _____
"AUTHORIZED REPRESENTATIVE"

NORWEST BANK GRAND JUNCTION

[redacted]

REMITTANCE STATEMENT
FLORIDA GAS TRANSMISSION COMPANY

CHECK NO. 0622083223

VOUCHER NO.	INVOICE DATE	INVOICE NUMBER	PURCHASE ORDER	AMOUNT GROSS	AMOUNT DISCOUNT	AMOUNT NET
9303004139	031993	CKR03199301		5,000.00	0.00	5,000.00
					TOTAL	5,000.00
		AIR PERMIT APPLICATION FEE FOR COMPRESSOR STATION NO. 19				

Special Instructions
PLEASE CALL MARCY BABB X3295 WHEN CHECK IS READY!!

P. O. BOX 1188, HOUSTON, TEXAS 77251-1188

DETACH STATEMENT BEFORE DEPOSITING. ENDORSEMENT OF CHECK ATTACHED ACKNOWLEDGES PAYMENT IN FULL OF ALL ITEMS SHOWN ABOVE. IN CASE OF ERROR OR OMISSION RETURN BOTH CHECK AND STATEMENT

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

DISTRICT ROUTING SLIP

TO: Chuck Collins DATE: 4-9-93

			CC TO
	PENSACOLA	**Northwest District**	
	PANAMA CITY	Northwest District Branch Office	
	TALLAHASSEE	Northwest District Branch Office	
	TAMPA	**Southwest District**	
X	**ORLANDO**	**Central Florida District**	
	MELBOURNE	Central Florida District Branch Office	
	JACKSONVILLE	**Northeast District**	
	GAINESVILLE	Northeast District Branch Office	
	FORT MYERS	**South Florida District**	
	PUNTA GORDA	South Florida District Branch Office	
	MARATHON	South Florida District Branch Office	
	WEST PALM BEACH	**Southeast Florida District**	
	PORT ST. LUCIE	Southeast Florida District Branch Office	

Reply Optional ☐ Reply Required ☐ Info Only ☐
Date Due: _____ Date Due: _____

COMMENTS:

AC05-229322

Please submit comments by 5-5-93 to Teresa Heron.

FROM: C. N. Fancy TEL: SC/278-1344

March 1993

AC 05-229322
Rec'd 4-7-93
Rec't # 180845
#5000.00

Florida Gas Transmission Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

RECEIVED
APR 7 1993
Division of Air
Resources Management

March 22, 1993

RECEIVED
APR 7 1993
Division of Air
Resources Management

Mr. Clair Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

Florida Gas Transmission Company, an ENRON/SONAT affiliate, is proposing to expand its existing pipeline system and has filed an application with the Federal Energy Regulatory Commission for a certificate of public convenience and necessity. This expansion will require the installation of three new compressor stations and the addition of new engines at eight existing stations. As discussed in a meeting on December 18, 1992, with you, Mr. Preston Lewis, and other members of your staff, two of the new stations and four of the existing stations requiring new engines are located in Florida. One of these is Compressor Station No. 19, located in Brevard County, near Melbourne, Florida.

Attached for your consideration is one original and three copies of an application for a State air permit for the addition of one new 5,000 bhp Dresser Rand engine at Compressor Station No. 19. A check for the permit fee in the amount of $5,000 is also attached.

Should you have any questions concerning this application, please call Dr. V. Duane Pierce at (713) 853-3569.

Sincerely,

C. D. Schulz
Vice President, Phase III Expansion
Florida Gas Transmission Company

CDS:DP
pierce\corres\0322.1

Florida Gas Transmission Company

PHASE III EXPANSION PROJECT

Compressor Station No. 19
Melbourne, Brevard County, Florida

Permit to Construct Application

March 1993

CONTENTS

CONTENTS
(Cont'd)

APPENDICES

LIST OF TABLES

LIST OF FIGURES

1.0 INTRODUCTION

Florida Gas Transmission Company (FGTC), a Delaware Corporation and ENRON/SONAT affiliate of Houston, Texas, is proposing to expand its existing natural gas pipeline facility in Brevard County, Florida (Compressor Station No. 19). This proposed modification is part of FGTC's Phase III expansion project aimed at increasing the supply capacity of the FGTC's network servicing domestic, commercial, and industrial customers in Florida. The scope of work for the Phase III project includes expansions by the addition of state-of-the-art compressor engines at eight existing compressor stations and the development of three new compressor facilities. The new pipeline will follow much of the right-of-way of the existing system. The basic project components include:

- mainline loops, additions, and replacements;
- lateral loops and additions;
- meter station additions, modifications, and expansions;
- regulator additions, modifications, and expansions; and
- compressor station additions and modifications.

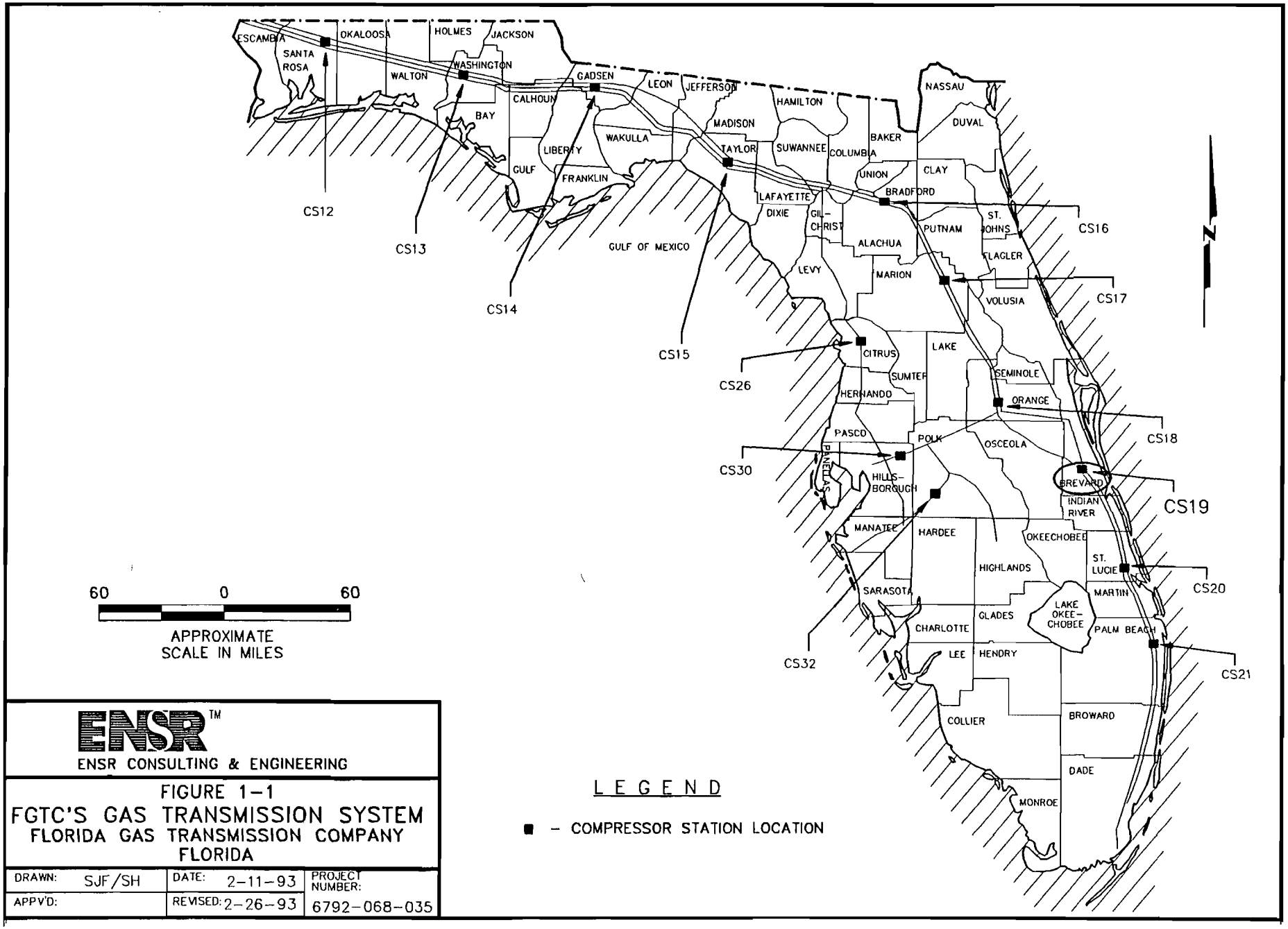
The route of the main gas pipeline and the approximate location of Compressor Station No. 19 along the main pipeline are shown in Figure 1-1.

Compressor Station No. 19 is located about 4.5 miles west of the town of Melbourne in Brevard County, Florida. Figure 1-2 shows the site location of the existing compressor station.

The proposed expansion at this location consists of the installation of one (1) 5,000 brake horsepower (bhp), natural-gas-fired, reciprocating engine. The proposed engine would be used solely for the purpose of transporting natural gas by pipeline for distribution to markets in Florida. The proposed engine is a Dresser Rand TCVD-10. Under current federal and state air quality regulations, the proposed engine will constitute a minor modification at an existing minor stationary source.

This report addresses the requirements of the Florida Department of Environmental Regulations (FDER). Based on the level of increased emissions associated with the addition of the 5,000 bhp engine, this project will require the issuance of a Permit to Construct.

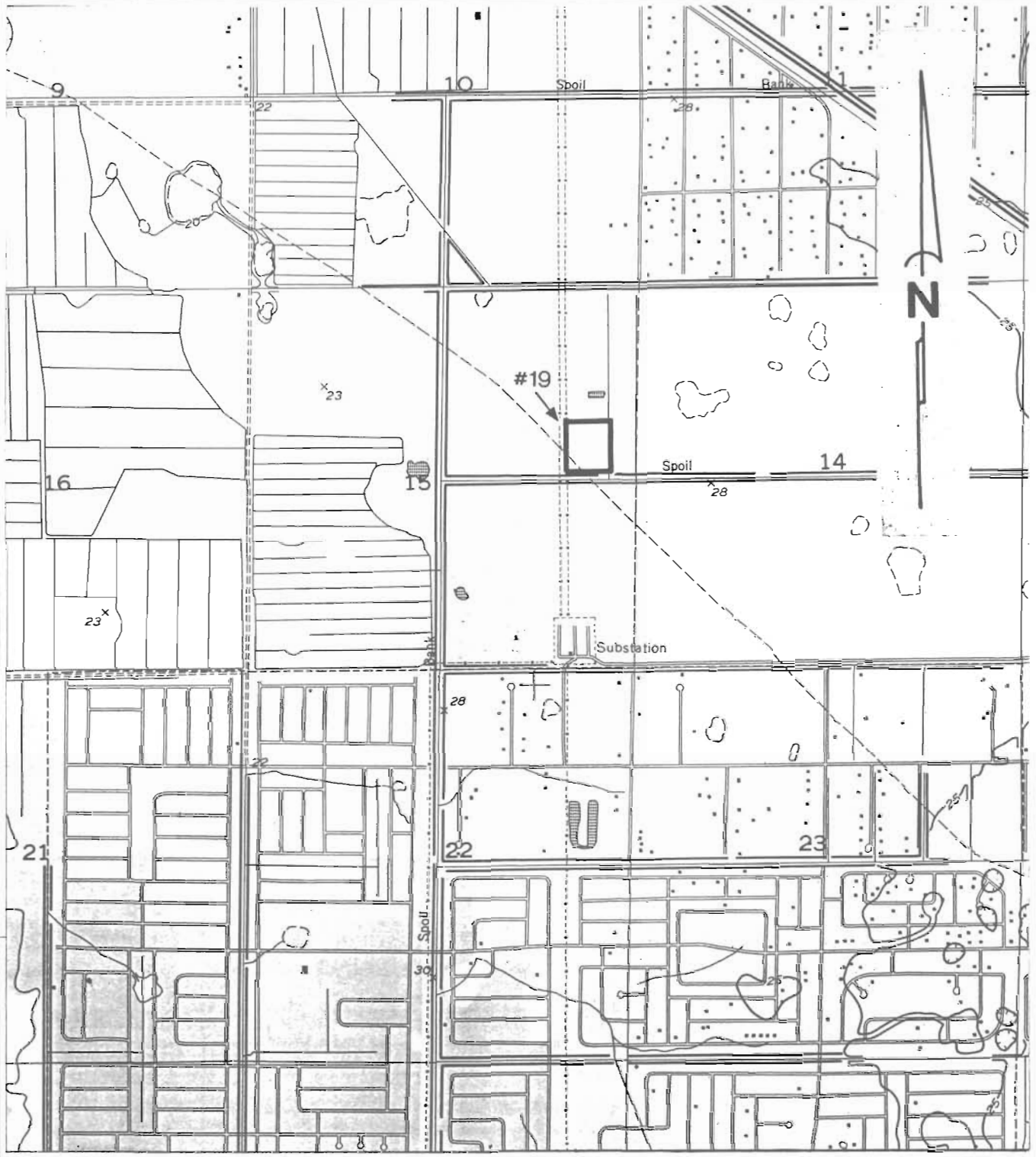
CE679264
12-15-92



ENSR™
ENSR CONSULTING & ENGINEERING

FIGURE 1-1
FGTC'S GAS TRANSMISSION SYSTEM
FLORIDA GAS TRANSMISSION COMPANY
FLORIDA

DRAWN: SJF/SH	DATE: 2-11-93	PROJECT NUMBER:
APPV'D:	REVISED: 2-26-93	6792-068-035



0 2000 4000

SCALE IN FEET

REFERENCE: U.S.G.S. Quadrangle Map for Melbourne West, Florida, 1988.

TOPO

ENSR™

ENSR CONSULTING AND ENGINEERING

FIGURE 1-2

SITE LOCATION MAP

COMPRESSOR STATION #19

FLORIDA GAS TRANSMISSION COMPANY

MELBOURNE, FLORIDA

DRAWN BY: SJF/SH	DATE: 12-16-92	PROJECT NUMBER: 6792-068-035
CHK'D.BY:	REVISED:	

Engineering designs for the proposed expansion project include selection of an engine incorporating lean-burn technology. The lean-burn technology for emission control represents best available control technology (BACT) for the proposed reciprocating internal combustion (IC) engine.

This application contains four additional sections. Descriptions of the existing operation at FGTC's Compressor Station No. 19 and the proposed one (1) 5,000 bhp engine addition are presented in Section 2.0. The air quality review requirements and applicability of FDER regulations are discussed in Section 3.0. The methodology and results of the air dispersion modeling and air quality impact analysis are presented in Section 4.0. The references cited in this document are listed in Section 5.0.

FDER permit application forms are contained in Appendix A. Additional appendices contain information which supports the representations made in this application.

2.0 PROJECT DESCRIPTION

A plot plan of FGTC's Compressor Station No. 19, showing the location of the plant boundaries, the existing emission sources, and the location of the proposed additional engine, is presented in Appendix B. The following sections provide a description of the existing operations at this location, as well as a description of the proposed project.

2.1 Existing Operations

FGTC's existing Compressor Station No. 19 consists of two (2) 2,500 bhp natural-gas-fired Dresser Rand 412KVSR reciprocating IC engines. Table 2-1 summarizes engine manufacturer, model and dates of installation for each of the existing engines. This station was initially constructed in 1991 as part of FGTC's Phase II expansion. These existing engines are not being modified as part of this expansion project.

2.2 Proposed Compressor Station Addition

The proposed engine to be installed at Compressor Station No. 19 will be used to drive a gas compressor that is a part of a new gas transmission line that will transport natural gas from source wells in Texas and Louisiana for delivery throughout south central Florida. Without the proposed engine, it would not be possible to increase the volumetric delivery capacity necessary to meet both short- and long-term demands for natural gas in Florida.

2.2.1 Compressor Engine Addition

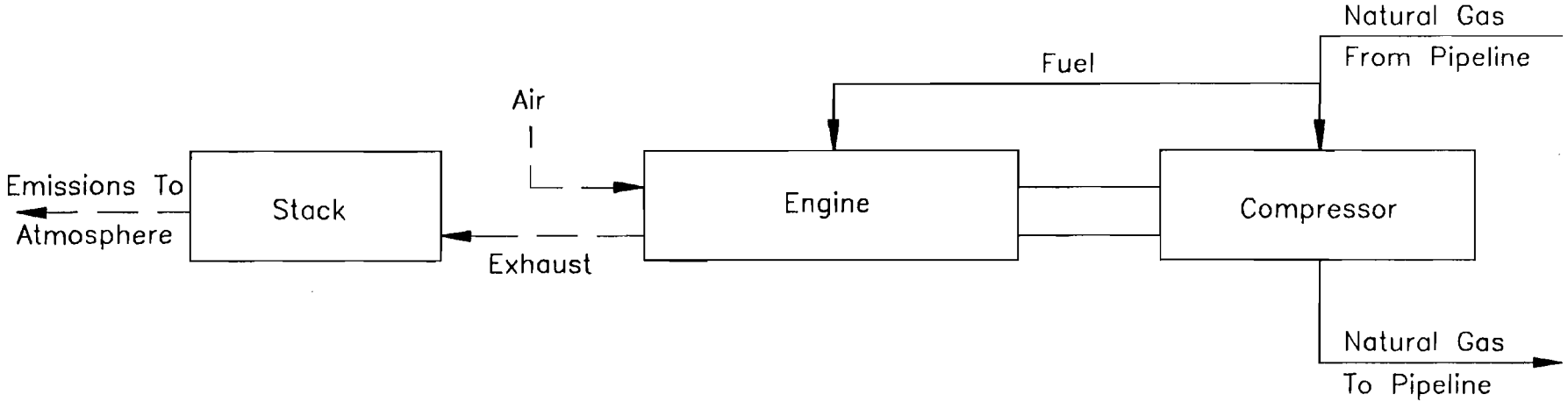
The expansion plan calls for installation of one (1) 5,000 bhp engine-compressor unit. The engine has 10 power cylinders and is rated at 5,000 bhp at 330 revolutions per minute (rpm). The engine is turbocharged, increasing the air inlet manifold pressure. Turbocharging allows the engine to operate at a high air-to-fuel ratio. This provides more power output from the engine than would otherwise be attained without having to use a larger size engine. A flow diagram of a typical engine compressor unit is presented in Figure 2-1. Fuel will be exclusively natural gas from the FGTC's gas pipeline. Based on the operating characteristics and design, this engine is classified as a large bore, slow speed IC engine according to the U.S. Environmental Protection Agency's (USEPA's) documented classification (USEPA,1979). Engine specifications and stack parameters for the proposed engine are presented in Table 2-2.

TABLE 2-1

Summary of Existing Engine Information
Compressor Station No. 19

Engine No.	Date of Installation	Type	Manufacturer	Model #	Brake Horse Power (bhp)
1901	1991	Reciprocating	Dresser - Rand	412-KVSR	2500
1902	1991	Reciprocating	Dresser - Rand	412-KVSR	2500

CE679259
(DALLAS/HPCL21)



ENSR™
ENSR CONSULTING & ENGINEERING

FIGURE 2-1
PROCESS FLOW DIAGRAM
OF AN
ENGINE-COMPRESSOR UNIT

DRAWN: DC/SH	DATE: 11-6-92	PROJECT NUMBER:
APPV'D:	REVISED: 3-16-93	6792-068

TABLE 2-2

Engine Specifications and Stack Parameters for the Proposed Project

Parameter	Design Specification
Compressor Engine	3
Type	Reciprocating
Manufacturer	Dresser - Rand
Model	TCVD-10
Air Charging	Turbo
Unit Size	5000 bhp
Number of Power Cylinders	10
Number of Compressor Cylinders	4
Power Cylinder Data	
Bore Size	17.75 inches
Stroke	19 inches
Cylinder Power	500 bhp/cylinder
Specific Heat Input	6850 Btu/bhp-hr Nominal
	7650 Btu/bhp-hr Maximum
Maximum Fuel Consumption [a]	0.0368 MMscfh
Speed	330 rpm
Stack Parameters	
Stack Height	65 feet
Stack Diameter	4 feet
Exhaust Gas Flow	34,624 acfm
Exhaust Temperature	515°F
Exhaust Gas Velocity	45.92 ft/sec

NOTE:

acfm	=	actual cubic feet per minute.
bhp	=	brake horsepower.
Btu/bhp-hr	=	British thermal units per brake horsepower per hour.
°F	=	degrees fahrenheit.
ft	=	feet.
ft/sec	=	feet per second.
lb/hr	=	pounds per hour.
MMscfh	=	million standard cubic feet per hour.
rpm	=	revolutions per minute.

[a] Based on heating value for natural gas of 1,040 British thermal units per standard cubic foot (Btu/scf).

The proposed engine will incorporate "lean-burn" technology, which is state-of-the-art design for minimizing air pollutant concentration in the exhaust gases from gas-fired reciprocating IC engines. In the lean-burn design, a small, fuel-rich mixture is combusted in a pre-ignition chamber. The hot combustion gases from the pre-ignition chamber then pass to the main combustion chamber, where they ignite a lean mixture of fuel. Since most of the fuel entering the engine is burned in a lean state (i.e., high ratio of air to fuel), exhaust NO_x emissions are minimized.

Maximum hourly and annual emissions of regulated pollutants from the proposed engine are presented in Table 2-3. Emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), and non-methane hydrocarbons (NMHC) are based on the engine manufacturer's supplied data (See Appendix C).

Typically IC engine manufacturers do not provide information on particulate matter (PM) or SO_2 emissions. Therefore, PM emissions are based upon USEPA publication AP-42 (USEPA, 1985) emission factors for natural gas combustion in boilers, and emissions of sulfur dioxide (SO_2) are based on FGTC's contract limit on sulfur content of 10 grains per 100 cubic feet.

To accommodate the new compressor engine the existing main compressor building constructed as part of the Phase II will be enlarged. Plans call for extending the north end of the building by approximately 70 feet. The extension will have a width of 60 feet and a height of 41 feet. This is 12 feet wider and five feet higher than the existing structure.

2.2.2 Fugitive Emissions

Emissions from Compressor Station No. 19 include fugitive emissions from the valves and flanges that will be in gas service. These fugitive emissions have been estimated using USEPA factors for components in gas service. Table 2-4 lists the quantities of existing and new components to be added as part of the Phase III project and an estimate of the fugitive emissions from these sources.

2.2.3 Emissions Summary

The total changes in emissions from the proposed project are listed in Table 2-5. The calculations used to estimate these emissions are presented in Appendix D.

TABLE 2-3

Emissions from FGTC's Proposed Compressor Engine

Pollutant	Emission Factor	Reference	Emissions		
			Maximum lb/hr	Nominal lb/hr	TPY
Nitrogen Oxides	2.000 grams/bhp-hr	Manufacturer Data	79.38	22.05	96.58
Carbon Monoxide	2.800 grams/bhp-hr	Manufacturer Data	45.20	30.87	135.21
Volatile Organic Compounds (non-methane)	0.800 grams/bhp-hr	Manufacturer Data	16.54	8.82	38.63
Particulate Matter	0.015 grams/bhp-hr	AP-42 (factor of 5 lb/MMscf)	0.19	0.17	0.74
Sulfur Dioxide	0.085 grams/bhp-hr	10 grains/100 scf	1.05	0.94	4.12

NOTE:

Maximum natural gas consumption is 35,100 standard cubic feet per hour (scf/hr).

grams/bhp-hr	=	grams per brake horsepower per hour.
grains/100scf	=	grains per one hundred standard cubic feet.
lb/hr	=	pounds per hour.
lb/MMscf	=	pounds per million standard cubic feet.
scf	=	standard cubic feet.
TPY	=	tons per year.

TABLE 2-4
FGTC's Compressor Station No. 19
Fugitive VOC's Emission Calculation and Summary

COMPONENT TYPE	SERVICE	COMPONENT COUNT	EMISSION FACTORS	NM/NE * FRACTION	EMISSIONS LBS/HR	EMISSIONS LBS/DAY	EMISSIONS TONS/YR
CURRENT:							
Valve	Gas	135	1.06 Lbs/Day (a)	0.005	0.030	0.72	0.13
Flange	Gas	254	0.57 Lbs/Day (a)	0.005	0.030	0.72	0.13
Compressor Seal	Gas	2	39.7 Lbs/Day (a)	0.005	0.017	0.40	0.07
				Total	0.077	1.84	0.34
PROJECT ADDED							
Valve	Gas	44	1.06 Lbs/Day (a)	0.005	0.010	0.23	0.04
Flange	Gas	87	0.57 Lbs/Day (a)	0.005	0.010	0.25	0.05
Compressor Seal	Gas	1	39.7 Lbs/Day (a)	0.005	0.008	0.20	0.04
				Total	0.028	0.68	0.12
FUTURE: (b)							
Valve	Gas	179			0.040	0.95	0.17
Flange	Gas	341			0.040	0.97	0.18
Compressor Seal	Gas	3			0.025	0.60	0.11
				Total:	0.105	2.52	0.46

Notes: (a) – EPA-450/3-83-007, page 3-9
(b) – Future = current + project added
* NM/NE = non-methane/non-ethane

TABLE 2-5

Annual (TPY) Emission Levels
ENRON, Phase III
Compressor Station No. 19

SOURCE ID	DESCRIPTION	NO_x	CO	VOC (NM/NEHC)	SO_2	PM
EXISTING FACILITY						
	COMPRESSOR ENGINES:					
1901	2500 bhp Recip. Engine	48.29	67.61	41.05	2.25	0.39
1902	2500 bhp Recip. Engine	48.29	67.61	41.05	2.25	0.39
Generator	380 bhp	3.67	0.33	0.17	0.01	<0.01
	OTHER SOURCES: *	—	—	2.28	—	—
EXISTING TOTAL		100.25	135.55	84.55	4.51	0.78
PROJECT RELATED						
	COMPRESSOR ENGINE:					
1903	5000 bhp Recip. Engine	96.58	135.2	38.6	4.12	0.74
	FUGITIVE	—	—	0.12	—	—
PROJECT TOTAL		96.58	135.2	38.72	4.12	0.74
STATION TOTAL **		196.83	270.75	123.27	8.63	1.52

* - Other Sources includes; Ancillary equipment, storage tanks and fugitive equipment leaks.
** - STATION TOTAL = EXISTING + PROJECT

3.0 REGULATORY ANALYSIS

This section presents a review of federal and Florida state air quality regulations which govern the operations to be conducted at Compressor Station No. 19.

3.1 Federal Regulatory Review

The federal regulatory programs administered by the USEPA have been developed under the authority of the Clean Air Act. The following subsections review the key elements of the federal regulatory program and the impact they have on operations at Compressor Station No. 19. Special attention will be placed on National Ambient Air Quality Standards (AAQS) (40 CFR 50), New Source Performance Standards (NSPS) (40 CFR 60), National Emission Standards for Hazardous Air Pollutants (NESHAPS) (40 CFR 61), and Prevention of Significant Deterioration (PSD) (40 CFR 52.21).

3.1.1 Classification of Ambient Air Quality

The 1970 Amendments to the CAA gave the USEPA specific authority to establish the minimum level of air quality which all states would be required to achieve. These minimum values or standards were developed in order to protect the public health (primary) and welfare (secondary). The federally promulgated standards and additional state standards are presented in Table 3-1.

Areas of the country which had air quality equal to or better than these standards (i.e., ambient concentrations less than a standard), are designated as "Attainment Areas", while those where monitoring indicates air quality is less than the standards are known as "Non-attainment Areas." The designation of an area has particular importance for a proposed project as it determines the type of permit review to which the application will be subject.

Major new sources or major modifications to existing major sources located in attainment areas are required to obtain a PSD permit prior to initiation of construction. Similar sources located in areas designated as Non-attainment or that adversely impact such areas will undergo more stringent New Source Review (NSR). In either case it is necessary, as a first step, to determine the air quality classification of a project site.

The 1990 CAA Amendments called for a review of the ambient air quality of all regions of the United States. States were required to file with the USEPA by March 15, 1991, designations of

TABLE 3-1

NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS
($\mu g/m^3$)

	AVERAGING PERIOD	EPA STANDARDS		FLORIDA STANDARDS
		PRIMARY	SECONDARY	
PM_{10}	24-hour[1]	150	150	150[1]
	annual[2]	50	50	50
SO_2	3-hour[1]	---	1,300	1,300
	24-hour[1]	365	---	260
	annual[2]	80	---	60
CO	1-hour[1]	---	40,000	40,000
	8-hour[1]	10,000	---	10,000
NO_2	annual[2]	100	100	100
O3	1-hour[3]	235	235	235

(1) Not to be exceeded more than once per year.
(2) Never to be exceeded.
(3) Not to be exceeded on more than 3 days over 3 years.
Source: 40 CFR 50; 36FR22384;Chapter 17-2.300, F.A.C.

all areas as either attainment, non-attainment or unclassifiable. The USEPA was then to issue this list of area classifications. The current classification of Brevard County is listed below on Table 3-2, for each criteria pollutant. These designations were obtained from 40 CFR 81, as updated in the November 6, 1991, Federal Register (56FR56694). Brevard County is designated as attainment or unclassified for all criteria pollutants.

The designation of Unclassifiable/Attainment indicates that there is insufficient monitoring data to prove that the area has attained the federal standards; however, the limited data indicate that the standard has been achieved. Areas with this classification are treated as attainment areas for permitting purposes.

3.1.2 PSD Applicability

The 1977 CAA Amendments added Part C - Prevention of Significant Deterioration to the Act. This part requires proposed new major stationary sources or existing sources planning a major modification in an area that has attained the National AAQS, to conduct a preconstruction review that includes a detailed analysis of the source's emissions. The USEPA was directed to prepare specific regulations on the methods to be employed in this analysis.

Federal air quality permitting regulations for attainment areas are codified in the Code of Federal Regulations (CFR), Title 40 - Protection of the Environment, Part 52.21 - Prevention of Significant Deterioration (40 CFR 52.21). While the portion of the Florida State Implementation Plan (SIP) related to PSD regulations has been approved by the USEPA, and authority for the program has been transferred to the state, the applicability of the program to Compressor Station No. 19 will be reviewed in this section, as it remains primarily a federal program.

For the PSD regulations to apply to a given project, the proposed location must be in a PSD area, i.e., an area that has been classified as attainment or as unclassifiable for a particular pollutant. A project's potential to emit is then reviewed to determine whether it constitutes a major stationary source or major modification at an existing major stationary source.

A major stationary source is defined as either one of the 28 sources identified in 40 CFR 52.21 (see Table 3-3) and that has a potential to emit 100 tons or more per year of any regulated pollutant, or any other stationary source that has the potential to emit 250 tons or more per year of a regulated pollutant. "Potential to emit" has a special meaning here as it is determined on an annual basis after the application of air pollution control equipment, or any other federally enforceable restriction.

TABLE 3-2

Classification of Brevard County For Each Criteria Pollutant

Carbon Monoxide	Unclassifiable/Attainment
Oxides of Nitrogen	Cannot be Classified or Better than National Standards
Sulfur Dioxide	Better than Standards
Particulate Matter (PM_{10})	Not Designated
Total Suspended Particulate	Better than Standards
Ozone	Unclassifiable Attainment

Source: 40 CFR 81.300, 1991
56FR56694

TABLE 3-3

Major Stationary Sources

Fossil Fuel-Fired Steam Electric Plants of More Than 250,000,000 British Thermal Units Per Hour Heat Input
Coal Cleaning Plants (with thermal dryers)
Kraft Pulp Mills
Portland Cement Plants
Primary Zinc Smelters
Iron and Steel Mill Plants
Primary Aluminum Ore Reduction Plants
Primary Copper Smelters
Municipal Incinerators Capable of Charging More Than 250 Tons of Refuse Per Day
Hydrofluoric, Sulfuric or Nitric Acid Plants
Petroleum Refineries
Lime Plants
Phosphate Rock Processing Plants
Coke Oven Batteries
Sulfur Recovery Plants
Carbon Black Plants
Primary Lead Smelters
Fuel Conversion Plants
Sintering Plants
Secondary Metal Production Plants
Chemical Processing Plants
Fossil-Fuel Boilers (or combination thereof) Totaling of More Than 250,000,000 British Thermal Units Per Hour Heat Input
Petroleum Storage and Transfer Units With a Total Storage Capacity Exceeding 300,000 Barrels
Taconite Ore Processing Plants
Glass Fiber Processing Plants
Charcoal Production Plants
Source: 40 CFR 51.165(a)(iv)(2)(c); Chapter 17-2.500,F.A.C.

By this definition, and based on the emissions presented in Section 2.0, the existing Compressor Station No. 19 is not designated a major stationary source. Since the station is not one of the 28 named source categories, its emissions are compared to the 250 TPY threshold. Since the net emissions increase for each criteria pollutant is less than 250 TPY, the facility is classified as an existing minor stationary source.

3.1.3 Good Engineering Practice (GEP) Stack Height

The 1977 CAA Amendments require that the degree of emission limitation required for control of any pollutant not be affected by a stack which exceeds GEP height. Further, no dispersion credit is given during air quality modeling for stacks which exceed GEP. GEP stack height is defined as the highest of:

- 65 meters; or
- a height established by applying the formula

  $H_{GEP} = H + 1.5\ L$

  Where; H_{GEP} = GEP Stack Height,
  H = Height of the structure or nearby structure, and
  L = Lesser dimension (height or projected width) of the nearby structure;

- a height demonstrated by fluid modeling or field study.

A structure or terrain feature is considered nearby if a stack is within a distance of five times the structure's height or maximum projected width. Only the smaller value of the height or projected width is used and the distance to the structure cannot be the greater than 0.8 km. Although GEP stack height regulations require that the stack height used in modeling for determining compliance with National AAQS and PSD increments not exceed GEP stack height, the actual stack height may be greater.

The stack height regulations also increase GEP stack height beyond that resulting from the formula in cases where plume impaction occurs. Plume impaction is defined as concentrations measured or modeled to occur when the plume interacts with elevated terrain. Elevated terrain is defined as terrain which exceeds the height calculated by the GEP stack height formula. Because terrain in the vicinity of the project site is generally flat, plume impaction is not considered in determining the GEP stack height.

The proposed stack at Compressor Station No. 19 will be 19.81 meters (65 feet) for the compressor engine. Based on the proposed building dimensions (See Section 2.0) the calculated GEP stack height is less than 65 meters; therefore, GEP stack height is 65 meters. Since the stack is less than GEP, it complies with the regulatory requirements.

3.1.4 Non-Attainment New Source Review (NSR) Applicability

Based on the current non-attainment provisions, all new major stationary sources, or modifications to such sources, located in a non-attainment area must undergo non-attainment New Source Review, if they have the potential to emit above an NSR significant threshold. For major new sources or major modifications in an attainment or unclassifiable area, the non-attainment provisions apply if the source or modification is located within the area of influence of a non-attainment area. The area of influence is defined as an area which is outside the boundary of a non-attainment area but within the locus of all points that are 50 kilometers outside the non-attainment area. Based on Chapter 17-2.510(2)(a)2.a, Florida Administrative Code (F.A.C.), all volatile organic compound sources which are located within an area of influence are exempt from the provisions of New Source Review (NSR) for non-attainment areas.

Compressor Station No. 19 is located in an area classified as either attainment, unclassifiable or not designated for all criteria pollutants. Therefore, this compressor station is not subject to federal non-attainment New Source Review.

3.1.5 Applicability of New Source Performance Standards (NSPS)

The regulation of new sources through the development of standards applicable to a specific category of sources was a significant step taken by the 1970 CAA Amendments. The Administrator was directed to prepare and publish a list of stationary source categories which, in the Administrator's judgement, cause or contribute significantly to air pollution and which may reasonably be anticipated to endanger public health. Further the Administrator was to publish a proposed regulation establishing a Standard of Performance for any new source which fell into that category. The significant feature of the Section was that it would apply to all sources within a given category, regardless of its geographic location or the ambient air quality at that location. The standards, in essence defined emission limitations that would be applicable to a particular source group.

A portion of Section 111 of the Act requires states to develop their own set of performance standards. State standards apply to existing sources, and only to those pollutants for which air quality criteria had not been developed or were not covered by either Section 108 or 112 of the Act. Additionally, states could regulate any source whether covered by a federally designated

source category or not. It is clear that Congress wanted to give the states specific authority to regulate existing sources which would, otherwise, only be subject to the provisions of Section 111 if they were new. New source performance standards promulgated by the state of Florida are discussed in a later section.

Currently, there are 66 separate performance standards published in 40 CFR 60. None are identified which have the potential to be applicable to Compressor Station No. 19.

3.1.6 Applicability of National Emission Standards for Hazardous Air Pollutants (NESHAP)

Realizing that there were numerous pollutants that did not meet the specific criteria for development of a National AAQS, Congress included Section 112 in the 1970 CAA Amendments which specifically addressed this problem. Section 112 provides the USEPA with a vehicle for developing standards for potentially hazardous pollutants.

During the development of the 1970 CAA Amendments, the Senate prepared a report identifying many such compounds which were to be considered for regulation under the new section. The 1990 CAA Amendments significantly expanded the number of compounds to be regulated under Section 112. Under the current provisions of the Act, 189 compounds or classes of compounds are to be regulated under Section 112 by November 15, 2000.

The regulations which were developed to implement Section 112 are presented in 40 CFR, Part 61 and Chapter 17-2.670, F.A.C. This part contains a listing of those pollutants that have been designated as being hazardous (Part 61.01) as defined in Section 112, and standards applicable to specific industries. None of the promulgated standards apply to Compressor Station No. 19.

3.2 Florida State Air Quality Regulations

Title 17, F.A.C., contains the environmental rules and regulations for the State of Florida. The primary federal regulations which affect Compressor Station No. 19 have been incorporated, for the most part in whole, into the Florida state regulations. Specific air quality regulations of the State of Florida are contained in Chapter 17-2, F.A.C., and are too numerous to discuss in detail in this section. However, an applicability review was performed during the preparation of this document. The results of this review are presented in Appendix E. Compressor Station No. 19 will operate in compliance with all applicable Florida state air quality regulations as documented in Appendix E.

4.0 AIR QUALITY IMPACT ANALYSIS

The Florida Department of Environmental Regulation (FDER), Air Quality Division, requires that an ambient air quality impact analysis be performed for a proposed project's emissions. For State Authority to Construct permits, this involves comparison of the proposed project's impact to the State and National AAQS, discussed in Section 3.0 of this report. The following section outlines the general approach used for this analysis. This approach was developed in consultation with the FDER and conforms with the recommendations presented in the Guidelines on Air Quality Models (USEPA, 1987).

4.1 Modeling Methodology and Assumption

This section outlines the approach used in the air dispersion modeling analysis. Model selection, meteorological data used, structure downwash considerations and model results from Compressor Station No. 19, Brevard County, Florida, are discussed.

4.1.1 General Modeling Methodology

The air dispersion modeling approach follows USEPA and FDER guidelines for determining compliance with State and National Ambient Air Quality Standards (AAQS).

The procedure listed below was followed:

- Model predictions for annual and short-term average concentrations, based on the net emission increases from the project were obtained using the Industrial Source Complex long-term (ISCLT2) and short-term (ISCST2) model (version 92062). A brief description of the Industrial Source Complex (ISC) model is given in Section 4.1.2.

- For comparison to annual National AAQS (NO_x) the ISCLT2 was run using five years of available meteorological data from FDER processed into the Stability Array (STAR) format. The maximum off-site impact from all 5 years was then compared to the significance level for NO_x. Results from this modeling showed concentrations greater than 1 $\mu g/m^3$ over a small section from the facility's west property boundary out to approximately 1.5 kilometer.

- For comparison to short-term AAQS for CO, the ISCST2 was run with five years (1982-1986) of meteorological data obtained from the FDER. The maximum predicted off-site

concentration was compared to the significance level and the 1 and 8 hour averaging period. Since all off-site receptors showed a concentration less than the significance level, no additional modeling analysis was conducted for CO.

4.1.2 Model Selection

The ISC dispersion model was used to evaluate emissions from the proposed facility. The ISC model was selected primarily for the following reasons:

- USEPA and FDER have approved the general use of the model for air quality dispersion analysis because the model assumptions and methods are consistent with those in the Guideline on Air Quality Models (USEPA, 1987);

- The ISC model is capable of predicting the impacts from stack, area, and volume sources that are spatially distributed over large areas and located in flat or gently rolling terrain; and

- The results from the ISC model are appropriate for addressing compliance with AAQS and PSD increments.

Major features of the ISC model are presented in Table 4-1. Concentrations due to point, area and volume sources are calculated by the model using the steady-state Gaussian plume equation for a continuous source.

4.1.3 Modeling Options

For modeling analyses that will undergo regulatory review, the following model options are recommended in the USEPA Guideline on Air Quality Models (USEPA, 1987), and are referred to, in the ISC model, as the Regulatory Default Options:

- Final plume rise at all receptor locations
- Stack-tip downwash,
- Buoyancy-induced dispersion,
- Default wind speed profile coefficients for rural or urban option,
- Default vertical potential temperature gradients, and
- Reducing calculated SO_2 concentrations in urban areas by using a decay half-life of 4 hours (i.e., reduce the SO_2 concentration by 50 percent for every 4 hours of plume travel time).

TABLE 4-1
Major Features of the ISC Model

ISC Model Features
• Polar or Cartesian coordinate systems for receptor locations
• Rural or urban option that affect windspeed profile exponent, dispersion rates, and mixing height calculations
• Plume rise as a result of momentum and buoyancy as a function of downwind distance for stack emissions (Briggs)
• Procedures suggested by Huber and Snyder (1976), Huber (1977), Schulman and Hanna (1986), and Schulman and Scire (1980) for evaluating building downwash and wake effects
• Procedures suggested by Briggs for evaluating stack-tip downwash
• Separation of multiple point sources
• Consideration of the effects of gravitational settling and dry deposition on ambient particulate concentrations
• Capability of simulating point, line, volume, and area sources
• Capability to calculate dry deposition
• Variation of windspeed with height (windspeed-profile exponent law)
• Concentration estimates for annual average
• Terrain-adjustment procedures for elevated terrain including a terrain truncation algorithm
• Receptors located above local terrain (i.e., "flagpole" receptors)
• Consideration of time-dependent exponential decay of pollutants
• The method of Pasquill (1976) to account for buoyancy-induced dispersion
• A regulatory default option to set various model options and parameters to EPA recommended values (see text for regulatory options used)

SOURCE: User's Guide for the Industrial Source Complex (ISC2) Dispersion Models Vol. 1 Draft

In this analysis, the USEPA Regulatory Default Options were used to address maximum impacts.

4.1.4 Selection of Dispersion Coefficients

The ISC model has rural and urban options which affect the wind speed profile, dispersion rates, and mixing-height formulations used in calculating ground level concentrations. The criteria used to determine when the rural or urban mode is appropriate are based on land use near the proposed plant's surroundings (Auer, 1978). If the land use is classified as heavy industrial, light-moderate industrial, commercial, or compact residential for more than 50 percent of the area within a 3 km radius around the proposed source, the urban option is selected. Otherwise, the rural option is used. Based on a USGS topographical map of the land within a 3 kilometer radius around the site, the rural mode was selected.

4.1.5 Meteorological Data

The USEPA Guideline on Air Quality Models (USEPA, 1987) recommends the use of 5 years of representative meteorological data in air quality modeling. The most recent, readily available 5-year period is preferred. The meteorological data may be collected either on-site or at the nearest National Weather Service (NWS) station.

The NWS station in West Palm Beach, Florida, located approximately 90 miles south of the site, is the most representative weather station that routinely records the hourly surface data required by the air dispersion models. Because of the proximity of this NWS station to the coast, the West Palm Beach meteorological data are considered to be representative of weather conditions occurring at the Melbourne compressor station.

Meteorological data used in the analysis were obtained from the FDER. The data consist of a 5-year record of surface and upper air weather observations (1982-1986). Surface and upper air data were collected by the NWS at West Palm Beach Airport. The data base consists of hourly surface data (i.e., windspeed, wind direction), and twice daily mixing heights. These data were preprocessed by the FDER, using the USEPA program RAMMET, which combines the surface and upper data into a single file, which can then be input directly into the ISCST2 model. The five years of surface data were then processed using the USEPA STAR program, to generate the data required by ISCLT2 model.

4.1.6 Source Data

The source parameters used to model Compressor Station No. 19 are presented in Table 4-2. The location of the proposed stacks within the site are presented on the facility plot plan (see Appendix B). The emission point listed as source 1903 on Table 4-2 corresponds to the new compressor engine. Table 4-3 lists the emission rates modeled for NO_x and CO. The maximum pounds per hour (lbs/hr) emission rates were used as input to the ISCST2 model to determine concentrations for averaging periods. Vendor guaranteed emission rates, in grams/bhp-hr, converted to a tons per year value were used to determine annual average concentrations.

4.1.7 Receptor Grid Modeled

For both ISCST2 and ISCLT2, a 100-meter spaced, 25 x 25 receptor grid array was used to determine the maximum off-site concentrations, per guidance from FDER and the Guideline on Air Quality Models (USEPA, 1987). The Grid Array was centered on the facility, and extended 1.2 kilometers in all directions.

4.1.8 Building Wake Effects and GEP Considerations

Based on the dimensions of the structures located at the compressor station, all stacks will be less than maximum allowable GEP height. Due to the location of emission points in relation to buildings and other solid structures, the stack emissions may be affected by building wakes from some of the structures. Therefore, the potential for building downwash must be considered in the modeling analysis.

The procedure used for addressing the effects of building downwash are those recommended in the ISC Dispersion Model User's Guide (USEPA, 1992). In the ISC model, the building heights and widths are input into the model for each direction. If the Huber-Snyder building downwash routine is used, the model picks the worst case dimension from all values. The effective width used by the program is the diameter of a circle of area equal to the square of the width input to the model.

TABLE 4-2

FGTC Phase III
Station No. 19
Summary of Source Parameters Used in the Modeling Analysis

Source Number	Stack Location (m)		Stack Dimensions		Operating Parameters	
	E (m)	N (m)	Height (m)	Diameter (m)	Temperature (K)	Velocity (m/s)
1903	0	0	19.81	1.22	541	14.00

TABLE 4-3

FGTC Phase III Expansion
Station No. 19
Modeled Emission Rates

SOURCE NO.	NO_x (TONS/YR)	CO (MAX LB/HR)
1903	96.58	45.20
SOURCE NO.	**NO_x (GM/SEC)**	**CO (GM/SEC)**
1903	2.78	5.69

If a specific width is to be modeled, then the value input to the model must be calculated according to the following formula:

$$M_w = \sqrt{\pi \times \left(\frac{H_w}{2}\right)^2}$$

$$= 0.886 H_w$$

where: M_w = building width input to the model to produce a building width of H_w used in the dispersion calculation.

H_w = the actual building width for dispersion calculations are desired.

If the Schulman-Scire wake effects method is used, the user inputs the building height and projected width associated with each wind sector. The actual inputs to the ISC were generated using the Bowman Environmental Engineering Automated Downwash Program. Plant coordinates of all building corners, tier corners, and emission points are input into the Downwash Program. The program provides direction-specific building dimensions for either the ISC long or short-term model, which are then directly input into the ISC source file. The program was run using a rectangular building wake area and a wind direction angle increment of 1 degree.

A summary of actual building dimensions for structures considered is presented in Table 4-4.

4.2 Model Results

Modeling was performed for the increases in net emissions of the following pollutants emitted from Compressor Station No. 19 additions:

- NO_x, and
- CO.

The maximum predicted off-site concentrations for each modeled pollutant, averaging period, and a comparison to AAQS and AAQS significance levels are shown in Table 4-5. Table 4-6 provides the maximum off-site concentration for each meteorological data year modeled. The maximum predicted off-site impact from CO and NO_x was generally to the west of the compressor station.

TABLE 4-4

FGTC Phase III
Station No. 19
Building Dimensions

Building	Actual Building Dimensions		
	Height (ft)	Length (ft)	Width (ft)
Auxiliary Building	20	105	30
Existing Compressor Building	36	75	48
Utility Building	19	80	40
Control Room	12	15	10
Flammable Storage	14	20	20
New Compressor	41	70	60

TABLE 4-5

FGTC PHASE III
STATION NO. 19
MODELING RESULTS
MAXIMUM PREDICTED AVERAGE CONCENTRATION OF MODELED POLLUTANTS AND COMPARISON TO SIGNIFICANT IMPACT LEVEL

POLLUTANT	AVG TIME	MAX OFF-SITE ($\mu g/m^3$)	National AAQS ($\mu g/m^3$)	SIGNIFICANT IMPACT ($\mu g/m^3$)
NO_x				
SOURCE 1903	ANNUAL	2.34	100	1
CO				
SOURCE 1903	1-HR	170	40,000	2,000
	8-HR	111	10,000	500

TABLE 4-6

FGTC PHASE III Project
Station No. 19
Maximum Predicted Impact by Year

Pollutant/ Averaging Period	Year of Meteorological Data				
	1982	1983	1984	1985	1986
CO					
1-hour	152	148	170	139	143
8-hour	58	70	111	57	64
NO_x					
Annual	2.18	1.48	2.21	1.90	2.34

NOTE: All values are in $\mu g/m^3$ unless otherwise indicated.

Area concentration maps, showing the facility boundary and maximum impacts at each modeled receptor for the worst case year, are included in Appendix F.

As shown, all predicted CO off-site concentrations were lower than the applicable AAQS. The maximum concentration (2.34 $\mu g/m^3$) exceeded the significance level for NO_x (1 $\mu g/m^3$) over a relatively, small area west of the facility out to a distance of approximately 1.5 km. The results of this air dispersion modeling indicate that the proposed modification to the Melbourne compressor station should not have an adverse effect on the surrounding area.

A floppy disk, containing all model input and output files, and structure downwash program input and output is included in Appendix F. Hard copy printouts of all modeling output are also included.

5.0 REFERENCES

Auer, A.H. 1978. Correlation of Land Use and Cover With Meteorological Anomalies. J. Appl. Meteor., Vol 17.

Bowman Environmental Engineering Automated Downwash Program (GEP). 1991. Bowman Environmental Engineering, Dallas, Texas.

Florida Administrative Code, Chapter 17-2 Air Pollution.

U.S. Environmental Protection Agency (USEPA). 1979. Stationary Internal Combustion Engines Standards Support and Environmental Impact Statement. Vol. I Standards of Performance. EPA-450/2-78-125a.

U.S. Environmental Protection Agency (USEPA). 1983. Guideline Series: Control of Volatile Organic Compound Leaks from Natural Gas/Gasoline Processing Plants. EPA-450/3-83-007. Research Triangle Park, NC.

U.S. Environmental Protection Agency. 1985. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources AP-42. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). 1987. Guideline on Air Quality Models, Supplement A (Revised). EPA-450/2-78-027.

U.S. Environmental Protection Agency (USEPA). 1992. User's Guide for the Industrial Source Complex (ISC2) Dispersion Models. Vol. I (Draft). EPA-450/4-92-2a.

U.S. Environmental Protection Agency (USEPA). (Revised, 1991). EPA Regulations on National Primary and Secondary Ambient Air Quality Standards. 40 CFR 50; 36FR22384; 43FR118. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). (Revised 1991). EPA Regulations on Preparation of Implementation Plans. 40 CFR 51; 36FR22398. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). (Revised 1991). EPA Regulations Designating Areas for Air Quality Planning. 40 CFR 81; 35FR22421; 56FR56694. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). (Amended 1992). EPA Regulations on Approval and Promulgation of Implementation Plans. 40 CFR 52; 37FR10846. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). (Amended 1992). EPA Regulations on Standards of Performance for New Stationary Sources. 40 CFR 60; 36FR24876. Research Triangle Park, NC.

U.S. Environmental Protection Agency (USEPA). (Amended 1992). EPA Regulations on National Emission Standards for Hazardous Air Pollutants. 40 CFR 61; 38FR8820. Research Triangle Park, NC.

APPENDIX A

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCE

#50000 AC05-229322 Rec'd 4-7-93 Rjt # 180845

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor Carol M. Browner, Secretary

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Natural Gas Compressor Engine [ ] New[1] [X] Existing[1]

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

COMPANY NAME: Florida Gas Transmission Company COUNTY: Brevard

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Station No. 19, Unit No. 1903

SOURCE LOCATION: Street _____ City Melbourne

UTM: East 528.67 North 3101.64

Latitude 28 ° 2 ' 29 "N Longitude 80 ° 42 ' 30 "W

APPLICANT NAME AND TITLE: Carl D. Schulz, Vice President, Project Management Services Florida Gas Transmission Company (713) 853-3893

APPLICANT ADDRESS: P.O. Box 1188, Houston, TX 77251-1188

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Florida Gas Transmission Co.

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

*Attach letter of authorization

Signed: _____

Carl D. Schulz, Vice President, Project Management Services

Name and Title (Please Type)

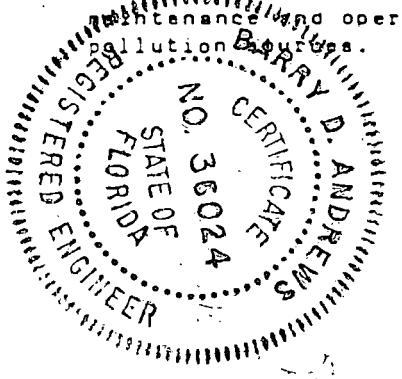
Date: _____ Telephone No. _____

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

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

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

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



Signed Barry D. Andrews

Barry D. Andrews
Name (Please Type)

ENSR Consulting and Engineering
Company Name (Please Type)

102 South Court Street, Florence, AL 35630
Mailing Address (Please Type)

Florida Registration No. 36024 Date: 3/19/93 Telephone No. (205) 740-8240

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See Application Report - Section 1.0 Introduction

Section 2.0 Project Description

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

Start of Construction February 1994 Completion of Construction 12/1/94

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Not Applicable

Not Applicable

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

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

if power plant, hrs/yr_____; if seasonal, describe: Not Applicable

F. If this is a new source or major modification, answer the following questions. (Yes or No) Not Applicable (See Application Report, Section 2.0)

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

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

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

   c. If yes, list non-attainment pollutants.

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

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

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

   a. If yes, for what pollutants?

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

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Not Applicable				

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

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

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

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
NO_x	79.38	96.6	N/A	N/A	78.38	96.6	
CO	45.20	135.2	N/A	N/A	45.20	135.2	
VOC	16.57	38.3	N/A	N/A	16.57	38.8	
SO2	1.05	4.1	N/A	N/A	1.05	4.1	
PM	0.19	0.7	N/A	N/A	0.19	0.7	

[1]See Section V, Item 2.

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

[3]Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
N/A				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.0329	0.0368	38.3

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

Fuel Analysis:

Percent Sulfur: 0.031 Percent Ash: N/A

Density: 0.0455 lb/ft3 lbs/gal Typical Percent Nitrogen: N/A

Heat Capacity: 22,857 BTU/lb _____ BTU/gal

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

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

Annual Average N/A Maximum _____

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

Not Applicable

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

Stack Height: 65 ft. Stack Diameter: 4 ft.

Gas Flow Rate: 34,624 ACFM 18,466 DSCFM Gas Exit Temperature: 515 °F.

Water Vapor Content: 8 % Velocity: 45.92 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

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

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

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

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
   See Application Report, Section 2.0, Appendix C, D
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See Application Report, Appendix C, D
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   See Application Report, Appendix C, D
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
   Not Applicable
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
   Not Applicable
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
   See Application Report, Figure 2-1
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
   See Application Report, Figure 1-1, Figure 2-1
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
   See Application Report, Appendix B

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

Submitted separately.

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

Not Applicable

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

[ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data Not Applicable

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

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

Other data recorded _____

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO^2	_____ grams/sec

E. Emission Data Used in Modeling

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

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

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

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

APPENDIX B

PLOT PLAN

APPENDIX C

SITE SUMMARY TABLE AND VENDOR DATA

Phase III Station Characteristics

16-Mar-93
CS19.WK1

Compressor Station: Number 19
Name: Melbourne
County: Brevard
Nearest City: Melbourne
Compressor Supervisor: Riley Jackson
Mailing Address: 3400 Ranch Road
Melbourne, FL 32904
Telephone: 407-723-8998
Latitude: 28-02-29
Longitude: 80-42-30
UTM Zone: 17
UTM Easting: 528.67 km
UTM Northing: 3,101.64 km
Elevation (ft): 28

ENGINE IDENTIFICATION	1903

Phase III Engine Characteristics

Operating Time (hr/yr)	8760
Hours/Day	24
Days/Week	7
Engine Type	Recip.
Manufacturer	Dresser-Rand
Model	TCVD-10
Horsepower Rating (hp)	5000
Air Charging	Turbo
Exhaust Temperature (F)	515
Mass Flow Rate (lbs/hr) (a)	84,346
Volumetric Flow Rate (acfm)	34,624
Volumetric Flow Rate (dscfm)	18,466
Nominal Fuel Consumption (MMCF/Hr) (b)	0.0329
Max. Fuel Consumption (MMCF/Hr) (b)	0.0368
Nominal Specific Fuel Consump. (BTU/bhp-hr)	6,850
Maximum Specific Fuel Consump. (BTU/bhp-hr)	7,650
Nominal Heat Input (MMBTU/Hr)	34.3
Maximum Heat Input (MMBTU/Hr)	38.3

Phase III Stack Parameters

Stack Height (ft)	65
Stack Diameter (ft)	4
Stack to Building Offset (ft)	17
Building Height (ft) (c)	41
Building Length (ft) (c)	70
Building Width (ft) (c)	60

Phase III Fuel Characteristics

Fuel Type	N.G.
Heating Value (BTU/CF)	1040
Heat Capacity (BTU/lb)	22,857
Density (lb/cubic ft)	0.0455
Percent Sulfur (%) (d)	0.031
Percent Ash (%)	N/A

16–Mar–93
CS19.WK1

ENGINE IDENTIFICATION 1903

Phase III Emissions Rates by Engine for Station 19

Grams/BHP–Hour		Nominal	Maximum
	NOX	2.00	7.20
	CO	2.80	4.10
	NMHC	0.80	1.50
	SO2 (e)	0.085	0.095
	PM (f)	0.015	0.017
Pounds/Hour			
	NOX	22.05	79.38
	CO	30.87	45.20
	NMHC	8.82	16.54
	SO2	0.94	1.05
	PM	0.17	0.19
Tons/Year			
	NOX	96.58	
	CO	135.21	
	NMHC	38.63	
	SO2	4.12	
	PM	0.72	

Notes:
(a) Wet mass flow (@ 60 F, 14.7 psi).
(b) Based on heating value of fuel gas.
(c) Engine enclosed in building.
(d) Percent by weight.
(e) Based on 10 grains S/100 SCF n.g. (assume full conversion).
(f) Based AP–42 factor of 5 lbs/MMSCF.

APPENDIX D

SUPPORTING CALCULATIONS

CRITERIA POLLUTANT EMISSION CALCULATIONS

MAXIMUM HEAT INPUT:

COMPRESSOR ENGINE:

Engine No. 1903:

Fuel Heating Value	=	1040 Btu/scf
Engine Rating	=	5,000 bhp
Brake Specific Fuel Consumption	=	7,650 Btu/bhp-hr
Maximum Heat Input = MMBtu/Hr	=	(Btu/bhp-hr * hp)/10^6
	=	(7,650 * 5,000)/10^6
	=	38.30 MMBtu/hr

POLLUTANT EMISSION FACTORS:

COMPRESSOR ENGINE:

Engine No. 1903:

Worst Case:

NO_x:	7.20 grams/bhp-hr	Manufacturer's Data
CO:	4.10 grams/bhp-hr	Manufacturer's Data
NMHC:	1.50 grams/bhp-hr	Manufacturer's Data
SO_2:	10 grains/100 CF	Contract Limit on Sulfur Content
	0.095 grams/bhp-hr	

lb SO_2/hr = 10 grains/100 CF * 1 lb/7,000 grains * Btu/bhp-hr * bhp * 1 CF/1,040 Btu * 64 lb SO_2/32 lb S

= 10 grains/100 CF * 1 lb/7,000 grains * 7,650 Btu/bhp-hr * 5,000 bhp * 1 CF/1,040 Btu * 64 lb SO_2/32 lb S

= 1.05 lb SO_2/hr

grams/bhp-hr	= lb SO_2/hr * 453.6 g/lb * 1/bhp	
	= 1.05 lb SO_2/hr * 453.6 g * 1/5,000 bhp	
	= 0.095 grams/bhp-hr	
PM:	5 lbs/10^6 CF	Table 1.4-1, AP-42
	0.017 grams/bhp-hr	

lb PM/hr	= 5 lb PM/10^6 CF * CF/hr	
	= 5 lb PM/10^6 CF * 0.037 MMCF/hr	
	= 0.19 lb PM/hr	
grams/bhp-hr	= lb PM/hr * 453.6 g/1 lb * 1/bhp	
	= 0.19 lb PM/hr * 453.6 g/ lb * 1/5,000 bhp	
	= 0.017 grams/bhp-hr	

Normal Operation:

NO_x:	2.00 grams/bhp-hr	Manufacturer's Data
CO:	2.80 grams/bhp-hr	Manufacturer's Data
NMHC:	0.80 grams/bhp-hr	Manufacturer's Data
SO_2:	10 grains/100 CF	Contract Limit on Sulfur Content
	0.085 grams/bhp-hr	
PM:	5 lbs/10^6 CF	Table 1.4-1, AP-42
	0.015 grams/bhp-hr	

HOURS OF OPERATION:

The compressor engine is analyzed as if it has a potential to operate 8,760 hours per year.

NO_x EMISSIONS

COMPRESSOR ENGINE

Engine No. 1903:

Worst Case:

lbs NO_x/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (7.20 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 79.38 lbs/hour

Normal Operation:

lbs NO_x/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (2.00 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 22.05 lbs/hour

tons NO_x/yr = (lbs NO_x/hr) * (8760 hr/yr) / (2000 lbs/ton)

= (22.05 lbs/hr) * (8760 hr/yr) / (2000 lbs/ton)

= 96.58 tons/year

Total Project Emissions:

lbs NO_x/hr = 79.38 lbs NO_x/hr

tons NO_x/yr = 96.58 TPY NO_x

CO EMISSIONS

COMPRESSOR ENGINE

Engine No. 1903:

Worst Case:

lbs CO/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (4.10 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 45.20 lbs/hour

Normal Operation:

lbs CO/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (2.80 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 30.87 lbs/hour

tons CO/yr = (lbs CO/hr) * (8760 hr/yr) / (2000 lbs/ton)

= (30.87 lbs/hr) * (8760 hr/yr) / (2000 lbs/ton)

= 135.21 tons/year

Total Project Emissions:

lbs CO/hr = 45.20 lbs CO/hr

tons CO/yr = 135.21 TPY CO

NMHC EMISSIONS

COMPRESSOR ENGINE

Engine No. 1903:

Worst Case:

lbs NMHC/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (1.50 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 16.54 lbs/hour

Normal Operation:

lbs NMHC/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (0.80 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 8.82 lbs/hour

tons NMHC/yr = (lbs NMHC/hr) * (8760 hr/yr) / (2000 lbs/ton)

= (8.82 lbs/hr) * (8760 hr/yr) / (2000 lbs/ton)

= 38.63 tons/year

Total Project Emissions:

lbs NMHC/hr = 16.54 lbs NMHC/hr

tons NMHC/yr = 38.63 TPY NMHC

SO_2 EMISSIONS

COMPRESSOR ENGINE

Engine No. 1903:

Worst Case:

lbs SO_2/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (0.095 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 1.05 lbs/hour

Normal Operation:

lbs SO_2/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (0.085 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 0.94 lbs/hour

tons SO_2/yr = (lbs SO_2/hr) * (8760 hr/yr) / (2000 lbs/ton)

= (0.94 lbs/hr) * (8760 hr/yr) / (2000 lbs/ton)

= 4.12 tons/year

Total Project Emissions:

lbs SO_2/hr = 1.05 lbs SO_2/hr

tons SO_2/yr = 4.12 TPY SO_2

PM EMISSIONS

COMPRESSOR ENGINE

Engine No. 1903:

Worst Case:

lbs PM/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (0.017 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 0.19 lbs/hour

Normal Operation:

lbs PM/hr = (grams/bhp-hr) * (0.002205 lbs/gram) * (bhp)

= (0.015 grams/bhp-hr) * (0.002205 lbs/gram) * (5000 bhp)

= 0.17 lbs/hour

tons PM/yr = (lbs PM/hr) * (8760 hr/yr) / (2000 lbs/ton)

= (0.17 lbs/hr) * (8760 hr/yr) / (2000 lbs/ton)

= 0.74 tons/year

Total Project Emissions:

lbs PM/hr = 0.19 lbs PM/hr

tons PM/yr = 0.74 TPY PM

APPENDIX E

FDER REGULATORY REQUIREMENTS SUMMARY

AIR QUALITY
REGULATORY REQUIREMENTS CHECKLIST
FLORIDA

Rules and Regulations	Applicability	Name	Comments
Title 17		Rules and Regulations of the State of Florida	Heading. No specific regulatory requirements.
• Chapter 17-2		Air Pollution	Heading. No specific regulatory requirements.
• Part I		Definitions	Heading. No specific regulatory requirements.
§17-2.100	Yes	Definitions	This subsection defines the terms used in Chapter 17-2. No specific regulatory requirements.
• Part II		General Provisions	Heading. No specific regulatory requirements.
§17-2.200	Yes	Statement of Intent	Chapter 17-2 is promulgated to eliminate, prevent, and control air pollution, except from outdoor burning and outdoor heating devices which are regulated under Chapter 17-5. It also furthers the Department of Environmental Regulation's (DER's) Prevention of Significant Deterioration (PSD) policy, and establishes ambient air quality standards and emission standards. No specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
§17-2.210	Yes	Permits Required	Unless exempt, all sources at the compressor station which emit or can reasonably be expected to emit any air pollutant are required to be permitted prior to construction, modification, or initial or continued operation. FGTC must file a construction permit for new sources or those desiring to undergo modification. The permit term will be for a time period sufficient to allow determination of compliance. An operation permit is required of the source after the construction permit expires. The permit specifies the manner, nature, volume and frequency of emissions permitted, applicable limiting standards (if any), proper operation and maintenance of pollution control equipment, and a term of 5 years. Requirements for sources which have shut down and desire to reactivate are specified. Exemptions to Chapter 17-2 are listed including emergency electrical generators operating $\leq$400 hrs/yr.
§17-2.215	No	Emission Estimates	Standards for making emissions estimates for all regulatory purposes including permitting and reporting purposes are established. Since standards have only been established for solid sulfur storage and handling facilities, this section is not applicable to the compressor station.

Rules and Regulations	Applicability	Name	Comments
§17-2.220	Yes	Public Notice and Comment	Public notice must be provided by FGTC for construction (including modifications) permit applications. There are additional public notice requirements for sources subject to New Source Review (NSR), i.e., sources located in non-attainment areas, or Prevention of Significant Deterioration (PSD), i.e., sources located in attainment areas. FGTC is required to publish the public notice after it has been prepared by DER. Procedures and specifications for public notice are detailed.
§17-2.240	Yes	Circumvention	Circumvention of pollution control devices and use of improperly operating devices is prohibited. No specific regulatory requirements.
§17-2.250	Yes	Excess Emissions	Excess emissions resulting from startup, shutdown, or malfunction are allowed for $\leq$2 hours in any 24-hour period provided best operational practices to minimize emissions are used and the activity did not result from poor maintenance or operations. Fossil fuel steam generators are presented as a special case. DER must be notified by FGTC of upset emissions followed by a written report on the malfunction(s), if requested.

Rules and Regulations	Applicability	Name	Comments
§17-2.260	Yes	Air Quality Models	FGTC's estimates of concentrations of ambient air pollutants are to be based on applicable air quality models, data bases, and other DER approved requirements specified in USEPA's "Guidelines On Air Quality Models" (1978). Alternative models may be allowed following public comment and as justified in USEPA's "Workbook for Comparison of Air Quality Models" (1978).
§17-2.270	Yes	Stack Height Policy	For the purpose of estimating ambient air concentrations through modeling, FGTC must use Good Engineering Practice (GEP). A required emission limitation shall not be affected by stack heights which exceed GEP or by other specified dispersion techniques. Actual stack heights are not restricted. GEP specifications and details regarding dispersion techniques are presented.
§17-2.280	Yes	Severability	If any part of this rule is invalidated, all other parts remain valid. No specific regulatory requirements.
§17-2.290	Yes	Effective Date	The effective date of this rule is 11/1/81. No specific regulatory requirements.
• Part III		Ambient Air Quality	Heading. No specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
§17-2.300	Yes	Ambient Air Quality Standards	Standards are established to protect human health and welfare. Violations of ambient air quality standards (AAQS) are not allowed by any source.. Standards are established for SO_2 (maximum 3-hour concentration not to be exceeded more than once per year = 1,500 $\mu g/m^3$; 24-hour standard not to be exceeded more than once per year = 260 $\mu g/m^3$); for PM_{10} (24-hour average concentration not to be exceeded more than once per year = 150 $\mu g/m^3$); for CO (maximum 1-hour concentration not to be exceeded more than once per year = 40 $\mu g/m^3$); for O_3 (daily maximum 1-hour concentration not to be exceeded an average of more than one day per year = 100 $\mu g/m^3$); for NO_2 (annual arithmetic mean = 100 $\mu g/m^3$); and for lead (maximum quarterly arithmetic mean = 1.5 $\mu g/m^3$). Specific instructions for determining O_3 exceedances and compliance are presented. FGTC is required to maintain AAQS.
§17-2.310	Yes	Maximum Allowable Increases (Prevention of Significant Deterioration Increments	At each point within the baseline area, any increase in pollutant concentration by the compressor station over the baseline concentration shall be limited to the amounts specified in this section. Specifications regarding averaging periods and allowable increases are presented on a pollutant-by-pollutant basis for each area designation (i.e., Class I or II). One exceedance per year above the maximum allowable increase is permitted during one averaging period in the year.

Rules and Regulations	Applicability	Name	Comments
§17-2.320	Yes	Air Pollution Episodes	Air Pollution Episodes are defined and classified. DER is authorized to declare and terminate episodes and define affected areas. Preplanned abatement strategies prepared by FGTC may be requested by DER. Plan contents are established. Procedures for enforcing non-compliance are presented.
§17-2.330	Yes	Air Alert	Alert level criteria are defined. Actions required of specific sources upon declaration of an alert are given. FGTC is prohibited from any form of open burning.
§17-2.340	Yes	Air Warning	Warning level criteria are defined. Actions required of specific sources upon declaration of a warning are given. FGTC is prohibited from any form of open burning and unnecessary space heating and cooling.
§17-2.350	Yes	Air Emergency	Emergency level criteria are defined. Actions required of specific sources upon declaration of an emergency are given. FGTC is prohibited from any form of open burning, any construction other than in case of an emergency, and unnecessary lighting, heating, or cooling in unoccupied structures. FGTC is required to take any action that will result in the maximum production of air pollutants from the compressor station.
• Part IV		Area Designation and Attainment Dates	Heading. No specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
§17-2.400	Yes	Procedures for Designation and Redesignation of Areas	All areas of the state are to be designated as non-attain ment, attainment, or unclassifiable with respect to each pollutant for which an AAQS has been established. Area determinations determine emission limiting standards, new and modified source review requirements, and other air pollution control measures. All areas not designated as non-attainment are PSD areas which require establishment of a baseline date. PSD areas are further classified as Class I, II, or III areas for which maximum allowable increases in SO_2 and TSP shall apply after the baseline date. FGTC must comply with these maximum allowable increases. Air Quality Maintenance Areas are former non-attainment areas which have been redesignated to attainment or unclassifiable. These areas remain subject to the emission limiting standards and permit limitations imposed upon them as non-attainment areas. Procedures for redesignation of Class I, II, and III areas and PSD areas are established.
§17-2.410	No	Designation of Areas Not Meeting Ambient Air Quality Standards (Non-attainment Areas)	Ozone, TSP, and SO_2 non-attainment areas within the state are designated. NO_x or PM_{10} non-attainment areas areas have been designated. No specific regulatory requirements apply since this compressor station is located in an attainment/unclassifiable area for all criteria pollutants.

Rules and Regulations	Applicability	Name	Comments
§17-2.420	Yes	Designation of Areas Meeting Ambient Air Quality Standards (Attainment Areas)	All areas not designated as non-attainment or unclassifiable are designated as attainment areas. This compressor station is located in an attainment area for SO_2 and PM, and unclassifiable for all other criteria pollutants. No specific regulatory requirements.
§17-2.430	Yes	Designation of Areas Which Cannot Be Classified Attainment or Non-attainment	Unclassifiable areas in the State are designated. These are all areas not designated as attainment or non-attainment. This compressor station is located in an area unclassifiable for NO_x, CO, and O_3. No specific regulatory requirements.
§17-2.440	Yes	Designation of Class I, Class II, and Class III Areas	Class I areas are specifically designated. All other areas are designated as Class II areas. No Class III areas are designated. No specific regulatory requirements.
§17-2.450	Yes	Designation of Prevention of Significant Deterioration (PSD) Areas	All of the State is a PSD area for TSP and SO_2 (except for designated non-attainment areas) and has a major source baseline date of 1/6/75; a minor source baseline date of 12/27/77; and a trigger date of 8/7/77. All of the state is a PSD area for NO_2 and has a major source baseline date of 2/28/88; a minor source baseline date of 3/28/88; and a trigger date of 2/8/88. No specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
§17-2.460	Yes	Designation of Air Quality Maintenance Areas	Air Quality Maintenance Areas within the State are designated. Non-attainment areas which will automatically become air quality maintenance areas upon redesignation by USEPA as attainment are listed. No specific regulatory requirements.
• Part V		New and Modified Source Review Requirements	Heading. No specific regulatory requirements
§17-2.500	Yes	Prevention of Significant Deterioration	This rule applies to construction of new sources or modification of existing sources in attainment areas. Twenty-eight categories of major facilities (Table 500-1) subject to this section are established. Specific construction and operation permit requirements are presented. Violations of AAQS are not allowed, nor are emissions increases above baseline concentrations which have been summed with the lesser of the allowable increases or AAQS. The criteria for determining whether or not the compressor station is subject to NSR are presented. Fugitive emissions cannot be used to subject a facility to NSR, and NSR does not apply to sources located in non-attainment areas. The action at this compressor station for which a permit is being requested does not constitute a major modification. Therefore, FGTC is not subject to PSD review. Source exemptions to New Source Review (NSR) are presented. Applicability of NSR to new or modified major and minor sources is established. The

Rules and Regulations	Applicability	Name	Comments
			specifications of new emissions increase, significant net emissions increase (Table 500-2), contemporaneous emissions changes, and creditable emissions changes are established. Should federal action result in the relaxation of emissions restrictions, then state NSR applies as if the facility was to be newly constructed. Limited exemptions and special provisions address: relocatable facilities, temporary emissions, modifications under 50 TPY, general ambient monitoring exclusions based on De Minimis ambient impacts (Table 500-3), and temporary and permanent exclusions from increment consumption. General provisions established include: facilities or modifications affecting Class I Areas, baseline related provisions, and ambient monitoring quality assurance requirements. Preconstruction review requirements include: primary and secondary impact analyses, technology review, BACT, and air quality monitoring analyses. Pre- and post construction monitoring may be required. Information which FGTC is required to submit in the PSD application is specified. The general requirements required for construction and operating permits are specified. This rule became effective 11/1/81.
§17-2.510	No	New Source Review for Non-attainment Areas	This compressor station is not located in a non-attainment area or area of influence on any non-attainment area for any criteria pollutant. Therefore, this section does not apply.

Rules and Regulations	Applicability	Name	Comments
§17-2.520	Yes	Sources Not Subject to Prevention of Significant Deterioration or Non-attainment Requirements	This rule applies to sources not subject to NSR but not exempt from general permitting requirements. This compressor station is not subject to the PSD requirements presented in §17-2.500. Therefore, this section applies to the compressor station.
§17-2.530	Yes	Source Reclassification	A source whose operating permit has been revoked is deemed permanently shut down. A source whose permit has lapsed is deemed permanently shut down unless DER is notified within 20 days of the date of lapse and that the source intends to continue operation. The source must meet the additional requirements specified in this rule. This rule does not apply since the permit for this facility has never been revoked or has never lapsed.
§17-2.540	No	Source Specific New Source Review Requirements	This rule applies only to sulfur storage and handling facilities.
• Part VI		Emission Limiting and Performance Standards	Heading. No specific regulatory requirement.
§17-2.600	No	Specific Source Emission Limiting Standards	Emission limiting standards for specified sources are presented. This compressor station is not one of the specified sources.

Rules and Regulations	Applicability	Name	Comments
§17-2.610	Yes	General Particulate Emission Limiting Standard	This rule establishes a PM standard for sources not subject to any other PM or opacity standard. The compressor station is subject to this standard since it is not subject to any other PM limiting standard. A process rate standard and a 20% opacity standard is established. The rule mandates that reasonable practices be taken to prevent unconfined PM emissions.
§17-2.620	Yes	General Pollutant Emission Limiting Standard	Vapor emission control is required for storing, pumping handling, processing, loading, unloading, or using in any process or installation VOCs or organic solvents. FGTC's compressor station must not emit objectionable odors.
§17-2.630	No	Best Available Control Technology (BACT)	DER will make a BACT determination following a receipt of a complete construction permit application. In its determination, DER will consider BACT determinations made by USEPA; NSPS; NESHAPS; scientific, technical, engineering, and other available information; BACT and emissions standards in other states; and the social and economic impact of the technology. This rule also provides for determining BACT for phased construction projects, and use of innovative control technology. FGTC must submit a complete construction permit application so that DER can proceed.

Rules and Regulations	Applicability	Name	Comments
§17-2.640	No	Lowest Achievable Emission Rate (LAER)	LAER is required for construction in non-attainment areas or areas of influence on non-attainment areas. Because this compressor station is not located in either one of these types of areas, this LAER is not applicable to the compressor station.
§17-2.650	No	Reasonably Available Control Technology (RACT)	RACT for VOC control is established for sources in non-attainment areas and air quality maintenance areas, and for PM in air quality maintenance areas and areas of influence on them. Because this compressor station is not located in either a non-attainment area of area of influence on a non-attainment area, this section does not apply.
§17-2.660	Yes	Standards of Performance for New Stationary Sources	Heading. No specific regulatory requirements.
• Subpart D	No	Standards of Performance for Fossil-Fuel Fired Steam Generators for which Construction is Commenced After August 17, 1991	This facility is not a fossil-fuel fired steam generator.
• Subpart Da	No	Standards for Performance for Electric Utility Steam Generating Units for which Construction is Commenced after September 18, 1978	This facility is not an electric utility steam generating unit.

Rules and Regulations	Applicability	Name	Comments
• Subpart Db	No	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	This facility is not a steam generating unit.
• Subpart E	No	Standards of Performance for Incinerators	This facility is not an incinerator.
• Subpart F	No	Standards of Performance for Portland Cement Plants	This facility is not a Portland Cement Plant.
• Subpart G	No	Standards of Performance for Nitric Acid Plants	This facility is not a nitric acid plant.
• Subpart H	No	Standards of Performance for Sulfuric Acid Plants	This facility is not a sulfuric acid plant.
• Subpart I	No	Standards of Performance for Asphalt Concrete Plants	This facility is not a hot mix asphalt facility.
• Subpart J	No	Standards of Performance for Petroleum Refineries	This facility is not a petroleum refinery.
• Subpart K	No	Standards of Performance for Storage Vessels for Petroleum Liquids Constructed after June 11, 1973, and Prior to May 19, 1978	The storage vessels at this facility do not meet the minimum criteria specified (storage capacity $\geq$40,000 gallons).

Rules and Regulations	Applicability	Name	Comments
• Subpart Ka	No	Standards of Performance for Storage Vessels for Petroleum Liquids Constructed after May 18, 1978.	The storage vessels at this facility do not meet the minimum criteria specified (storage capacity $\geq$40,000 gallons).
• Subpart Kb	No	Standards of Performance for Storage Vessels for Petroleum Liquids Constructed after July 23, 1978.	The storage vessels at this facility do not meet the minimum criteria specified (storage capacity $\geq$40 m^3).
• Subpart L	No	Standards of Performance for Secondary Lead Smelters	This facility is not a lead smelter.
• Subpart M	No	Standards of Performance for Secondary Brass and Bronze Ingot Production Plants	This facility does not produce brass or bronze.
• Subpart N	No	Standards of Performance for Iron and Steel Plants	This facility is not an iron or steel plant.
• Subpart Na	No	Standards of Performance for Basic Oxygen Process Steelmaking Facilities for which Construction is Commenced after January 20, 1983	This facility is not a steelmaking facility.

Rules and Regulations	Applicability	Name	Comments
• Subpart O	No	Standards of Performance for Sewage Treatment Plants	This facility is not a sewage treatment plant.
• Subpart P	No	Standards of Performance for Primary Copper Smelters	This facility is not a copper smelter.
• Subpart Q	No	Standards of Performance for Primary Zinc Smelters	This facility is not a zinc smelter.
• Subpart R	No	Standards of Performance for Primary Lead Smelters	This facility is not a lead smelter.
• Subpart S	No	Standards of Performance for Primary Aluminum Reduction Plants	This facility is not an aluminum reduction plant.
• Subpart T	No	Standards of Performance for Phosphate Fertilizer Industry (P.F.I.)s: Wet Process Phosphoric Acid Plants	This facility is not part of the phosphate fertilizer industry.
• Subpart U	No	Standards of Performance for P.F.I.s: Superphosphoric Acid Acid Plants	This facility is not part of the phosphate fertilizer industry.
• Subpart V	No	Standards of Performance for P.F.I.s: Diammonium Phosphate Plants	This facility is not part of the phosphate fertilizer industry.

Rules and Regulations	Applicability	Name	Comments
• Subpart W	No	Standards of Performance for P.F.I.s: Triple Superphosphate Plants	This facility is not part of the phosphate fertilizer industry.
• Subpart X	No	Standards of Performance for P.F.I.s: Granular Triple Superphosphate Storage Facilities	This facility is not part of the phosphate fertilizer industry.
• Subpart Y	No	Standards of Performance for Coal Preparation Plants	This facility is not a coal preparation plant.
• Subpart Z	No	Standards of Performance for Ferroalloy Production Facilities	This facility is not a ferroalloy production facility.
• Subpart AA	No	Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed after October 21, 1974, and on or before August 17, 1983	This facility is not a steel plant.
• Subpart AAa	No	Standards of Performance for Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed after August 7, 1983	This facility is not a furnace.

Rules and Regulations	Applicability	Name	Comments
• Subpart BB	No	Standards of Performance for Kraft Pulp Mills	This facility is not a Kraft pulp mill.
• Subpart CC	No	Standards of Performance for Glass Manufacturing Plants	This facility is not a glass manufacturing plant.
• Subpart DD	No	Standards of Performance for Grain Elevators	This facility is not a grain elevator.
• Subpart EE	No	Standards of Performance for Surface Coating: Metal Furniture	This facility is not involved in surface coating operations.
• Subpart GG	No	Standards of Performance for Stationary Gas Turbines	There are no stationary gas turbines at this facility.
• Subpart HH	No	Standards of Performance for Lime Manufacturing Plants	This facility is not a lime manufacturing plant.
• Subpart KK	No	Standards of Performance for Lead-Acid Battery Manufacture Plants	This facility is not a lead-acid battery manufacturing plant.
• Subpart LL	No	Standards of Performance for Metallic-Mineral Processing Plants	This facility is not a metallic-mineral processing plant.

Rules and Regulations	Applicability	Name	Comments
• Subpart MM	No	Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations	This facility is not a surface coating facility.
• Subpart NN	No	Standards of Performance for Phosphate Rock Plants	This facility is not a phosphate rock plant.
• Subpart PP	No	Standards of Performance for Ammonium Sulfate Manufacturing	This facility is not involved in the manufacture of ammonium sulfate.
• Subpart QQ	No	Standards of Performance for Graphic Arts Industry: Publication Rotogravure Printing	This facility is not part of the graphic arts industry.
• Subpart RR	No	Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations	This facility is not involved in coating operations.
• Subpart SS	No	Standards of Performance for Industrial Surface Coating: Large Appliances	This facility is not involved in coating operations.
• Subpart TT	No	Standards of Performance for Metal Coil Surface Coating	This facility is not involved in coating operations.

Rules and Regulations	Applicability	Name	Comments
• Subpart UU	No	Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture	This facility is not involved in asphalt processing or asphalt roofing manufacture.
• Subpart VV	No	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	This facility is not a SOCMI facility.
• Subpart WW	No	Standards of Performance for the Beverage Can Surface Coating Industry	This facility is not involved in coating operations.
• Subpart XX	No	Standards of Performance for Bulk Gasoline Terminals	This facility is not a bulk gasoline terminal.
• Subpart AAA	No	Standards of Performance for New Residential Wood Heaters	This facility is not a residential wood heater.
• Subpart BBB	No	Standards of Performance for the Rubber Tire Manufacturing Industry	This facility is not involved in the manufacture of rubber tires.
• Subpart FFF	No	Standards of Performance for Flexible Vinyl and Urethane Coating and Printing	This facility is not involved in coating or printing.

Rules and Regulations	Applicability	Name	Comments
• Subpart GGG	No	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries	This facility is not a petroleum refinery.
• Subpart HHH	No	Standards of Performance for Synthetic Fiber Production Facilities	This facility is not a synthetic fiber production facility.
• Subpart III	No	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	This facility is not a SOCMI facility.
• Subpart JJJ	No	Standards of Performance for Petroleum Dry Cleaners	This facility is not a petroleum dry cleaner.
• Subpart KKK	No	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	This facility is not a natural gas processing plant.
• Subpart LLL	No	Standards of Performance for Onshore Natural Gas Processing: SO_2 Emissions	This facility is not a natural gas processing plant.

Rules and Regulations	Applicability	Name	Comments
• Subpart NNN	No	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	This facility is not a SOCMI facility.
• Subpart OOO	No	Standards of Performance for Nonmetallic Mineral Processing Plants	This facility is not a nonmetallic mineral processing plant.
• Subpart PPP	No	Standards of Performance for Wool Fiberglass Insulation Manufacturing Plants	This facility is not a wool fiberglass manufacturing plant.
• Subpart QQQ	No	Standards of Performance for Petroleum Wastewater Systems	This facility is not a is not a petroleum wastewater system.
• Subpart SSS	No	Standards of Performance for Magnetic Tape Manufacturing Industry	This facility is not involved in the manufacture or magnetic tape.
• Subpart TTT	No	Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	This facility is not a surface coating facility.

Rules and Regulations	Applicability	Name	Comments
• Subpart VVV	No	Standards of Performance for Polymeric Coating of Supporting Substrates Facilities	This facility is not involved in coating operations.
§17-2.670	No	National Emission Standards for Hazardous Air Pollutants	The federal NESHAPS are incorporated here by reference.
• Subpart B	No	Radon-222 Emission from Underground Uranium Mines	This facility is not an underground uranium mine.
• Subpart C	No	Beryllium	This facility is not a source of beryllium.
• Subpart D	No	Beryllium Rocket Motor Firing	This facility is not engaged in rocket motor firing.
• Subpart E	No	Mercury	There are no mercury emissions from this facility.
• Subpart F	No	Vinyl Chloride	There are no vinyl chloride emissions from this facility.
• Subpart G	No		Reserved. No specific regulatory requirements.
• Subpart H	No		Reserved. No specific regulatory requirements.
• Subpart I	No		Reserved. No specific regulatory requirements.
• Subpart J	No	Benzene Equipment Leaks	There are no benzene emissions from this facility.
• Subpart K	No		Reserved. No specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
• Subpart L	No	Benzene Emissions from Coke By-Product Recovery Plants	This facility is not a coke by-product recovery plant.
• Subpart M	No	Asbestos	There are no asbestos emissions at this facility.
• Subpart N	No	Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plants	This facility is not a glass manufacturing plant.
• Subpart O	No	Standard for Inorganic Arsenic Emissions from Primary Copper Smelters	This facility is not a primary copper smelter.
• Subpart P	No	Standard for Inorganic Arsenic Emissions from Arsenic Trioxide and Metallic Arsenic Production Facilities	This facility is not an arsenic production facility.
• Subpart Q	No		Reserved. No specific regulatory requirements.
• Subpart R	No		Reserved. No specific regulatory requirements.
• Subpart S	No		Reserved. No specific regulatory requirements.
• Subpart T	No		Reserved. No specific regulatory requirements.
• Subpart U	No		Reserved. No Specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
• Subpart V	No	Equipment Leaks (Fugitive Emission Sources)	This facility will have no benzene or vinyl chloride emissions.
• Subpart W	No	Radon-222 Emissions from Licensed Uranium Mill Tailings	This facility is not a licensed uranium mill tailing.
• Subpart X	No		Reserved. No specific regulatory requirements.
• Subpart Y	No	Benzene Emissions from Benzene Storage Vessels	This facility does not have benzene storage vessels.
• Subpart Z	No		Reserved. No specific regulatory requirements.
• Subpart AA	No		Reserved. No specific regulatory requirements.
• Subpart BB	No	Benzene Emissions from Benzene Transfer Operations	There are no benzene transfer operations at this facility.
• Subpart CC	No		Reserved. No specific regulatory requirements.
• Subpart DD	No		Reserved. No specific regulatory requirements.
• Subpart EE	No		Reserved. No specific regulatory requirements.
• Part VII	No	Source Sampling and Monitoring	Heading. No specific regulatory requirements.

Rules and Regulations	Applicability	Name	Comments
§17-2.700	Yes	Stationary Point Source Emissions Test Procedures	The methods and procedures which FGTC must use to perform compliance test on stack emission are presented.
§17-2.710	No	Continuous Monitoring Requirements	These requirements apply only to certain specified sources. This facility is not one of those specified.
§17-2.753	No	DER Ambient Test Methods	These requirements apply only to certain specified sources. This facility is not one of those specified.
• Part VIII	No	Local Air Pollution Control Programs	This part establishes local air pollution control programs. in specified counties. Because this facility is not located in one of the counties with approved programs, it is not subject to a local air pollution control program.
• Part IX	No	Compliance Schedules	This part applies only to certain specified sources. This facility is not one of the sources specified.
• Chapter 17-4		Permits	Heading. No specific regulatory requirements.
§17-4.001	No	Scope of Part I	This section establishes that procedures for obtaining an FDER permit will be presented in Part I. No specific regulatory requirements.
§17-4.020	Yes	Definitions	Definitions of terms used in Part I to which FGTC is subject are presented.

Rules and Regulations	Applicability	Name	Comments
§17-4.021	No	Transferability of Definitions	Terms defined in other Chapters retain their meaning here, unless otherwise defined. No specific regulatory requirements.
§17-4.022	No	Determination of the Landward Extent of Surface Waters of the State	Transferred to §17-3.022. No specific regulatory requirements.
§17-4.030	Yes	General Prohibition	All FGTC stationary sources must have a valid permit unless exempted, and must be constructed, maintained, and operated consistent with the terms of the permit.
§17-4.040	Yes	Exemptions	DER may exempt structural changes which will not change quality, nature, or quantity of emissions or will not cause pollution. DER may exempt sources which do not contribute significantly to pollution problems within the state. FGTC may request an exemption for sources which meet the previously stated conditions.
§17-4.050	Yes	Procedure to Obtain Permit: Application	FGTC is to complete an application in quadruplicate on DER forms. The application must be certified by a Florida Registered Professional Engineer and must be accompanied by the appropriate processing fee. FGTC must submit a certification of construction and permit fee upon completion of construction in order to be granted an operation permit.

Rules and Regulations	Applicability	Name	Comments
§17-4.055	Yes	Permit Processing	This section establishes the schedule which DER must follow in processing the permit application. DER may request additional information from FGTC. FGTC may request a hearing if it believes that the requested information is not legally authorized.
§17-4.060	Yes	Consultation	FGTC or their representatives are encouraged to consult with DER prior to submitting the permit application. No specific regulatory requirements.
§17-4.070	Yes	Standards for Issuing or Denying Permits; Issuance; Denial	The construction permit will be issued "for a period of time as necessary." The operation permit will have a 5 year term. FGTC's compliance history will be considered in issuing/denying the application. DER will stipulate permit conditions. No specific regulatory requirements.
§17-4.080	Yes	Modification of Permit Conditions	DER may, after issuing the permit, modify or establish new permit conditions. FGTC may request a permit modification permit extension.
§17-4.090	Yes	Renewals	FGTC must apply for a permit renewal prior to 60 days before the expiration of the permit.
§17-4.100	Yes	Suspension and Revocation	FGTC's permit may be suspended or revoked for actions specified within the section.

Rules and Regulations	Applicability	Name	Comments
§17-4.110	Yes	Financial Responsibility	DER may request FGTC to submit proof of financial responsibility, and may require a bond to guarantee compliance.
§17-4.120	Yes	Transfer of Permits	FGTC must submit an "Application for Transfer of Permit" within 30 days of selling/legally transferring a permitted facility.
§17-4.140	No	Reports	Repealed. No specific regulatory requirements.
§17-4.150	Yes	Review	After having received notice of a proposed or final DER action, FGTC waives its right to an administrative hearing if FGTC fails to respond to the notice with 14 days of receipt.
§17-4.160	Yes	Permit Conditions	FGTC is required to properly operate and maintain the facility in order to maintain compliance. DER may access FGTC's records, inspect the facility, and collect samples. All FGTC data may be used in enforcement proceedings. FGTC must keep a copy of the permit at the facility. All monitoring information, reports, and data used to complete applications must be retained at the site or other location specified in the permit for 3 years. FGTC is required to keep specific information regarding monitoring data.

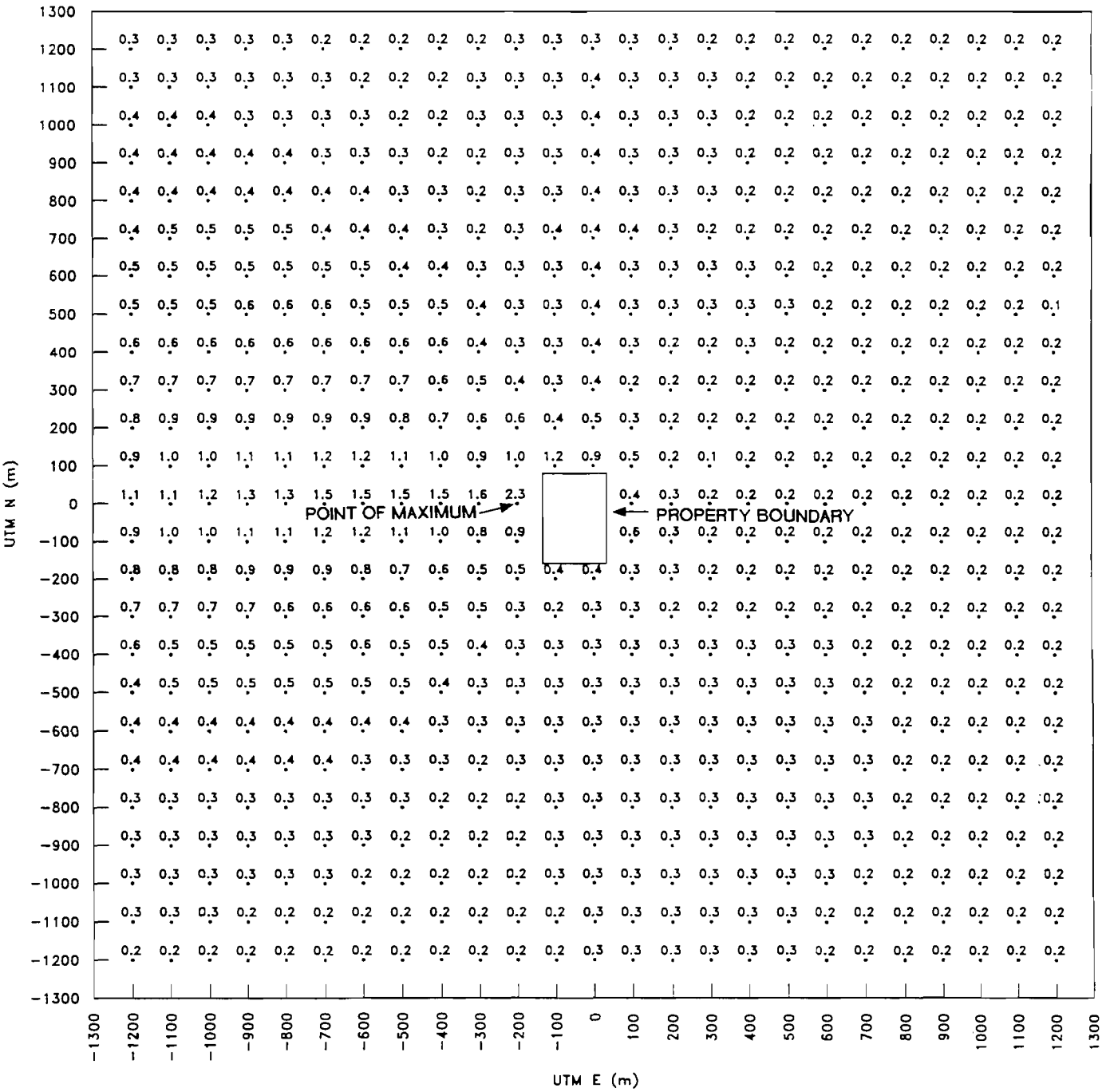
Rules and Regulations	Applicability	Name	Comments
• Part II	No	Specific Permits: Requirements	Heading. No specific regulatory requirements.
§17-4.200	No	Scope of Part II	This section establishes that additional requirements for certain permits are established in the following sections. No specific regulatory requirements.
§17-4.210	Yes	Construction Permits	FGTC is required to apply on DER forms for a permit to construct.
§17-4.220	Yes	Operation Permit for New Sources	FGTC is required to submit the appropriate fee and certification that construction was completed.
§17-4.230	No	Operation Permits for Pollution Sources	Repealed. No specific regulatory requirements.
• Part III	No	Procedures for General Permits	This facility does not meet the requirements for being issued a general permit.
• Chapter 17-256	No	Open Burning and Frost Protection Fires	This facility will not engaged in open burning or use of frost protection fires.
• Chapter 17-8	Yes	Ad Valorem Tax Assessment Rules	A tax assessor may require FGTC to submit a detailed list of pollution control devices at the facility, and their cost and function, for the purpose of assessing ad valorem taxes.

Rules and Regulations	Applicability	Name	Comments
• Chapter 17-242	No	Mobile Source - Motor Vehicle Emission Standards and Test Procedures	This facility is not involved with compliance and testing of mobile sources/motor vehicles.
• Chapter 17-243	No	Tampering With Motor Vehicle Air Pollution Control Equipment	This facility is not involved with checking motor vehicle pollution control devices for tampering.

APPENDIX F

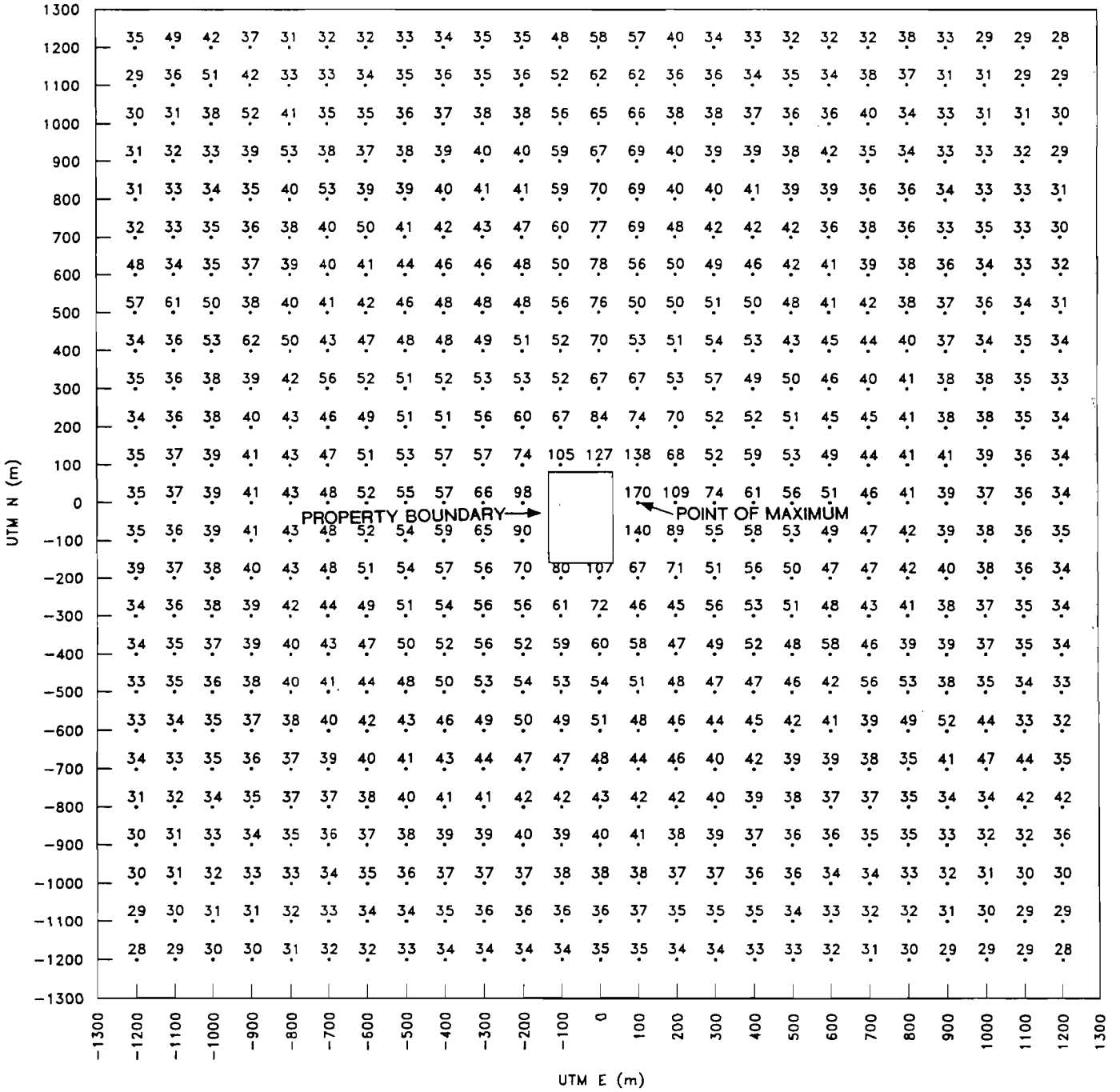
AREA CONCENTRATION MAPS FROM ISC MODELING
GEP STRUCTURE DOWNWASH OUTPUT TABLE
FLOPPY DISK WITH MODELING AND GEP INPUT AND OUTPUT FILES

MAXIMUM ANNUAL NO_x CONCENTRATION ($\mu g/m^3$)
100 METER GRID SPACING


FGTC Station 19 NOX annual 100 m grid (ug/m3) 1986
POINT OF MAXIMUM
PROPERTY BOUNDARY
UTM N (m)
UTM E (m)
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
−100
−200
−300
−400
−500
−600
−700
−800
−900
−1000
−1100
−1200
−1300

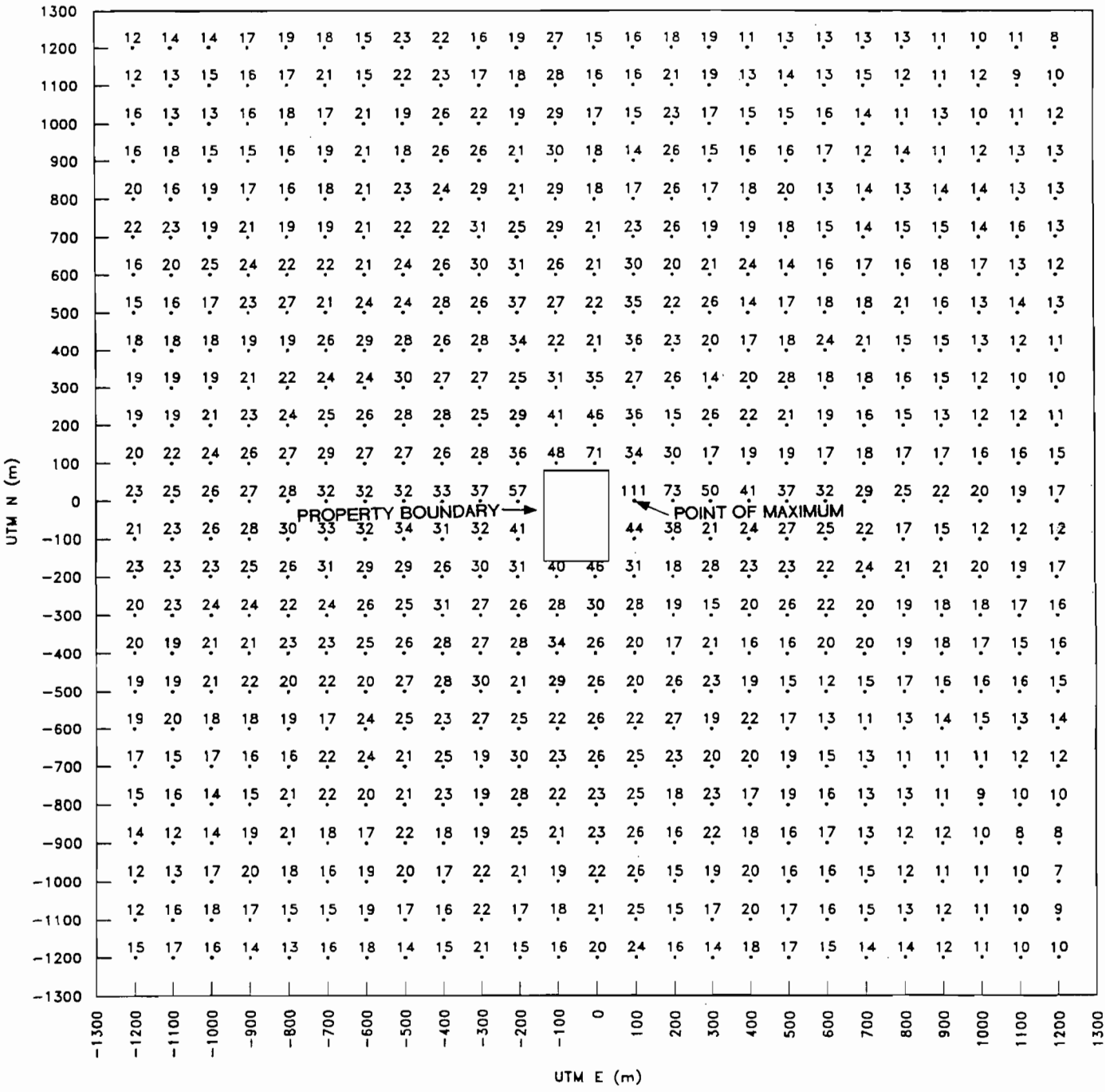
MAXIMUM 1-HOUR CO CONCENTRATION ($\mu g/m^3$)
100 METER GRID SPACING

FGTC Station 19 CO 1 HR MAX 100 m grid (ug/m3) 1984



MAXIMUM 8-HOUR CO CONCENTRATION ($\mu g/m^3$)
100 METER GRID SPACING

FGTC Station 19 CO 8 HR MAX 100 m grid (ug/m3) 1984



ISC MODEL RESULTS
CO 1- AND 8-HOUR
100 METER GRID
YEAR 1982

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**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: 1-HR 8-HR

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: CO

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: s19co82.dta ; **Output Print File: s19co82.lst
**File for Saving Result Arrays: CO.SAV
**Detailed Error/Message File: S19CO82.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.56900E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

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	12.5,	23.2,	0	2	12.5,	25.6,	0	3	12.5,	27.2,	0	4	12.5,	28.0,	0	5	12.5,	28.1,	0	6	12.5,	28.0,	0
7	12.5,	27.1,	0	8	12.5,	25.3,	0	9	12.5,	22.8,	0	10	12.5,	25.3,	0	11	12.5,	27.1,	0	12	12.5,	28.0,	0
13	12.5,	28.1,	0	14	12.5,	28.0,	0	15	12.5,	27.2,	0	16	12.5,	25.6,	0	17	12.5,	23.2,	0	18	12.5,	20.1,	0
19	12.5,	23.2,	0	20	12.5,	25.6,	0	21	12.5,	27.2,	0	22	12.5,	28.0,	0	23	12.5,	28.1,	0	24	12.5,	28.0,	0
25	12.5,	27.1,	0	26	12.5,	25.3,	0	27	12.5,	22.8,	0	28	12.5,	25.3,	0	29	12.5,	27.1,	0	30	12.5,	28.0,	0
31	12.5,	28.1,	0	32	12.5,	28.0,	0	33	12.5,	27.2,	0	34	12.5,	25.6,	0	35	12.5,	23.2,	0	36	12.5,	20.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0,	-1100.0,	-1000.0,	-900.0,	-800.0,	-700.0,	-600.0,	-500.0,	-400.0,	-300.0,
-200.0,	-100.0,	0.0,	100.0,	200.0,	300.0,	400.0,	500.0,	600.0,	700.0,
800.0,	900.0,	1000.0,	1100.0,	1200.0,					

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0,	-1100.0,	-1000.0,	-900.0,	-800.0,	-700.0,	-600.0,	-500.0,	-400.0,	-300.0,
-200.0,	-100.0,	0.0,	100.0,	200.0,	300.0,	400.0,	500.0,	600.0,	700.0,
800.0,	900.0,	1000.0,	1100.0,	1200.0,					

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: lpalm82.bin FORMAT: UNFORM
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WPALMBCH-FL NAME: WPALMBCH-FL
YEAR: 1982 YEAR: 1982

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN
82	1	1	1	31.0	2.06	294.3	6	1148.0	572.0
82	1	1	2	28.0	1.00	293.7	7	1148.0	572.0
82	1	1	3	34.0	1.00	293.2	7	1148.0	572.0
82	1	1	4	3.0	2.57	293.2	6	1148.0	572.0
82	1	1	5	113.0	2.06	293.7	6	1148.0	572.0
82	1	1	6	12.0	2.06	293.2	6	1148.0	572.0
82	1	1	7	15.0	1.00	291.5	6	1148.0	572.0
82	1	1	8	53.0	1.54	293.2	5	132.0	638.0
82	1	1	9	87.0	3.09	295.4	4	301.0	723.0
82	1	1	10	51.0	3.09	297.0	3	471.0	808.0
82	1	1	11	74.0	5.14	298.7	3	640.0	893.0
82	1	1	12	56.0	3.09	300.9	2	809.0	978.0
82	1	1	13	93.0	3.09	300.9	2	979.0	1063.0
82	1	1	14	109.0	2.57	301.5	2	1148.0	1148.0
82	1	1	15	272.0	4.63	301.5	3	1148.0	1148.0
82	1	1	16	284.0	3.60	299.8	3	1148.0	1148.0
82	1	1	17	271.0	4.63	298.7	4	1148.0	1148.0
82	1	1	18	277.0	3.60	297.0	5	1153.0	1097.0
82	1	1	19	304.0	2.57	296.5	6	1164.0	979.0
82	1	1	20	307.0	2.57	296.5	6	1175.0	860.0
82	1	1	21	310.0	2.57	295.9	6	1186.0	741.0
82	1	1	22	302.0	2.06	295.4	6	1197.0	622.0
82	1	1	23	300.0	1.54	295.4	6	1208.0	504.0
82	1	1	24	320.0	2.06	295.9	5	1218.0	385.0

*** 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.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	28.60865 (82073107)	29.32065 (82072910)	30.32285 (82101416)	30.85224 (82062219)	31.08026 (82121115)
1100.0	29.48034 (82122412)	30.22688 (82073107)	31.17151 (82072910)	31.54350 (82041514)	32.40190 (82050918)
1000.0	30.16047 (82110309)	31.23363 (82070317)	31.98374 (82030513)	32.90273 (82072910)	33.71421 (82041514)
900.0	30.83994 (82122411)	31.74189 (82071808)	33.22794 (82072217)	33.93137 (82030513)	34.91696 (82021215)
800.0	31.67059 (82070917)	32.67289 (82070909)	35.08119 (82122411)	35.22630 (82081915)	36.45579 (82110314)
700.0	32.30379 (82071016)	33.49660 (82080816)	34.90469 (82080814)	38.02743 (82122411)	37.75383 (82080709)
600.0	32.56625 (82061518)	34.22660 (82071118)	35.61228 (82041611)	37.45635 (82072315)	39.08593 (82122411)
500.0	33.48200 (82082816)	34.76731 (82101312)	36.44210 (82071015)	38.14403 (82041612)	39.53772 (82120414)
400.0	33.95622 (82080910)	35.77748 (82080917)	37.55696 (82082816)	38.58539 (82120121)	40.81212 (82093014)
300.0	34.70713 (82082815)	36.49132 (82081715)	37.90580 (82090316)	39.13672 (82112813)	41.39723 (82120315)
200.0	34.96145 (82090813)	36.82251 (82090813)	38.22892 (82090216)	40.27545 (82090216)	42.63107 (82120214)
100.0	34.97759 (82071419)	36.84488 (82071419)	38.71097 (82080517)	40.53628 (82082015)	43.34896 (82082015)
0.0	34.78109 (82041917)	36.53489 (82041923)	38.42931 (82103022)	40.74487 (82103022)	42.89322 (82103022)
-100.0	35.49708 (82090415)	37.17448 (82090415)	38.32639 (82103010)	40.60313 (82103010)	43.30860 (82101914)
-200.0	34.58287 (82071518)	36.46173 (82083011)	38.15790 (82090710)	40.37528 (82083110)	42.69201 (82083123)
-300.0	34.77952 (82090110)	35.70867 (82101118)	37.79096 (82100612)	43.94416 (82051106)	61.31287 (82051106)
-400.0	40.72195 (82051106)	55.82140 (82051106)	64.85635 (82051106)	58.01079 (82051106)	41.07215 (82060715)
-500.0	61.05832 (82051106)	51.90474 (82051106)	36.34607 (82060715)	37.96962 (82090118)	39.99436 (82090116)
-600.0	32.46504 (82101119)	34.22826 (82090118)	35.61228 (82101122)	36.87622 (82100707)	38.92776 (82060716)
-700.0	32.08518 (82123117)	33.16661 (82100224)	34.57116 (82032615)	35.76722 (82083014)	37.69395 (82082917)
-800.0	31.65502 (82090717)	32.77931 (82091618)	33.33079 (82102109)	35.03816 (82090613)	36.15201 (82102713)
-900.0	30.94649 (82091318)	31.56613 (82020715)	32.91952 (82090613)	33.61236 (82102718)	34.85098 (82091502)
-1000.0	30.21769 (82082919)	30.64884 (82090613)	31.71262 (82102718)	32.76194 (82091502)	33.94148 (82091317)
-1100.0	28.42372 (82020704)	29.83765 (82102718)	30.65835 (82101719)	32.00717 (82091317)	32.62969 (82102112)
-1200.0	28.08082 (82091718)	28.87970 (82101719)	29.84748 (82101720)	30.21041 (82051619)	31.39090 (82101016)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	32.19458 (82031516)	32.73438 (82081916)	33.10294 (82032117)	33.94963 (82061118)	34.21659 (82061807)
1100.0	33.30873 (82032017)	33.90010 (82060318)	35.01852 (82071910)	35.93896 (82080712)	36.44995 (82090914)
1000.0	34.74368 (82060314)	35.48509 (82022712)	36.41123 (82081818)	37.04661 (82032117)	37.56441 (82040316)
900.0	36.28488 (82071909)	36.70127 (82050815)	38.03232 (82110315)	39.12246 (82020914)	39.50135 (82040313)
800.0	37.64186 (82090812)	38.88636 (82110313)	40.43002 (82072915)	40.69224 (82120511)	41.42181 (82012314)
700.0	39.09212 (82110314)	40.10916 (82073009)	41.35001 (82032415)	42.89683 (82040516)	42.93422 (82040515)
600.0	40.18118 (82080709)	41.84663 (82082924)	43.53654 (82073009)	46.46432 (82050815)	48.15036 (82120511)
500.0	41.89907 (82080612)	43.02798 (82122716)	47.48649 (82082924)	49.46606 (82021612)	49.32722 (82040516)
400.0	42.55443 (82042512)	46.60480 (82072315)	50.49873 (82122411)	49.65929 (82082924)	51.81991 (82013114)
300.0	43.45334 (82080913)	48.36996 (82093014)	49.18342 (82042511)	53.22029 (82020212)	52.54928 (82080811)
200.0	47.43505 (82080716)	49.61762 (82032822)	51.40162 (82120315)	51.81102 (82073112)	54.26200 (82080711)
100.0	47.52004 (82032817)	51.12230 (82042413)	53.43386 (82122714)	55.88919 (82032821)	61.30032 (82032822)
0.0	47.73960 (82103022)	50.79883 (82012917)	54.65580 (82032905)	59.31448 (82032905)	71.24192 (82032905)
-100.0	47.73840 (82050610)	51.09546 (82101820)	54.72503 (82031003)	57.54674 (82032907)	66.39932 (82042315)
-200.0	47.63925 (82101212)	50.17511 (82042315)	61.25311 (82051106)	58.27401 (82032912)	63.29740 (82032914)
-300.0	60.15981 (82051106)	49.04958 (82083017)	52.54498 (82110802)	54.01644 (82101806)	53.62175 (82110719)
-400.0	42.97695 (82083124)	47.64746 (82102814)	49.69463 (82101807)	51.51329 (82110718)	52.91210 (82083016)
-500.0	41.49507 (82102214)	43.35314 (82100709)	47.70503 (82110718)	49.39799 (82121316)	50.45951 (82091415)
-600.0	40.10831 (82082917)	41.64052 (82110718)	43.28424 (82032714)	45.97961 (82111323)	49.09581 (82091414)
-700.0	38.72190 (82102713)	40.45630 (82091417)	41.64263 (82091511)	43.12129 (82091412)	43.34645 (82110716)
-800.0	37.82579 (82083010)	38.52749 (82051618)	40.06797 (82091518)	40.92695 (82091414)	40.76031 (82102613)
-900.0	35.87717 (82112211)	37.19103 (82101016)	37.81702 (82060816)	37.24549 (82101717)	39.88257 (82091515)
-1000.0	34.32454 (82110619)	35.72907 (82091316)	36.32122 (82091509)	37.32545 (82091517)	37.69818 (82083015)
-1100.0	32.89870 (82101713)	34.11437 (82060816)	34.40878 (82112115)	34.87336 (82102613)	35.50248 (82091419)
-1200.0	31.99573 (82091316)	32.27366 (82091509)	33.10113 (82110815)	33.80129 (82091617)	34.34737 (82091501)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	34.10809 (82030624)	55.89006 (82060215)	34.70666 (82030411)	34.45246 (82121612)	34.21265 (82011313)
1100.0	36.12553 (82061801)	54.57545 (82060215)	35.97302 (82030411)	36.06528 (82061804)	36.21900 (82011313)
1000.0	37.93019 (82022710)	51.74395 (82060215)	37.19901 (82012310)	37.91827 (82011406)	37.45959 (82030703)
900.0	40.01240 (82032414)	46.97822 (82060215)	39.34197 (82040518)	40.12537 (82011406)	39.31466 (82030714)
800.0	42.43702 (82013112)	42.43816 (82021613)	41.42903 (82040518)	40.76337 (82011406)	40.86800 (82011401)
700.0	47.11516 (82040817)	47.77131 (82040517)	46.14495 (82040518)	45.96672 (82030713)	45.70369 (82030711)
600.0	49.15860 (82020910)	51.19160 (82042515)	47.82271 (82040518)	47.84985 (82030713)	45.20647 (82121210)
500.0	52.51802 (82030414)	49.90026 (82061724)	50.17252 (82061810)	53.77353 (82030714)	50.53490 (82011407)
400.0	51.67545 (82032412)	53.69622 (82040816)	52.97321 (82061810)	49.89288 (82030714)	43.42677 (82092113)
300.0	52.40940 (82041314)	57.51867 (82040811)	61.78501 (82061810)	44.96139 (82021710)	39.77497 (82052911)
200.0	69.24544 (82122410)	73.58843 (82040812)	92.21621 (82061810)	62.88234 (82011409)	64.51786 (82011408)
100.0	78.90157 (82020411)	126.88990 (82070622)	151.98580 (82060210)	128.63990 (82011408)	70.63828 (82040915)
0.0	105.60800 (82032905)	163.72630 (82032905)	0.00000 (0)	149.07630 (82011417)	95.90134 (82011417)
-100.0	101.07580 (82032912)	128.92100 (82110719)	118.31700 (82121312)	104.94070 (82011111)	83.85021 (82011419)
-200.0	64.67709 (82110719)	74.73534 (82091414)	80.00289 (82121312)	67.29026 (82011004)	54.25820 (82050915)
-300.0	53.77833 (82060813)	55.19309 (82072414)	53.54568 (82121312)	51.14789 (82030811)	52.08121 (82021712)
-400.0	52.02439 (82091414)	50.19326 (82072414)	47.64698 (82121312)	45.65192 (82022510)	47.75481 (82101615)
-500.0	53.61300 (82121315)	50.84052 (82041116)	48.68800 (82121312)	49.90508 (82110515)	49.04525 (82110516)
-600.0	49.57594 (82091515)	49.71624 (82091516)	47.72712 (82121312)	49.59037 (82110515)	47.33356 (82030811)
-700.0	44.73402 (82091419)	46.55091 (82080217)	45.65220 (82121312)	45.36530 (82102615)	46.56983 (82041114)
-800.0	40.20961 (82012619)	42.53318 (82091421)	40.93069 (82121312)	40.05388 (82102615)	40.15205 (82041121)
-900.0	39.16182 (82041117)	40.14675 (82091421)	38.64989 (82121312)	38.33048 (82022215)	38.27952 (82111320)
-1000.0	37.45959 (82112216)	37.61518 (82102021)	36.42635 (82041118)	37.13910 (82022215)	37.00512 (82121311)
-1100.0	36.12553 (82091424)	36.28534 (82102514)	34.90151 (82010504)	35.07665 (82022215)	35.35957 (82111317)
-1200.0	34.02596 (82110617)	34.51521 (82102515)	33.75274 (82010504)	33.71208 (82041123)	33.33101 (82030821)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	34.07130 (82052703)	34.07649 (82092116)	33.10297 (82060109)	32.82445 (82062309)	31.76978 (82061822)
1100.0	35.94984 (82021711)	34.15940 (82060605)	33.95027 (82060510)	31.81157 (82061822)	32.84243 (82030712)
1000.0	37.08087 (82030711)	37.04660 (82060109)	35.83103 (82062309)	35.01110 (82121211)	33.19207 (82050810)
900.0	38.51199 (82121210)	36.79996 (82061813)	36.50338 (82011410)	36.03257 (82030712)	35.85517 (82121213)
800.0	41.49483 (82021710)	38.17294 (82062309)	39.06253 (82011405)	37.11475 (82030715)	36.06044 (82040914)
700.0	41.44261 (82011407)	42.74477 (82011409)	37.55010 (82082616)	39.41395 (82040914)	36.18021 (82011408)
600.0	42.15037 (82062309)	43.37215 (82030712)	42.37390 (82121212)	40.22659 (82011408)	35.34297 (82022812)
500.0	50.55714 (82011409)	49.09090 (82121212)	46.33550 (82011408)	39.73368 (82070116)	40.36246 (82121214)
400.0	46.23934 (82030715)	50.84616 (82011408)	47.29130 (82060417)	43.38919 (82121214)	42.18338 (82040610)
300.0	53.36434 (82011408)	49.39211 (82040911)	45.21456 (82040610)	48.76174 (82040915)	39.65830 (82061110)
200.0	47.49189 (82040911)	50.15878 (82040915)	48.15537 (82040613)	45.02922 (82070112)	41.21670 (82010111)
100.0	52.73555 (82040913)	56.92234 (82011416)	50.02915 (82040917)	41.42338 (82040917)	41.63350 (82040614)
0.0	64.29118 (82011417)	53.31379 (82011417)	49.56437 (82011417)	46.32441 (82011414)	44.89829 (82011414)
-100.0	54.69107 (82011418)	50.81131 (82011418)	48.22865 (82010917)	51.15760 (82040617)	47.37947 (82040617)
-200.0	60.90841 (82011420)	51.88814 (82011419)	54.27393 (82040616)	49.24641 (82012413)	45.70155 (82011418)
-300.0	47.74537 (82061210)	49.42455 (82080311)	51.03167 (82081315)	45.32768 (82041112)	43.10865 (82011413)
-400.0	55.32746 (82021712)	46.75147 (82061210)	48.31796 (82022213)	44.41636 (82040619)	37.82480 (82121711)
-500.0	45.58239 (82063010)	47.63047 (82011109)	44.29327 (82012612)	43.12748 (82101607)	39.73328 (82012602)
-600.0	45.65054 (82022211)	45.79056 (82012615)	39.90507 (82011003)	39.71457 (82072021)	47.44858 (82101607)
-700.0	42.39230 (82022210)	40.74439 (82102412)	40.58373 (82021712)	39.70257 (82021313)	37.99836 (82072021)
-800.0	40.03313 (82110513)	39.31815 (82022211)	37.65567 (82032614)	39.92292 (82011109)	37.36032 (82021313)
-900.0	38.25769 (82110511)	38.26267 (82022212)	36.65540 (82011011)	36.48288 (82101616)	39.78976 (82011109)
-1000.0	35.99360 (82041114)	36.91608 (82081414)	35.47440 (82030115)	35.55442 (82032614)	34.80858 (82080309)
-1100.0	34.71559 (82102423)	34.81791 (82120911)	33.67352 (82022212)	33.42725 (82092120)	31.84779 (82030803)
-1200.0	33.51209 (82041121)	33.45036 (82101710)	32.62265 (82102413)	31.90875 (82022214)	31.57045 (82102411)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	31.23335 (82050810)	29.53188 (82061915)	29.72993 (82040914)	28.83595 (82062222)	28.22802 (82040908)
1100.0	31.50631 (82061915)	31.36323 (82040914)	30.60746 (82062222)	29.50717 (82040908)	28.42803 (82060610)
1000.0	33.13186 (82061713)	32.24696 (82062222)	31.13905 (82062015)	30.16968 (82060610)	28.28205 (82052607)
900.0	33.54093 (82062222)	32.74305 (82062015)	31.78686 (82060610)	29.21093 (82032320)	29.23340 (82092608)
800.0	34.19270 (82062015)	33.06754 (82060610)	32.50025 (82060417)	32.07826 (82092608)	31.24191 (82040918)
700.0	33.64860 (82060610)	35.71945 (82060417)	34.45301 (82042709)	33.37542 (82040918)	30.81802 (82121916)
600.0	37.05840 (82060417)	36.11473 (82040918)	34.73081 (82121916)	33.64560 (82100516)	32.00842 (82061710)
500.0	39.38337 (82040609)	37.32128 (82040610)	35.83133 (82040915)	31.72320 (82061710)	30.20412 (82053112)
400.0	41.08853 (82040915)	34.39283 (82040915)	34.39059 (82053112)	35.02626 (82042710)	33.12999 (82030717)
300.0	37.78889 (82042710)	36.63804 (82030717)	34.05976 (82030717)	34.58840 (82040916)	34.84359 (82040916)
200.0	41.19788 (82011416)	40.27393 (82040917)	37.72731 (82040917)	32.85763 (82012412)	31.49573 (82022111)
100.0	41.34764 (82040614)	40.93608 (82040614)	38.86736 (82040614)	36.07739 (82040614)	33.46228 (82081215)
0.0	40.33796 (82011414)	38.41639 (82011414)	36.42622 (82081904)	35.00427 (82081904)	33.50717 (82081904)
-100.0	42.03623 (82011412)	38.22029 (82011412)	36.99698 (82121216)	35.51721 (82070117)	34.87735 (82070117)
-200.0	42.63747 (82040615)	38.67059 (82010916)	37.17598 (82010917)	35.25606 (82121701)	34.74512 (82040618)
-300.0	39.35279 (82040616)	38.99153 (82012413)	34.21224 (82022117)	34.22025 (82040615)	34.09473 (82040615)
-400.0	39.54017 (82041112)	38.29643 (82041111)	35.71180 (82030718)	33.71513 (82011424)	33.25401 (82022117)
-500.0	39.07563 (82022216)	35.39216 (82121219)	35.71135 (82041112)	34.28909 (82022112)	31.02876 (82022112)
-600.0	37.87829 (82110508)	36.82891 (82040619)	33.48452 (82022216)	33.01975 (82121219)	32.36501 (82012414)
-700.0	48.14014 (82101607)	44.11378 (82101607)	33.89330 (82030113)	31.88212 (82022216)	31.43576 (82010915)
-800.0	35.90096 (82072021)	47.12662 (82101607)	48.63446 (82101607)	31.88141 (82121217)	31.16068 (82040619)
-900.0	34.36267 (82021313)	33.68892 (82072021)	45.17564 (82101607)	50.53658 (82101607)	36.36945 (82101607)
-1000.0	37.39563 (82011109)	32.46201 (82062417)	31.50569 (82072021)	42.76631 (82101607)	50.58542 (82101607)
-1100.0	32.28570 (82011109)	34.08621 (82011109)	30.51522 (82062417)	29.42441 (82072021)	40.18634 (82101607)
-1200.0	30.94003 (82101616)	33.56242 (82011109)	30.58790 (82011109)	28.51412 (82062417)	27.47847 (82072021)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	16.54681 (82042524)	15.22686 (82042524)	18.00721 (82010316)	17.89191 (82060316)	19.94077 (82060316)
1100.0	17.78157 (82120116)	17.57026 (82042524)	15.94346 (82042524)	19.61293 (82010316)	20.04637 (82060316)
1000.0	16.38505 (82120116)	19.12974 (82120116)	18.62864 (82042524)	17.67485 (82010316)	21.05714 (82010316)
900.0	14.66845 (82120424)	17.40215 (82010308)	20.53910 (82120116)	19.70726 (82120116)	19.87017 (82010316)
800.0	15.25483 (82041616)	15.19942 (82041616)	18.17335 (82010308)	21.94635 (82120116)	21.21186 (82120116)
700.0	16.57505 (82122424)	16.45204 (82041616)	17.46512 (82041616)	18.35197 (82010308)	23.22302 (82120116)
600.0	21.91620 (82122424)	21.04249 (82122424)	17.00665 (82122424)	19.58553 (82041616)	19.48207 (82091016)
500.0	20.81673 (82042424)	22.26265 (82122424)	24.70096 (82122424)	22.75850 (82122424)	20.76933 (82041616)
400.0	18.00807 (82042424)	22.05026 (82042424)	24.20870 (82042424)	24.21570 (82122424)	27.48614 (82122424)
300.0	25.04905 (82013016)	25.83152 (82013016)	24.94850 (82013016)	21.68065 (82013016)	26.59831 (82042424)
200.0	21.16645 (82021508)	23.15173 (82021508)	24.86243 (82013016)	28.84633 (82013016)	31.50939 (82013016)
100.0	19.01231 (82050208)	19.98735 (82050208)	20.71556 (82050208)	20.98162 (82050208)	23.46773 (82051216)
0.0	21.07616 (82012924)	22.58880 (82012924)	24.21880 (82012924)	25.95026 (82012924)	27.67655 (82012924)
-100.0	22.38935 (82103024)	23.72056 (82103024)	24.92097 (82103024)	27.55524 (82020808)	29.83282 (82020808)
-200.0	26.65283 (82100308)	28.13706 (82100308)	28.52170 (82100308)	26.98484 (82100308)	22.88643 (82031008)
-300.0	19.88079 (82100308)	19.04860 (82102008)	20.49614 (82030916)	23.97677 (82111116)	27.57312 (82111116)
-400.0	19.49993 (82111108)	21.83328 (82051108)	27.18313 (82051108)	27.74851 (82051108)	28.96322 (82102824)
-500.0	26.19686 (82051108)	25.19983 (82051108)	25.04201 (82102824)	22.18601 (82102824)	20.43312 (82032916)
-600.0	21.61299 (82102824)	19.97440 (82102824)	16.93588 (82032916)	15.78543 (82032916)	23.83706 (82111016)
-700.0	14.81005 (82102824)	14.25157 (82032916)	16.10225 (82111016)	23.12037 (82111016)	22.37371 (82111016)
-800.0	12.06885 (82111024)	17.24718 (82111016)	21.42827 (82111016)	19.48195 (82111016)	26.58292 (82110908)
-900.0	17.26535 (82111016)	19.43728 (82111016)	17.03634 (82111016)	24.78350 (82110908)	24.26717 (82110908)
-1000.0	17.46821 (82111016)	16.40277 (82110908)	23.04877 (82110908)	23.32792 (82110908)	22.56675 (82110708)
-1100.0	15.74200 (82110908)	21.42132 (82110908)	22.16808 (82110908)	21.01315 (82110708)	15.66495 (82110708)
-1200.0	19.91758 (82110908)	20.92702 (82110908)	19.19916 (82110708)	16.57304 (82110708)	11.09083 (82110924)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	15.00683 (82060316)	13.61886 (82020316)	17.43158 (82013124)	16.23038 (82020916)	19.54529 (82121616)
1100.0	19.87146 (82060316)	14.03586 (82122916)	17.30425 (82013124)	19.26595 (82020916)	21.15674 (82121616)
1000.0	22.00107 (82060316)	18.20862 (82060316)	16.71823c(82011816)	19.87821 (82020916)	21.35783 (82121616)
900.0	22.00170 (82010316)	23.03371 (82060316)	16.92543c(82011816)	19.49059 (82020316)	19.30220 (82020916)
800.0	22.31935 (82010316)	21.85932 (82010316)	21.91147 (82060316)	21.44060c(82011816)	22.91408 (82020916)
700.0	22.72610 (82120116)	24.87658 (82010316)	23.86774 (82060316)	21.00730c(82011816)	23.98237c(82011816)
600.0	24.11960 (82120116)	24.12017 (82120116)	26.87600 (82010316)	27.12533 (82060316)	26.74790c(82011816)
500.0	22.19840 (82091016)	25.79484 (82091016)	27.21241 (82120116)	29.95831 (82010316)	23.76982c(82011816)
400.0	23.26760 (82122424)	26.02745 (82041616)	30.38339 (82091016)	28.68966 (82050716)	26.23179 (82010316)
300.0	26.93881 (82042424)	31.80119 (82122424)	26.87859 (82070716)	33.14503 (82091016)	27.88559 (82073016)
200.0	33.18370 (82013016)	27.04259 (82013016)	31.64985 (82042424)	30.17245 (82122424)	28.38833 (82091016)
100.0	26.83500 (82051216)	29.72449 (82051216)	32.07207 (82013016)	35.00543 (82013016)	30.54112 (82032824)
0.0	30.99084 (82012924)	32.75808 (82012924)	33.90995 (82012924)	33.86610 (82012924)	38.83394 (82012924)
-100.0	33.82198 (82020808)	32.25291 (82020808)	33.37506 (82031008)	31.06065 (82031008)	38.91130 (82111116)
-200.0	25.43460 (82030916)	31.90086 (82111116)	35.18806 (82111116)	36.43304 (82102824)	35.05569 (82032916)
-300.0	28.93876 (82102824)	34.80162 (82102824)	31.68825 (82032916)	32.08573 (82111016)	31.27853 (82110724)
-400.0	23.80067 (82032916)	23.27991 (82032916)	33.59267 (82111016)	33.40728 (82110908)	30.34553 (82110708)
-500.0	22.35309 (82111016)	28.97494 (82111016)	33.60160 (82110908)	34.18750 (82110708)	24.03814 (82091416)
-600.0	25.68763 (82111016)	29.92835 (82110908)	30.37414 (82110708)	17.79812 (82091416)	21.42082 (82091416)
-700.0	28.35663 (82110908)	27.24553 (82110708)	19.86202 (82110708)	20.39976 (82091416)	17.32308 (82091516)
-800.0	24.74771 (82110908)	22.80814 (82110708)	16.36589 (82091416)	17.80224 (82110816)	15.12521 (82091424)
-900.0	23.40893 (82110708)	13.74391 (82110924)	17.19899 (82091416)	15.35738 (82091516)	14.79688 (82091424)
-1000.0	13.76338 (82110708)	14.68976 (82091416)	15.85530 (82110816)	12.84341 (82091516)	12.92332 (82091424)
-1100.0	11.82663 (82110924)	14.39161 (82091416)	13.43491 (82110816)	13.53886 (82091424)	11.00745 (82091424)
-1200.0	12.84089 (82091416)	13.97763 (82110816)	11.48472 (82091516)	12.75344 (82091424)	11.70646 (82021124)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	17.60691 (82061808)	17.67793 (82012316)	12.44371 (82030708)	15.17875 (82061824)	11.17241 (82030708)
1100.0	17.92833 (82061808)	18.95007 (82012316)	12.91802 (82030708)	15.79598 (82061824)	11.87300 (82030716)
1000.0	18.18501 (82121616)	20.23223 (82012316)	13.34413 (82030708)	16.24625 (82061824)	14.22635 (82030716)
900.0	21.39528 (82121616)	21.43935 (82012316)	13.85589 (82061916)	16.38985 (82061824)	16.74910 (82030716)
800.0	24.33698 (82121616)	22.34903 (82012316)	14.73801 (82061916)	15.96355 (82061824)	18.84832 (82030716)
700.0	26.81336 (82121616)	24.56903 (82012316)	16.47016 (82031616)	16.11214 (82011408)	20.57548 (82030716)
600.0	23.78898 (82040816)	24.54317 (82061808)	17.74032 (82031616)	15.14744 (82030716)	16.44379 (82030716)
500.0	26.01823c(82011816)	23.02581 (82121616)	18.53747 (82031616)	19.04109 (82030716)	13.50999 (82061816)
400.0	27.95814c(82011816)	25.36113 (82040816)	17.97620 (82031616)	20.57410 (82030716)	14.26826 (82062016)
300.0	20.40786 (82072916)	28.76611 (82040816)	17.75194 (82031616)	15.12312 (82030716)	15.20755 (82062016)
200.0	28.73427 (82073016)	30.55151 (82060416)	26.44666 (82061808)	15.20763 (82062016)	16.64269 (82040916)
100.0	43.30154 (82122424)	63.54734 (82120116)	43.29091 (82061808)	35.38145 (82040608)	21.76582 (82040916)
0.0	58.44615 (82012924)	88.37194 (82012924)	0.00000 (0)	35.31859 (82022124)	20.08206 (82022124)
-100.0	54.47157 (82102824)	75.54089 (82110724)	39.59584 (82102516)	50.64856 (82011008)	27.32018 (82011424)
-200.0	37.56890 (82110724)	33.91122 (82091416)	30.76977 (82102516)	28.67557 (82022216)	19.96006 (82011008)
-300.0	21.29235 (82091416)	19.84122 (82091424)	22.38922 (82102516)	17.39222 (82110516)	22.33322 (82101616)
-400.0	23.64868 (82091416)	14.53512 (82091424)	21.38444 (82102516)	14.95383 (82110516)	21.33996 (82101616)
-500.0	19.37393 (82091516)	14.84025 (82021316)	22.72978 (82102516)	16.03771 (82110516)	19.81415 (82022216)
-600.0	17.50413 (82091424)	18.00775 (82102616)	22.51856 (82102516)	16.73142 (82041124)	16.29798 (82030816)
-700.0	15.27224 (82091424)	19.53071 (82102616)	21.50059 (82102516)	17.13873 (82041124)	14.88917 (82030816)
-800.0	12.64155 (82021124)	17.86148 (82102616)	19.33397 (82102516)	15.65355 (82041124)	13.02555 (82041124)
-900.0	13.75457 (82021124)	17.16500 (82102616)	17.97692 (82102516)	15.69716 (82041124)	14.18935 (82041124)
-1000.0	13.56727 (82021124)	16.05632 (82102616)	16.61430 (82102516)	15.51944 (82041124)	14.18429 (82041124)
-1100.0	13.14402 (82102616)	14.83098 (82102616)	15.33735 (82102516)	15.19520 (82041124)	13.67316 (82041124)
-1200.0	13.81729 (82102616)	14.13460 (82102516)	14.16435 (82102516)	14.75649 (82041124)	13.03637 (82041124)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	15.19344 (82030716)	12.16741 (82030716)	12.62914 (82061816)	9.04563 (82061816)	7.46283c(82082124)
1100.0	16.32776 (82030716)	10.61489 (82061816)	12.10691 (82061816)	7.72744c(82082124)	6.24782 (82011416)
1000.0	16.23978 (82030716)	13.18242 (82061816)	9.77250 (82061816)	8.17191 (82011416)	8.04641 (82121216)
900.0	14.04725 (82030716)	13.27524 (82061816)	8.97370 (82011416)	8.01417 (82062016)	9.54787 (82121216)
800.0	12.25671 (82061816)	10.26743 (82061816)	9.49995 (82062016)	10.26764 (82121216)	10.29453 (82062016)
700.0	13.55959 (82061816)	10.89407 (82062016)	10.83421 (82062016)	11.48711 (82062016)	11.07912 (82022816)
600.0	11.53023 (82062016)	13.05868 (82062016)	12.87540 (82062016)	12.30052 (82062016)	14.46972 (82022816)
500.0	15.02427 (82062016)	14.80648 (82062016)	13.99666 (82062016)	15.42162 (82022816)	12.36204 (82022816)
400.0	16.36329 (82062016)	14.72383 (82062016)	15.06020 (82022816)	11.53827 (82070116)	11.76075 (82040616)
300.0	14.14686 (82040916)	14.89777 (82063016)	13.88122 (82070116)	12.75560 (82070116)	13.60902 (82042716)
200.0	14.60648 (82040916)	15.82377 (82070116)	15.53321 (82070116)	18.14026 (82042716)	17.35064 (82042716)
100.0	15.14253 (82070116)	15.22796 (82070116)	14.16641 (82070116)	12.30603 (82070116)	10.41788 (82070116)
0.0	11.50087 (82022124)	10.47553 (82080216)	10.65865 (82080216)	10.73274 (82022124)	11.44175 (82022124)
-100.0	15.61926 (82011424)	16.77712 (82080216)	17.08106 (82080216)	15.80778 (82080216)	14.23284 (82080216)
-200.0	19.77159 (82121716)	16.49327 (82011424)	15.89477 (82011424)	13.74215 (82080216)	14.33601 (82080216)
-300.0	15.95052 (82121308)	20.68585 (82121716)	21.48544 (82121716)	14.75313 (82011424)	13.75558 (82011424)
-400.0	18.87135 (82101616)	16.76026 (82121308)	20.40058 (82030724)	21.97009 (82121716)	17.29954 (82121716)
-500.0	25.39720 (82122016)	20.33565 (82121308)	17.13926 (82011008)	19.74957 (82030724)	18.63056 (82121716)
-600.0	20.07674 (82022216)	23.92810 (82122016)	19.47567 (82121308)	15.90187 (82011008)	19.68246 (82030724)
-700.0	19.35732 (82022216)	22.32148 (82122016)	19.06174 (82122016)	19.21219 (82121308)	15.69176 (82011008)
-800.0	15.73049 (82110524)	17.20501 (82022216)	21.37868 (82122016)	16.43913 (82102416)	18.09560 (82121308)
-900.0	13.44150 (82030816)	18.19793 (82022216)	18.29372 (82122016)	18.63723 (82122016)	15.82726 (82102416)
-1000.0	12.41923 (82030816)	15.69183 (82110524)	15.30932 (82022216)	17.88420 (82122016)	15.42611 (82122016)
-1100.0	11.61835 (82010508)	14.16915 (82110524)	16.22021 (82022216)	15.00755 (82012708)	16.36830 (82122016)
-1200.0	11.45654 (82041124)	11.84972 (82030124)	14.69806 (82110524)	13.49591 (82022216)	14.65106 (82122016)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	6.25196 (82121216)	7.56224 (82121216)	8.58660 (82061908)	10.67758c(82040908)	9.83778c(82040908)
1100.0	7.91092 (82121216)	8.48485 (82061908)	10.83199c(82040908)	10.16535c(82040908)	7.89539 (82022816)
1000.0	8.59385 (82121216)	10.83974c(82040908)	10.44722c(82040908)	8.95571 (82022816)	8.90531 (82022816)
900.0	10.62965c(82040908)	10.65344c(82040908)	10.18004 (82022816)	9.92842 (82022816)	8.60053 (82022816)
800.0	10.74149c(82040908)	11.56243 (82022816)	10.98038 (82022816)	9.10445 (82022816)	7.19714 (82121216)
700.0	13.04806 (82022816)	11.93762 (82022816)	9.34147 (82022816)	7.12679 (82040616)	7.83014 (82040616)
600.0	12.54894 (82022816)	9.08726 (82022816)	8.89266 (82040616)	8.27643 (82040616)	7.71652 (82092616)
500.0	9.52127 (82040616)	9.95475 (82040616)	8.64682 (82010816)	10.21179 (82042716)	11.95978 (82042716)
400.0	10.31091c(82101416)	11.91514 (82042716)	14.16660 (82042716)	14.85166 (82042716)	14.30614 (82042716)
300.0	16.43759 (82042716)	16.55243 (82042716)	15.34736 (82042716)	13.81513 (82042716)	12.34954 (82042716)
200.0	14.72713 (82042716)	13.07319 (82042716)	11.56497 (82042716)	10.21790 (82042716)	9.02152 (82042716)
100.0	8.75766 (82070116)	8.29078 (82022124)	8.64918 (82022124)	8.81618 (82022124)	8.86240 (82022124)
0.0	10.66838 (82022124)	10.90773 (82022124)	10.95743 (82022124)	10.90800 (82022124)	10.78575 (82022124)
-100.0	12.49169 (82080216)	11.12490 (82080216)	9.91834 (82080216)	8.86625 (82080216)	7.95096 (82080216)
-200.0	13.35306 (82080216)	11.83682 (82080216)	10.34117 (82080216)	10.80162 (82040624)	10.77157 (82040624)
-300.0	12.00308 (82011424)	10.01375 (82011424)	9.71871 (82080216)	9.19641 (82080216)	8.39286 (82080216)
-400.0	11.98513 (82011424)	12.02415 (82011424)	10.82905 (82011424)	9.40944 (82011424)	8.04838 (82011424)
-500.0	18.22145 (82121716)	14.29926 (82121716)	10.14952 (82011424)	10.25799 (82011424)	9.51070 (82011424)
-600.0	16.00441 (82121716)	16.84623 (82121716)	15.25682 (82121716)	11.83861 (82010916)	8.93875 (82010916)
-700.0	18.62325 (82030724)	15.98517 (82030724)	14.81204 (82121716)	14.56809 (82121716)	12.71508 (82121716)
-800.0	15.29397 (82011008)	17.27612 (82030724)	16.36284 (82030724)	12.80204 (82121716)	13.20803 (82121716)
-900.0	16.72927 (82121308)	14.79602 (82011008)	15.87899 (82030724)	16.04026 (82030724)	11.82094 (82030724)
-1000.0	14.95820 (82102416)	15.32856 (82121308)	14.25111 (82011008)	14.54043 (82030724)	15.33152 (82030724)
-1100.0	13.75055 (82102416)	14.41068 (82121308)	13.99408 (82121308)	13.69114 (82011008)	13.30479 (82030724)
-1200.0	14.32980 (82122016)	13.17217 (82102416)	13.79240 (82121308)	12.76698 (82121308)	12.99712 (82011008)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	163.72630	(82032905)	AT (	-100.00,	0.00)	GC	26.	122.64600	(82011411)	AT (	100.00,	100.00)	GC
2.	151.98580	(82060210)	AT (	0.00,	100.00)	GC	27.	122.46810	(82110712)	AT (	-100.00,	-100.00)	GC
3.	150.14910	(82032814)	AT (	-100.00,	0.00)	GC	28.	121.15170	(82033019)	AT (	-100.00,	0.00)	GC
4.	149.88510	(82032906)	AT (	-100.00,	0.00)	GC	29.	120.67740	(82110721)	AT (	-100.00,	-100.00)	GC
5.	149.26810	(82042408)	AT (	-100.00,	0.00)	GC	30.	120.58370	(82120213)	AT (	-100.00,	0.00)	GC
6.	149.07630	(82011417)	AT (	100.00,	0.00)	GC	31.	120.54970	(82012918)	AT (	-100.00,	0.00)	GC
7.	141.52190	(82061810)	AT (	0.00,	100.00)	GC	32.	120.12920	(82120309)	AT (	-100.00,	0.00)	GC
8.	137.71850	(82012917)	AT (	-100.00,	0.00)	GC	33.	119.73820	(82122613)	AT (	-100.00,	0.00)	GC
9.	136.03580	(82120102)	AT (	-100.00,	0.00)	GC	34.	119.38860	(82021423)	AT (	-100.00,	0.00)	GC
10.	135.86590	(82122510)	AT (	-100.00,	0.00)	GC	35.	119.08020	(82021421)	AT (	-100.00,	0.00)	GC
11.	135.24710	(82121502)	AT (	-100.00,	0.00)	GC	36.	118.68380	(82012924)	AT (	-100.00,	0.00)	GC
12.	129.10090	(82012912)	AT (	-100.00,	0.00)	GC	37.	118.68370	(82012922)	AT (	-100.00,	0.00)	GC
13.	128.92100	(82110719)	AT (	-100.00,	-100.00)	GC	38.	118.62670	(82122507)	AT (	-100.00,	0.00)	GC
14.	128.92100	(82111012)	AT (	-100.00,	-100.00)	GC	39.	118.31700	(82121312)	AT (	0.00,	-100.00)	GC
15.	128.78670	(82121505)	AT (	-100.00,	0.00)	GC	40.	117.95710	(82110709)	AT (	-100.00,	-100.00)	GC
16.	128.63990	(82011408)	AT (	100.00,	100.00)	GC	41.	116.71080	(82032810)	AT (	-100.00,	0.00)	GC
17.	127.62800	(82033111)	AT (	-100.00,	0.00)	GC	42.	116.60160	(82092606)	AT (	100.00,	0.00)	GC
18.	127.62790	(82122514)	AT (	-100.00,	0.00)	GC	43.	116.30420	(82103022)	AT (	-100.00,	0.00)	GC
19.	127.34870	(82033012)	AT (	-100.00,	0.00)	GC	44.	116.06850	(82111013)	AT (	-100.00,	-100.00)	GC
20.	127.31510	(82033014)	AT (	-100.00,	0.00)	GC	45.	115.64480	(82101901)	AT (	-100.00,	0.00)	GC
21.	127.21800	(82032815)	AT (	-100.00,	0.00)	GC	46.	114.98170	(82033020)	AT (	-100.00,	0.00)	GC
22.	126.88990	(82070622)	AT (	-100.00,	100.00)	GC	47.	114.67940	(82101810)	AT (	-100.00,	-100.00)	GC
23.	126.63210	(82042412)	AT (	-100.00,	0.00)	GC	48.	114.47160	(82061711)	AT (	0.00,	100.00)	GC
24.	126.49160	(82013002)	AT (	-100.00,	0.00)	GC	49.	114.41320	(82110722)	AT (	-100.00,	-100.00)	GC
25.	124.83130	(82110718)	AT (	-100.00,	-100.00)	GC	50.	114.26860	(82110723)	AT (	-100.00,	-100.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	88.37194	(82012924)	AT (	-100.00,	0.00)	GC	26.	51.60531	(82050216)	AT (	-100.00,	0.00)	GC
2.	79.97558	(82122516)	AT (	-100.00,	0.00)	GC	27.	51.51392	(82050224)	AT (	-100.00,	0.00)	GC
3.	75.54089	(82110724)	AT (	-100.00,	-100.00)	GC	28.	51.02866	(82010316)	AT (	-100.00,	100.00)	GC
4.	75.23577	(82110908)	AT (	-100.00,	-100.00)	GC	29.	50.99728	(82122408)	AT (	-100.00,	100.00)	GC
5.	68.66281	(82033024)	AT (	-100.00,	0.00)	GC	30.	50.84919	(82112124)	AT (	-100.00,	-100.00)	GC
6.	67.81573	(82021424)	AT (	-100.00,	0.00)	GC	31.	50.64856	(82011008)	AT (	100.00,	-100.00)	GC
7.	66.61198	(82032816)	AT (	-100.00,	0.00)	GC	32.	50.62223	(82051924)	AT (	-100.00,	0.00)	GC
8.	63.54734	(82120116)	AT (	-100.00,	100.00)	GC	33.	50.20935	(82120216)	AT (	-100.00,	0.00)	GC
9.	61.48465	(82120316)	AT (	-100.00,	0.00)	GC	34.	50.13088	(82020308)	AT (	-100.00,	100.00)	GC
10.	58.67225	(82111408)	AT (	-100.00,	-100.00)	GC	35.	49.79652	(82032916)	AT (	-200.00,	-100.00)	GC
11.	58.44615	(82012924)	AT (	-200.00,	0.00)	GC	36.	49.40642	(82041924)	AT (	-100.00,	0.00)	GC
12.	57.61712	(82103024)	AT (	-100.00,	0.00)	GC	37.	48.85823	(82120224)	AT (	-100.00,	0.00)	GC
13.	57.46045	(82112208)	AT (	-100.00,	-100.00)	GC	38.	48.53096	(82012808)	AT (	-100.00,	0.00)	GC
14.	56.24233	(82050624)	AT (	-100.00,	0.00)	GC	39.	47.95195	(82013116)	AT (	-100.00,	100.00)	GC
15.	55.96625	(82033016)	AT (	-100.00,	0.00)	GC	40.	47.91211	(82110716)	AT (	-100.00,	-100.00)	GC
16.	55.90569	(82101816)	AT (	-100.00,	-100.00)	GC	41.	47.89111	(82111008)	AT (	-100.00,	-100.00)	GC
17.	55.38802	(82111016)	AT (	-100.00,	-100.00)	GC	42.	47.63657	(82033116)	AT (	-100.00,	0.00)	GC
18.	54.47157	(82102824)	AT (	-200.00,	-100.00)	GC	43.	46.44596	(82101908)	AT (	-100.00,	0.00)	GC
19.	53.82394	(82112608)	AT (	-100.00,	0.00)	GC	44.	46.22435	(82041216)	AT (	-200.00,	-100.00)	GC
20.	53.12954	(82051308)	AT (	-100.00,	0.00)	GC	45.	46.12082	(82021416)	AT (	-100.00,	0.00)	GC
21.	52.62873	(82042408)	AT (	-100.00,	0.00)	GC	46.	46.05680	(82032908)	AT (	-100.00,	0.00)	GC
22.	52.08417	(82013008)	AT (	-100.00,	0.00)	GC	47.	45.50465	(82122508)	AT (	-100.00,	0.00)	GC
23.	51.81879	(82122516)	AT (	-200.00,	0.00)	GC	48.	45.49511	(82111608)	AT (	-100.00,	0.00)	GC
24.	51.76409	(82042524)	AT (	-100.00,	100.00)	GC	49.	44.82943	(82111208)	AT (	-100.00,	0.00)	GC
25.	51.70636	(82112624)	AT (	-100.00,	0.00)	GC	50.	44.63240	(82112016)	AT (	-100.00,	0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO 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	163.72630	ON 82032905:	AT (-100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO 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	88.37194	ON 82012924:	AT (-100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 619 Informational Message(s)

A Total of 619 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

ISC MODEL RESULTS
CO 1- AND 8-HOUR
100 METER GRID
YEAR 1983

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**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: 1-HR 8-HR

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: CO

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: S19C083.dta ; **Output Print File: S19C083.lst
**File for Saving Result Arrays: CO.SAV
**Detailed Error/Message File: S19C083.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.56900E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

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	12.5,	23.2,	0	2	12.5,	25.6,	0	3	12.5,	27.2,	0	4	12.5,	28.0,	0	5	12.5,	28.1,	0	6	12.5,	28.0,	0
7	12.5,	27.1,	0	8	12.5,	25.3,	0	9	12.5,	22.8,	0	10	12.5,	25.3,	0	11	12.5,	27.1,	0	12	12.5,	28.0,	0
13	12.5,	28.1,	0	14	12.5,	28.0,	0	15	12.5,	27.2,	0	16	12.5,	25.6,	0	17	12.5,	23.2,	0	18	12.5,	20.1,	0
19	12.5,	23.2,	0	20	12.5,	25.6,	0	21	12.5,	27.2,	0	22	12.5,	28.0,	0	23	12.5,	28.1,	0	24	12.5,	28.0,	0
25	12.5,	27.1,	0	26	12.5,	25.3,	0	27	12.5,	22.8,	0	28	12.5,	25.3,	0	29	12.5,	27.1,	0	30	12.5,	28.0,	0
31	12.5,	28.1,	0	32	12.5,	28.0,	0	33	12.5,	27.2,	0	34	12.5,	25.6,	0	35	12.5,	23.2,	0	36	12.5,	20.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0,	-1100.0,	-1000.0,	-900.0,	-800.0,	-700.0,	-600.0,	-500.0,	-400.0,	-300.0,
-200.0,	-100.0,	0.0,	100.0,	200.0,	300.0,	400.0,	500.0,	600.0,	700.0,
800.0,	900.0,	1000.0,	1100.0,	1200.0,					

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0,	-1100.0,	-1000.0,	-900.0,	-800.0,	-700.0,	-600.0,	-500.0,	-400.0,	-300.0,
-200.0,	-100.0,	0.0,	100.0,	200.0,	300.0,	400.0,	500.0,	600.0,	700.0,
800.0,	900.0,	1000.0,	1100.0,	1200.0,					

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY			WIND SPEED CATEGORY			
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: lpalm83.bin FORMAT: UNFORM
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WPALMBCH-FL NAME: WPALMBCH-FL
YEAR: 1983 YEAR: 1983

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	URBAN
83	1	1	1	271.0	6.69	298.2	4	1087.0	1087.0
83	1	1	2	278.0	5.66	298.2	4	1087.0	1087.0
83	1	1	3	284.0	4.12	297.6	5	1087.0	1605.0
83	1	1	4	273.0	4.63	297.6	5	1087.0	1605.0
83	1	1	5	283.0	4.12	297.6	5	1087.0	1605.0
83	1	1	6	262.0	4.12	297.6	4	1087.0	1087.0
83	1	1	7	265.0	4.63	297.6	4	1087.0	1087.0
83	1	1	8	283.0	4.12	296.5	4	1087.0	1087.0
83	1	1	9	267.0	2.57	297.0	4	1087.0	1087.0
83	1	1	10	291.0	3.60	298.7	4	1087.0	1087.0
83	1	1	11	344.0	4.12	298.7	4	1087.0	1087.0
83	1	1	12	346.0	3.60	300.4	4	1087.0	1087.0
83	1	1	13	23.0	3.60	298.2	4	1087.0	1087.0
83	1	1	14	339.0	4.12	298.2	4	1087.0	1087.0
83	1	1	15	332.0	5.14	298.7	4	1087.0	1087.0
83	1	1	16	344.0	5.14	298.7	4	1087.0	1087.0
83	1	1	17	351.0	4.63	298.2	4	1087.0	1087.0
83	1	1	18	337.0	2.57	298.2	5	1094.0	1060.0
83	1	1	19	314.0	3.09	297.6	5	1111.0	997.0
83	1	1	20	317.0	2.06	296.5	6	1128.0	934.0
83	1	1	21	340.0	1.54	296.5	7	1144.0	870.0
83	1	1	22	2.0	1.54	295.9	7	1161.0	807.0
83	1	1	23	360.0	1.00	294.8	7	1178.0	744.0
83	1	1	24	360.0	1.00	294.8	7	1195.0	681.0

*** 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.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	28.75022 (83070619)	29.37395 (83071517)	29.71471 (83040719)	30.74075 (83040513)	46.53631 (83051606)
1100.0	29.24475 (83072019)	30.39032 (83070619)	31.23362 (83071517)	31.92960 (83071518)	32.47239 (83052217)
1000.0	29.85391 (83052015)	30.82103 (83063016)	32.04842 (83070619)	32.97502 (83071517)	34.10618 (83071916)
900.0	31.02526 (83062717)	31.87430 (83090408)	33.12444 (83063016)	33.65456 (83070619)	34.91696 (83052213)
800.0	31.78987 (83082217)	32.94065 (83082616)	33.69216 (83080124)	35.28181 (83063016)	36.02277 (83060516)
700.0	32.08519 (83052017)	33.22465 (83052214)	34.70140 (83080222)	36.47823 (83071515)	37.23000 (83041416)
600.0	32.85759 (83080218)	34.48521 (83070313)	35.79463 (83062214)	37.52654 (83073116)	38.52159 (83052014)
500.0	33.48200 (83073113)	35.08450 (83080210)	36.15115 (83051912)	38.55830 (83073017)	40.35217 (83073016)
400.0	34.03010 (83102212)	34.88566 (83040508)	37.55696 (83073113)	38.88882 (83080210)	40.06942 (83092812)
300.0	34.66233 (83061910)	35.96688 (83040611)	37.97934 (83070318)	39.48124 (83102212)	40.88692 (83110122)
200.0	34.86453 (83092010)	36.13091 (83040516)	38.14695 (83051914)	40.11496 (83070317)	42.04180 (83022015)
100.0	34.81092 (83051810)	36.69950 (83073118)	38.99721 (83073112)	41.00446 (83073110)	42.24030 (83070409)
0.0	35.45317 (83091810)	37.09074 (83091810)	38.90760 (83073020)	40.68942 (83073020)	42.29471 (83022101)
-100.0	34.53050 (83082609)	36.28534 (83120914)	38.46971 (83101912)	40.47394 (83101912)	42.26590 (83090817)
-200.0	34.79049 (83072810)	38.45326 (83051806)	47.16873 (83051806)	54.31092 (83051806)	55.91391 (83051806)
-300.0	59.79179 (83051806)	56.92269 (83051806)	57.86794 (83102210)	63.16092 (83102210)	55.04062 (83101609)
-400.0	54.95868 (83102210)	50.69877 (83102210)	53.36649 (83101609)	52.38539 (83101609)	42.45792 (83101609)
-500.0	47.49609 (83101609)	45.99945 (83101609)	38.93160 (83101609)	38.25103 (83082621)	39.92443 (83051813)
-600.0	34.27975 (83101609)	34.15005 (83080418)	36.21370 (83102907)	36.87622 (83102913)	37.93430 (83102809)
-700.0	37.84758 (83102907)	35.22665 (83102907)	34.86274 (83090722)	36.41771 (83070914)	37.49508 (83090710)
-800.0	33.26620 (83103007)	33.07042 (83082617)	33.62985 (83070914)	34.97926 (83070915)	36.34424 (83090716)
-900.0	30.96410 (83070816)	31.31756 (83051320)	33.16438 (83070915)	33.48780 (83101819)	34.85098 (83061718)
-1000.0	30.02205 (83090808)	31.11204 (83070915)	31.79246 (83100211)	32.84259 (83081718)	33.74868 (83061517)
-1100.0	29.44018 (83090617)	30.16939 (83100211)	31.11985 (83081718)	31.84313 (83061517)	32.77931 (83090721)
-1200.0	28.55882 (83100211)	29.27630 (83081718)	29.80032 (83092220)	30.45400 (83101818)	31.02976 (83061710)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	46.81917 (83051606)	33.53648 (83100409)	33.39408 (83040816)	33.95871 (83072517)	34.28787 (83120316)
1100.0	52.41826 (83051606)	36.19335 (83051606)	35.01852 (83053012)	35.37648 (83051609)	35.79656 (83010211)
1000.0	39.65352 (83051606)	51.90590 (83051606)	36.56343 (83080715)	36.61992 (83032017)	37.72274 (83060716)
900.0	36.34520 (83062715)	49.22681 (83051606)	40.82730 (83051606)	38.79992 (83053012)	39.27001 (83040810)
800.0	37.36031 (83120311)	38.80295 (83070415)	53.56393 (83051606)	40.70846 (83080715)	41.44193 (83040914)
700.0	38.95823 (83060516)	39.83051 (83030713)	41.44792 (83050315)	44.03878 (83051606)	43.52374 (83040910)
600.0	40.48792 (83073115)	41.84072 (83060516)	42.26872 (83032706)	52.02223 (83051606)	48.15738 (83032709)
500.0	40.65424 (83030503)	43.47687 (83073115)	47.62838 (83041415)	47.96005 (83040715)	50.45773 (83031612)
400.0	42.07194 (83070309)	47.76668 (83062915)	48.71446 (83052013)	51.62941 (83020112)	53.63803 (83022214)
300.0	43.36713 (83080316)	46.69035 (83092812)	51.56368 (83073015)	49.71258 (83080713)	55.32555 (83020112)
200.0	46.53948 (83073117)	47.20000 (83102212)	51.17665 (83031622)	51.28172 (83082613)	52.36712 (83073111)
100.0	47.67999 (83051915)	48.58949 (83012303)	54.32732 (83022111)	54.08436 (83073114)	56.81434 (83051311)
0.0	47.28438 (83022101)	50.42723 (83022101)	53.72935 (83012021)	60.27564 (83012021)	74.24825 (83012021)
-100.0	48.11042 (83090817)	50.29794 (83021220)	54.77249 (83012018)	59.25525 (83012019)	68.48428 (83022718)
-200.0	64.36745 (83102210)	73.15473 (83102210)	54.62297 (83110111)	53.03571 (83022619)	63.16500 (83022717)
-300.0	54.94106 (83101609)	48.34552 (83103118)	51.32941 (83103016)	54.26539 (83092510)	56.59549 (83092419)
-400.0	42.62669 (83103011)	47.39371 (83092313)	50.08496 (83092522)	51.89807 (83092419)	51.81988 (83110211)
-500.0	41.40647 (83061516)	43.20739 (83092502)	48.13227 (83061515)	50.13129 (83092509)	49.75027 (83092516)
-600.0	39.64539 (83110216)	42.33331 (83090716)	42.75428 (83092509)	46.67568 (83092611)	47.46660 (83092618)
-700.0	39.35474 (83090716)	39.94149 (83092318)	41.23652 (83102114)	39.90068 (83090720)	40.78848 (83092622)
-800.0	37.20923 (83092318)	37.67712 (83092916)	39.73846 (83110214)	40.58717 (83092312)	41.88083 (83081816)
-900.0	36.21262 (83090719)	36.62347 (83061710)	37.88631 (83090720)	38.15401 (83092814)	38.49028 (83092917)
-1000.0	34.23089 (83102114)	35.87960 (83090718)	36.06959 (83102115)	37.09858 (83092711)	37.63733 (83102116)
-1100.0	33.60397 (83090616)	34.16609 (83090720)	34.64742 (83061618)	35.36143 (83092617)	35.60380 (83102713)
-1200.0	31.67241 (83090718)	32.85761 (83090717)	33.51561 (83081818)	33.70860 (83092917)	33.90414 (83112912)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	39.30742 (83070206)	34.45245 (83040921)	34.89701 (83122816)	34.09683 (83040809)	34.40426 (83050409)
1100.0	35.99649 (83012712)	35.86069 (83022223)	36.45830 (83122816)	35.58347 (83120610)	36.13090 (83010215)
1000.0	37.73982 (83112416)	38.28391 (83112015)	38.41982 (83040217)	38.28392 (83120610)	37.73978 (83020616)
900.0	40.08406 (83042314)	40.33298 (83122810)	40.43436 (83040217)	40.39421 (83012716)	39.70925 (83020616)
800.0	42.42831 (83122815)	42.29961 (83021015)	43.35574 (83042312)	41.38089 (83111513)	42.43701 (83091314)
700.0	47.15709 (83032014)	47.28101 (83122811)	48.57334 (83042312)	46.60798 (83012717)	47.09551 (83032108)
600.0	49.50208 (83031601)	49.81091 (83112410)	52.52931 (83042312)	49.04808 (83020614)	48.88316 (83031724)
500.0	49.95011 (83032704)	53.87387 (83042311)	55.99264 (83042312)	50.58851 (83122814)	53.59076 (83031717)
400.0	52.14727 (83032709)	55.27907 (83122815)	58.08550 (83042312)	52.56296 (83032409)	53.41423 (83031801)
300.0	53.40760 (83040712)	58.60957 (83031601)	66.18360 (83042312)	56.27142 (83031717)	47.49232 (83072215)
200.0	67.77165 (83020112)	79.34143 (83112012)	98.10497 (83042312)	82.35030 (83031723)	64.76425 (83090209)
100.0	73.55288 (83073014)	134.54730 (83020112)	147.80800 (83042312)	129.07480 (83090209)	88.42011 (83032415)
0.0	109.94990 (83012021)	173.66970 (83012021)	0.00000 (0)	127.34890 (83020315)	84.81894 (83030117)
-100.0	84.19374 (83022716)	139.24180 (83092419)	131.11420 (83121906)	106.74310 (83041709)	83.58698 (83031115)
-200.0	70.38300 (83092419)	69.24779 (83092618)	78.67106 (83123005)	75.57619 (83123108)	52.25502 (83041709)
-300.0	49.66551 (83070813)	55.51485 (83092612)	57.89290 (83041712)	55.72610 (83032512)	47.62766 (83122509)
-400.0	51.48915 (83092512)	49.23285 (83081817)	51.50554 (83041712)	52.83070 (83123115)	49.24734 (83123108)
-500.0	48.75251 (83092622)	46.83276 (83102717)	48.95662 (83081814)	50.96009 (83123117)	46.53049 (83102712)
-600.0	48.87127 (83041716)	52.15342 (83113010)	46.95230 (83041610)	49.64413 (83123117)	46.37138 (83032511)
-700.0	46.18493 (83092322)	61.06400 (83113010)	45.44493 (83092614)	47.73841 (83050416)	46.72865 (83062414)
-800.0	42.86202 (83081817)	54.85930 (83113010)	40.88881 (83092614)	44.53725 (83112909)	39.80472 (83123115)
-900.0	39.82187 (83092613)	53.51691 (83113010)	39.17578 (83092614)	45.08097 (83112909)	38.12902 (83123118)
-1000.0	41.78470 (83113010)	50.13113 (83113010)	37.19899 (83092614)	43.67567 (83112909)	36.54330 (83120713)
-1100.0	49.96021 (83113010)	46.00496 (83113010)	35.29985 (83092610)	41.33233 (83112909)	34.83724 (83022606)
-1200.0	54.94669 (83113010)	41.73536 (83113010)	33.95849 (83121517)	38.57060 (83112909)	37.15307 (83112909)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	34.31292 (83090211)	33.07460 (83021313)	33.04500 (83032814)	30.74928 (83120615)	31.44037 (83021317)
1100.0	36.03096 (83020615)	33.98151 (83021313)	33.85880 (83021318)	33.77641 (83120615)	30.77072 (83121415)
1000.0	37.50376 (83121412)	36.96866 (83032814)	33.63325 (83120615)	35.05365 (83041817)	34.62498 (83121416)
900.0	38.63800 (83031718)	38.33363 (83040219)	38.18328 (83042318)	36.68755 (83121415)	34.89990 (83031316)
800.0	40.74194 (83031722)	39.47180 (83031801)	37.67741 (83041817)	37.70456 (83021706)	37.50890 (83042317)
700.0	41.09691 (83040219)	41.90724 (83042318)	40.81925 (83030814)	40.31046 (83042317)	38.65326 (83050414)
600.0	48.13701 (83031801)	44.53443 (83030814)	42.77742 (83032109)	40.50146 (83050414)	50.64968 (83111110)
500.0	46.67472 (83021705)	49.85162 (83022816)	46.54816 (83090209)	56.57484 (83111110)	52.80918 (83111110)
400.0	49.58255 (83031016)	51.13894 (83090209)	59.17750 (83111110)	46.82508 (83111110)	41.67485 (83031814)
300.0	53.76268 (83090209)	52.84380 (83111110)	50.68973 (83020314)	48.01790 (83031811)	41.22355 (83030109)
200.0	61.96839 (83032414)	55.03493 (83032415)	51.75704 (83030109)	49.89510 (83032418)	45.79343 (83032420)
100.0	73.08906 (83032416)	53.01247 (83042411)	55.29854 (83042415)	51.55054 (83042416)	48.02240 (83042417)
0.0	60.54235 (83042511)	52.53054 (83042512)	50.09389 (83030117)	49.14188 (83020312)	47.05021 (83020312)
-100.0	57.38403 (83031024)	58.11483 (83030116)	51.74296 (83060517)	49.87292 (83122417)	47.43729 (83042410)
-200.0	54.74213 (83032113)	54.21227 (83111113)	53.67424 (83020215)	48.09842 (83031024)	47.11094 (83032115)
-300.0	46.82127 (83083115)	52.00341 (83111612)	49.70931 (83031102)	48.55443 (83111113)	41.91669 (83042418)
-400.0	50.43831 (83111610)	46.12164 (83083115)	45.22971 (83011211)	45.80900 (83122412)	41.74652 (83031213)
-500.0	49.60986 (83111614)	45.68967 (83123104)	44.66797 (83122405)	40.56512 (83011512)	40.99255 (83033115)
-600.0	46.30339 (83123108)	47.82180 (83032207)	40.07487 (83032509)	39.93871 (83122405)	38.85559 (83011215)
-700.0	41.54171 (83123120)	41.80312 (83111609)	41.68020 (83032207)	38.23288 (83032205)	37.78529 (83122405)
-800.0	39.09820 (83123110)	38.68806 (83123107)	40.57527 (83032207)	37.21579 (83050509)	35.93447 (83122411)
-900.0	37.99377 (83021722)	37.59033 (83102610)	37.38931 (83030213)	46.80365 (83032207)	35.02796 (83011511)
-1000.0	36.08942 (83062414)	35.63005 (83011214)	35.41153 (83102508)	35.23199 (83102512)	45.47280 (83032207)
-1100.0	35.28724 (83041609)	33.20390 (83123020)	34.11698 (83102610)	33.32391 (83030213)	43.14576 (83032207)
-1200.0	33.56971 (83113019)	32.73410 (83021722)	32.46308 (83121516)	32.05063 (83102508)	32.13862 (83020408)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	31.07063 (83121415)	30.34958 (83090312)	29.35699 (83022820)	35.05654 (83031807)	30.58149 (83031807)
1100.0	33.13310 (83090312)	30.66152 (83022820)	34.72952 (83031807)	30.79053 (83031807)	28.27585 (83031314)
1000.0	32.64933 (83030101)	33.85066 (83031807)	31.88850 (83050414)	30.09094 (83021713)	35.49905 (83111110)
900.0	34.19035 (83042317)	34.14441 (83050414)	33.55341 (83111110)	39.55208 (83111110)	37.93710 (83111110)
800.0	36.44608 (83050414)	38.43812 (83111110)	44.03284 (83111110)	39.74905 (83111110)	30.83642 (83041915)
700.0	44.23364 (83111110)	48.57878 (83111110)	40.38468 (83111110)	33.13370 (83120617)	31.85607 (83072621)
600.0	52.20939 (83111110)	38.72666 (83111110)	34.92076 (83072621)	33.97352 (83090216)	32.71791 (83111111)
500.0	38.58833 (83030106)	36.96631 (83031814)	35.96190 (83062316)	34.35967 (83042404)	33.03187 (83042405)
400.0	40.53460 (83062316)	38.58539 (83042404)	35.66159 (83020313)	35.73748 (83072622)	32.76075 (83021716)
300.0	40.22269 (83021321)	38.94946 (83021716)	36.82188 (83031813)	33.94225 (83032420)	33.90414 (83022315)
200.0	42.51438 (83032116)	38.91017 (83022316)	37.07396 (83021717)	35.20179 (83021717)	33.69106 (83030812)
100.0	41.99848 (83042417)	40.17759 (83032110)	38.21447 (83032110)	35.86068 (83022515)	34.34138 (83022515)
0.0	42.21979 (83020312)	39.89539 (83020312)	37.47205 (83020312)	35.14153 (83020312)	33.19793 (83041917)
-100.0	42.93911 (83091414)	47.20232 (83011110)	49.45506 (83011110)	50.00293 (83011110)	49.38978 (83011110)
-200.0	41.39787 (83122416)	39.03337 (83022511)	37.50622 (83042419)	35.53733 (83042515)	34.27129 (83042517)
-300.0	40.58747 (83022516)	39.59983 (83072412)	36.87446 (83032111)	35.16928 (83022414)	34.01898 (83091618)
-400.0	39.88066 (83122413)	37.19070 (83020717)	35.74624 (83022516)	35.23554 (83030915)	34.44476 (83072412)
-500.0	37.94352 (83122412)	35.85246 (83042520)	35.66901 (83121515)	33.84417 (83030918)	31.68083 (83032503)
-600.0	37.52266 (83011111)	36.69237 (83033117)	34.13381 (83020712)	31.48545 (83042520)	32.21775 (83121515)
-700.0	36.00260 (83011215)	35.22674 (83010511)	33.99245 (83033116)	31.70453 (83011117)	31.56346 (83062217)
-800.0	35.38152 (83122405)	33.88587 (83012515)	33.99472 (83032507)	31.75752 (83011111)	30.94004 (83042518)
-900.0	33.88588 (83041809)	32.96137 (83122405)	31.94782 (83012515)	32.38900 (83032507)	31.02744 (83011111)
-1000.0	32.48222 (83011511)	31.94782 (83041809)	30.64146 (83122405)	29.90016 (83011515)	30.22917 (83032507)
-1100.0	40.32069 (83032207)	31.11229 (83072715)	30.35155 (83010315)	28.90019 (83010603)	28.41502 (83011515)
-1200.0	45.66999 (83032207)	34.04977 (83032207)	30.00835 (83072715)	29.05043 (83010315)	27.83175 (83010603)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	16.01877 (83020116)	19.16088 (83020108)	16.76208 (83031516)	15.89042 (83031516)	16.09961 (83020124)
1100.0	12.88695 (83052016)	17.52423 (83020116)	20.31182 (83020108)	18.13051 (83031516)	15.75261 (83031516)
1000.0	18.01951 (83052016)	14.65973 (83052016)	19.24305 (83020116)	21.26360 (83020108)	19.45008 (83031516)
900.0	16.89275 (83052016)	19.76527 (83052016)	16.75977 (83052016)	21.20604 (83020116)	22.04127 (83020108)
800.0	16.08425 (83062116)	16.83579 (83052016)	21.36979 (83052016)	19.22975 (83052016)	23.44049 (83020116)
700.0	16.88524 (83062016)	17.63038 (83062116)	18.16254 (83062116)	22.53083 (83052016)	22.07404 (83052016)
600.0	16.03825 (83052108)	18.74088 (83062016)	21.10939 (83062016)	20.99674 (83062016)	22.79100 (83052016)
500.0	14.29501 (83040516)	14.24275 (83040516)	19.19086 (83062016)	23.93480 (83062016)	26.22427 (83062016)
400.0	15.58147 (83052008)	14.78600 (83041324)	16.19715 (83040516)	17.02953 (83062016)	24.20354 (83062016)
300.0	18.03076 (83052008)	19.43280 (83052008)	19.76507 (83052008)	18.48068 (83052008)	17.59501 (83040516)
200.0	27.49859 (83012308)	27.95805 (83012308)	26.72836 (83012308)	23.17188 (83012308)	21.76615 (83052008)
100.0	15.23207 (83022116)	17.02855 (83012308)	19.86423 (83012308)	23.11802 (83012308)	26.49545 (83012308)
0.0	16.45429 (83042916)	17.94807 (83042916)	19.62374 (83042916)	21.48664 (83042916)	23.47834 (83042916)
-100.0	20.93618 (83040424)	22.84842 (83040424)	24.76553 (83040424)	26.50439 (83040424)	27.66029 (83040424)
-200.0	20.03296 (83040424)	19.39263 (83040424)	19.73928 (83012024)	21.51534 (83040416)	22.26661 (83040416)
-300.0	19.13597 (83051808)	19.39249 (83051808)	17.66227 (83051808)	17.99516 (83102924)	22.16782 (83102924)
-400.0	15.86807 (83102924)	19.25591 (83102924)	21.96155 (83102924)	22.78728 (83102924)	20.22897 (83103116)
-500.0	20.52544 (83102924)	20.80999 (83102924)	18.70669 (83102924)	18.65412 (83112216)	20.48974 (83103016)
-600.0	17.05611 (83102924)	16.50017 (83112216)	18.45072 (83103016)	20.81236 (83092508)	23.45775 (83092424)
-700.0	15.89597 (83103016)	16.85352 (83050624)	20.13031 (83092508)	20.43951 (83092424)	21.34629 (83100116)
-800.0	16.25173 (83092508)	18.34411 (83092508)	17.81076 (83092424)	19.29792 (83100116)	20.14450 (83100116)
-900.0	16.27459 (83092508)	15.59348 (83092424)	17.34599 (83100116)	17.79912 (83100116)	16.38135 (83061716)
-1000.0	13.73205 (83092424)	15.57679 (83100116)	15.77690 (83100116)	14.37295 (83061716)	17.66175 (83061716)
-1100.0	14.50491 (83061324)	14.04762 (83100116)	12.69616 (83061716)	15.78174 (83061716)	15.76217 (83061716)
-1200.0	12.57059 (83100116)	11.32236 (83092516)	14.06486 (83061716)	15.00311 (83061716)	11.55888 (83061716)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	20.11179 (83020124)	15.80536 (83020124)	16.25616 (83041516)	20.20643 (83040216)	15.52427 (83040216)
1100.0	19.53483 (83020124)	20.99442 (83020124)	16.49044 (83122808)	20.61671 (83040216)	18.49028 (83040216)
1000.0	16.12976 (83020124)	23.04544 (83020124)	18.41097 (83020124)	18.55160 (83040816)	21.74354 (83040216)
900.0	20.46620 (83031516)	20.45411 (83020124)	24.93587 (83020124)	17.99926 (83101316)	24.25763 (83040216)
800.0	22.45978 (83020108)	20.64797 (83031516)	25.57463 (83020124)	21.47692 (83020124)	23.63254 (83040216)
700.0	25.95841 (83020116)	23.27808 (83040716)	20.31143 (83040716)	29.30603 (83020124)	21.99528 (83040816)
600.0	25.18074 (83052016)	28.72904 (83020116)	25.77305 (83040716)	27.21022 (83020124)	26.06753 (83020124)
500.0	23.58719 (83062016)	27.93645 (83052016)	33.06228 (83020116)	29.21189 (83040716)	34.50651 (83020124)
400.0	30.43698 (83062016)	30.72418 (83062016)	31.78817 (83052016)	35.93638 (83020116)	29.75879 (83040716)
300.0	19.49006 (83062016)	29.51498 (83062016)	35.90191 (83062016)	29.52013 (83052016)	37.21432 (83020116)
200.0	24.74459 (83052008)	22.28337 (83052008)	22.47769 (83080116)	29.81240 (83062016)	26.58727 (83062016)
100.0	32.43333 (83012308)	33.49851 (83012308)	29.35287 (83012308)	27.13958 (83041316)	21.49536 (83041324)
0.0	26.40713 (83042916)	28.38214 (83042916)	29.67756 (83042916)	30.28133 (83012008)	37.13979 (83012008)
-100.0	30.04202 (83040424)	29.57390 (83012016)	32.32519 (83012024)	28.23753 (83012024)	29.35832 (83022624)
-200.0	22.81830 (83040416)	22.69555 (83103116)	24.99053 (83022716)	25.76527 (83051116)	35.87312 (83092424)
-300.0	23.66206 (83102924)	23.95649 (83103116)	29.44021 (83050616)	35.91297 (83092424)	27.64266 (83100116)
-400.0	22.42978 (83050616)	28.76857 (83092424)	30.79247 (83092424)	30.00214 (83100116)	29.47193 (83061716)
-500.0	26.48078 (83092424)	24.77287 (83092424)	28.70358 (83100116)	28.99307 (83061716)	19.68547 (83090616)
-600.0	23.25608 (83100116)	25.65101 (83100116)	24.61722 (83061716)	20.59327 (83061716)	17.15058 (83092624)
-700.0	22.80301 (83100116)	21.60718 (83061716)	21.64024 (83061716)	15.08169 (83090724)	17.15111 (83092624)
-800.0	18.78246 (83061716)	21.15075 (83061716)	14.36075 (83090724)	14.56890 (83092624)	18.10406 (83092624)
-900.0	19.56818 (83061716)	15.00203 (83061716)	13.71008 (83090724)	15.23331 (83092624)	16.67109 (83092624)
-1000.0	15.91912 (83061716)	13.13936 (83090724)	12.95166 (83092624)	16.03614 (83092624)	16.49974 (83102716)
-1100.0	11.93005 (83090724)	12.13378 (83090724)	13.15516 (83092624)	16.02375 (83092624)	17.54362 (83102716)
-1200.0	11.74953 (83090724)	11.40324 (83092624)	13.70527 (83092624)	14.77671 (83092624)	16.52185 (83102716)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	16.39535 (83031524)	17.40010 (83122816)	17.52100 (83122908)	11.32285 (83090124)	12.58750 (83090308)
1100.0	16.96413 (83060616)	18.53634 (83122816)	17.61582 (83032108)	11.89549 (83082516)	13.51440 (83122916)
1000.0	19.26018 (83060616)	19.57584 (83122816)	18.43832 (83032108)	12.75525 (83082516)	14.79179 (83122916)
900.0	20.99233 (83060616)	20.37832 (83122816)	19.21433 (83032108)	13.58327 (83082516)	17.19068 (83121416)
800.0	21.30403 (83060616)	20.69528 (83122816)	19.80285 (83032108)	14.28889 (83082516)	21.27910 (83121416)
700.0	26.20944 (83040216)	21.54200 (83122816)	22.02526 (83032108)	15.75565 (83122916)	29.79209 (83031724)
600.0	29.66675 (83040216)	25.45700 (83060616)	22.13687 (83032108)	17.06808 (83122916)	40.35038 (83031724)
500.0	27.72824 (83040816)	27.95260 (83060616)	21.56414 (83032108)	16.95425 (83122916)	36.96288 (83031724)
400.0	28.13721 (83020124)	24.78198 (83060616)	21.95433 (83032716)	23.32407 (83031724)	20.34662 (83053116)
300.0	28.57553 (83020124)	29.29062 (83040216)	25.65625 (83032716)	46.66806 (83031724)	18.79124 (83053116)
200.0	44.67068 (83020116)	43.42928 (83020124)	36.48854 (83032716)	30.38968 (83031724)	19.27723 (83022816)
100.0	26.74887 (83052108)	90.70252 (83020116)	51.41225 (83032108)	44.53448 (83022824)	28.77314 (83032416)
0.0	56.32479 (83012008)	90.32328 (83012008)	0.00000 (0)	70.10816 (83030116)	43.27518 (83030116)
-100.0	35.55892 (83103116)	68.12589 (83092524)	49.59375 (83092616)	50.20024 (83122608)	34.29601 (83122416)
-200.0	31.98488 (83092524)	25.49133 (83092624)	33.39388 (83092616)	27.09392 (83123108)	23.09155 (83012816)
-300.0	21.90857 (83061716)	16.78070 (83102716)	22.37908 (83092616)	18.27117 (83123116)	19.49564 (83111616)
-400.0	16.83791 (83092624)	22.83679 (83102716)	20.75822 (83092616)	20.26518 (83123116)	17.82575 (83123016)
-500.0	19.98825 (83092624)	18.39991 (83102716)	22.17336 (83092616)	21.11873 (83123116)	16.54533 (83122516)
-600.0	18.94827 (83092624)	15.31410 (83092616)	22.45117 (83092616)	19.98243 (83123116)	16.01239 (83123116)
-700.0	22.22702 (83102716)	16.77179 (83012416)	21.96657 (83092616)	17.84418 (83123116)	17.01079 (83123116)
-800.0	20.74689 (83102716)	17.06885 (83012416)	20.01463 (83092616)	15.40917 (83122016)	15.91095 (83123116)
-900.0	17.50185 (83102716)	17.20621 (83092616)	19.05901 (83092616)	15.47339 (83120716)	15.28481 (83123116)
-1000.0	13.73493 (83102716)	17.14880 (83092616)	17.97612 (83092616)	15.36463 (83120716)	14.47254 (83123116)
-1100.0	12.00787 (83112916)	16.79181 (83092616)	16.88847 (83092616)	14.99316 (83120716)	13.52377 (83123116)
-1200.0	11.13648 (83112916)	16.24078 (83092616)	15.83577 (83092616)	14.46048 (83120716)	12.48047 (83123116)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	18.28883 (83121416)	25.01881 (83031724)	17.73705 (83031724)	9.64598 (83120416)	10.84870 (83021708)
1100.0	20.51097 (83121416)	26.32924 (83031724)	13.36163 (83031724)	9.62601 (83021708)	13.39893 (83021708)
1000.0	25.42964 (83031724)	23.83745 (83031724)	11.41884 (83120416)	12.51518 (83021708)	14.36029 (83021708)
900.0	31.25951 (83031724)	17.84345 (83031724)	10.79139 (83021708)	15.00217 (83021708)	13.29787c(83022808)
800.0	32.03562 (83031724)	13.39631 (83120416)	14.37496 (83021708)	13.76686 (83031016)	13.38459 (83031416)
700.0	24.63477 (83031724)	13.83581 (83053116)	15.15723 (83021708)	15.06193 (83031416)	14.59791 (83111016)
600.0	15.32175 (83120416)	17.12589 (83021708)	16.41990 (83031416)	15.89610 (83111016)	16.34193 (83111016)
500.0	20.17073 (83053116)	17.89235 (83022816)	17.65542 (83031016)	18.16194 (83022816)	21.95970 (83031816)
400.0	18.57271 (83053116)	18.24009 (83031016)	21.50327 (83031816)	25.08205 (83031816)	19.14368 (83031816)
300.0	17.03533 (83031016)	25.56315 (83031816)	24.24304 (83031816)	18.79682 (83021716)	14.84315 (83021716)
200.0	25.21935 (83031816)	18.82524 (83021716)	16.07695 (83110516)	14.54800 (83110516)	14.99820 (83022316)
100.0	17.72696 (83032424)	28.06037 (83042416)	29.42593 (83042416)	25.00488 (83042416)	19.72712 (83042416)
0.0	27.99772 (83030116)	24.07999 (83042516)	22.11424 (83042516)	19.46333 (83042516)	17.47883 (83030116)
-100.0	22.01288 (83030916)	21.16906 (83030916)	21.17695 (83042516)	21.85230 (83042516)	20.25943 (83042516)
-200.0	20.63418 (83031216)	22.21974 (83122416)	23.63957 (83020716)	25.47324 (83030916)	24.26275 (83030916)
-300.0	21.28469 (83012816)	21.17013 (83031216)	19.90923 (83122416)	20.43419 (83122416)	18.67118 (83020716)
-400.0	19.31748 (83122508)	24.06604 (83012816)	21.40943 (83011216)	21.09877 (83031216)	17.66280 (83122416)
-500.0	18.06484 (83111616)	22.00708 (83122508)	24.36627 (83012816)	18.85134 (83011216)	18.99166 (83031216)
-600.0	19.25175 (83123016)	18.39072 (83111616)	20.04794 (83122508)	21.98137 (83012816)	17.36482 (83012816)
-700.0	15.57564 (83123016)	14.00606 (83011316)	15.49386 (83122508)	19.00315 (83122508)	20.59042 (83012816)
-800.0	14.63585 (83122516)	16.83986 (83123016)	14.77830 (83111616)	16.41387 (83122508)	17.32869 (83122508)
-900.0	13.81198 (83102516)	15.36810 (83123016)	13.58058 (83123016)	13.79738 (83111616)	16.58892 (83122508)
-1000.0	12.77004 (83123116)	13.10564 (83122516)	15.33914 (83123016)	14.19357 (83010408)	12.31371 (83122508)
-1100.0	12.38292 (83123116)	13.64342 (83102516)	14.20878 (83123016)	12.72483 (83123016)	13.91175 (83010408)
-1200.0	12.45902 (83120724)	12.74892 (83102516)	11.75163 (83123016)	13.75376 (83123016)	13.64134 (83010408)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	13.47179 (83021708)	11.52450c(83022808)	10.80399c(83022808)	10.91259 (83031808)	10.95185 (83031808)
1100.0	12.99560 (83021708)	11.80509c(83022808)	11.13025 (83031808)	11.47309 (83031808)	11.20991 (83111016)
1000.0	12.70072c(83022808)	11.54104 (83022824)	11.87794 (83031808)	12.09830 (83111016)	11.07806 (83111016)
900.0	12.06644 (83022824)	12.26525 (83031808)	13.08383 (83111016)	11.87504 (83022816)	14.04436 (83031816)
800.0	13.33791 (83111016)	14.15970 (83111016)	13.66737 (83031816)	15.91739 (83031816)	15.21849 (83031816)
700.0	15.28987 (83111016)	16.33480 (83031816)	17.69900 (83031816)	16.03961 (83031816)	13.65646 (83031816)
600.0	19.25171 (83031816)	19.12543 (83031816)	16.42823 (83031816)	13.12622 (83031816)	12.29410 (83021716)
500.0	19.85313 (83031816)	15.83934 (83031816)	14.04819 (83021716)	12.86122 (83021716)	11.83685 (83042408)
400.0	15.94939 (83021716)	14.21750 (83021716)	12.15302 (83042408)	9.33306 (83110516)	9.20107 (83021408)
300.0	12.96837 (83110516)	11.10846 (83110516)	10.71493 (83022316)	12.82005 (83022316)	13.40202 (83022316)
200.0	16.22310 (83022316)	16.28732 (83042416)	15.31710 (83042416)	13.68888 (83042416)	11.88089 (83042416)
100.0	16.25779 (83032424)	16.71671 (83032424)	16.53036 (83032424)	15.95796 (83032424)	15.17274 (83032424)
0.0	15.32647 (83030116)	13.91992 (83030116)	13.13267 (83032124)	12.66309 (83032124)	12.18217 (83032124)
-100.0	17.48996 (83042516)	15.69756 (83030124)	14.74054 (83030124)	13.73631 (83030124)	12.76538 (83030124)
-200.0	20.86538 (83030916)	17.40897 (83030916)	14.75417 (83042516)	13.90471 (83042516)	13.98088 (83030124)
-300.0	20.70275 (83020716)	20.44656 (83030916)	19.06708 (83030916)	16.87199 (83030916)	14.55354 (83030916)
-400.0	16.78110 (83122416)	15.16155 (83020716)	18.01543 (83020716)	17.35207 (83020716)	15.64795 (83030916)
-500.0	15.43913 (83031216)	15.48922 (83122416)	14.30846 (83122416)	12.17218 (83020716)	14.86694 (83020716)
-600.0	16.54955 (83031216)	16.27698 (83031216)	13.07358 (83122416)	13.33078 (83122416)	12.23122 (83122416)
-700.0	16.96841 (83012816)	16.00175 (83011216)	15.48729 (83031216)	12.92368 (83031216)	11.57754 (83122416)
-800.0	19.06810 (83012816)	16.19653 (83012816)	15.35132 (83011216)	13.96737 (83031216)	13.04882 (83031216)
-900.0	16.55311 (83011608)	17.57072 (83012816)	15.26548 (83012816)	14.21760 (83011216)	13.20542 (83012324)
-1000.0	16.17546 (83122508)	16.22602 (83011608)	16.16651 (83012816)	14.29228 (83012816)	12.92181 (83011216)
-1100.0	12.57734 (83122508)	15.38374 (83122508)	15.70099 (83011608)	14.88035 (83012816)	13.33794 (83012816)
-1200.0	12.50791 (83010408)	12.63658 (83122508)	14.39382 (83122508)	14.84006 (83011608)	13.71622 (83012816)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	173.66970	(83012021)	AT (	-100.00,	0.00)	GC	26.	122.18100	(83020110)	AT (	-100.00,	100.00)	GC
2.	160.79590	(83012011)	AT (	-100.00,	0.00)	GC	27.	120.69050	(83020312)	AT (	100.00,	0.00)	GC
3.	158.78790	(83012008)	AT (	-100.00,	0.00)	GC	28.	120.39310	(83092521)	AT (	-100.00,	-100.00)	GC
4.	149.27800	(83021602)	AT (	-100.00,	0.00)	GC	29.	120.28930	(83020611)	AT (	0.00,	100.00)	GC
5.	147.80800	(83042312)	AT (	0.00,	100.00)	GC	30.	119.32760	(83061515)	AT (	-100.00,	-100.00)	GC
6.	144.51000	(83012013)	AT (	-100.00,	0.00)	GC	31.	119.25110	(83102221)	AT (	-100.00,	0.00)	GC
7.	141.53370	(83012001)	AT (	-100.00,	0.00)	GC	32.	119.25110	(83042408)	AT (	100.00,	0.00)	GC
8.	139.24180	(83092419)	AT (	-100.00,	-100.00)	GC	33.	119.25110	(83020211)	AT (	0.00,	100.00)	GC
9.	138.98480	(83032714)	AT (	0.00,	100.00)	GC	34.	118.41930	(83041415)	AT (	-100.00,	100.00)	GC
10.	137.06680	(83022101)	AT (	-100.00,	0.00)	GC	35.	117.96230	(83123005)	AT (	0.00,	-100.00)	GC
11.	134.54730	(83020112)	AT (	-100.00,	100.00)	GC	36.	117.40190	(83021323)	AT (	100.00,	0.00)	GC
12.	134.38580	(83012006)	AT (	-100.00,	0.00)	GC	37.	116.58100	(83031716)	AT (	100.00,	100.00)	GC
13.	133.80350	(83092501)	AT (	-100.00,	-100.00)	GC	38.	116.22900	(83092511)	AT (	-100.00,	-100.00)	GC
14.	131.11420	(83121906)	AT (	0.00,	-100.00)	GC	39.	115.77530	(83092416)	AT (	-100.00,	-100.00)	GC
15.	129.07480	(83090209)	AT (	100.00,	100.00)	GC	40.	115.64260	(83020115)	AT (	-100.00,	100.00)	GC
16.	128.79290	(83030514)	AT (	-100.00,	100.00)	GC	41.	115.64260	(83020116)	AT (	-100.00,	100.00)	GC
17.	127.94260	(83102213)	AT (	-100.00,	0.00)	GC	42.	115.64260	(83092415)	AT (	-100.00,	-100.00)	GC
18.	127.34890	(83020315)	AT (	100.00,	0.00)	GC	43.	115.52050	(83032710)	AT (	0.00,	100.00)	GC
19.	126.84260	(83012012)	AT (	-100.00,	0.00)	GC	44.	114.90530	(83030704)	AT (	-100.00,	100.00)	GC
20.	126.33730	(83011923)	AT (	-100.00,	0.00)	GC	45.	114.21790	(83030112)	AT (	100.00,	0.00)	GC
21.	126.07980	(83030117)	AT (	100.00,	0.00)	GC	46.	114.08060	(83011921)	AT (	-100.00,	0.00)	GC
22.	125.91340	(83011915)	AT (	-100.00,	0.00)	GC	47.	113.43640	(83092514)	AT (	-100.00,	-100.00)	GC
23.	125.34950	(83021613)	AT (	-100.00,	100.00)	GC	48.	113.23000	(83042406)	AT (	100.00,	0.00)	GC
24.	122.83240	(83012004)	AT (	-100.00,	0.00)	GC	49.	113.05590	(83033011)	AT (	-100.00,	0.00)	GC
25.	122.18120	(83020111)	AT (	-100.00,	100.00)	GC	50.	112.96130	(83022617)	AT (	-100.00,	-100.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	90.70252	(83020116)	AT (	-100.00,	100.00)	GC	26.	49.37270	(83042916)	AT (	-100.00,	0.00)	GC
2.	90.32328	(83012008)	AT (	-100.00,	0.00)	GC	27.	49.13303	(83121016)	AT (	-100.00,	0.00)	GC
3.	84.96873	(83012016)	AT (	-100.00,	0.00)	GC	28.	48.82438	(83120716)	AT (	0.00,	-100.00)	GC
4.	70.10816	(83030116)	AT (	100.00,	0.00)	GC	29.	48.57858	(83092424)	AT (	-100.00,	-100.00)	GC
5.	68.12589	(83092524)	AT (	-100.00,	-100.00)	GC	30.	48.54139	(83032624)	AT (	-100.00,	100.00)	GC
6.	63.93452	(83022116)	AT (	-100.00,	0.00)	GC	31.	47.66335	(83111924)	AT (	-100.00,	100.00)	GC
7.	62.00739	(83020108)	AT (	-100.00,	100.00)	GC	32.	47.37286	(83110216)	AT (	-100.00,	-100.00)	GC
8.	58.67791	(83092516)	AT (	-100.00,	-100.00)	GC	33.	47.12202	(83040716)	AT (	-100.00,	100.00)	GC
9.	56.32479	(83012008)	AT (	-200.00,	0.00)	GC	34.	46.66806	(83031724)	AT (	100.00,	300.00)	GC
10.	56.20380	(83012024)	AT (	-100.00,	0.00)	GC	35.	46.34590	(83102808)	AT (	-100.00,	-100.00)	GC
11.	55.23568	(83041416)	AT (	-100.00,	100.00)	GC	36.	46.23564	(83030524)	AT (	-100.00,	100.00)	GC
12.	54.81687	(83031516)	AT (	-100.00,	100.00)	GC	37.	45.98896	(83122816)	AT (	0.00,	100.00)	GC
13.	54.73616	(83030708)	AT (	-100.00,	100.00)	GC	38.	45.85480	(83030416)	AT (	-100.00,	100.00)	GC
14.	53.75647	(83011924)	AT (	-100.00,	0.00)	GC	39.	45.50200	(83012816)	AT (	100.00,	-100.00)	GC
15.	52.66426	(83041408)	AT (	-100.00,	100.00)	GC	40.	45.06510	(83123108)	AT (	100.00,	-100.00)	GC
16.	52.61152	(83030516)	AT (	-100.00,	100.00)	GC	41.	44.67068	(83020116)	AT (	-200.00,	200.00)	GC
17.	51.41225	(83032108)	AT (	0.00,	100.00)	GC	42.	44.53448	(83022824)	AT (	100.00,	100.00)	GC
18.	51.06473	(83051408)	AT (	-100.00,	0.00)	GC	43.	44.49963	(83072024)	AT (	-100.00,	100.00)	GC
19.	50.71720	(83012016)	AT (	-200.00,	0.00)	GC	44.	44.34598	(83032124)	AT (	100.00,	0.00)	GC
20.	50.57725	(83102224)	AT (	-100.00,	0.00)	GC	45.	44.34212	(83022708)	AT (	-100.00,	0.00)	GC
21.	50.20024	(83122608)	AT (	100.00,	-100.00)	GC	46.	44.34138	(83051516)	AT (	-100.00,	100.00)	GC
22.	50.04070	(83022108)	AT (	-100.00,	0.00)	GC	47.	44.29889	(83073024)	AT (	-100.00,	0.00)	GC
23.	49.60304	(83032716)	AT (	0.00,	100.00)	GC	48.	43.69578	(83021916)	AT (	-100.00,	0.00)	GC
24.	49.59375	(83092616)	AT (	0.00,	-100.00)	GC	49.	43.54145	(83022816)	AT (	100.00,	100.00)	GC
25.	49.59343	(83061716)	AT (	-100.00,	-100.00)	GC	50.	43.54142	(83092508)	AT (	-100.00,	-100.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO 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	173.66970	ON 83012021:	AT (-100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO 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	90.70252	ON 83020116:	AT (-100.00, 100.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 586 Informational Message(s)

A Total of 586 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

ISC MODEL RESULTS
CO 1- AND 8-HOUR
100 METER GRID
YEAR 1984

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**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: 1-HR 8-HR

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: CO

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: S19CO84.dta ; **Output Print File: S19CO84.lst
**File for Saving Result Arrays: CO.SAV
**Detailed Error/Message File: S19CO84.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.56900E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

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	12.5,	23.2,	0	2	12.5,	25.6,	0	3	12.5,	27.2,	0	4	12.5,	28.0,	0	5	12.5,	28.1,	0	6	12.5,	28.0,	0
7	12.5,	27.1,	0	8	12.5,	25.3,	0	9	12.5,	22.8,	0	10	12.5,	25.3,	0	11	12.5,	27.1,	0	12	12.5,	28.0,	0
13	12.5,	28.1,	0	14	12.5,	28.0,	0	15	12.5,	27.2,	0	16	12.5,	25.6,	0	17	12.5,	23.2,	0	18	12.5,	20.1,	0
19	12.5,	23.2,	0	20	12.5,	25.6,	0	21	12.5,	27.2,	0	22	12.5,	28.0,	0	23	12.5,	28.1,	0	24	12.5,	28.0,	0
25	12.5,	27.1,	0	26	12.5,	25.3,	0	27	12.5,	22.8,	0	28	12.5,	25.3,	0	29	12.5,	27.1,	0	30	12.5,	28.0,	0
31	12.5,	28.1,	0	32	12.5,	28.0,	0	33	12.5,	27.2,	0	34	12.5,	25.6,	0	35	12.5,	23.2,	0	36	12.5,	20.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY			WIND SPEED CATEGORY			
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: lpalm84.bin FORMAT: UNFORM
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WPALMBCH-FL NAME: WPALMBCH-FL
YEAR: 1984 YEAR: 1984

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN
84	1	1	1	151.0	6.69	282.6	4	1494.0	1494.0
84	1	1	2	148.0	6.69	282.0	4	1494.0	1494.0
84	1	1	3	154.0	5.66	281.5	4	1494.0	1494.0
84	1	1	4	153.0	4.63	281.5	5	1494.0	138.0
84	1	1	5	153.0	5.14	281.5	5	1494.0	138.0
84	1	1	6	152.0	5.14	281.5	5	1494.0	138.0
84	1	1	7	165.0	4.63	281.5	4	1494.0	1494.0
84	1	1	8	163.0	6.17	282.6	4	1494.0	1494.0
84	1	1	9	157.0	5.14	283.7	4	1494.0	1494.0
84	1	1	10	151.0	4.63	284.8	4	1494.0	1494.0
84	1	1	11	154.0	5.66	287.0	4	1494.0	1494.0
84	1	1	12	166.0	5.14	288.7	4	1494.0	1494.0
84	1	1	13	173.0	7.72	291.5	4	1494.0	1494.0
84	1	1	14	179.0	5.14	291.5	4	1494.0	1494.0
84	1	1	15	212.0	9.26	293.2	4	1494.0	1494.0
84	1	1	16	194.0	7.72	292.0	4	1494.0	1494.0
84	1	1	17	191.0	6.17	291.5	4	1494.0	1494.0
84	1	1	18	217.0	7.20	292.0	4	1491.0	1491.0
84	1	1	19	194.0	5.14	290.9	4	1483.0	1483.0
84	1	1	20	167.0	5.66	288.7	4	1476.0	1476.0
84	1	1	21	160.0	5.66	287.6	4	1469.0	1469.0
84	1	1	22	152.0	5.14	286.5	5	1461.0	576.0
84	1	1	23	160.0	5.66	285.9	4	1454.0	1454.0
84	1	1	24	150.0	4.12	285.4	5	1446.0	162.0

*** 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.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	34.84594 (84070206)	48.55168 (84070206)	42.12251 (84070206)	36.62192 (84052510)	31.13350 (84111817)
1100.0	29.17009 (84050517)	36.43121 (84070206)	50.70752 (84070206)	42.39761 (84052510)	32.72757 (84071918)
1000.0	30.32284 (84080817)	30.99618 (84050517)	37.92521 (84070206)	52.43677 (84070206)	41.36050 (84052510)
900.0	30.68011 (84052618)	31.68944 (84072324)	32.91952 (84080217)	39.21538 (84070206)	53.36415 (84070206)
800.0	31.39206 (84052615)	32.61401 (84050619)	33.62168 (84050615)	35.03817 (84080217)	40.13353 (84070206)
700.0	32.14482 (84072323)	33.33124 (84072817)	34.74069 (84072015)	36.28487 (84073116)	37.69396 (84091216)
600.0	47.87418 (84060606)	34.05238 (84061514)	35.45285 (84052718)	37.00314 (84052117)	38.58649 (84102711)
500.0	56.57769 (84060606)	60.80406 (84060606)	49.82427 (84060606)	37.73403 (84061514)	39.60807 (84080318)
400.0	33.88110 (84072408)	36.10367 (84060606)	52.90857 (84060606)	61.71304 (84060606)	49.69354 (84060606)
300.0	34.54551 (84071514)	35.96688 (84102215)	37.90580 (84080314)	39.36264 (84122612)	41.93481 (84060606)
200.0	34.47428 (84052614)	36.26579 (84052614)	37.99295 (84102010)	40.08404 (84061412)	42.57895 (84052210)
100.0	34.76653 (84123015)	36.63883 (84070415)	38.79692 (84071615)	40.85415 (84071615)	42.66975 (84112612)
0.0	35.13044 (84091416)	36.72626 (84072920)	38.54261 (84072920)	40.80710 (84102312)	43.10377 (84080224)
-100.0	34.76653 (84102409)	36.34344 (84102409)	38.77583 (84091616)	40.60313 (84051213)	43.01202 (84100715)
-200.0	39.20813 (84051906)	36.61125 (84091615)	38.27232 (84072917)	40.01235 (84092014)	42.79923 (84092215)
-300.0	34.41890 (84070718)	36.14868 (84080218)	37.55088 (84071015)	39.41293 (84102314)	41.54278 (84100613)
-400.0	33.70862 (84051216)	35.41879 (84123012)	36.97879 (84092016)	38.79792 (84122715)	40.41279 (84100809)
-500.0	33.31465 (84080221)	34.59221 (84101912)	36.08997 (84110213)	38.05312 (84082815)	39.73846 (84110115)
-600.0	32.56334 (84110213)	34.29053 (84082815)	35.25912 (84092510)	37.07252 (84100614)	38.08001 (84051615)
-700.0	33.73709 (84103107)	32.92813 (84081518)	34.50666 (84092021)	35.61454 (84051016)	37.26931 (84081521)
-800.0	30.98080 (84060620)	32.48425 (84101715)	33.60439 (84060816)	34.61006 (84103109)	36.50713 (84081516)
-900.0	30.34051 (84051615)	31.45099 (84060816)	32.75387 (84082720)	34.19537 (84081516)	34.61256 (84100211)
-1000.0	30.00835 (84100414)	30.94479 (84082709)	31.93128 (84081516)	32.90272 (84081617)	33.26697 (84100902)
-1100.0	29.12595 (84082709)	29.78439 (84081516)	31.17152 (84081617)	31.36502 (84102602)	32.33035 (84060115)
-1200.0	27.84236 (84112421)	29.32066 (84081617)	29.67387 (84082523)	30.21041 (84051118)	31.13103 (84120115)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	32.25091 (84050412)	32.31832 (84021917)	33.48053 (84090517)	34.05444 (84062016)	34.72621 (84071810)
1100.0	33.18910 (84070208)	33.72642 (84071809)	34.76727 (84080115)	35.55077 (84050816)	35.42769 (84040320)
1000.0	34.99305 (84071715)	35.35832 (84012413)	35.80220 (84021917)	37.02884 (84011714)	37.83847 (84050413)
900.0	38.19084 (84052510)	37.07251 (84050810)	37.68979 (84030515)	38.59184 (84032015)	39.55175 (84070210)
800.0	52.91396 (84070206)	38.59784 (84111813)	39.41499 (84030511)	39.92283 (84022707)	41.48491 (84070209)
700.0	40.43402 (84070206)	50.24374 (84070206)	41.20542 (84102613)	42.39589 (84030512)	43.25676 (84111814)
600.0	40.22451 (84072313)	41.16146 (84052015)	43.58152 (84070206)	46.12347 (84021915)	46.43968 (84022707)
500.0	41.49505 (84052214)	41.67410 (84052222)	46.13988 (84052015)	48.19355 (84030517)	47.88025 (84030512)
400.0	43.12423 (84062214)	47.19030 (84052709)	47.61812 (84052222)	47.72966 (84071714)	49.37076 (84080112)
300.0	55.76883 (84060606)	51.77221 (84060606)	51.02026 (84092119)	51.98083 (84081116)	52.72145 (84073112)
200.0	45.90989 (84102212)	48.56562 (84012314)	50.76659 (84122711)	51.48092 (84072512)	56.19798 (84081116)
100.0	47.39798 (84091811)	51.12230 (84012310)	52.90186 (84071413)	56.60289 (84012312)	57.25162 (84080312)
0.0	48.23169 (84092308)	52.09597 (84092308)	55.44226 (84092308)	57.39219 (84092308)	65.95875 (84012306)
-100.0	48.10763 (84092211)	51.51170 (84092301)	54.31798 (84092224)	58.67957 (84092222)	64.81386 (84092416)
-200.0	47.50338 (84092410)	50.73879 (84092416)	53.73796 (84092112)	56.93313 (84012212)	55.94859 (84092412)
-300.0	43.99054 (84092501)	49.17703 (84092511)	51.48382 (84092317)	54.01644 (84051709)	56.46656 (84092701)
-400.0	42.73268 (84092420)	47.03963 (84102510)	49.93793 (84100812)	51.92957 (84051015)	56.18859 (84092609)
-500.0	41.30047 (84100911)	43.76153 (84092512)	48.01307 (84051015)	49.68611 (84092624)	52.72369 (84092704)
-600.0	39.81771 (84102512)	41.92772 (84102514)	43.01889 (84103112)	46.36005 (84100817)	48.53727 (84101014)
-700.0	38.95823 (84100810)	39.93743 (84100914)	41.49508 (84090714)	42.55301 (84102513)	43.81222 (84092620)
-800.0	37.10013 (84060110)	38.34048 (84100818)	39.76328 (84101214)	40.53791 (84101014)	40.99009 (84092622)
-900.0	35.81758 (84100808)	37.00312 (84101112)	38.14403 (84101013)	38.92984 (84101011)	38.99937 (84112414)
-1000.0	34.45301 (84051710)	34.78497 (84031818)	36.29037 (84101114)	36.96867 (84090717)	37.11179 (84051010)
-1100.0	32.95466 (84100918)	33.87777 (84101013)	34.46573 (84100215)	35.16705 (84110916)	36.02161 (84090615)
-1200.0	32.10152 (84081509)	32.41912 (84090710)	33.04498 (84090717)	33.65800 (84050914)	33.78965 (84030816)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	34.56134 (84120513)	48.19574 (84092714)	58.48451 (84092715)	57.33958 (84092716)	40.05940 (84092716)
1100.0	35.77017 (84030613)	52.33170 (84092714)	61.50014 (84092715)	62.08395 (84092716)	36.16426 (84032809)
1000.0	38.27230 (84030613)	56.11962 (84092714)	64.52282 (84092715)	66.32248 (84092716)	38.21528 (84032810)
900.0	40.01137 (84030615)	58.84955 (84092714)	67.41089 (84092715)	69.18543 (84092716)	40.02769 (84032715)
800.0	41.33028 (84042309)	59.19204 (84092714)	69.67361 (84092715)	69.07251 (84092716)	40.15620 (84030612)
700.0	47.36606 (84080110)	59.55417 (84092714)	77.30088 (84092715)	69.38251 (84092716)	47.63862 (84032814)
600.0	47.97348 (84070210)	50.33083 (84050315)	77.87367 (84092715)	56.48206 (84092716)	49.67931 (84032820)
500.0	47.79197 (84111814)	55.61405 (84022712)	75.81131 (84092715)	50.04230 (84032811)	50.36272 (84032817)
400.0	50.92566 (84050211)	52.46737 (84050314)	69.87706 (84092715)	53.47924 (84032812)	51.38422 (84092812)
300.0	52.83728 (84050312)	51.77198 (84050513)	66.87103 (84092718)	66.80170 (84032815)	52.62493 (84032823)
200.0	59.79783 (84073112)	66.94242 (84102110)	83.94138 (84081117)	74.09165 (84032819)	69.57202 (84032901)
100.0	73.99799 (84102811)	104.93320 (84052215)	126.93170 (84081117)	137.67650 (84032901)	68.48382 (84082013)
0.0	97.95660 (84012306)	149.13280 (84012306)	0.00000 (0)	170.47860 (84032911)	108.87590 (84032911)
-100.0	89.91457 (84012212)	139.09700 (84092701)	166.76890 (84112301)	140.03790 (84022916)	89.15357 (84112315)
-200.0	70.30034 (84092701)	79.63586 (84100813)	107.00750 (84112301)	67.37144 (84012112)	70.85265 (84022916)
-300.0	55.89134 (84051702)	61.03189 (84092614)	72.20638 (84112301)	46.38005 (84090813)	44.84800 (84120624)
-400.0	52.27948 (84100813)	59.38601 (84112302)	59.56410 (84112301)	57.66697 (84112304)	47.16672 (84042410)
-500.0	53.52887 (84092611)	52.96277 (84112224)	54.40492 (84112301)	51.02871 (84112304)	48.25747 (84012117)
-600.0	49.67932 (84092612)	48.82186 (84101017)	50.51982 (84110613)	48.27364 (84053114)	46.48533 (84010314)
-700.0	46.66717 (84051010)	47.43728 (84092621)	47.75396 (84110613)	44.39254 (84010113)	46.03145 (84090814)
-800.0	42.15449 (84112413)	41.62239 (84092621)	42.76668 (84110613)	41.50614 (84010113)	41.92112 (84110611)
-900.0	39.93906 (84090715)	39.29839 (84110817)	40.19772 (84110615)	40.52929 (84090815)	38.43354 (84120716)
-1000.0	37.46650 (84050915)	37.71213 (84110817)	37.72828 (84110615)	38.26333 (84090815)	37.24387 (84110614)
-1100.0	35.62109 (84111314)	35.72563 (84051004)	36.03410 (84090708)	36.59771 (84090816)	35.35957 (84053114)
-1200.0	33.88154 (84010213)	34.22234 (84051004)	34.52344 (84090708)	34.76202 (84090816)	34.44288 (84090817)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	33.58374 (84050408)	33.16449 (84063019)	31.70680 (84032817)	32.08729 (84092811)	32.20691 (84090917)
1100.0	35.55755 (84022722)	34.16831 (84032709)	34.79539 (84092813)	33.82665 (84032816)	38.29134 (84092710)
1000.0	37.77235 (84032818)	36.83737 (84032817)	36.06958 (84092811)	35.96665 (84092710)	39.98066 (84092710)
900.0	39.23025 (84092814)	39.18299 (84092813)	37.52288 (84050410)	41.51718 (84092710)	35.37450 (84092711)
800.0	39.51632 (84032709)	40.53790 (84032819)	39.35032 (84092710)	38.52497 (84012714)	35.56347 (84020416)
700.0	41.86407 (84032817)	42.47293 (84050410)	42.01340 (84050415)	36.18497 (84041512)	37.59635 (84020419)
600.0	48.53726 (84032819)	45.72593 (84050415)	42.49135 (84032902)	41.44720 (84032901)	39.06435 (84082010)
500.0	51.42070 (84032824)	50.30432 (84032902)	47.89169 (84032901)	40.59690 (84082010)	41.50363 (84050416)
400.0	54.42886 (84092712)	53.25278 (84032901)	42.93585 (84050908)	44.83547 (84120610)	43.56902 (84050417)
300.0	56.99945 (84032901)	48.72670 (84063013)	50.45773 (84032903)	46.21967 (84120615)	40.19478 (84091013)
200.0	52.32477 (84090911)	52.47861 (84082013)	51.06803 (84022801)	44.85170 (84032103)	45.22278 (84091015)
100.0	52.27527 (84022814)	59.20785 (84022814)	52.73668 (84032910)	48.96729 (84032910)	44.05447 (84022818)
0.0	73.51077 (84032911)	60.64573 (84032911)	55.82267 (84022813)	51.13768 (84022813)	46.43636 (84022813)
-100.0	55.14774 (84041613)	57.65278 (84022913)	53.11622 (84062217)	49.14884 (84032919)	47.45599 (84032917)
-200.0	51.32271 (84062513)	56.01022 (84112315)	49.67267 (84030711)	47.43501 (84032105)	47.13527 (84092815)
-300.0	56.10608 (84022916)	52.66047 (84112308)	51.40751 (84112310)	48.02894 (84112315)	42.63385 (84041015)
-400.0	49.02420 (84022908)	51.97198 (84022916)	47.59283 (84022909)	57.92862 (84111208)	45.62207 (84111208)
-500.0	47.20268 (84040416)	47.15351 (84022908)	46.47240 (84022916)	42.10738 (84041608)	55.71841 (84111208)
-600.0	44.21644 (84020710)	44.75617 (84110701)	41.82978 (84042409)	40.52671 (84120623)	38.61136 (84041608)
-700.0	39.94381 (84012117)	41.90945 (84040416)	39.20694 (84022907)	39.41114 (84062414)	37.83766 (84033010)
-800.0	40.36782 (84112222)	38.90956 (84011916)	38.15692 (84012116)	37.41402 (84033009)	37.49508 (84062414)
-900.0	38.67627 (84010314)	37.36523 (84120713)	36.12366 (84040416)	35.68053 (84110701)	35.03780 (84110719)
-1000.0	36.88968 (84021412)	35.90661 (84010312)	35.82198 (84011916)	34.27753 (84110702)	34.15394 (84112322)
-1100.0	35.10641 (84021412)	34.80919 (84112114)	33.81133 (84010716)	32.84967 (84010311)	32.47399 (84110812)
-1200.0	33.51209 (84022512)	33.09612 (84112214)	32.66252 (84010315)	32.36105 (84011916)	30.67758 (84110624)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	37.73021 (84092710)	32.63305 (84092710)	28.82480 (84041512)	28.78349 (84093015)	27.95778 (84062719)
1100.0	36.61562 (84092710)	31.49301 (84041512)	30.71895 (84020416)	29.22440 (84020419)	29.27632 (84032717)
1000.0	33.65427 (84041512)	32.70157 (84020416)	31.26952 (84020419)	31.11986 (84032717)	29.57214 (84082010)
900.0	34.43602 (84020416)	33.40827 (84020419)	32.84260 (84032717)	31.62095 (84111115)	29.40393 (84041009)
800.0	35.56567 (84020419)	34.22947 (84032717)	33.14448 (84111115)	32.52189 (84050416)	31.08027 (84020417)
700.0	35.78004 (84082010)	33.25518 (84111115)	34.50697 (84020415)	33.26248 (84090916)	30.20496 (84022806)
600.0	38.31611 (84050416)	36.23856 (84120610)	34.43748 (84022806)	33.13021 (84040502)	32.46503 (84062609)
500.0	38.01273 (84120610)	36.74537 (84050417)	36.18972 (84120615)	33.99914 (84020421)	31.17284 (84062402)
400.0	40.19508 (84120615)	37.43284 (84020421)	33.92207 (84022801)	35.16705 (84041817)	33.81416 (84091017)
300.0	40.51023 (84022801)	37.59649 (84091015)	38.25006 (84091015)	35.48664 (84030714)	33.14713 (84042404)
200.0	41.33340 (84022810)	37.90539 (84022819)	37.64289 (84041616)	35.45453 (84041616)	33.85628 (84022305)
100.0	41.42469 (84062413)	41.00447 (84062413)	38.92616 (84062413)	36.12713 (84062413)	34.25220 (84062510)
0.0	41.33651 (84022813)	39.01776 (84041013)	37.31993 (84041013)	35.53921 (84041013)	33.75495 (84041013)
-100.0	41.51566 (84032917)	39.45028 (84032905)	37.57328 (84041610)	36.02626 (84062509)	34.72326 (84062509)
-200.0	41.96093 (84041715)	39.51623 (84062515)	38.00318 (84032615)	36.12553 (84062409)	33.92952 (84062409)
-300.0	41.15511 (84030711)	38.49474 (84040509)	37.35610 (84041010)	35.29825 (84012915)	34.42904 (84041014)
-400.0	39.46463 (84120620)	38.83027 (84041015)	37.09859 (84041016)	34.60110 (84030720)	34.14589 (84062517)
-500.0	52.92231 (84111208)	38.03939 (84111208)	35.35644 (84022313)	33.72460 (84033017)	32.69122 (84041016)
-600.0	48.56975 (84111208)	52.13745 (84111208)	43.54314 (84111208)	33.18054 (84120619)	31.96307 (84022315)
-700.0	35.33015 (84062612)	40.70222 (84111208)	47.45198 (84111208)	44.22266 (84111208)	35.26444 (84111208)
-800.0	35.25458 (84112406)	33.53438 (84020617)	33.72353 (84111208)	41.62145 (84111208)	42.07373 (84111208)
-900.0	34.79276 (84062414)	32.85612 (84112406)	31.65057 (84020617)	31.54599 (84062612)	35.96240 (84111208)
-1000.0	33.10925 (84012914)	31.89635 (84062414)	30.55357 (84112406)	30.07060 (84122013)	30.12574 (84062612)
-1100.0	31.97970 (84012916)	31.03345 (84012914)	29.78942 (84042407)	29.07691 (84020510)	28.80474 (84122013)
-1200.0	30.08451 (84020111)	29.41294 (84041424)	29.06056 (84042408)	28.55280 (84110707)	27.61021 (84020510)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	11.81824 (84021308)	14.46796c(84071224)	14.23052 (84102116)	16.80679 (84052224)	18.57344 (84040908)
1100.0	12.28722 (84021308)	12.55019 (84021308)	15.23902c(84071224)	15.68018 (84102116)	17.28046 (84052224)
1000.0	16.02882 (84072316)	13.15902 (84072316)	13.21109 (84021308)	15.86122c(84071224)	17.57274 (84052224)
900.0	15.67277 (84072316)	17.73885 (84072316)	14.88820 (84072316)	14.62154 (84052016)	16.39826c(84071224)
800.0	20.06088 (84052724)	15.76071 (84072316)	19.42945 (84072316)	16.90886 (84072316)	16.42875 (84052016)
700.0	21.75343 (84052724)	23.12157 (84052724)	19.24274 (84052724)	20.85196 (84072316)	19.24887 (84072316)
600.0	16.00462 (84061524)	19.75207 (84052724)	24.77924 (84052724)	23.59307 (84052724)	21.53655 (84072316)
500.0	15.41976 (84102216)	16.20326 (84061524)	17.30873 (84061524)	22.96429 (84052724)	27.06174 (84052724)
400.0	18.01301 (84102224)	18.25744 (84102216)	18.45526 (84102216)	19.24738 (84080216)	18.65388 (84061516)
300.0	19.15686 (84123116)	18.76340 (84123116)	19.05289 (84080316)	20.69011 (84102216)	21.76480 (84102216)
200.0	18.80042 (84102016)	18.63671 (84123116)	21.22480 (84123116)	23.21053 (84123116)	23.55309 (84123116)
100.0	19.80122 (84102016)	21.87098 (84102016)	23.98462 (84102016)	25.93423 (84102016)	27.25679 (84102016)
0.0	23.43127 (84122808)	24.74686 (84122808)	26.08323 (84122808)	27.39244 (84122808)	28.49050 (84122808)
-100.0	21.34781 (84021024)	23.48022 (84021024)	25.72488 (84021024)	27.94105 (84021024)	29.75927 (84021024)
-200.0	23.34392 (84021024)	23.35406 (84021024)	23.44404 (84092016)	25.36511 (84092016)	26.28058 (84122524)
-300.0	20.45514 (84092408)	23.00092 (84092408)	24.41226 (84092408)	23.73910 (84092408)	22.19417 (84121424)
-400.0	19.79659 (84092408)	19.25567 (84121424)	20.79316 (84021816)	20.60175 (84110124)	22.93555 (84110124)
-500.0	18.76456 (84021816)	18.92391 (84110124)	20.72957 (84110124)	21.59665 (84051808)	19.51287 (84121724)
-600.0	18.54758 (84110124)	19.69314 (84051808)	17.72515 (84121724)	17.97498 (84012216)	19.37592 (84051716)
-700.0	16.97209 (84051808)	15.27664 (84121724)	17.29086 (84110108)	16.13369 (84051716)	16.38946 (84051724)
-800.0	14.71559 (84110108)	15.86948 (84110108)	14.02227 (84110916)	15.33786 (84051724)	20.52998 (84020816)
-900.0	14.20056 (84110108)	12.42824 (84051724)	14.32011 (84051724)	18.94515 (84020816)	20.66655 (84020816)
-1000.0	11.72115c(84031624)	13.35711 (84051724)	17.47077 (84020816)	19.52742 (84020816)	17.75393 (84092524)
-1100.0	12.45879 (84051724)	16.12295 (84020816)	18.30208 (84020816)	16.89252 (84092524)	15.35663 (84051708)
-1200.0	14.90204 (84020816)	17.08170 (84020816)	15.87633 (84092524)	14.14953 (84051708)	13.15555 (84060116)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	18.14559 (84040908)	15.20802 (84071816)	22.83878 (84032016)	22.34321 (84012516)	16.04268 (84042316)
1100.0	20.53367 (84040908)	15.48682 (84040908)	21.67507 (84032016)	23.22499 (84012516)	16.99186 (84012516)
1000.0	17.49612 (84040908)	20.59207 (84040908)	18.92411 (84071816)	26.47466 (84032016)	22.33822 (84012516)
900.0	19.34306 (84052224)	20.87165 (84040908)	18.41344 (84030516)	26.17623 (84032016)	26.44287 (84012516)
800.0	17.62134c(84071716)	21.10468 (84052316)	22.50935 (84040908)	23.88741 (84071816)	29.35829 (84032016)
700.0	18.53264 (84052016)	20.65163c(84071716)	22.47214 (84052316)	21.74846 (84030516)	31.01161 (84032016)
600.0	21.88281 (84072316)	20.92683 (84052016)	23.89540c(84071716)	25.99021 (84021916)	30.31743 (84071816)
500.0	20.72320 (84052724)	24.48662 (84072316)	24.24958 (84052016)	27.68500c(84071716)	26.24366 (84021916)
400.0	26.11403 (84052724)	28.55791 (84052724)	27.74176 (84072316)	26.46874 (84052016)	27.95289 (84052316)
300.0	23.87485 (84080216)	23.83984 (84080216)	30.21926 (84052724)	26.52948 (84072016)	26.74708 (84052016)
200.0	25.11460 (84080316)	25.78274 (84080316)	28.38999 (84080216)	27.60265 (84080216)	25.30840 (84052116)
100.0	29.34995 (84102016)	26.97411 (84102016)	27.40906 (84123116)	26.01105 (84080316)	28.13051 (84080316)
0.0	31.72060 (84122808)	32.27780 (84122808)	31.90342 (84092308)	32.51299 (84092308)	37.40105 (84092308)
-100.0	33.22851 (84021024)	32.29909 (84021024)	34.05233 (84012308)	30.67581 (84092224)	31.89963 (84092416)
-200.0	30.68588 (84092408)	29.03285 (84092408)	28.98969 (84031516)	26.07782 (84110124)	30.47170 (84012216)
-300.0	23.60362 (84031516)	26.34517 (84110124)	25.22842 (84121724)	31.49871 (84051716)	27.23865 (84081516)
-400.0	22.50230 (84051808)	24.96986 (84012216)	25.71376 (84051716)	27.83587 (84081516)	26.96440 (84051708)
-500.0	22.17360 (84051716)	19.79257 (84081616)	26.93514 (84020816)	27.69230 (84092524)	29.62716 (84090716)
-600.0	17.43471 (84051724)	23.77899 (84020816)	25.42243 (84092524)	22.89567 (84090716)	27.49284 (84101016)
-700.0	22.17763 (84020816)	24.00059 (84092524)	21.05475 (84051708)	25.28757 (84090716)	18.95529 (84101016)
-800.0	22.10052 (84092524)	19.69635 (84051708)	20.94741 (84090716)	23.15522 (84101016)	18.85043 (84011316)
-900.0	18.22304 (84092524)	16.70589 (84060116)	21.52446 (84090716)	18.22467 (84101016)	19.23617 (84112416)
-1000.0	16.03626 (84051708)	18.68862 (84090716)	20.25773 (84101016)	16.71362 (84011316)	21.60162 (84112416)
-1100.0	15.17097 (84090716)	18.65905 (84101016)	16.54581 (84101016)	16.41060 (84011316)	22.16161 (84112416)
-1200.0	16.35418 (84090716)	17.62899 (84101016)	14.06737 (84011316)	15.40503 (84112416)	21.33815 (84112416)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	18.71646 (84011016)	27.00047 (84011016)	14.84608 (84092716)	15.56293 (84040416)	17.75863 (84032816)
1100.0	18.32937 (84022716)	28.21983 (84011016)	15.71042 (84092716)	15.60066 (84040416)	20.60457 (84032816)
1000.0	19.22546 (84042316)	29.16142 (84011016)	16.61190 (84092716)	15.26943 (84040416)	23.37726 (84032816)
900.0	20.69768 (84042316)	29.56524 (84011016)	17.52771 (84092716)	14.41273 (84040416)	25.59339 (84032816)
800.0	20.54026 (84042316)	28.92244 (84011016)	18.34624 (84092716)	17.42475 (84032816)	26.47890 (84032816)
700.0	24.98543 (84012516)	29.42721 (84011016)	20.59305 (84092716)	23.46282 (84032816)	25.78033 (84032816)
600.0	30.74147 (84012516)	26.19791 (84022716)	21.22947 (84011816)	29.63982 (84032816)	20.25178 (84032816)
500.0	36.86940 (84032016)	26.64130 (84022716)	21.61593 (84011816)	35.18581 (84032816)	21.73724 (84032824)
400.0	34.05059 (84071816)	21.54186 (84042316)	20.55691 (84011816)	35.99188 (84032816)	22.88558 (84032824)
300.0	24.87318 (84021916)	31.45118 (84032016)	34.71223 (84092724)	26.67163 (84032816)	25.56713 (84050416)
200.0	29.29749 (84052016)	41.17825 (84071816)	46.19625 (84092724)	35.55003 (84032824)	15.38132 (84020416)
100.0	36.10020 (84080216)	48.21568 (84052016)	70.63364 (84092724)	34.26714 (84020416)	29.53106 (84090916)
0.0	56.76072 (84092308)	87.95210 (84092308)	0.00000 (0)	110.52080 (84032916)	73.43733 (84032916)
-100.0	40.86415 (84110124)	65.96561 (84020816)	70.72417 (84112308)	43.61112 (84120708)	38.15463 (84112316)
-200.0	30.67188 (84020816)	40.46203 (84101016)	45.53623 (84112308)	31.32817 (84010108)	18.19128 (84022916)
-300.0	25.58840 (84090716)	28.08250 (84112416)	30.42090 (84112308)	28.05687 (84012124)	18.89184 (84012116)
-400.0	27.84632 (84101016)	34.11807 (84112416)	25.79070 (84090816)	20.34677 (84012124)	16.51613 (84030808)
-500.0	21.40204 (84092616)	29.46638 (84112416)	26.23117 (84053124)	20.49209 (84090816)	25.55222 (84012124)
-600.0	24.84134 (84112416)	21.86514 (84030816)	26.32927 (84053124)	21.50423 (84090816)	26.90208 (84012124)
-700.0	29.61589 (84112416)	23.33892 (84011416)	25.88312 (84053124)	25.08248 (84053116)	23.41726 (84012124)
-800.0	28.07504 (84112416)	21.57198 (84011416)	23.37943 (84053124)	25.35145 (84053116)	17.73068 (84012124)
-900.0	25.18401 (84112416)	20.56695 (84011416)	22.52525 (84053124)	26.14568 (84053116)	15.64444 (84012008)
-1000.0	21.16713 (84112416)	19.13765 (84011416)	21.50864 (84053124)	25.96085 (84053116)	14.82208 (84012008)
-1100.0	17.32225 (84030816)	17.60670 (84011416)	20.58104 (84011324)	25.21988 (84053116)	15.04296 (84011508)
-1200.0	15.09237 (84011416)	16.11159 (84011416)	20.10871 (84011324)	24.16730 (84053116)	15.60945 (84011508)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	18.80899 (84032816)	11.37026 (84032824)	13.00548 (84032824)	13.23242 (84022224)	12.52631 (84050416)
1100.0	18.50009 (84032816)	13.31783 (84032824)	14.09548 (84032824)	13.39525 (84032824)	14.77356 (84050416)
1000.0	17.07678 (84032816)	14.96984 (84032824)	15.02118 (84032824)	15.70110 (84050416)	13.96401 (84050416)
900.0	14.62580 (84032716)	16.38120 (84032824)	15.64869 (84032824)	17.10608 (84050416)	12.18425 (84092716)
800.0	16.85959 (84032824)	17.52170 (84032824)	19.55716 (84050416)	13.48671 (84092716)	14.19212 (84020416)
700.0	18.63262 (84032824)	19.36703 (84050416)	17.63559 (84050416)	14.56227 (84020416)	14.17605 (84053016)
600.0	21.32053 (84032824)	23.63018 (84050416)	14.15688 (84020416)	15.60744 (84053016)	16.61086 (84053016)
500.0	25.73257 (84050416)	14.19084 (84020416)	16.70144 (84053016)	17.67345 (84053016)	17.65283 (84090916)
400.0	19.55548 (84050416)	16.56914 (84053016)	18.36683 (84053016)	24.37605 (84090916)	21.07566 (84090916)
300.0	14.08851 (84053016)	19.68414 (84090916)	27.52036 (84090916)	18.13897 (84091016)	17.63968 (84091016)
200.0	25.90264 (84090916)	21.67003 (84090916)	20.62596 (84091016)	18.93556 (84091016)	16.39403 (84082016)
100.0	17.41934 (84091016)	18.75768 (84022816)	18.60579 (84082016)	16.52563 (84082016)	17.52069 (84032916)
0.0	49.75036 (84032916)	40.76149 (84032916)	36.55603 (84032916)	32.42100 (84032916)	28.68416 (84032916)
-100.0	21.27184 (84012816)	24.16667 (84032924)	27.42207 (84032924)	25.41713 (84032924)	21.93602 (84032924)
-200.0	28.31719 (84112316)	22.57487 (84022316)	22.84879 (84022316)	22.05209 (84012816)	23.60264 (84012816)
-300.0	15.15616 (84011216)	20.12305 (84112316)	26.21281 (84112316)	22.37229 (84022316)	20.39746 (84022316)
-400.0	21.03429 (84010416)	16.33736 (84011216)	15.70284 (84112316)	19.87748 (84112316)	20.28342 (84112316)
-500.0	22.74631 (84010416)	18.76413 (84121016)	15.03517 (84011216)	12.48695 (84112316)	15.45102 (84032116)
-600.0	18.98277 (84030808)	22.41203 (84010416)	16.69175 (84121016)	13.23239c(84082216)	11.06814c(84082216)
-700.0	20.25137 (84012124)	19.85156 (84010416)	19.40284 (84010416)	14.75983 (84121016)	13.31042c(84082216)
-800.0	23.29957 (84012124)	17.17650 (84030808)	18.86242 (84010416)	16.01733 (84010416)	13.30368 (84112324)
-900.0	21.95896 (84012124)	18.11696 (84030808)	16.37932 (84010108)	16.75806 (84012116)	13.33385 (84121016)
-1000.0	19.36868 (84012124)	19.94728 (84012124)	16.19736 (84030808)	15.70525 (84121016)	14.69655 (84012116)
-1100.0	16.58817 (84012124)	19.89073 (84012124)	16.65278 (84030808)	16.13460 (84010108)	14.92273 (84012116)
-1200.0	13.98264 (84012008)	18.30591 (84012124)	16.65401 (84012124)	15.25163 (84010108)	14.17380 (84121016)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	13.00443 (84050416)	10.85791 (84092716)	10.40576 (84020416)	10.98270 (84020416)	8.42981 (84020416)
1100.0	11.61311 (84092716)	10.69238 (84020416)	11.82059 (84020416)	9.07558 (84020416)	9.62026 (84053016)
1000.0	10.80439 (84020416)	12.67864 (84020416)	10.03974 (84053016)	10.78274 (84053016)	11.62209 (84053016)
900.0	13.50310 (84020416)	11.28984 (84053016)	12.10120 (84053016)	12.89474 (84053016)	12.73398 (84053016)
800.0	12.68631 (84053016)	13.56410 (84053016)	14.20895 (84053016)	13.30901 (84053016)	13.43137 (84090916)
700.0	15.11610 (84053016)	15.42933 (84053016)	13.98381 (84090916)	15.56470 (84090916)	13.42834 (84090916)
600.0	16.27767 (84053016)	17.61141 (84090916)	16.75825 (84090916)	12.51528 (84090916)	12.37984 (84062508)
500.0	20.63219 (84090916)	16.14678 (84090916)	13.08790 (84062508)	14.06212 (84062508)	12.78288 (84062508)
400.0	14.58352 (84091016)	14.63051 (84062508)	13.05236 (84062508)	12.08360 (84091016)	11.02115 (84091016)
300.0	16.32295 (84091016)	14.60216 (84091016)	12.49318 (84091016)	10.25966 (84082016)	10.31578 (84090908)
200.0	15.10557 (84082016)	13.43289 (84082016)	12.28883 (84090908)	11.64794 (84090908)	10.58416 (84041724)
100.0	17.34896 (84032916)	17.01057 (84032916)	16.36919 (84032916)	15.57699 (84032916)	14.72166 (84032916)
0.0	25.09182 (84032916)	22.48418 (84032916)	20.29215 (84022816)	18.80825 (84022816)	17.46013 (84022816)
-100.0	17.47683 (84032924)	14.73818 (84032924)	12.44856 (84032924)	12.10046 (84032908)	11.61916 (84032908)
-200.0	20.84891 (84032924)	21.31238 (84032924)	20.23919 (84032924)	18.52995 (84032924)	16.65572 (84032924)
-300.0	18.75267 (84022316)	17.90103 (84022908)	17.74915 (84012816)	16.93175 (84012816)	16.29949 (84032924)
-400.0	18.72369 (84022316)	18.26324 (84022316)	16.74185 (84022316)	15.27293 (84022316)	15.60011 (84022908)
-500.0	17.27719 (84112316)	15.98123 (84112316)	16.23209 (84022316)	15.85706 (84022316)	14.68141 (84022316)
-600.0	12.90870 (84032116)	13.60078 (84112316)	14.59921 (84112316)	13.34567 (84012816)	14.03267 (84022316)
-700.0	11.25502c(84082216)	10.59162 (84032116)	11.42487 (84032116)	12.18297 (84112316)	12.19426 (84112316)
-800.0	12.69969c(84082216)	10.85604c(84082216)	8.67989 (84032116)	9.80537 (84032116)	9.95632 (84112316)
-900.0	12.38557 (84112324)	11.76766c(84082216)	10.16682c(84082216)	7.80322c(84082216)	8.32950 (84032116)
-1000.0	12.47526 (84111308)	11.44095 (84112324)	10.73518c(84082216)	9.77991 (84112216)	7.38265c(84082216)
-1100.0	12.51363 (84012116)	12.01145 (84111308)	10.71483 (84110708)	10.17656 (84112216)	9.47756 (84112216)
-1200.0	13.80015 (84012116)	11.67829 (84111308)	11.49444 (84111308)	10.05829 (84110708)	9.62489 (84112216)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	170.47860	(84032911)	AT (	100.00,	0.00)	GC	26.	130.08270	(84091901)	AT (	-100.00,	0.00)	GC
2.	167.83350	(84032914)	AT (	100.00,	0.00)	GC	27.	129.73440	(84110613)	AT (	0.00,	-100.00)	GC
3.	166.76890	(84112301)	AT (	0.00,	-100.00)	GC	28.	129.41680	(84112620)	AT (	-100.00,	0.00)	GC
4.	162.62130	(84022813)	AT (	100.00,	0.00)	GC	29.	128.08630	(84031212)	AT (	-100.00,	0.00)	GC
5.	155.35150	(84032904)	AT (	100.00,	0.00)	GC	30.	127.95390	(84092305)	AT (	-100.00,	0.00)	GC
6.	153.10640	(84022815)	AT (	100.00,	0.00)	GC	31.	127.95380	(84092617)	AT (	0.00,	-100.00)	GC
7.	149.13280	(84012306)	AT (	-100.00,	0.00)	GC	32.	127.77320	(84092209)	AT (	-100.00,	0.00)	GC
8.	148.83610	(84112305)	AT (	0.00,	-100.00)	GC	33.	127.63740	(84031217)	AT (	-100.00,	0.00)	GC
9.	148.22040	(84022816)	AT (	100.00,	0.00)	GC	34.	127.10640	(84112307)	AT (	100.00,	-100.00)	GC
10.	146.99430	(84092308)	AT (	-100.00,	0.00)	GC	35.	126.93170	(84081117)	AT (	0.00,	100.00)	GC
11.	144.78150	(84112306)	AT (	0.00,	-100.00)	GC	36.	126.38620	(84112402)	AT (	0.00,	-100.00)	GC
12.	143.68580	(84092303)	AT (	-100.00,	0.00)	GC	37.	126.13770	(84032909)	AT (	100.00,	0.00)	GC
13.	140.03790	(84022916)	AT (	100.00,	-100.00)	GC	38.	125.42080	(84051015)	AT (	-100.00,	-100.00)	GC
14.	139.09700	(84092701)	AT (	-100.00,	-100.00)	GC	39.	122.61710	(84080224)	AT (	-100.00,	0.00)	GC
15.	138.98480	(84092122)	AT (	-100.00,	0.00)	GC	40.	122.59900	(84110111)	AT (	-100.00,	-100.00)	GC
16.	138.66580	(84012313)	AT (	-100.00,	0.00)	GC	41.	122.46810	(84100916)	AT (	-100.00,	-100.00)	GC
17.	137.67650	(84032901)	AT (	100.00,	100.00)	GC	42.	122.31140	(84092323)	AT (	-100.00,	-100.00)	GC
18.	137.13020	(84112312)	AT (	100.00,	-100.00)	GC	43.	122.22620	(84120623)	AT (	100.00,	-100.00)	GC
19.	136.03580	(84092306)	AT (	-100.00,	0.00)	GC	44.	121.81580	(84092207)	AT (	-100.00,	0.00)	GC
20.	135.69650	(84092618)	AT (	0.00,	-100.00)	GC	45.	121.74050	(84051703)	AT (	-100.00,	-100.00)	GC
21.	135.55570	(84053116)	AT (	0.00,	-100.00)	GC	46.	121.47100	(84110615)	AT (	0.00,	-100.00)	GC
22.	135.35470	(84092220)	AT (	-100.00,	0.00)	GC	47.	121.32270	(84100912)	AT (	-100.00,	-100.00)	GC
23.	135.34360	(84032915)	AT (	100.00,	0.00)	GC	48.	119.54640	(84053117)	AT (	0.00,	-100.00)	GC
24.	134.16570	(84022812)	AT (	100.00,	0.00)	GC	49.	119.30910	(84012211)	AT (	-100.00,	-100.00)	GC
25.	130.87980	(84012308)	AT (	-100.00,	0.00)	GC	50.	119.25110	(84112712)	AT (	-100.00,	0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	110.52080	(84032916)	AT (	100.00,	0.00)	GC	26.	53.49604	(84100916)	AT (	-100.00,	-100.00)	GC
2.	87.95210	(84092308)	AT (	-100.00,	0.00)	GC	27.	53.21869	(84092208)	AT (	-100.00,	0.00)	GC
3.	85.75835	(84022816)	AT (	100.00,	0.00)	GC	28.	52.88945	(84121516)	AT (	-100.00,	0.00)	GC
4.	77.04760	(84122808)	AT (	-100.00,	0.00)	GC	29.	52.51423	(84121408)	AT (	-100.00,	0.00)	GC
5.	73.43733	(84032916)	AT (	200.00,	0.00)	GC	30.	51.11117	(84112616)	AT (	-100.00,	0.00)	GC
6.	71.08734	(84112624)	AT (	-100.00,	0.00)	GC	31.	50.76627	(84032808)	AT (	0.00,	100.00)	GC
7.	70.72417	(84112308)	AT (	0.00,	-100.00)	GC	32.	50.68908	(84051624)	AT (	-100.00,	-100.00)	GC
8.	70.63364	(84092724)	AT (	0.00,	100.00)	GC	33.	50.63144	(84122808)	AT (	-200.00,	0.00)	GC
9.	69.24635	(84053124)	AT (	0.00,	-100.00)	GC	34.	50.03025	(84020916)	AT (	-100.00,	0.00)	GC
10.	68.44427	(84092108)	AT (	-100.00,	0.00)	GC	35.	49.86777	(84121524)	AT (	-100.00,	0.00)	GC
11.	68.23644	(84053116)	AT (	0.00,	-100.00)	GC	36.	49.75036	(84032916)	AT (	300.00,	0.00)	GC
12.	66.97374	(84122708)	AT (	-100.00,	0.00)	GC	37.	49.39239	(84032908)	AT (	100.00,	0.00)	GC
13.	65.96561	(84020816)	AT (	-100.00,	-100.00)	GC	38.	49.07229	(84100924)	AT (	-100.00,	-100.00)	GC
14.	61.98740	(84012316)	AT (	-100.00,	0.00)	GC	39.	48.54926	(84051016)	AT (	-100.00,	-100.00)	GC
15.	61.94581	(84122516)	AT (	-100.00,	0.00)	GC	40.	48.53115	(84032024)	AT (	0.00,	100.00)	GC
16.	61.52510	(84112608)	AT (	-100.00,	0.00)	GC	41.	48.21568	(84052016)	AT (	-100.00,	100.00)	GC
17.	59.55367	(84051724)	AT (	-100.00,	-100.00)	GC	42.	47.70317	(84102716)	AT (	-100.00,	100.00)	GC
18.	58.67185	(84102516)	AT (	-100.00,	-100.00)	GC	43.	47.70097	(84102308)	AT (	-100.00,	0.00)	GC
19.	58.09692	(84100816)	AT (	-100.00,	-100.00)	GC	44.	47.69510	(84101924)	AT (	-100.00,	0.00)	GC
20.	57.33727	(84092524)	AT (	-100.00,	-100.00)	GC	45.	46.87444	(84011324)	AT (	0.00,	-100.00)	GC
21.	56.76072	(84092308)	AT (	-200.00,	0.00)	GC	46.	46.45533	(84110616)	AT (	0.00,	-100.00)	GC
22.	56.03878	(84011924)	AT (	0.00,	-100.00)	GC	47.	46.19625	(84092724)	AT (	0.00,	200.00)	GC
23.	55.58552	(84022816)	AT (	200.00,	0.00)	GC	48.	45.82145	(84112624)	AT (	-200.00,	0.00)	GC
24.	55.53326	(84102908)	AT (	-100.00,	0.00)	GC	49.	45.76765	(84031508)	AT (	-100.00,	-100.00)	GC
25.	54.83409	(84031416)	AT (	-100.00,	-100.00)	GC	50.	45.53623	(84112308)	AT (	0.00,	-200.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO 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	170.47860	ON 84032911:	AT (100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO 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	110.52080	ON 84032916:	AT (100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 850 Informational Message(s)

A Total of 850 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

ISC MODEL RESULTS
CO 1- AND 8-HOUR
100 METER GRID
YEAR 1985

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

**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: 1-HR 8-HR

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: CO

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: S19CO85.dta ; **Output Print File: S19CO85.lst
**File for Saving Result Arrays: CO.SAV
**Detailed Error/Message File: S19CO85.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.56900E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

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	12.5,	23.2,	0	2	12.5,	25.6,	0	3	12.5,	27.2,	0	4	12.5,	28.0,	0	5	12.5,	28.1,	0	6	12.5,	28.0,	0
7	12.5,	27.1,	0	8	12.5,	25.3,	0	9	12.5,	22.8,	0	10	12.5,	25.3,	0	11	12.5,	27.1,	0	12	12.5,	28.0,	0
13	12.5,	28.1,	0	14	12.5,	28.0,	0	15	12.5,	27.2,	0	16	12.5,	25.6,	0	17	12.5,	23.2,	0	18	12.5,	20.1,	0
19	12.5,	23.2,	0	20	12.5,	25.6,	0	21	12.5,	27.2,	0	22	12.5,	28.0,	0	23	12.5,	28.1,	0	24	12.5,	28.0,	0
25	12.5,	27.1,	0	26	12.5,	25.3,	0	27	12.5,	22.8,	0	28	12.5,	25.3,	0	29	12.5,	27.1,	0	30	12.5,	28.0,	0
31	12.5,	28.1,	0	32	12.5,	28.0,	0	33	12.5,	27.2,	0	34	12.5,	25.6,	0	35	12.5,	23.2,	0	36	12.5,	20.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54, 3.09, 5.14, 8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY			WIND SPEED CATEGORY			
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: lpalm85.bin FORMAT: UNFORM
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WPALMBCH-FL NAME: WPALMBCH-FL
YEAR: 1985 YEAR: 1985

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN
85	1	1	1	291.0	6.69	295.9	4	1450.0	1450.0
85	1	1	2	318.0	3.60	295.9	5	1450.0	1716.0
85	1	1	3	314.0	3.60	295.4	5	1450.0	1716.0
85	1	1	4	333.0	3.09	295.4	6	1450.0	1716.0
85	1	1	5	323.0	3.60	295.4	5	1450.0	1716.0
85	1	1	6	312.0	3.60	295.4	5	1450.0	1716.0
85	1	1	7	305.0	4.12	295.4	5	1450.0	1716.0
85	1	1	8	313.0	3.60	295.9	4	167.0	1685.0
85	1	1	9	317.0	4.12	297.6	3	381.0	1646.0
85	1	1	10	301.0	7.20	298.2	4	594.0	1607.0
85	1	1	11	314.0	6.17	298.2	4	808.0	1568.0
85	1	1	12	316.0	6.69	298.7	4	1022.0	1528.0
85	1	1	13	303.0	6.69	298.7	4	1236.0	1489.0
85	1	1	14	299.0	7.20	297.0	4	1450.0	1450.0
85	1	1	15	302.0	6.17	298.7	4	1450.0	1450.0
85	1	1	16	304.0	6.69	297.0	4	1450.0	1450.0
85	1	1	17	301.0	6.17	295.9	4	1450.0	1450.0
85	1	1	18	307.0	5.66	296.5	4	1448.0	1448.0
85	1	1	19	304.0	6.69	295.9	4	1444.0	1444.0
85	1	1	20	287.0	4.63	295.4	4	1441.0	1441.0
85	1	1	21	300.0	3.60	294.8	4	1437.0	1437.0
85	1	1	22	292.0	2.06	294.8	5	1433.0	1485.0
85	1	1	23	310.0	6.17	296.5	4	1429.0	1429.0
85	1	1	24	320.0	5.66	295.9	4	1425.0	1425.0

*** 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.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	28.75022 (85070510)	29.06299 (85083008)	30.38033 (85083011)	30.55578 (85082509)	31.43885 (85062608)
1100.0	29.32067 (85072917)	30.39032 (85070510)	30.83195 (85112713)	31.53598 (85083011)	32.67289 (85062015)
1000.0	29.83540 (85061601)	31.17152 (85072917)	32.04842 (85070510)	32.91952 (85061511)	33.54462 (85121211)
900.0	30.84038 (85082018)	31.32143 (85061116)	33.02184 (85080515)	33.65456 (85070510)	35.03819 (85061511)
800.0	31.02977 (85082624)	32.67289 (85102815)	33.62987 (85061115)	35.15980 (85080515)	35.91495 (85022414)
700.0	31.82229 (85110916)	33.37286 (85072515)	34.68968 (85033115)	36.41771 (85061115)	37.09211 (85022413)
600.0	32.34050 (85102704)	33.88760 (85112005)	35.87960 (85072817)	37.45635 (85071115)	38.15171 (85061602)
500.0	33.42189 (85082823)	34.65795 (85090916)	35.72947 (85022512)	38.00314 (85102702)	39.86622 (85112012)
400.0	33.57160 (85102709)	35.48774 (85061503)	37.18987 (85072517)	38.95619 (85082724)	39.69204 (85032016)
300.0	43.39860 (85102307)	40.97681 (85101907)	37.34529 (85082824)	39.69098 (85072816)	41.02236 (85022310)
200.0	40.18111 (85102307)	44.67378 (85102307)	47.10299 (85102307)	45.56825 (85102307)	42.53672 (85111211)
100.0	35.13007 (85091711)	36.75673 (85091711)	38.32611 (85073110)	40.52926 (85111212)	42.67578 (85041110)
0.0	35.14073 (85102613)	36.83988 (85101711)	38.94904 (85101711)	41.05027 (85101711)	42.89151 (85101711)
-100.0	34.88733 (85102315)	36.48072 (85102315)	38.53961 (85101912)	40.55513 (85101912)	42.81602 (85121011)
-200.0	34.65602 (85101615)	36.40112 (85102411)	38.09010 (85111310)	43.21527 (85062211)	53.97794 (85062211)
-300.0	39.93344 (85062211)	46.56794 (85062211)	52.13625 (85062211)	54.37699 (85062211)	50.21875 (85062211)
-400.0	43.22047 (85062211)	41.84307 (85062211)	37.22678 (85091909)	39.02277 (85102313)	40.41279 (85043015)
-500.0	39.65079 (85070307)	39.28815 (85070307)	36.13105 (85101717)	38.14403 (85102511)	39.99079 (85100817)
-600.0	37.40906 (85070307)	34.22662 (85070411)	35.80968 (85092815)	36.82890 (85092915)	38.57813 (85100815)
-700.0	32.36433 (85060617)	33.27304 (85102513)	34.68298 (85100816)	35.71944 (85100717)	38.56606 (85062218)
-800.0	31.55170 (85101816)	32.28520 (85100903)	33.49488 (85091406)	37.48737 (85062218)	37.34173 (85062218)
-900.0	30.79139 (85052612)	31.44583 (85091621)	35.79662 (85062218)	35.34649 (85062218)	34.63399 (85051416)
-1000.0	29.37231 (85091424)	33.83661 (85062218)	33.20406 (85062218)	32.41014 (85091605)	33.50068 (85060519)
-1100.0	31.82122 (85062218)	31.07827 (85062218)	30.71952 (85051118)	31.63197 (85060519)	32.20868 (85100714)
-1200.0	29.06489 (85062218)	29.01189 (85091318)	29.76377 (85091407)	32.58340 (85091907)	30.93995 (85051516)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	32.19458 (85112815)	32.66175 (85080811)	33.05861 (85090106)	33.32339 (85112810)	40.48720 (85072313)
1100.0	33.30873 (85102816)	33.76353 (85083010)	34.52789 (85112115)	34.34586 (85112114)	42.19595 (85072313)
1000.0	34.45301 (85040514)	35.65057 (85081118)	35.59272 (85010303)	36.59522 (85061610)	38.79057 (85072313)
900.0	35.83248 (85110316)	36.81866 (85031417)	37.04924 (85032715)	38.66456 (85020514)	39.36268 (85010311)
800.0	37.15910 (85033014)	39.05807 (85082510)	40.28741 (85090115)	40.11728 (85020113)	41.79240 (85061610)
700.0	38.43337 (85022414)	39.69834 (85112108)	41.56411 (85061609)	42.40725 (85032109)	42.70678 (85020112)
600.0	39.79742 (85022413)	40.72852 (85022414)	41.63163 (85031416)	47.89677 (85090110)	48.57579 (85020113)
500.0	41.52723 (85112014)	42.71088 (85082817)	46.25160 (85112112)	47.29861 (85033011)	50.57717 (85020114)
400.0	41.65817 (85102702)	46.68818 (85030410)	50.58956 (85082817)	50.46980 (85032108)	50.39644 (85061112)
300.0	42.88760 (85082902)	46.16746 (85032016)	52.47071 (85101918)	49.96641 (85080714)	52.85349 (85032108)
200.0	46.11702 (85082824)	48.19869 (85072816)	49.44623 (85022310)	50.54568 (85081212)	50.55750 (85032113)
100.0	45.87325 (85041110)	49.07832 (85121021)	55.20954 (85111916)	57.57151 (85111915)	55.58419 (85082613)
0.0	47.65000 (85101711)	50.32811 (85030722)	53.47622 (85041211)	55.33958 (85041211)	63.85421 (85041211)
-100.0	47.79795 (85082614)	50.89044 (85022113)	53.58963 (85030802)	59.86891 (85111904)	67.91324 (85041220)
-200.0	62.98137 (85062211)	63.76194 (85062211)	54.80711 (85091521)	58.58881 (85030712)	58.67517 (85030711)
-300.0	43.64554 (85030705)	48.95704 (85111823)	52.36691 (85101921)	53.00233 (85091517)	57.97292 (85091504)
-400.0	43.17382 (85091612)	47.49073 (85092816)	50.20628 (85091503)	52.25693 (85091504)	57.27810 (85091414)
-500.0	41.44794 (85100818)	43.76153 (85111812)	46.54818 (85111819)	50.51619 (85091416)	53.31977 (85091415)
-600.0	39.93743 (85102512)	40.52832 (85091507)	43.77402 (85091516)	46.06884 (85051417)	47.76346 (85030311)
-700.0	38.93280 (85062218)	40.10831 (85051416)	41.42202 (85100915)	41.06368 (85100912)	42.93426 (85100917)
-800.0	37.69396 (85051416)	38.88638 (85092414)	38.72215 (85100912)	40.41833 (85030311)	39.95544 (85020715)
-900.0	36.08049 (85101817)	37.13044 (85051417)	37.73397 (85041716)	38.47696 (85100917)	38.98994 (85022017)
-1000.0	34.42430 (85100722)	35.56618 (85100911)	35.70060 (85100721)	36.84344 (85041715)	36.87448 (85022016)
-1100.0	33.32433 (85051516)	33.88760 (85100720)	33.00327 (85100917)	34.38822 (85052611)	36.08149 (85100916)
-1200.0	31.59209 (85021920)	31.96308 (85022023)	33.04168 (85100616)	33.76940 (85100908)	33.86057 (85092510)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	34.77670 (85103115)	34.81090 (85041415)	35.45317 (85061212)	34.88732 (85121214)	33.99488 (85062616)
1100.0	36.61124 (85103115)	36.65375 (85041415)	37.09074 (85061212)	36.48072 (85121214)	35.18091 (85062616)
1000.0	38.20696 (85061607)	38.26332 (85112113)	38.66382 (85061212)	38.20842 (85011713)	37.61530 (85083109)
900.0	40.30141 (85083113)	40.52929 (85112113)	40.07670 (85061212)	39.90477 (85080812)	40.14205 (85083109)
800.0	42.72136 (85090108)	41.22203 (85112113)	41.01194 (85061212)	41.12154 (85080812)	39.01611 (85112210)
700.0	47.19052 (85090107)	44.59528 (85031618)	45.42159 (85021121)	45.40759 (85122510)	43.84715 (85012812)
600.0	47.58643 (85010311)	45.76467 (85061811)	46.95233 (85021121)	48.19403 (85122510)	47.80982 (85110109)
500.0	50.40902 (85021113)	48.74329 (85020117)	47.21291 (85021121)	49.76915 (85083109)	46.67286 (85020215)
400.0	52.81060 (85020113)	51.23687 (85090108)	45.34878 (85021121)	52.49580 (85083111)	51.59719 (85050313)
300.0	55.98860 (85090110)	55.52407 (85090111)	50.46592 (85072411)	45.91852 (85110109)	50.47465 (85050311)
200.0	64.20194 (85032108)	78.32185 (85020113)	76.14783 (85072411)	64.41856 (85050313)	65.24545 (85052415)
100.0	70.20208 (85102622)	141.24180 (85100404)	116.71250 (85072411)	99.17548 (85051721)	83.35410 (85061406)
0.0	94.88007 (85041211)	143.37770 (85041211)	0.00000 (0)	138.72430 (85021213)	90.35144 (85021213)
-100.0	95.19014 (85030712)	143.53260 (85091504)	110.39800 (85011216)	118.79930 (85021516)	93.97675 (85021212)
-200.0	72.80439 (85091504)	71.23856 (85100913)	74.34753 (85011216)	63.65733 (85011515)	60.80478 (85031813)
-300.0	56.90234 (85091420)	55.57342 (85040917)	49.38959 (85011216)	55.52259 (85031811)	48.56850 (85051511)
-400.0	49.01745 (85100913)	56.96903 (85040908)	44.86242 (85011913)	50.89195 (85012612)	45.79593 (85010711)
-500.0	53.11313 (85040912)	49.91082 (85100914)	46.66616 (85011913)	48.55621 (85020817)	49.47152 (85031810)
-600.0	49.23722 (85040917)	48.51854 (85040913)	45.59339 (85011216)	47.69640 (85020804)	46.80293 (85110409)
-700.0	46.65639 (85040916)	47.48162 (85040913)	44.28749 (85011216)	45.83936 (85012611)	44.66799 (85031811)
-800.0	42.20504 (85092510)	41.42706 (85040913)	39.80307 (85011216)	40.31933 (85012611)	41.46029 (85012612)
-900.0	40.21392 (85100914)	39.22105 (85040910)	38.62703 (85020714)	39.78024 (85062820)	38.59603 (85020817)
-1000.0	38.13130 (85092517)	37.12854 (85022019)	37.39053 (85020714)	38.13166 (85062820)	36.78207 (85020818)
-1100.0	36.00972 (85092515)	35.97546 (85022019)	35.97211 (85020714)	35.68351 (85062820)	35.18805 (85020721)
-1200.0	34.27126 (85030616)	34.45167 (85092511)	34.46881 (85020714)	33.47481 (85020819)	34.35645 (85081018)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	33.26242 (85112210)	33.10973 (85110109)	42.06072 (85061306)	31.35766 (85032207)	31.28164 (85072320)
1100.0	34.98713 (85012812)	37.51980 (85061306)	35.13993 (85061306)	33.91644 (85072320)	33.67329 (85062917)
1000.0	36.49219 (85012812)	42.79961 (85061306)	33.94582 (85011714)	33.32827 (85081915)	33.87505 (85020214)
900.0	39.50134 (85110109)	39.44338 (85083115)	37.36273 (85072321)	36.50024 (85062917)	36.34521 (85050317)
800.0	41.57271 (85020216)	37.73894 (85011714)	39.48410 (85081915)	37.99414 (85051618)	36.19443 (85020616)
700.0	43.50629 (85083115)	39.21409 (85072321)	40.37519 (85012012)	36.17937 (85020616)	37.65991 (85050316)
600.0	43.47099 (85011714)	43.03020 (85081915)	39.60465 (85121313)	39.53645 (85050316)	39.79743 (85031709)
500.0	47.67968 (85081915)	48.98438 (85083117)	44.07533 (85050316)	41.67406 (85012815)	40.38113 (85050315)
400.0	49.03829 (85083117)	47.34180 (85051815)	49.83590 (85110113)	43.38919 (85012814)	41.67197 (85012511)
300.0	51.66510 (85052415)	51.78088 (85110113)	48.48659 (85052016)	48.08905 (85031710)	40.50520 (85032210)
200.0	54.50551 (85050314)	50.58767 (85031710)	45.42189 (85032212)	44.26419 (85032211)	41.51794 (85051309)
100.0	44.80625 (85032213)	46.87426 (85040111)	49.75028 (85051714)	45.72094 (85062712)	44.07306 (85031717)
0.0	60.46743 (85021213)	50.68610 (85021213)	48.38506 (85021213)	45.42164 (85122912)	45.23549 (85122912)
-100.0	60.92908 (85021215)	52.71523 (85021216)	52.03779 (85021214)	47.69641 (85021205)	45.66424 (85021217)
-200.0	54.36891 (85021211)	57.16811 (85021212)	53.24635 (85021206)	49.18493 (85021215)	45.80431 (85080318)
-300.0	48.78223 (85031813)	49.17848 (85021211)	46.39614 (85051611)	47.20000 (85010410)	42.91491 (85070917)
-400.0	51.66946 (85122512)	47.65312 (85021516)	47.21156 (85021515)	45.76923 (85010412)	40.50647 (85051710)
-500.0	47.73152 (85010509)	47.38626 (85010713)	45.17859 (85110417)	41.95807 (85010514)	40.22786 (85121413)
-600.0	45.93808 (85011515)	45.68777 (85120610)	41.24771 (85010713)	40.36328 (85110417)	38.56499 (85011910)
-700.0	41.46326 (85012613)	40.97097 (85031814)	40.42498 (85121411)	38.59010 (85032507)	38.13393 (85110417)
-800.0	40.29751 (85031810)	39.56010 (85011515)	38.47064 (85011211)	37.03121 (85011114)	41.40207 (85032507)
-900.0	38.87476 (85110409)	37.45570 (85012613)	36.96633 (85031814)	36.23866 (85120610)	34.77229 (85031802)
-1000.0	36.08184 (85040310)	35.77339 (85011214)	35.26234 (85011515)	34.49765 (85011212)	33.41496 (85011114)
-1100.0	34.26443 (85120612)	33.76595 (85120613)	33.43243 (85120608)	33.02311 (85120611)	32.40976 (85120603)
-1200.0	32.76507 (85012311)	32.88028 (85120613)	32.30765 (85101916)	31.50037 (85040309)	30.32486 (85122513)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	31.49392 (85062917)	30.94649 (85083118)	28.67355 (85031708)	29.02171 (85020616)	27.16704 (85103017)
1100.0	32.78485 (85020214)	30.43426 (85031708)	31.11203 (85020616)	28.83319 (85050316)	28.97623 (85011717)
1000.0	33.57010 (85050317)	33.16437 (85020616)	30.94015 (85050316)	30.77059 (85011717)	28.95746 (85011815)
900.0	34.97927 (85020616)	33.16840 (85050316)	32.78377 (85051717)	31.35871 (85031715)	29.89792 (85050315)
800.0	35.45267 (85050316)	35.21065 (85051717)	33.49489 (85031715)	32.88559 (85050315)	30.62423 (85051723)
700.0	37.24664 (85051717)	35.81757 (85012816)	34.80858 (85121314)	32.64675 (85051723)	31.88712 (85110116)
600.0	37.80489 (85050315)	35.17514 (85051723)	35.58526 (85110116)	33.84291 (85110115)	33.13004 (85051715)
500.0	39.42912 (85012512)	37.46569 (85012511)	36.84290 (85051715)	35.25066 (85062916)	32.70596 (85052014)
400.0	40.54163 (85051718)	38.51953 (85032210)	34.29013 (85031718)	35.86920 (85081014)	33.37601 (85012015)
300.0	40.13667 (85081014)	37.99208 (85012015)	34.95612 (85012015)	34.82164 (85042918)	33.03862 (85122914)
200.0	39.21858 (85062914)	39.50216 (85070119)	37.31059 (85070119)	34.96989 (85031720)	34.68015 (85050318)
100.0	38.99762 (85032215)	38.42514 (85062913)	38.25227 (85062913)	36.96905 (85062913)	35.08581 (85062913)
0.0	40.84768 (85122912)	39.60122 (85122912)	37.96286 (85122912)	36.22169 (85122912)	34.46178 (85122912)
-100.0	41.11341 (85010421)	38.90131 (85021209)	36.42831 (85021209)	34.78250 (85071415)	34.04157 (85081019)
-200.0	41.28991 (85021216)	39.03176 (85110511)	37.08480 (85110413)	35.12840 (85110510)	33.97286 (85051702)
-300.0	40.38185 (85092614)	37.66349 (85121409)	36.75039 (85010411)	34.54755 (85080318)	34.19717 (85122915)
-400.0	40.07158 (85051619)	37.42135 (85070917)	36.68292 (85092614)	34.72594 (85092614)	33.15592 (85121409)
-500.0	38.62329 (85032315)	36.94790 (85060209)	35.63002 (85051619)	33.37313 (85012022)	32.90107 (85102919)
-600.0	37.12325 (85031712)	36.16445 (85050411)	34.83028 (85031722)	33.95819 (85060209)	32.54182 (85011115)
-700.0	36.20937 (85112215)	34.61774 (85010511)	33.45164 (85110411)	32.95468 (85032315)	32.32294 (85092617)
-800.0	35.66866 (85110417)	34.05815 (85112215)	32.84007 (85010813)	31.77134 (85031712)	31.39206 (85050411)
-900.0	42.48138 (85032507)	33.24886 (85110418)	31.62893 (85060308)	30.55748 (85010813)	30.50643 (85032317)
-1000.0	36.27132 (85032507)	42.38951 (85032507)	31.42850 (85032318)	30.28317 (85060308)	28.30065 (85112215)
-1100.0	32.38459 (85011114)	39.76265 (85032507)	41.54316 (85032507)	29.85490 (85032318)	28.74657 (85060308)
-1200.0	30.11522 (85012608)	29.54059 (85012607)	41.67687 (85032507)	40.23472 (85032507)	28.28613 (85032318)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	15.64739c(85032816)	13.23367 (85033016)	16.18041 (85033016)	13.97629 (85082516)	13.51172 (85010216)
1100.0	16.90213c(85032816)	16.97225c(85032816)	14.79738 (85033016)	17.43819 (85033016)	15.32795 (85082516)
1000.0	14.51183 (85022416)	18.22575c(85032816)	18.44364c(85032816)	16.60195 (85033016)	18.51954 (85033016)
900.0	17.82972 (85112016)	15.18092 (85022416)	19.62619c(85032816)	20.06286c(85032816)	18.66076 (85033016)
800.0	18.46712 (85112016)	20.24088 (85112016)	17.64925 (85112016)	21.05112c(85032816)	21.81087c(85032816)
700.0	17.97001 (85102708)	18.59213 (85010116)	22.34340 (85112016)	20.96384 (85112016)	22.38879c(85032816)
600.0	23.58412 (85102708)	23.44168 (85102708)	19.65406 (85010116)	23.23791 (85112016)	24.70934 (85112016)
500.0	14.30355 (85090216)	20.46641 (85102708)	25.62672 (85102708)	24.16094 (85102708)	22.58537 (85010116)
400.0	15.65826 (85090216)	17.36135 (85090216)	18.64342 (85090216)	20.80326 (85102708)	27.26735 (85102708)
300.0	15.44807 (85121108)	16.57245 (85111924)	18.87669 (85090216)	21.69168 (85090216)	24.17410 (85090216)
200.0	18.31291 (85042308)	18.30902 (85042216)	19.44042 (85042216)	19.79331 (85042216)	20.26155 (85112616)
100.0	18.18898 (85022216)	18.80526 (85022216)	19.08508 (85022216)	20.64540 (85042216)	23.88380 (85042216)
0.0	17.87071 (85022224)	19.29650 (85022224)	20.86149 (85022224)	22.56321 (85022224)	24.32486 (85022224)
-100.0	22.83253 (85022224)	24.03274 (85022224)	24.98340 (85022224)	25.44291 (85022224)	25.09356 (85111416)
-200.0	20.27574 (85111416)	20.46060 (85111416)	19.95903 (85111416)	19.05691 (85041816)	23.32780 (85041016)
-300.0	18.36934 (85041016)	22.13341 (85041016)	24.94766 (85041016)	26.68284 (85042024)	28.37539 (85042024)
-400.0	22.39170 (85042024)	24.06522 (85042024)	23.60348 (85042024)	22.08926 (85111808)	21.98347 (85030708)
-500.0	19.24755 (85042024)	19.29256 (85111808)	18.63779 (85030708)	21.84633 (85092824)	24.85357 (85092824)
-600.0	15.86816 (85030708)	18.71133 (85092824)	23.12959 (85092824)	20.33885 (85102516)	21.83544 (85100824)
-700.0	20.43802 (85092824)	20.91492 (85092824)	18.53616 (85102516)	20.72790 (85100824)	20.53036 (85091508)
-800.0	17.25067 (85092824)	16.88642 (85100824)	19.25641 (85100824)	18.61271 (85091608)	21.91914 (85091608)
-900.0	16.18865 (85100824)	17.69752 (85100824)	17.74360 (85091608)	20.38647 (85091608)	18.88622 (85091608)
-1000.0	16.18354 (85100824)	16.77843 (85091608)	18.92298 (85091608)	17.90082 (85091608)	17.70329 (85100716)
-1100.0	15.79500 (85091608)	17.55858 (85091608)	16.86048 (85091608)	15.84509 (85100716)	15.64820 (85100716)
-1200.0	16.30345 (85091608)	15.82839 (85091608)	14.03521 (85100716)	15.46053 (85100716)	14.18392 (85100916)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	13.71196 (85083024)	18.40977 (85020516)	15.89366 (85101116)	16.17745 (85101116)	14.26403 (85090108)
1100.0	15.25782 (85010216)	15.95686 (85020516)	19.19297 (85020516)	18.65914 (85101116)	15.86350 (85090108)
1000.0	16.32088 (85082516)	15.96140 (85010216)	20.65283 (85020516)	20.49450 (85101116)	18.36058 (85101116)
900.0	19.16207 (85033016)	16.75322 (85010216)	18.68590 (85112816)	20.79320 (85020516)	22.33739 (85101116)
800.0	20.94568 (85033016)	21.68916 (85061616)	18.54414 (85010216)	22.84426 (85020516)	25.98212 (85101116)
700.0	23.62366c(85032816)	23.32226 (85033016)	23.95494 (85061616)	22.24883 (85112816)	26.90661 (85101116)
600.0	24.21706 (85022616)	25.53556 (85022616)	25.54565 (85061616)	24.84277 (85061616)	26.22287 (85020516)
500.0	28.09658 (85112016)	25.26199 (85022616)	29.19086 (85022616)	31.30155 (85061616)	24.52354 (85090116)
400.0	23.11428 (85102708)	30.46467 (85112016)	28.21593 (85112016)	31.20525 (85022616)	34.94289 (85061616)
300.0	24.67262 (85090216)	30.07134 (85102708)	26.24134 (85010116)	33.36455 (85112016)	29.74411 (85022616)
200.0	24.93386 (85090216)	28.99299 (85090216)	30.24028 (85090216)	29.45302 (85072716)	30.86992 (85112016)
100.0	28.16390 (85042216)	31.32465 (85042216)	32.11757 (85042216)	26.44220 (85042216)	26.56573 (85090216)
0.0	27.46586 (85022224)	29.47829 (85022224)	31.08647 (85022224)	31.78068 (85022224)	37.07593 (85022224)
-100.0	28.73676 (85111416)	28.96470 (85111416)	26.77477 (85041816)	27.49741 (85041816)	41.19796 (85111908)
-200.0	30.42680 (85041016)	32.37756 (85042024)	33.26505 (85111908)	29.81004 (85030708)	25.07233 (85100816)
-300.0	24.95753 (85042024)	26.95473 (85030708)	28.68158 (85092824)	27.98176 (85100816)	26.22496 (85091608)
-400.0	25.03098 (85092824)	25.91736 (85102516)	28.44451 (85100824)	28.16032 (85091608)	26.01630 (85091516)
-500.0	22.34624 (85100816)	24.69481 (85100824)	28.06219 (85091608)	25.11771 (85091516)	25.93927 (85100916)
-600.0	22.65026 (85100824)	24.86032 (85091608)	21.14374 (85100716)	22.90159 (85100916)	17.31564 (85052716)
-700.0	23.45460 (85091608)	20.13194 (85091608)	19.24398 (85100716)	20.94180 (85100916)	16.92226 (85040916)
-800.0	19.70039 (85091608)	20.18524 (85100716)	21.03542 (85100916)	14.15937 (85041716)	15.52766 (85040916)
-900.0	19.33811 (85100716)	17.67353 (85100916)	17.23968 (85100916)	14.18276 (85040916)	12.22704 (85040916)
-1000.0	14.86696 (85100716)	18.33088 (85100916)	11.88458 (85041716)	14.09870 (85040916)	12.61820 (85092516)
-1100.0	16.77573 (85100916)	14.13579 (85100916)	11.68582 (85040916)	11.91121 (85040916)	15.28525 (85092516)
-1200.0	15.47303 (85100916)	9.96682 (85041716)	12.22130 (85040916)	9.62922 (85040916)	16.42460 (85092516)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	21.46130 (85020124)	13.19857c(85031624)	15.12177 (85021124)	17.08765 (85021124)	11.03300 (85083116)
1100.0	21.60451 (85020124)	13.72419c(85031624)	15.99011 (85021124)	17.38928 (85021124)	12.98202 (85083116)
1000.0	20.59270 (85020124)	15.77475 (85020124)	16.87187 (85021124)	17.35187 (85021124)	14.93461 (85083116)
900.0	18.06120 (85020124)	18.29197 (85020124)	17.73540 (85021124)	16.79482 (85021124)	16.48608 (85083116)
800.0	18.16153 (85052116)	20.84408 (85020124)	18.45144 (85021124)	15.44307 (85021124)	16.98544 (85083116)
700.0	23.66635 (85101116)	25.08184 (85020124)	20.66241 (85021124)	16.68219 (85083116)	16.04948 (85083116)
600.0	29.54707 (85101116)	25.83674 (85020124)	21.02226 (85021124)	20.87880 (85083116)	15.68878 (85041416)
500.0	32.20009 (85101116)	22.89700 (85020124)	20.74659 (85021124)	24.30027 (85083116)	16.73548 (85041416)
400.0	24.52797 (85020516)	20.43973 (85101116)	19.51647 (85021124)	23.25381 (85083116)	13.99652 (85041416)
300.0	30.23388 (85061616)	26.27419 (85101116)	21.84374 (85021124)	16.46972 (85083116)	13.88673 (85050316)
200.0	29.50018 (85022616)	34.21925 (85020516)	34.17437 (85021124)	14.95634 (85050316)	18.07597 (85052416)
100.0	37.32503 (85102708)	58.04601 (85032108)	53.32373 (85021124)	37.41361 (85011724)	23.40723 (85012516)
0.0	56.65723 (85022224)	87.94914 (85022224)	0.00000 (0)	28.83121 (85122916)	21.76823 (85122916)
-100.0	46.71529 (85030708)	66.78459 (85091608)	44.86193 (85020724)	53.02045 (85012108)	32.74088 (85010416)
-200.0	30.26731 (85091508)	24.23447 (85100916)	27.70309 (85020724)	24.76099 (85021516)	23.54812 (85012108)
-300.0	23.43749 (85091416)	19.19956 (85040916)	19.21466 (85092516)	21.60416 (85031816)	23.93959 (85031808)
-400.0	19.38338 (85052716)	23.97723 (85092516)	18.20817 (85092516)	14.92008 (85012616)	18.61326 (85021516)
-500.0	20.33958 (85040916)	26.65454 (85092516)	18.83997 (85092516)	15.88760 (85012616)	19.60325 (85012916)
-600.0	16.15848 (85040916)	24.55927 (85092516)	18.35560 (85092516)	16.57431 (85012616)	18.30897 (85031816)
-700.0	18.70644 (85092516)	21.65250 (85092516)	17.33423 (85092516)	16.80511 (85012616)	18.19754 (85120616)
-800.0	21.04923 (85092516)	18.12503 (85092516)	15.71168 (85121816)	15.46749 (85012616)	14.72039 (85120616)
-900.0	21.31327 (85092516)	19.35670 (85020724)	15.77500 (85121816)	14.86263 (85012616)	12.10390 (85120616)
-1000.0	19.84331 (85092516)	20.25117 (85020724)	15.55345 (85121816)	14.01417 (85012616)	11.08173 (85012616)
-1100.0	17.76402 (85092516)	20.42948 (85020724)	15.20099 (85121816)	13.08105 (85012616)	11.16172 (85020724)
-1200.0	15.67122 (85092516)	20.12750 (85020724)	14.76486 (85121816)	12.14157 (85012616)	10.87321 (85020724)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	11.13238 (85083116)	12.13125 (85072408)	10.40442 (85072324)	10.20541 (85072324)	10.27535 (85121324)
1100.0	11.50964 (85072408)	11.46958 (85072408)	10.49087 (85072324)	10.06826 (85072324)	9.16898 (85103016)
1000.0	11.82840 (85072408)	11.72338 (85020216)	10.83383 (85072324)	10.31839 (85103016)	9.96464 (85012508)
900.0	11.72662 (85072408)	11.12299 (85020216)	10.79788 (85103016)	10.80120 (85103016)	11.16241 (85121316)
800.0	13.15067 (85020216)	11.18973 (85072324)	12.62141 (85103016)	12.16385 (85121316)	13.19195 (85121316)
700.0	13.58492 (85020216)	13.32294 (85103016)	12.83585 (85121316)	15.03800 (85121316)	12.72825 (85121316)
600.0	12.18439 (85072324)	14.13580 (85103016)	16.84643 (85121316)	14.35413 (85121316)	19.39933 (85012816)
500.0	14.81452 (85103016)	18.06891 (85121316)	15.80772 (85121316)	23.13490 (85012816)	24.87813 (85012816)
400.0	17.44935 (85121316)	16.42096 (85052416)	28.78129 (85012816)	22.30710 (85012816)	16.80609 (85012824)
300.0	17.48442 (85052416)	29.38386 (85012816)	18.01661 (85012824)	17.23048 (85051724)	19.87506 (85012524)
200.0	19.65699 (85012816)	17.34361 (85081016)	24.56237 (85032216)	24.66112 (85032216)	22.60093 (85032216)
100.0	23.46965 (85032216)	21.55254 (85032216)	20.09430 (85032216)	17.78081 (85032216)	15.35664 (85032216)
0.0	16.97544 (85062816)	18.03844 (85062816)	18.54045 (85062816)	17.36242 (85062816)	15.69090 (85122916)
-100.0	20.46003 (85021216)	18.55181 (85021216)	20.32010 (85110516)	20.59016 (85110516)	18.77345 (85110516)
-200.0	17.47354 (85012316)	20.06461 (85010416)	21.45002 (85060216)	18.40837 (85060216)	15.15260 (85021216)
-300.0	19.13152 (85012116)	25.73588 (85010516)	24.29412 (85012316)	18.67545 (85060216)	17.72075 (85060216)
-400.0	24.28812 (85031808)	20.25422 (85012116)	26.11363 (85010516)	20.53859 (85012316)	21.02410 (85012316)
-500.0	25.89267 (85031808)	27.37758 (85012108)	19.69604 (85012116)	21.52308 (85010516)	20.42166 (85010516)
-600.0	19.96761 (85012916)	29.37381 (85031808)	26.78518 (85012108)	17.34294 (85012116)	18.54998 (85010516)
-700.0	19.24680 (85012916)	20.52198 (85031808)	25.56833 (85031808)	26.42540 (85012108)	16.00369 (85012116)
-800.0	15.72956 (85012916)	17.30756 (85012916)	23.70618 (85031808)	22.37862 (85031808)	24.80191 (85012108)
-900.0	15.12983 (85120616)	17.11177 (85012916)	17.16324 (85031808)	24.13270 (85031808)	18.94549 (85012108)
-1000.0	15.55859 (85120616)	14.79422 (85012916)	14.82526 (85012916)	19.65252 (85031808)	22.80731 (85031808)
-1100.0	14.65523 (85120616)	12.11664 (85031816)	14.61079 (85012916)	14.32716 (85031808)	20.61055 (85031808)
-1200.0	13.00995 (85120616)	13.09664 (85120616)	13.10222 (85012916)	12.61452 (85012916)	16.21044 (85031808)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	9.14896 (85012508)	8.79357 (85012508)	9.18585 (85050308)	8.63109 (85020616)	7.81403 (85011816)
1100.0	9.67323 (85012508)	9.03122 (85121316)	9.19495 (85020616)	8.13904 (85011816)	11.64537 (85011724)
1000.0	10.07797 (85121316)	10.05007 (85121316)	8.60832 (85121316)	12.31582 (85011724)	14.72673 (85012816)
900.0	11.51121 (85121316)	9.80029 (85121316)	12.48435 (85011724)	17.16513 (85012816)	18.86380 (85012816)
800.0	11.17922 (85121316)	13.30870 (85012816)	19.88659 (85012816)	19.86348 (85012816)	14.63171 (85011816)
700.0	16.03631 (85012816)	22.64021 (85012816)	19.69549 (85012816)	16.37797 (85012824)	16.23904 (85012824)
600.0	24.76889 (85012816)	17.57497 (85012816)	17.69199 (85012824)	13.92980 (85051724)	12.74480 (85051724)
500.0	18.06405 (85012824)	15.48831 (85012824)	14.09388 (85051724)	17.96299 (85012524)	20.60659 (85012524)
400.0	15.29321 (85051724)	19.54996 (85012524)	22.04096 (85012524)	20.72439 (85012524)	17.23587 (85012524)
300.0	21.63384 (85012524)	18.55498 (85032216)	16.87175 (85032216)	15.22812 (85032216)	13.67877 (85032216)
200.0	20.14039 (85032216)	17.70556 (85032216)	15.42128 (85032216)	13.37111 (85032216)	11.92682 (85071708)
100.0	13.91005 (85062916)	13.27022 (85062916)	12.42406 (85062916)	11.50447 (85062916)	10.90910 (85122916)
0.0	14.19217 (85122916)	13.37164 (85122916)	12.49943 (85122916)	11.65573 (85122916)	10.86165 (85122916)
-100.0	16.35823 (85010816)	15.40117 (85010816)	14.30765 (85010816)	13.20686 (85010816)	12.15757 (85010816)
-200.0	14.22150 (85110516)	15.47046 (85110516)	15.52248 (85110516)	14.75084 (85110516)	13.54609 (85110516)
-300.0	16.14420 (85060216)	14.04519 (85012024)	13.21583 (85012024)	11.30530 (85012024)	10.58382 (85110516)
-400.0	15.38367 (85010424)	14.13678 (85060216)	13.22185 (85060216)	11.96363 (85012024)	12.16849 (85012024)
-500.0	20.42701 (85012316)	18.16428 (85012316)	13.84645 (85010424)	11.54608 (85010416)	10.88812 (85010416)
-600.0	21.09429 (85010516)	16.57442 (85012316)	18.84327 (85012316)	15.36394 (85012316)	12.29771 (85010424)
-700.0	15.70260 (85010516)	20.02636 (85010516)	15.80875 (85010516)	16.74477 (85012316)	16.50748 (85012316)
-800.0	14.69862 (85012108)	13.31415 (85010516)	18.19087 (85010516)	16.36797 (85010516)	13.77595 (85012316)
-900.0	22.81879 (85012108)	13.54619 (85012108)	11.36056 (85010516)	16.16042 (85010516)	16.05381 (85010516)
-1000.0	19.64998 (85012108)	20.80266 (85012108)	12.75151 (85011208)	9.77110 (85010516)	14.21208 (85010516)
-1100.0	20.59970 (85031808)	19.51790 (85012108)	18.89866 (85012108)	12.31777 (85011208)	8.47390 (85010516)
-1200.0	20.37456 (85031808)	18.11603 (85031808)	18.86624 (85012108)	17.16208 (85012108)	11.67105 (85011208)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	143.53260	(85091504)	AT (	-100.00,	-100.00)	GC	26.	115.12170	(85022210)	AT (	-100.00,	0.00)	GC
2.	143.37770	(85041211)	AT (	-100.00,	0.00)	GC	27.	114.86530	(85022224)	AT (	-100.00,	0.00)	GC
3.	142.76200	(85030709)	AT (	-100.00,	-100.00)	GC	28.	114.86510	(85041117)	AT (	-100.00,	0.00)	GC
4.	141.24180	(85100404)	AT (	-100.00,	100.00)	GC	29.	114.70180	(85101710)	AT (	-100.00,	0.00)	GC
5.	140.24520	(85041223)	AT (	-100.00,	0.00)	GC	30.	114.64030	(85041203)	AT (	-100.00,	0.00)	GC
6.	138.72430	(85021213)	AT (	100.00,	0.00)	GC	31.	112.91140	(85121101)	AT (	-100.00,	0.00)	GC
7.	134.49260	(85041116)	AT (	-100.00,	0.00)	GC	32.	112.42230	(85021121)	AT (	0.00,	100.00)	GC
8.	129.41680	(85030722)	AT (	-100.00,	0.00)	GC	33.	112.10830	(85022121)	AT (	-100.00,	0.00)	GC
9.	129.10090	(85041108)	AT (	-100.00,	0.00)	GC	34.	111.08930	(85112112)	AT (	-100.00,	100.00)	GC
10.	129.07480	(85111819)	AT (	-100.00,	-100.00)	GC	35.	110.39800	(85011216)	AT (	0.00,	-100.00)	GC
11.	128.08210	(85032108)	AT (	-100.00,	100.00)	GC	36.	110.34970	(85091604)	AT (	-100.00,	-100.00)	GC
12.	127.14510	(85022213)	AT (	-100.00,	0.00)	GC	37.	109.76010	(85101711)	AT (	-100.00,	0.00)	GC
13.	126.52600	(85022222)	AT (	-100.00,	0.00)	GC	38.	109.72760	(85032111)	AT (	-100.00,	100.00)	GC
14.	122.59900	(85091507)	AT (	-100.00,	-100.00)	GC	39.	108.95450	(85111813)	AT (	-100.00,	-100.00)	GC
15.	121.05880	(85111817)	AT (	-100.00,	-100.00)	GC	40.	108.78570	(85091505)	AT (	-100.00,	-100.00)	GC
16.	120.83430	(85022208)	AT (	-100.00,	0.00)	GC	41.	108.32160	(85012513)	AT (	100.00,	0.00)	GC
17.	119.25740	(85022219)	AT (	-100.00,	0.00)	GC	42.	108.26840	(85121415)	AT (	100.00,	-100.00)	GC
18.	119.25740	(85030721)	AT (	-100.00,	0.00)	GC	43.	106.98110	(85102209)	AT (	-100.00,	0.00)	GC
19.	119.25100	(85091917)	AT (	-100.00,	0.00)	GC	44.	106.65380	(85111209)	AT (	-100.00,	0.00)	GC
20.	118.79930	(85021516)	AT (	100.00,	-100.00)	GC	45.	106.31370	(85032011)	AT (	-100.00,	0.00)	GC
21.	116.71250	(85072411)	AT (	0.00,	100.00)	GC	46.	106.18130	(85030815)	AT (	-100.00,	0.00)	GC
22.	116.16060	(85111912)	AT (	-100.00,	0.00)	GC	47.	106.18120	(85022311)	AT (	-100.00,	0.00)	GC
23.	115.79400	(85030812)	AT (	-100.00,	0.00)	GC	48.	106.17920	(85041209)	AT (	-100.00,	0.00)	GC
24.	115.64480	(85030411)	AT (	-100.00,	0.00)	GC	49.	105.50910	(85030408)	AT (	-100.00,	0.00)	GC
25.	115.28820	(85121103)	AT (	-100.00,	0.00)	GC	50.	105.19080	(85041205)	AT (	-100.00,	0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		TYPE
1.	87.94914	(85022224)	AT (	-100.00,	0.00)	GC	26.	46.51105	(85011208)	AT (	100.00,	-100.00)	GC
2.	81.36768	(85022216)	AT (	-100.00,	0.00)	GC	27.	46.48795	(85102208)	AT (	-100.00,	0.00)	GC
3.	70.23762	(85041108)	AT (	-100.00,	0.00)	GC	28.	46.41563c	(85032816)	AT (	-100.00,	100.00)	GC
4.	66.99286	(85041208)	AT (	-100.00,	0.00)	GC	29.	46.31253	(85091516)	AT (	-100.00,	-100.00)	GC
5.	66.78459	(85091608)	AT (	-100.00,	-100.00)	GC	30.	46.14879	(85093008)	AT (	-100.00,	0.00)	GC
6.	64.71212	(85041216)	AT (	-100.00,	0.00)	GC	31.	46.06269	(85102316)	AT (	-100.00,	0.00)	GC
7.	63.38887	(85030816)	AT (	-100.00,	0.00)	GC	32.	45.97695	(85061516)	AT (	-100.00,	100.00)	GC
8.	63.03671	(85091508)	AT (	-100.00,	-100.00)	GC	33.	45.85300	(85012116)	AT (	100.00,	-100.00)	GC
9.	59.07895	(85022208)	AT (	-100.00,	0.00)	GC	34.	45.37088	(85111516)	AT (	-100.00,	0.00)	GC
10.	58.04601	(85032108)	AT (	-100.00,	100.00)	GC	35.	44.86193	(85020724)	AT (	0.00,	-100.00)	GC
11.	56.65723	(85022224)	AT (	-200.00,	0.00)	GC	36.	44.69796	(85032608)	AT (	-100.00,	-100.00)	GC
12.	56.22555	(85042224)	AT (	-100.00,	0.00)	GC	37.	44.58287	(85022124)	AT (	-100.00,	0.00)	GC
13.	55.70982	(85041116)	AT (	-100.00,	0.00)	GC	38.	44.49611	(85030416)	AT (	-100.00,	0.00)	GC
14.	54.91069	(85102124)	AT (	-100.00,	0.00)	GC	39.	43.93408	(85111816)	AT (	-100.00,	-100.00)	GC
15.	54.33290	(85030408)	AT (	-100.00,	0.00)	GC	40.	43.92195	(85121108)	AT (	-100.00,	0.00)	GC
16.	53.32373	(85021124)	AT (	0.00,	100.00)	GC	41.	43.90015	(85022416)	AT (	-100.00,	100.00)	GC
17.	53.17721	(85101716)	AT (	-100.00,	0.00)	GC	42.	43.76967	(85091416)	AT (	-100.00,	-100.00)	GC
18.	53.02045	(85012108)	AT (	100.00,	-100.00)	GC	43.	43.56213	(85041108)	AT (	-200.00,	0.00)	GC
19.	52.17234	(85022216)	AT (	-200.00,	0.00)	GC	44.	43.24830	(85041208)	AT (	-200.00,	0.00)	GC
20.	51.30037	(85121016)	AT (	-100.00,	0.00)	GC	45.	43.15989	(85111224)	AT (	-100.00,	0.00)	GC
21.	49.27589	(85111408)	AT (	-100.00,	0.00)	GC	46.	43.13440	(85101708)	AT (	-100.00,	0.00)	GC
22.	48.59715	(85022308)	AT (	-100.00,	0.00)	GC	47.	42.89356	(85022616)	AT (	-100.00,	100.00)	GC
23.	47.11304	(85121024)	AT (	-100.00,	0.00)	GC	48.	42.44099	(85030724)	AT (	-100.00,	0.00)	GC
24.	46.84187	(85052624)	AT (	-100.00,	-100.00)	GC	49.	41.50595	(85030716)	AT (	-200.00,	-100.00)	GC
25.	46.71529	(85030708)	AT (	-200.00,	-100.00)	GC	50.	41.35851	(85041216)	AT (	-200.00,	0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO 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	143.53260	ON 85091504:	AT (-100.00, -100.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO 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	87.94914	ON 85022224:	AT (-100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 584 Informational Message(s)

A Total of 584 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

ISC MODEL RESULTS
CO 1- AND 8-HOUR
100 METER GRID
YEAR 1986

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**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: 1-HR 8-HR

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: CO

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE 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) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: S19C086.dta ; **Output Print File: S19C086.lst
**File for Saving Result Arrays: CO.SAV
**Detailed Error/Message File: S19C086.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.56900E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

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	12.5,	23.2,	0	2	12.5,	25.6,	0	3	12.5,	27.2,	0	4	12.5,	28.0,	0	5	12.5,	28.1,	0	6	12.5,	28.0,	0
7	12.5,	27.1,	0	8	12.5,	25.3,	0	9	12.5,	22.8,	0	10	12.5,	25.3,	0	11	12.5,	27.1,	0	12	12.5,	28.0,	0
13	12.5,	28.1,	0	14	12.5,	28.0,	0	15	12.5,	27.2,	0	16	12.5,	25.6,	0	17	12.5,	23.2,	0	18	12.5,	20.1,	0
19	12.5,	23.2,	0	20	12.5,	25.6,	0	21	12.5,	27.2,	0	22	12.5,	28.0,	0	23	12.5,	28.1,	0	24	12.5,	28.0,	0
25	12.5,	27.1,	0	26	12.5,	25.3,	0	27	12.5,	22.8,	0	28	12.5,	25.3,	0	29	12.5,	27.1,	0	30	12.5,	28.0,	0
31	12.5,	28.1,	0	32	12.5,	28.0,	0	33	12.5,	27.2,	0	34	12.5,	25.6,	0	35	12.5,	23.2,	0	36	12.5,	20.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC   RURAL FLAT   DFAULT

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

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

1.54,   3.09,   5.14,   8.23, 10.80,

*** WIND PROFILE EXPONENTS ***

STABILITY			WIND SPEED CATEGORY			
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: lpalm86.bin FORMAT: UNFORM
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WPALMBCH-FL NAME: WPALMBCH-FL
YEAR: 1986 YEAR: 1986

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN
86	1	1	1	121.0	1.00	288.2	7	1065.0	47.0
86	1	1	2	28.0	2.06	287.6	6	1065.0	47.0
86	1	1	3	4.0	2.06	289.3	6	1065.0	47.0
86	1	1	4	33.0	1.54	289.8	7	1065.0	47.0
86	1	1	5	53.0	1.54	289.8	6	1065.0	47.0
86	1	1	6	52.0	1.00	290.4	5	1065.0	47.0
86	1	1	7	15.0	2.06	290.9	5	1065.0	47.0
86	1	1	8	33.0	2.57	291.5	4	122.0	164.0
86	1	1	9	17.0	4.12	294.3	4	279.0	314.0
86	1	1	10	181.0	3.09	292.6	4	436.0	464.0
86	1	1	11	194.0	2.57	294.3	4	594.0	614.0
86	1	1	12	186.0	1.00	296.5	3	751.0	765.0
86	1	1	13	13.0	2.57	298.7	2	908.0	915.0
86	1	1	14	59.0	1.54	298.2	2	1065.0	1065.0
86	1	1	15	292.0	3.09	295.9	3	1065.0	1065.0
86	1	1	16	344.0	3.09	296.5	4	1065.0	1065.0
86	1	1	17	1.0	2.57	295.9	4	1065.0	1065.0
86	1	1	18	357.0	2.57	294.3	5	1072.0	1013.0
86	1	1	19	24.0	3.09	294.3	5	1087.0	890.0
86	1	1	20	7.0	3.60	293.2	5	1102.0	768.0
86	1	1	21	20.0	3.09	292.6	6	1118.0	645.0
86	1	1	22	22.0	2.57	292.0	6	1133.0	523.0
86	1	1	23	20.0	2.57	291.5	6	1148.0	400.0
86	1	1	24	30.0	2.06	290.4	6	1163.0	278.0

*** 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.

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	28.70019 (86080219)	29.19160 (86101012)	34.38939 (86061506)	36.66028 (86061506)	31.31515 (86121217)
1100.0	32.57234 (86031907)	30.33254 (86080219)	30.94477 (86081319)	35.83506 (86061506)	32.90144 (86061506)
1000.0	30.27500 (86072417)	32.95060 (86031907)	31.98147 (86080219)	33.18052 (86072915)	36.28370 (86061506)
900.0	30.67939 (86101114)	31.90095 (86061018)	33.46198 (86073016)	34.02240 (86102614)	35.34855 (86072915)
800.0	31.65503 (86070117)	32.77931 (86110514)	33.81660 (86061018)	35.32917 (86073016)	36.63043 (86090716)
700.0	32.20692 (86091017)	33.49570 (86071017)	34.92784 (86110615)	36.27235 (86081217)	37.23000 (86101014)
600.0	32.82447 (86083118)	34.34248 (86080910)	36.00810 (86100911)	37.33422 (86071415)	38.72713 (86112914)
500.0	33.64711 (86100815)	35.13960 (86100813)	36.15115 (86112814)	38.25104 (86072616)	39.79648 (86112512)
400.0	33.88057 (86091108)	35.86920 (86061613)	37.55493 (86101412)	39.10279 (86100917)	41.01295 (86081216)
300.0	34.89706 (86080715)	36.33131 (86101312)	37.79097 (86091010)	39.99671 (86083113)	41.46963 (86102414)
200.0	34.92981 (86061016)	36.68568 (86080516)	38.53567 (86093011)	40.52134 (86083111)	42.65657 (86112513)
100.0	35.31870 (86092514)	36.97137 (86092514)	38.92617 (86100714)	41.00446 (86100714)	42.37456 (86050520)
0.0	35.38600 (86093016)	37.01430 (86093016)	38.75077 (86110112)	40.67031 (86102411)	42.80713 (86050512)
-100.0	35.37435 (86091614)	37.03473 (86091614)	38.85382 (86083017)	40.78602 (86092511)	43.01202 (86110815)
-200.0	34.58568 (86091516)	36.64858 (86091516)	38.34086 (86070709)	40.11495 (86091515)	42.53673 (86081116)
-300.0	34.77952 (86092416)	36.35826 (86092615)	38.11448 (86100213)	39.55174 (86070710)	41.48492 (86070717)
-400.0	34.16702 (86101213)	35.81116 (86092617)	37.55494 (86101211)	39.24993 (86092911)	40.75851 (86091714)
-500.0	33.58821 (86100214)	35.08452 (86080716)	36.49549 (86101210)	38.05312 (86092517)	39.78566 (86051013)
-600.0	32.86885 (86101210)	34.29053 (86092517)	35.80424 (86092914)	37.39795 (86100314)	38.66450 (86082220)
-700.0	32.19458 (86060408)	33.38951 (86092116)	34.74368 (86091919)	36.41771 (86091514)	39.19323 (86060406)
-800.0	31.61649 (86101316)	32.66558 (86092719)	33.62985 (86091514)	37.83086 (86060406)	36.44608 (86060516)
-900.0	30.34843 (86120502)	33.08340 (86060406)	36.02110 (86060406)	34.14441 (86060516)	35.15981 (86091616)
-1000.0	33.63286 (86060406)	34.05196 (86060406)	31.88850 (86060516)	33.04812 (86082318)	33.38571 (86060502)
-1100.0	32.07264 (86060406)	29.97803 (86092018)	31.01335 (86082318)	31.26668 (86060502)	32.62969 (86092816)
-1200.0	28.22802 (86060424)	29.09450 (86092720)	29.53035 (86072715)	30.64665 (86100202)	31.61649 (86091217)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	31.92664 (86121106)	32.86884 (86080415)	31.59538 (86072909)	34.21829 (86063016)	35.10315 (86082007)
1100.0	33.27303 (86072119)	33.58039 (86020616)	34.96360 (86072909)	35.36143 (86031213)	35.89015 (86052115)
1000.0	34.56761 (86102514)	34.86166 (86031324)	36.49547 (86080415)	36.69463 (86070218)	37.77132 (86112910)
900.0	36.08049 (86071019)	36.69235 (86113016)	37.52374 (86080115)	38.72599 (86072909)	39.90715 (86082915)
800.0	37.82578 (86080113)	39.03057 (86070216)	40.28741 (86080117)	40.19057 (86122318)	41.18687 (86070218)
700.0	39.30519 (86090716)	40.26881 (86080113)	41.48276 (86090715)	43.17037 (86080115)	41.59408 (86122317)
600.0	40.34203 (86061116)	42.45847 (86100915)	44.03930 (86072916)	46.77940 (86122321)	47.49128 (86122318)
500.0	41.89907 (86081215)	43.53653 (86103011)	48.23554 (86100915)	48.98440 (86081315)	52.45768 (86122320)
400.0	43.35597 (86080315)	47.64748 (86102910)	50.04604 (86122313)	51.41795 (86070515)	51.27958 (86122312)
300.0	44.07228 (86093013)	49.09822 (86102911)	50.97755 (86122304)	54.69748 (86081009)	54.58671 (86123116)
200.0	47.81577 (86091014)	49.63065 (86110111)	53.62379 (86111110)	56.80919 (86122305)	55.37679 (86112412)
100.0	47.98846 (86081021)	51.11279 (86120811)	52.66795 (86120913)	53.16965 (86082113)	61.22330 (86122301)
0.0	47.72234 (86050512)	50.55541 (86110813)	53.29824 (86110813)	55.04828 (86122224)	66.19540 (86122224)
-100.0	48.21357 (86111011)	51.04435 (86091715)	54.32090 (86010906)	55.50726 (86110722)	61.80616 (86111423)
-200.0	47.49088 (86111010)	50.16330 (86111423)	53.51469 (86010822)	56.60447 (86032515)	59.88618 (86051402)
-300.0	43.90526 (86110721)	48.90496 (86091714)	52.89145 (86092014)	54.90290 (86111411)	58.44040 (86101920)
-400.0	43.36709 (86092015)	47.60490 (86060410)	50.04147 (86111422)	52.34929 (86060414)	54.62403 (86101823)
-500.0	41.51721 (86091618)	42.70975 (86120702)	48.32304 (86060414)	49.51103 (86111406)	51.24957 (86111405)
-600.0	40.16458 (86092818)	42.13970 (86060414)	42.67566 (86060416)	47.48151 (86102011)	48.16857 (86120608)
-700.0	38.65326 (86060516)	39.94149 (86101913)	41.15855 (86032811)	43.12424 (86060413)	43.11883 (86102014)
-800.0	37.49508 (86091417)	39.03057 (86091913)	39.56883 (86051015)	40.00391 (86121319)	40.90348 (86101804)
-900.0	35.81758 (86111617)	37.32800 (86091916)	37.97123 (86092815)	38.66644 (86101803)	39.01823 (86082416)
-1000.0	33.94983 (86102114)	35.50705 (86060517)	35.58144 (86121319)	37.03112 (86101812)	37.02102 (86041410)
-1100.0	33.30958 (86092716)	34.15002 (86091911)	34.83284 (86060315)	34.94951 (86060420)	35.79655 (86112115)
-1200.0	32.30378 (86092714)	32.44989 (86041412)	32.99675 (86060415)	34.01744 (86082416)	34.48193 (86101815)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	34.27128 (86031408)	34.72324 (86112615)	34.98032 (86073008)	34.87733 (86060710)	34.48010 (86082009)
1100.0	35.93667 (86032015)	36.57827 (86112915)	36.38310 (86062012)	36.02719 (86122405)	36.52694 (86082009)
1000.0	38.15331 (86072910)	38.07599 (86112915)	38.13359 (86121112)	38.27250 (86032009)	38.09035 (86060717)
900.0	40.18781 (86072910)	40.53070 (86060715)	40.39804 (86121112)	39.94213 (86032009)	40.11496 (86060717)
800.0	41.17552 (86020513)	42.62412 (86060715)	42.48397 (86121112)	40.98600 (86032011)	40.58485 (86031509)
700.0	46.55314 (86080118)	46.33062 (86031511)	47.27211 (86121112)	46.44785 (86032011)	45.38559 (86122414)
600.0	49.24641 (86112812)	51.07777 (86122403)	48.89581 (86121112)	48.33912 (86073009)	47.23868 (86122414)
500.0	50.76660 (86122317)	53.77357 (86112613)	49.42028 (86082010)	49.79869 (86072914)	47.99526 (86073011)
400.0	51.54512 (86031913)	54.19986 (86060713)	48.18105 (86073012)	52.00525 (86072912)	47.67606 (86080416)
300.0	64.14611 (86122314)	60.76277 (86080212)	52.02467 (86121112)	58.43073 (86082813)	47.87466 (86073010)
200.0	69.00274 (86122322)	78.48998 (86122402)	78.04978 (86121112)	69.96256 (86122411)	72.32774 (86081715)
100.0	89.81228 (86122305)	136.92830 (86122322)	115.46620 (86121112)	142.61790 (86081715)	77.91955 (86070413)
0.0	98.64207 (86122224)	154.15220 (86122224)	0.00000 (0)	125.77430 (86012717)	83.15527 (86012717)
-100.0	89.53215 (86032515)	146.41550 (86101920)	128.64440 (86031516)	141.38680 (86022515)	88.80659 (86030116)
-200.0	74.45077 (86101920)	85.86823 (86101904)	86.79012 (86031516)	80.54925 (86032214)	71.62345 (86022515)
-300.0	55.07355 (86102011)	66.41145 (86101903)	59.92593 (86032312)	63.41344 (86032215)	57.08937 (86030113)
-400.0	53.93645 (86101904)	51.85620 (86092814)	52.35329 (86032312)	51.97033 (86032317)	49.72516 (86090211)
-500.0	50.66115 (86101919)	50.84052 (86032315)	51.52467 (86031516)	51.97262 (86121311)	47.03990 (86101617)
-600.0	50.16250 (86101903)	46.03873 (86112114)	49.86064 (86031516)	48.05999 (86121313)	49.29290 (86032215)
-700.0	47.29595 (86102012)	44.89654 (86112114)	47.22016 (86031516)	43.88484 (86112117)	46.32230 (86041318)
-800.0	43.02058 (86092814)	41.56844 (86101716)	42.30108 (86031516)	39.90100 (86032218)	41.27795 (86122815)
-900.0	39.79614 (86121615)	39.62854 (86101716)	39.69328 (86031516)	38.98036 (86122110)	40.15058 (86101614)
-1000.0	37.73980 (86101713)	37.77541 (86102001)	37.71319 (86032909)	37.43490 (86122110)	37.28694 (86122613)
-1100.0	35.78972 (86120411)	36.02720 (86121314)	35.77306 (86032909)	35.80889 (86122817)	35.52939 (86122816)
-1200.0	34.29914 (86112114)	34.24458 (86122114)	34.03139 (86120514)	34.09526 (86121613)	33.84743 (86122115)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	34.02721 (86061510)	33.93201 (86121213)	32.83321 (86012614)	31.23269 (86073120)	31.54144 (86052012)
1100.0	36.22565 (86112013)	33.93242 (86022712)	34.84410 (86081910)	34.03358 (86042116)	32.38182 (86021109)
1000.0	35.94358 (86122407)	36.68426 (86012614)	34.12053 (86120213)	34.86166 (86081816)	34.99305 (86041615)
900.0	38.82601 (86121213)	39.24994 (86081910)	38.35692 (86042116)	37.12611 (86042117)	35.98774 (86080209)
800.0	38.26512 (86072010)	37.97886 (86120213)	36.08923 (86081816)	37.66007 (86122413)	52.34914 (86060818)
700.0	41.49055 (86081910)	41.73582 (86122013)	40.52062 (86102718)	47.76435 (86060818)	66.20017 (86060818)
600.0	45.05520 (86122411)	47.94606 (86073010)	42.94329 (86022813)	66.45335 (86060818)	39.90734 (86040914)
500.0	46.35530 (86072813)	47.85172 (86080209)	72.23466 (86060818)	42.74429 (86040914)	41.55541 (86021115)
400.0	50.54109 (86122413)	65.58910 (86060818)	50.22681 (86072815)	46.36006 (86072418)	40.52448 (86041610)
300.0	58.41410 (86081715)	55.12668 (86063017)	49.28675 (86041610)	48.26367 (86040915)	43.26333 (86040916)
200.0	42.57793 (86072418)	52.28862 (86070413)	48.33695 (86012616)	47.70816 (86040912)	41.18444 (86111811)
100.0	55.80610 (86012616)	53.11777 (86012716)	48.17405 (86090411)	49.26624 (86041618)	46.68964 (86041618)
0.0	55.54348 (86012717)	47.52474 (86012717)	46.75374 (86012717)	47.07961 (86042215)	46.66187 (86042215)
-100.0	58.43855 (86022513)	58.59789 (86030115)	48.85873 (86021514)	44.70941 (86090413)	46.23316 (86040917)
-200.0	55.79934 (86030114)	55.24293 (86030112)	50.38575 (86012718)	45.38692 (86012712)	46.41154 (86022512)
-300.0	57.31334 (86022515)	49.98900 (86012617)	48.38499 (86022516)	47.58380 (86030112)	43.35082 (86042218)
-400.0	52.96567 (86030111)	52.82775 (86022515)	47.33926 (86010516)	46.77123 (86041316)	39.92461 (86022516)
-500.0	48.21866 (86032216)	47.38976 (86032211)	47.07916 (86022515)	43.03882 (86022514)	39.87702 (86012617)
-600.0	46.64565 (86102017)	46.45857 (86062016)	41.02853 (86032211)	40.63685 (86022515)	38.61227 (86022514)
-700.0	50.53950 (86110210)	42.22690 (86101615)	39.46027 (86030111)	38.19352 (86122722)	37.21684 (86101908)
-800.0	49.14678 (86110210)	43.02713 (86110210)	38.61164 (86101612)	37.59746 (86021208)	35.99293 (86071221)
-900.0	43.73079 (86110210)	45.07011 (86110210)	37.85948 (86101615)	36.73981 (86101612)	38.78671 (86021208)
-1000.0	37.15279 (86110210)	43.24094 (86110210)	36.79083 (86110210)	33.94438 (86050916)	34.57116 (86090414)
-1100.0	35.04076 (86120519)	39.39973 (86110210)	37.88208 (86110210)	33.13059 (86122818)	32.92816 (86101612)
-1200.0	33.78965 (86122813)	34.84289 (86110210)	36.87597 (86110210)	31.71021 (86122810)	31.97611 (86050916)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	31.61649 (86072018)	30.51888 (86070319)	31.55614 (86060818)	52.88221 (86060818)	53.82158 (86060818)
1100.0	32.34327 (86031512)	31.73739 (86081918)	54.22179 (86060818)	56.67643 (86060818)	37.16428 (86060818)
1000.0	33.62447 (86081918)	54.89025 (86060818)	59.53890 (86060818)	37.10230 (86060818)	30.11286 (86042111)
900.0	54.46487 (86060818)	62.26249 (86060818)	36.39001 (86060818)	31.41343 (86073115)	30.10758 (86072714)
800.0	64.60884 (86060818)	34.84270 (86081917)	33.26698 (86022718)	32.84150 (86072714)	31.34968 (86041617)
700.0	36.92577 (86032017)	36.20788 (86021114)	34.41926 (86021115)	32.84756 (86122015)	31.28129 (86082020)
600.0	38.57812 (86081912)	37.12612 (86041617)	35.30084 (86010512)	31.40981 (86040909)	30.96999 (86040915)
500.0	39.60807 (86122015)	34.05597 (86072111)	35.58475 (86040915)	34.10936 (86022415)	32.57263 (86011909)
400.0	40.73706 (86040915)	38.70404 (86040916)	35.57625 (86011918)	33.98491 (86041313)	33.48173 (86041313)
300.0	40.93189 (86012616)	39.43826 (86040912)	35.68544 (86040912)	34.43088 (86073117)	33.51723 (86081521)
200.0	41.47052 (86012716)	39.78865 (86040913)	38.27013 (86042217)	36.63656 (86072012)	35.03434 (86072012)
100.0	42.01316 (86011916)	39.70672 (86011916)	36.73802 (86030110)	35.65269 (86022414)	34.39120 (86022414)
0.0	42.10283 (86042215)	40.68942 (86042215)	38.90760 (86042215)	37.04352 (86042215)	35.17887 (86042215)
-100.0	41.74772 (86082015)	39.48192 (86082015)	37.44648 (86021511)	35.34221 (86021511)	32.85910 (86021511)
-200.0	41.75868 (86073014)	39.67781 (86021514)	37.22066 (86021514)	35.20178 (86010713)	34.44290 (86073017)
-300.0	40.65371 (86011315)	36.80597 (86030119)	35.89796 (86022512)	36.18880 (86073014)	33.22565 (86073014)
-400.0	40.13719 (86021516)	37.63646 (86042218)	36.35803 (86122014)	34.79256 (86012014)	32.38516 (86011912)
-500.0	39.22961 (86072217)	37.19885 (86030713)	35.64223 (86021516)	34.29005 (86061318)	33.05861 (86122014)
-600.0	36.36936 (86010516)	36.23856 (86022416)	35.30084 (86061215)	33.70712 (86052210)	32.00977 (86021118)
-700.0	35.79530 (86101623)	35.54464 (86101621)	32.93661 (86042220)	32.61824 (86072217)	31.87881 (86122016)
-800.0	34.74793 (86101908)	34.30569 (86101623)	33.76423 (86101611)	31.76243 (86010714)	31.02902 (86042220)
-900.0	33.59659 (86071221)	32.74058 (86101613)	32.30233 (86101623)	31.58562 (86101611)	29.47112 (86010714)
-1000.0	37.52402 (86021208)	31.83441 (86123013)	30.84528 (86101613)	30.12940 (86101623)	29.07313 (86122108)
-1100.0	32.88115 (86021208)	35.05422 (86021208)	29.98065 (86123013)	28.98465 (86101613)	28.70873 (86101622)
-1200.0	30.82587 (86121310)	34.93180 (86021208)	32.12549 (86021208)	28.25500 (86120603)	27.20754 (86101613)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -1200.00	-1100.00	-1000.00	-900.00	-800.00
1200.0	12.23198 (86113016)	13.48937 (86080224)	12.87140 (86080224)	14.66230 (86031316)	13.92579 (86031316)
1100.0	14.33491 (86031224)	13.15013 (86113016)	14.33047 (86080224)	13.89435 (86031316)	15.86790 (86031316)
1000.0	15.59581 (86031224)	14.80893 (86031224)	14.14431 (86113016)	14.93230 (86080224)	15.55604 (86031316)
900.0	15.46792 (86051816)	15.46982 (86031224)	15.06927 (86031224)	15.35026 (86120116)	15.40351 (86080224)
800.0	15.35911 (86051816)	16.73554 (86051816)	15.25292 (86051816)	15.16700 (86031224)	16.67218 (86120116)
700.0	17.57120 (86112824)	15.62787 (86112824)	17.54585 (86051816)	17.09691 (86051816)	15.31353 (86102924)
600.0	15.50708 (86091108)	18.00742 (86112824)	18.48512 (86112824)	17.49225 (86051816)	18.72758 (86051816)
500.0	22.99237 (86091108)	21.39582 (86091108)	17.45016 (86091108)	19.78403 (86112824)	20.19090 (86080316)
400.0	21.40845 (86091108)	24.93206 (86091108)	26.46405 (86091108)	24.86612 (86091108)	21.66403 (86050616)
300.0	18.58785 (86091024)	18.78924 (86050508)	19.80493 (86091016)	24.97569 (86091108)	29.19358 (86091108)
200.0	22.01054 (86091024)	23.74129 (86091024)	24.91564 (86091024)	24.94577 (86091024)	22.95796 (86091024)
100.0	22.11070 (86120908)	23.52801 (86120908)	24.79220 (86120908)	25.69010 (86120908)	25.79695 (86120908)
0.0	23.27963 (86110708)	24.56136 (86110708)	25.85696 (86110708)	27.11730 (86110708)	28.16928 (86011708)
-100.0	20.85493 (86122224)	21.57851 (86122224)	21.93742 (86122224)	22.88871 (86010908)	25.53297 (86010908)
-200.0	22.45210 (86011624)	23.90195 (86011624)	24.65215 (86011624)	24.05242 (86011624)	22.99455 (86032616)
-300.0	17.51793 (86110808)	18.05127 (86102308)	21.62847 (86102308)	24.18406 (86102308)	25.08984 (86102308)
-400.0	20.30367 (86102308)	21.38401 (86102308)	21.66336 (86102308)	20.53175 (86102308)	21.39783 (86121408)
-500.0	18.53387 (86102308)	17.59554 (86102308)	18.31586 (86121416)	20.84203 (86121408)	20.34938 (86121408)
-600.0	16.03329 (86121416)	17.72924 (86121408)	18.41716 (86121408)	15.81521 (86121408)	18.99206 (86042416)
-700.0	16.55219 (86121424)	15.33198 (86121408)	14.46429 (86091424)	17.10020 (86091424)	18.43155 (86042416)
-800.0	13.70232 (86091724)	14.55612 (86091424)	15.83709 (86091424)	15.73714 (86092024)	16.40254 (86092024)
-900.0	14.08699 (86091424)	14.43976 (86091424)	15.10222 (86092024)	15.43663 (86092024)	18.93547 (86101924)
-1000.0	13.47398 (86091808)	14.36333 (86092024)	14.47386 (86092024)	17.37290 (86101924)	13.86078 (86101924)
-1100.0	13.51483 (86092024)	13.54863 (86092024)	15.87137 (86101924)	13.98243 (86101924)	11.16410 (86032924)
-1200.0	12.65531 (86092024)	14.48588 (86101924)	13.70185 (86101924)	11.03941 (86011216)	10.67787 (86102016)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -700.00	-600.00	-500.00	-400.00	-300.00
1200.0	11.35913 (86031324)	13.77295 (86031408)	13.55815 (86031216)	13.72479 (86112916)	14.05885 (86112916)
1100.0	13.32344 (86031316)	12.30517 (86031408)	15.18374 (86031216)	11.67068 (86112616)	16.36622 (86112916)
1000.0	16.75499 (86031316)	13.08095 (86122324)	15.21403 (86031408)	14.02491 (86031216)	17.76681 (86112916)
900.0	17.31734 (86031316)	16.80348 (86031316)	13.66199 (86122324)	16.77896 (86031216)	16.78896 (86112916)
800.0	15.62605 (86080224)	19.74453 (86081316)	16.67951 (86081316)	16.46422 (86031408)	13.14969 (86112616)
700.0	17.99533 (86120116)	16.75251 (86081316)	22.04385 (86081316)	16.97759 (86122324)	17.35108 (86031216)
600.0	16.35370 (86081216)	19.17745 (86120116)	20.75679 (86081316)	23.39403 (86081316)	18.51297 (86031408)
500.0	19.75156 (86080316)	19.22767 (86081216)	20.82306 (86120116)	26.02061 (86081316)	22.00070 (86122324)
400.0	24.62591 (86050616)	25.70094 (86080316)	23.51156 (86081216)	20.63062 (86120116)	29.05723 (86081316)
300.0	28.02474 (86091108)	28.02881 (86050616)	29.96924 (86050616)	26.77391 (86081216)	19.01172 (86113016)
200.0	24.96219 (86050508)	29.47675 (86091108)	32.65017 (86091108)	32.43339 (86050616)	31.95067 (86080316)
100.0	27.60006 (86091024)	30.42719 (86091024)	30.56606 (86091024)	26.38621 (86080816)	26.77378 (86091108)
0.0	31.47342 (86011708)	32.49156 (86011708)	33.75365 (86122224)	35.56330 (86122224)	42.05268 (86122224)
-100.0	29.00708 (86011624)	31.12878 (86011624)	30.41278 (86011624)	27.97302 (86032616)	28.37975 (86102308)
-200.0	25.30135 (86102308)	29.29430 (86102308)	29.51715 (86032508)	28.37328 (86121408)	23.30442 (86121408)
-300.0	24.34331 (86032508)	26.12186 (86121408)	28.12009 (86121408)	29.47601 (86042416)	26.25241 (86042416)
-400.0	24.20312 (86121408)	21.31551 (86121408)	28.86875 (86042416)	26.08773 (86042416)	20.55483 (86042916)
-500.0	20.78024 (86042416)	25.51652 (86042416)	23.36484 (86042416)	21.39116 (86082316)	18.39104 (86101908)
-600.0	21.78300 (86042416)	20.07710 (86042416)	21.60442 (86101924)	18.07780 (86111408)	21.93627 (86101908)
-700.0	17.30656 (86092024)	21.55631 (86101924)	14.52075 (86111408)	16.80847 (86101908)	22.88787 (86101808)
-800.0	20.42589 (86101924)	12.50114 (86060424)	13.86408 (86111408)	17.99767 (86101908)	20.45188 (86101808)
-900.0	13.33980 (86011216)	13.06398 (86102016)	15.06360 (86101908)	20.55741 (86101808)	15.71592 (86101808)
-1000.0	11.94783 (86060424)	12.00352 (86101908)	15.83287 (86101808)	19.47646 (86101808)	13.54521 (86101816)
-1100.0	11.47959 (86102016)	13.17668 (86101908)	17.89745 (86101808)	16.31842 (86101808)	12.40855 (86101816)
-1200.0	10.91045 (86101908)	14.14947 (86101808)	17.52127 (86101808)	12.95603 (86101808)	11.14374 (86101816)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) -200.00	-100.00	0.00	100.00	200.00
1200.0	11.82198 (86112924)	12.92675 (86082008)	15.22501 (86021016)	12.00958 (86121124)	9.82532 (86020816)
1100.0	11.83207 (86112924)	12.33967 (86082008)	16.58158 (86021016)	12.84911 (86021016)	10.71320 (86122408)
1000.0	13.03430 (86032016)	12.83183 (86060716)	18.06406 (86021016)	13.77158 (86021016)	11.80737 (86122408)
900.0	15.62332 (86112916)	13.99405 (86060716)	19.64185 (86021016)	14.64363 (86021016)	12.54640 (86122408)
800.0	18.90112 (86112916)	15.02071 (86060716)	21.21300 (86021016)	15.33537 (86021016)	12.45198 (86070316)
700.0	22.54236 (86112916)	16.10749 (86060716)	23.03840 (86021016)	15.85984 (86020816)	12.94922 (86072916)
600.0	20.67060 (86112916)	16.57291 (86112916)	23.87019 (86021016)	15.20737 (86070316)	13.16449 (86102716)
500.0	17.08068 (86031216)	18.41353 (86112916)	23.47778 (86021016)	15.78129 (86070316)	17.36241 (86022716)
400.0	18.40921 (86122324)	20.89392 (86112916)	20.80828 (86021016)	17.38931 (86072916)	19.01381 (86022716)
300.0	32.74594 (86122316)	19.60417 (86112916)	19.07327 (86021016)	15.07888 (86072916)	15.46320 (86122416)
200.0	23.75774 (86122316)	29.73559 (86122324)	27.18891 (86121124)	23.84458 (86022716)	22.36257 (86073116)
100.0	41.00639 (86050616)	50.81396 (86122316)	47.04400 (86121124)	38.14991 (86042116)	25.40213 (86040916)
0.0	63.76417 (86122224)	99.76506 (86122224)	0.00000 (0)	33.64366 (86011916)	23.87723 (86011916)
-100.0	44.29026 (86121408)	57.17359 (86121324)	57.27309 (86032316)	37.89433 (86012808)	38.46869 (86042216)
-200.0	28.05914 (86121324)	37.34760 (86101908)	42.49261 (86032316)	26.46300 (86032216)	16.72908 (86012016)
-300.0	23.45700 (86111408)	22.76081 (86041416)	29.82992 (86032316)	15.53004 (86122616)	19.91410 (86032216)
-400.0	23.79785 (86101908)	17.07912 (86041416)	25.95448 (86032316)	20.96476 (86122616)	17.78116 (86032116)
-500.0	25.51984 (86101808)	18.59246 (86120416)	25.35746 (86032316)	23.15105 (86032324)	14.13851 (86122816)
-600.0	20.23674 (86041416)	21.95720 (86120416)	23.84989 (86032316)	24.61757 (86032324)	16.94674 (86120524)
-700.0	16.72127 (86101816)	22.49786 (86120416)	22.03723 (86032316)	24.77615 (86032324)	20.77572 (86122616)
-800.0	13.93251 (86101816)	19.91212 (86120416)	19.34980 (86032316)	21.89251 (86032324)	21.17625 (86122616)
-900.0	14.48392 (86120416)	18.34652 (86120416)	17.76045 (86032316)	21.03814 (86032324)	20.97919 (86122616)
-1000.0	16.15274 (86120416)	16.54122 (86120416)	16.27516 (86032316)	19.90324 (86032324)	19.30611 (86032324)
-1100.0	16.87370 (86120416)	14.77555 (86120416)	14.94107 (86032316)	18.67464 (86032324)	19.31564 (86032324)
-1200.0	16.83731 (86120416)	13.15014 (86120416)	13.74849 (86032316)	17.42995 (86032324)	18.99483 (86032324)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 300.00	400.00	500.00	600.00	700.00
1200.0	10.64115 (86122408)	9.61304 (86081908)	10.21957 (86022716)	10.80228 (86120216)	9.52037 (86120216)
1100.0	10.18429 (86122408)	10.87598 (86081908)	11.58318 (86120216)	10.80849 (86120216)	11.08009 (86122416)
1000.0	9.06687 (86070316)	11.74139 (86022716)	12.28343 (86120216)	11.12261 (86052016)	13.21588 (86122416)
900.0	10.27554 (86081908)	13.81848 (86022716)	12.22417 (86120216)	13.64935 (86122416)	13.62162 (86021116)
800.0	12.72573 (86022716)	14.70088 (86022716)	12.90036 (86122416)	15.09244 (86021116)	12.57071 (86021116)
700.0	16.10471 (86022716)	13.89436 (86022716)	15.78014 (86021116)	14.30034 (86021116)	14.80362 (86042116)
600.0	18.05031 (86022716)	17.13638 (86122416)	16.06893 (86021116)	16.96344 (86073116)	16.92756 (86073116)
500.0	16.10443 (86022716)	18.76896 (86021116)	19.70709 (86073116)	18.52434 (86073116)	13.99621 (86021116)
400.0	18.61240 (86021116)	21.85725 (86073116)	19.55410 (86073116)	12.85204 (86021116)	10.95023 (86041616)
300.0	21.92985 (86073116)	18.42365 (86021116)	12.16693 (86041616)	17.23962 (86040916)	16.73484 (86040916)
200.0	12.64695 (86021116)	18.80031 (86041616)	20.70141 (86041616)	19.47167 (86041616)	17.26771 (86041616)
100.0	21.59237 (86041616)	20.41264 (86041616)	19.98331 (86021916)	18.38941 (86021916)	15.97254 (86021916)
0.0	16.48827 (86011916)	15.82649 (86011916)	17.39644 (86011916)	17.83997 (86011916)	17.56796 (86011916)
-100.0	20.13877 (86030124)	15.67418 (86030716)	15.25049 (86030716)	13.53478 (86030716)	11.72072 (86030716)
-200.0	20.49262 (86041716)	31.06160 (86042216)	25.49639 (86042216)	20.38638 (86030124)	16.82944 (86030124)
-300.0	17.06161 (86012016)	27.17249 (86041716)	25.95762 (86041716)	25.91657 (86042216)	21.86638 (86042216)
-400.0	19.05636 (86032216)	19.41515 (86012016)	25.43390 (86041716)	25.01453 (86041716)	20.49345 (86041716)
-500.0	18.19613 (86032116)	16.49940 (86032216)	19.39682 (86012016)	21.53045 (86041716)	21.99976 (86041716)
-600.0	19.48195 (86032116)	16.85963 (86021216)	15.96164 (86012816)	17.80114 (86012016)	17.67788 (86041716)
-700.0	13.51064 (86122816)	17.22816 (86032116)	14.07315 (86032216)	15.61818 (86012816)	16.28062 (86012016)
-800.0	12.70052 (86120524)	17.08930 (86032116)	15.75736 (86021216)	12.65669 (86012816)	14.57329 (86012816)
-900.0	15.10889 (86120524)	13.83287 (86032116)	16.30570 (86032116)	14.12174 (86021216)	12.79626 (86012816)
-1000.0	15.84755 (86122616)	11.48321 (86122816)	15.62639 (86032116)	14.85135 (86032116)	11.72755 (86032308)
-1100.0	17.34019 (86122616)	12.24548 (86120524)	13.17771 (86032116)	14.82997 (86032116)	13.41502 (86021216)
-1200.0	17.96881 (86122616)	13.44822 (86120524)	10.66387 (86122816)	14.04139 (86032116)	13.60362 (86032116)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 800.00	900.00	1000.00	1100.00	1200.00
1200.0	11.25531 (86122416)	11.32807 (86021116)	9.30811 (86021116)	8.81582c(86060824)	9.72711 (86042116)
1100.0	12.37221 (86021116)	10.57103 (86021116)	9.04009c(86060824)	10.53675 (86042116)	10.31633 (86011016)
1000.0	12.03116 (86021116)	9.80324 (86021116)	11.44238 (86042116)	11.04750 (86011016)	11.25711 (86032024)
900.0	11.07320 (86021116)	12.45342 (86042116)	11.78942 (86011016)	11.12041 (86032024)	9.63369 (86021116)
800.0	13.57546 (86042116)	13.23631 (86073116)	11.36584 (86021116)	10.18748 (86021116)	7.33639 (86021116)
700.0	15.03795 (86073116)	12.66190 (86021116)	10.28542 (86021116)	8.15550 (86010516)	9.10718 (86042708)
600.0	13.74400 (86021116)	9.53472 (86021116)	9.05212 (86072116)	9.63117 (86040916)	11.42882 (86040916)
500.0	9.68494 (86010516)	10.03489 (86040916)	12.94927 (86040916)	12.89532 (86040916)	11.35372 (86040916)
400.0	14.60812 (86040916)	14.79683 (86040916)	12.82637 (86040916)	10.94320 (86040916)	9.59766 (86040916)
300.0	14.67466 (86041616)	13.21068 (86041616)	12.00076 (86021916)	11.01620 (86021916)	9.94100 (86021916)
200.0	15.83647 (86021916)	14.13729 (86021916)	12.41742 (86021916)	10.83390 (86021916)	9.43512 (86021916)
100.0	13.54551 (86021916)	11.39925 (86021916)	9.84837 (86011916)	9.71687 (86011916)	9.47395 (86011916)
0.0	15.97436 (86011916)	15.23533 (86011916)	14.38879 (86011916)	13.53855 (86011916)	12.71616 (86011916)
-100.0	10.11594 (86030716)	9.23075 (86040924)	8.53144 (86040924)	7.76070 (86040924)	7.60370 (86022016)
-200.0	13.10099 (86122516)	11.56837 (86030716)	10.25200 (86030716)	9.05303 (86030716)	7.99855 (86030716)
-300.0	18.00161 (86122516)	18.04459 (86030124)	15.53842 (86030124)	11.99442 (86030124)	9.08650 (86122516)
-400.0	19.68339 (86042216)	17.10279 (86042216)	15.96027 (86122516)	16.15036 (86030124)	16.09491 (86030124)
-500.0	18.86079 (86041716)	15.21454 (86042216)	14.96120 (86042216)	13.30694 (86042216)	13.77071 (86122516)
-600.0	18.60636 (86041716)	16.73761 (86041716)	13.88174 (86041716)	12.43000 (86011316)	11.71496 (86042224)
-700.0	14.45444 (86041716)	15.52644 (86041716)	14.55453 (86041716)	12.53414 (86041716)	11.45531 (86011316)
-800.0	14.72179 (86012016)	13.19312 (86012016)	13.23975 (86122108)	12.53467 (86041716)	11.18463 (86041716)
-900.0	13.36924 (86012808)	13.26225 (86012016)	12.23364 (86012016)	12.87034 (86122108)	10.76468 (86041716)
-1000.0	12.40714 (86012816)	13.31970 (86012808)	11.94906 (86012016)	11.26694 (86012016)	12.22382 (86122108)
-1100.0	10.49163 (86032308)	11.71538 (86012816)	13.11663 (86120408)	10.78890 (86012016)	10.34764 (86012016)
-1200.0	11.90616 (86021216)	9.37380 (86012816)	11.30947 (86120408)	12.53596 (86120408)	9.77185 (86012016)

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	154.15220	(86122224)	AT (	-100.00,	0.00)	GC	26.	125.77430	(86012717)	AT (	100.00,	0.00)	GC
2.	146.41550	(86101920)	AT (	-100.00,	-100.00)	GC	27.	125.60230	(86120614)	AT (	-100.00,	-100.00)	GC
3.	142.61790	(86081715)	AT (	100.00,	100.00)	GC	28.	124.22150	(86121324)	AT (	-100.00,	-100.00)	GC
4.	141.38680	(86022515)	AT (	100.00,	-100.00)	GC	29.	121.96780	(86050512)	AT (	-100.00,	0.00)	GC
5.	140.67620	(86122221)	AT (	-100.00,	0.00)	GC	30.	121.58580	(86120704)	AT (	-100.00,	-100.00)	GC
6.	137.12240	(86110813)	AT (	-100.00,	0.00)	GC	31.	120.89500	(86101909)	AT (	-100.00,	-100.00)	GC
7.	136.92830	(86122322)	AT (	-100.00,	100.00)	GC	32.	119.83700	(86120809)	AT (	-100.00,	0.00)	GC
8.	136.80580	(86103111)	AT (	-100.00,	0.00)	GC	33.	119.56590	(86112322)	AT (	-100.00,	0.00)	GC
9.	136.67830	(86122308)	AT (	-100.00,	100.00)	GC	34.	119.49430	(86070515)	AT (	-100.00,	100.00)	GC
10.	135.07950	(86032521)	AT (	-100.00,	0.00)	GC	35.	119.10030	(86032520)	AT (	-100.00,	0.00)	GC
11.	134.94020	(86122303)	AT (	-100.00,	0.00)	GC	36.	118.93800	(86121312)	AT (	0.00,	-100.00)	GC
12.	133.72870	(86123116)	AT (	-100.00,	100.00)	GC	37.	116.98470	(86060618)	AT (	-100.00,	100.00)	GC
13.	131.17240	(86121322)	AT (	-100.00,	-100.00)	GC	38.	116.42380	(86110811)	AT (	-100.00,	0.00)	GC
14.	131.01680	(86032415)	AT (	-100.00,	-100.00)	GC	39.	116.12360	(86102411)	AT (	-100.00,	0.00)	GC
15.	129.27300	(86010915)	AT (	-100.00,	0.00)	GC	40.	116.06860	(86101616)	AT (	100.00,	-100.00)	GC
16.	129.27300	(86011707)	AT (	-100.00,	0.00)	GC	41.	115.79400	(86110924)	AT (	-100.00,	0.00)	GC
17.	128.79310	(86122319)	AT (	-100.00,	100.00)	GC	42.	115.77520	(86121024)	AT (	-100.00,	100.00)	GC
18.	128.64440	(86031516)	AT (	0.00,	-100.00)	GC	43.	115.46620	(86121112)	AT (	0.00,	100.00)	GC
19.	128.16560	(86122311)	AT (	-100.00,	100.00)	GC	44.	115.21100	(86082010)	AT (	0.00,	100.00)	GC
20.	127.62800	(86111104)	AT (	-100.00,	0.00)	GC	45.	115.12170	(86122222)	AT (	-100.00,	0.00)	GC
21.	127.35020	(86032905)	AT (	0.00,	-100.00)	GC	46.	115.12160	(86123113)	AT (	-100.00,	0.00)	GC
22.	127.31510	(86120808)	AT (	-100.00,	0.00)	GC	47.	115.03080	(86080817)	AT (	-100.00,	0.00)	GC
23.	127.00390	(86123114)	AT (	-100.00,	0.00)	GC	48.	114.82490	(86032812)	AT (	-100.00,	-100.00)	GC
24.	126.76790	(86122223)	AT (	-100.00,	0.00)	GC	49.	114.41310	(86090617)	AT (	100.00,	100.00)	GC
25.	126.01640	(86060414)	AT (	-100.00,	-100.00)	GC	50.	114.40500	(86100915)	AT (	-100.00,	100.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 50 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF CO IN MICROGRAMS/CUBIC-METER **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	99.76506	(86122224)	AT (	-100.00,	0.00)	GC	26.	51.94510	(86050516)	AT (	-200.00,	0.00)	GC
2.	85.37619	(86032524)	AT (	-100.00,	0.00)	GC	27.	50.81396	(86122316)	AT (	-100.00,	100.00)	GC
3.	81.51050	(86011708)	AT (	-100.00,	0.00)	GC	28.	50.03659	(86110816)	AT (	-100.00,	0.00)	GC
4.	79.03799	(86050516)	AT (	-100.00,	0.00)	GC	29.	49.44116	(86112408)	AT (	-200.00,	0.00)	GC
5.	77.57734	(86112408)	AT (	-100.00,	0.00)	GC	30.	49.23505	(86111108)	AT (	-100.00,	0.00)	GC
6.	73.71085	(86110708)	AT (	-100.00,	0.00)	GC	31.	48.85627	(86090124)	AT (	-100.00,	0.00)	GC
7.	72.94427	(86080824)	AT (	-100.00,	0.00)	GC	32.	48.65250	(86110708)	AT (	-200.00,	0.00)	GC
8.	71.21110	(86120824)	AT (	-100.00,	0.00)	GC	33.	48.31260	(86102408)	AT (	-100.00,	0.00)	GC
9.	63.76417	(86122224)	AT (	-200.00,	0.00)	GC	34.	48.08900	(86080624)	AT (	-100.00,	0.00)	GC
10.	60.92304	(86110716)	AT (	-100.00,	0.00)	GC	35.	47.68364	(86020124)	AT (	-100.00,	0.00)	GC
11.	60.32925	(86102324)	AT (	-100.00,	0.00)	GC	36.	47.57756	(86060416)	AT (	-100.00,	-100.00)	GC
12.	57.50071	(86102316)	AT (	-100.00,	0.00)	GC	37.	47.51702	(86101916)	AT (	-100.00,	-100.00)	GC
13.	57.29491	(86032608)	AT (	-100.00,	0.00)	GC	38.	47.04400	(86121124)	AT (	0.00,	100.00)	GC
14.	57.27309	(86032316)	AT (	0.00,	-100.00)	GC	39.	46.96228	(86113016)	AT (	-100.00,	100.00)	GC
15.	57.17359	(86121324)	AT (	-100.00,	-100.00)	GC	40.	46.79267	(86092024)	AT (	-100.00,	-100.00)	GC
16.	56.46563	(86101924)	AT (	-100.00,	-100.00)	GC	41.	46.21334	(86120824)	AT (	-200.00,	0.00)	GC
17.	56.28270	(86010916)	AT (	-100.00,	0.00)	GC	42.	46.17133	(86080824)	AT (	-200.00,	0.00)	GC
18.	56.12136	(86010924)	AT (	-100.00,	0.00)	GC	43.	46.03252	(86122324)	AT (	-100.00,	100.00)	GC
19.	55.82955	(86032524)	AT (	-200.00,	0.00)	GC	44.	45.69394	(86121316)	AT (	0.00,	-100.00)	GC
20.	54.76452	(86120908)	AT (	-100.00,	0.00)	GC	45.	44.77550	(86093008)	AT (	-100.00,	0.00)	GC
21.	54.29669	(86120808)	AT (	-100.00,	0.00)	GC	46.	44.29026	(86121408)	AT (	-200.00,	-100.00)	GC
22.	54.11663	(86123116)	AT (	-100.00,	0.00)	GC	47.	43.96872	(86110824)	AT (	-100.00,	0.00)	GC
23.	53.61185	(86011708)	AT (	-200.00,	0.00)	GC	48.	43.86289	(86081024)	AT (	-100.00,	0.00)	GC
24.	53.03821	(86110916)	AT (	-100.00,	0.00)	GC	49.	43.51754	(86031916)	AT (	-100.00,	100.00)	GC
25.	52.96654	(86051516)	AT (	-100.00,	0.00)	GC	50.	43.06738	(86080224)	AT (	-100.00,	100.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF CO 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	154.15220	ON 86122224:	AT (-100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO 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	99.76506	ON 86122224:	AT (-100.00, 0.00, 0.00, 0.00)	GC	E3

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 236 Informational Message(s)

A Total of 235 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST2 Finishes Successfully ***
****

ISC MODEL RESULTS
NO_x ANNUAL
100 METER GRID
YEAR 1982

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Default Wind Profile Exponents.
5. Default Vertical Potential Temperature Gradients.
6. "Upper Bound" Values For Supersquat Buildings.
7. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 STAR Average(s) for the Following Months: 0 0 0 0 0 0 0 0 0 0 0 0
Seasons/Quarters: 0 0 0 0
and Annual: 1

**Model Assumes 1 STAR Summaries In Data File for the Averaging Periods Identified Above

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: NOX

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Long Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Maximum Long Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of Long Term Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: st19n82.ann ; **Output Print File: st19n82.out
**Error Message File: st19n82.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.27800E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	12.5,	22.1,	0	2	12.5,	27.0,	0	3	12.5,	28.1,	0	4	12.5,	27.9,	0
5	12.5,	24.5,	0	6	12.5,	27.9,	0	7	12.5,	28.1,	0	8	12.5,	27.1,	0
9	12.5,	22.1,	0	10	12.5,	27.0,	0	11	12.5,	28.1,	0	12	12.5,	27.9,	0
13	12.5,	24.5,	0	14	12.5,	27.9,	0	15	12.5,	28.1,	0	16	12.5,	27.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE SPEED FOR EACH WIND SPEED CATEGORY ***
(METERS/SEC)

1.50, 2.50, 4.30, 6.80, 9.50, 12.50,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** AVERAGE AMBIENT AIR TEMPERATURE (KELVIN) ***

	STABILITY CATEGORY A	STABILITY CATEGORY B	STABILITY CATEGORY C	STABILITY CATEGORY D	STABILITY CATEGORY E	STABILITY CATEGORY F
ANNUAL	301.4000	301.4000	301.4000	296.8000	292.2000	292.2000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE MIXING LAYER HEIGHT (METERS) ***

ANNUAL

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY A	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000
STABILITY CATEGORY B	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY C	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY D	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY E	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000
STABILITY CATEGORY F	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb82.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1982 YEAR: 1982

ANNUAL: STABILITY CATEGORY A

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00026500	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00010100	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00026500	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00021500	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00026500	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00015100	0.00034300	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00010100	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00005100	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY B

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00164600	0.00159900	0.00045700	0.00000000	0.00000000	0.00000000
22.500	0.00006300	0.00045700	0.00034300	0.00000000	0.00000000	0.00000000
45.000	0.00068000	0.00022900	0.00068500	0.00000000	0.00000000	0.00000000
67.500	0.00045200	0.00045700	0.00057100	0.00000000	0.00000000	0.00000000
90.000	0.00065500	0.00194100	0.00456700	0.00000000	0.00000000	0.00000000
112.500	0.00040000	0.00102800	0.00376800	0.00000000	0.00000000	0.00000000
135.000	0.00063900	0.00182700	0.00456700	0.00000000	0.00000000	0.00000000
157.500	0.00048300	0.00068500	0.00194100	0.00000000	0.00000000	0.00000000
180.000	0.00240400	0.00239800	0.00080000	0.00000000	0.00000000	0.00000000
202.500	0.00087200	0.00068500	0.00057100	0.00000000	0.00000000	0.00000000
225.000	0.00088300	0.00171300	0.00114200	0.00000000	0.00000000	0.00000000
247.500	0.00109600	0.00137000	0.00068500	0.00000000	0.00000000	0.00000000
270.000	0.00130800	0.00102800	0.00080000	0.00000000	0.00000000	0.00000000
292.500	0.00077400	0.00091400	0.00091400	0.00000000	0.00000000	0.00000000
315.000	0.00074300	0.00068500	0.00022900	0.00000000	0.00000000	0.00000000
337.500	0.00083600	0.00137000	0.00068500	0.00000000	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb82.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1982 YEAR: 1982

ANNUAL: STABILITY CATEGORY C

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00090900	0.00262600	0.00274000	0.00068500	0.00000000	0.00000000
22.500	0.00004900	0.00045700	0.00148500	0.00068500	0.00000000	0.00000000
45.000	0.00019900	0.00068500	0.00319700	0.00171300	0.00000000	0.00000000
67.500	0.00007300	0.00068500	0.00399600	0.00251200	0.00034300	0.00000000
90.000	0.00029600	0.00159900	0.01335700	0.00913300	0.00011500	0.00000000
112.500	0.00012100	0.00114200	0.01290000	0.00719200	0.00000000	0.00000000
135.000	0.00049400	0.00228400	0.01780900	0.00685000	0.00011500	0.00000000
157.500	0.00012100	0.00114200	0.00890500	0.00308300	0.00022900	0.00000000
180.000	0.00094500	0.00296900	0.00616500	0.00114200	0.00000000	0.00000000
202.500	0.00051200	0.00125600	0.00194100	0.00000000	0.00000000	0.00000000
225.000	0.00041600	0.00274000	0.00171300	0.00034300	0.00000000	0.00000000
247.500	0.00004900	0.00045700	0.00228400	0.00068500	0.00011500	0.00000000
270.000	0.00029600	0.00159900	0.00171300	0.00045700	0.00000000	0.00000000
292.500	0.00050000	0.00114200	0.00091400	0.00011500	0.00000000	0.00000000
315.000	0.00054800	0.00159900	0.00216900	0.00045700	0.00000000	0.00000000
337.500	0.00064500	0.00251200	0.00296900	0.00022900	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY D

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00009800	0.00251200	0.00685000	0.00810600	0.00068500	0.00000000
22.500	0.00014600	0.00068500	0.00216900	0.00924700	0.00091400	0.00000000
45.000	0.00000900	0.00022900	0.00525200	0.02408700	0.00239800	0.00011500
67.500	0.00019000	0.00182700	0.01050300	0.03561700	0.00753500	0.00080000
90.000	0.00018100	0.00159900	0.02089100	0.06084500	0.00947500	0.00068500
112.500	0.00005800	0.00148500	0.01438400	0.02180400	0.00080000	0.00000000
135.000	0.00024300	0.00319700	0.02020600	0.02397300	0.00068500	0.00000000
157.500	0.00005400	0.00137000	0.01118800	0.01130200	0.00034300	0.00000000
180.000	0.00063500	0.00411000	0.01267200	0.01038900	0.00080000	0.00000000
202.500	0.00019500	0.00194100	0.00205500	0.00239800	0.00011500	0.00000000
225.000	0.00018600	0.00171300	0.00285400	0.00159900	0.00011500	0.00011500
247.500	0.00026400	0.00068500	0.00194100	0.00125600	0.00000000	0.00000000
270.000	0.00017700	0.00148500	0.00365300	0.00296900	0.00045700	0.00022900
292.500	0.00028700	0.00125600	0.00159900	0.00365300	0.00045700	0.00022900
315.000	0.00053700	0.00159900	0.00559400	0.00799100	0.00034300	0.00000000
337.500	0.00017200	0.00137000	0.00707800	0.00753500	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb82.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1982 YEAR: 1982

ANNUAL: STABILITY CATEGORY E

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00000000	0.00376800	0.00331100	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00091400	0.00182700	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00125600	0.00433800	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00080000	0.00833400	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00376800	0.01449800	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00433800	0.01016000	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00913300	0.01255800	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00833400	0.00536600	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01244300	0.00342500	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00251200	0.00080000	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00433800	0.00148500	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00285400	0.00045700	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00411000	0.00182700	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00388200	0.00080000	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00205500	0.00616500	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00433800	0.00274000	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY F

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00561400	0.00399600	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00134700	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00122200	0.00114200	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00116700	0.00182700	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00400500	0.00639300	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00644700	0.00867600	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.01287100	0.01895000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.01019600	0.00776300	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01824100	0.01484100	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00749300	0.00479500	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00986100	0.00605100	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00566900	0.00331100	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01298100	0.00970400	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00539000	0.00548000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00911600	0.00616500	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00676500	0.00536600	0.00000000	0.00000000	0.00000000	0.00000000

SUM OF FREQUENCIES, FTOTAL = 1.00015

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-1200.00	-1100.00	-1000.00	-900.00	-800.00	-700.00	-600.00	-500.00	-400.00
1200.00	0.555415	0.541858	0.526293	0.502249	0.472329	0.436180	0.393775	0.345582	0.357071
1100.00	0.556224	0.596570	0.579217	0.555761	0.525387	0.487463	0.441732	0.388561	0.370271
1000.00	0.557642	0.596624	0.639181	0.617153	0.587044	0.547816	0.498828	0.440157	0.385034
900.00	0.553506	0.593978	0.638509	0.687470	0.658698	0.618990	0.566908	0.503737	0.428859
800.00	0.546693	0.588227	0.634258	0.685273	0.741805	0.702682	0.652366	0.581251	0.494692
700.00	0.537043	0.579083	0.625946	0.678218	0.736285	0.806126	0.750778	0.674205	0.574159
600.00	0.524593	0.566483	0.613343	0.665608	0.728042	0.794089	0.868467	0.783730	0.704938
500.00	0.509676	0.550744	0.596646	0.649159	0.708317	0.772655	0.840038	0.963477	0.833725
400.00	0.592245	0.596863	0.595475	0.628323	0.682762	0.740329	0.840795	0.912456	0.991371
300.00	0.683892	0.700337	0.712093	0.717612	0.710120	0.704507	0.793062	0.845109	0.897861
200.00	0.779803	0.810226	0.839650	0.861649	0.872612	0.909621	0.875504	0.801570	0.790940
100.00	0.877437	0.923297	0.971143	1.015309	1.050475	1.132107	1.130133	1.085495	0.962295
0.00	0.973846	1.035670	1.102970	1.171356	1.236694	1.370189	1.417221	1.430278	1.367858
-100.00	0.867563	0.911313	0.955879	0.996151	1.025769	1.104138	1.094647	1.041069	0.913508
-200.00	0.760540	0.786935	0.810109	0.824725	0.825673	0.855648	0.806729	0.715877	0.630578
-300.00	0.655972	0.666822	0.671182	0.665234	0.644122	0.608389	0.631641	0.587261	0.515275
-400.00	0.556574	0.554448	0.544149	0.542326	0.541834	0.529201	0.537423	0.493515	0.432625
-500.00	0.465703	0.474695	0.480247	0.480893	0.474960	0.459783	0.430065	0.420287	0.354330
-600.00	0.423976	0.428579	0.429588	0.425772	0.416183	0.398920	0.373983	0.329394	0.290854
-700.00	0.384928	0.386012	0.383587	0.376768	0.364724	0.347362	0.317941	0.277814	0.225941
-800.00	0.348780	0.347136	0.342228	0.333473	0.320483	0.299478	0.270832	0.233572	0.188542
-900.00	0.315603	0.311913	0.305292	0.295409	0.280046	0.258867	0.231279	0.197289	0.157490
-1000.00	0.285355	0.280181	0.272444	0.260955	0.245102	0.224360	0.198433	0.167449	0.141186
-1100.00	0.257153	0.251703	0.242945	0.230861	0.215018	0.195091	0.170967	0.142879	0.142893
-1200.00	0.232231	0.225543	0.216935	0.204651	0.189151	0.170247	0.147936	0.122489	0.143480

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-300.00	-200.00	-100.00	0.00	100.00	200.00	300.00	400.00	500.00
1200.00	0.370901	0.384967	0.398999	0.412702	0.347606	0.282789	0.220280	0.161753	0.110005
1100.00	0.383999	0.398123	0.412402	0.426592	0.353172	0.280444	0.211026	0.147000	0.116108
1000.00	0.398654	0.414076	0.428526	0.443298	0.359451	0.276963	0.198410	0.128011	0.122859
900.00	0.414733	0.426822	0.439999	0.454239	0.358889	0.265995	0.180270	0.125780	0.130628
800.00	0.430663	0.438502	0.447669	0.460530	0.351980	0.248038	0.154595	0.132645	0.139593
700.00	0.459307	0.469407	0.473771	0.483695	0.353549	0.231365	0.131108	0.139451	0.148376
600.00	0.562324	0.477728	0.469638	0.472325	0.325195	0.192004	0.140545	0.151424	0.157239
500.00	0.662569	0.483170	0.458239	0.449078	0.282806	0.140560	0.142697	0.157970	0.172673
400.00	0.792245	0.545834	0.425323	0.397185	0.215948	0.124106	0.143702	0.164235	0.157888
300.00	0.944266	0.629961	0.430235	0.388646	0.150077	0.111013	0.142465	0.144233	0.142856
200.00	0.768951	0.994458	0.696520	0.555733	0.124571	0.125757	0.112083	0.125702	0.133662
100.00	0.865805	1.034748	1.925716	0.915551	0.245710	0.123513	0.111821	0.132730	0.153968
0.00	1.475849	2.182873	3.285457	0.000000	0.356444	0.210999	0.156938	0.165328	0.183550
-100.00	0.830019	0.939263	1.011366	0.547318	0.519862	0.172347	0.124036	0.138849	0.157905
-200.00	0.508394	0.473020	0.305518	0.339690	0.275027	0.223839	0.151962	0.144427	0.140664
-300.00	0.416509	0.268503	0.180126	0.236714	0.210326	0.193344	0.209693	0.189827	0.171584
-400.00	0.333898	0.212124	0.191857	0.242562	0.224644	0.225958	0.226876	0.230644	0.206592
-500.00	0.267886	0.180054	0.221349	0.274902	0.255750	0.251642	0.242922	0.238663	0.236803
-600.00	0.217454	0.194681	0.238442	0.289419	0.271575	0.264101	0.256537	0.246435	0.225900
-700.00	0.167297	0.204551	0.247777	0.294808	0.279181	0.269645	0.249752	0.238204	0.229436
-800.00	0.164224	0.199133	0.237664	0.278643	0.265581	0.256681	0.250438	0.240345	0.229697
-900.00	0.167861	0.201086	0.236790	0.273340	0.262449	0.253482	0.246348	0.238909	0.227121
-1000.00	0.169424	0.200218	0.232524	0.265117	0.255895	0.247751	0.239624	0.233222	0.223542
-1100.00	0.169046	0.196953	0.225815	0.254648	0.246766	0.239446	0.232693	0.226497	0.219091
-1200.00	0.167614	0.192977	0.218912	0.244649	0.237963	0.231504	0.225323	0.219453	0.213813

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00
1200.00	0.113614	0.116935	0.119832	0.122247	0.124175	0.124706	0.125621
1100.00	0.120160	0.123808	0.126892	0.129359	0.131222	0.132533	0.123273
1000.00	0.127482	0.131518	0.134802	0.137294	0.139038	0.129774	0.121200
900.00	0.135574	0.140156	0.143655	0.146136	0.135877	0.126368	0.117632
800.00	0.146002	0.149725	0.153550	0.142342	0.131903	0.122283	0.113498
700.00	0.156019	0.162015	0.148636	0.137524	0.127108	0.117540	0.108836
600.00	0.167129	0.155230	0.143776	0.131683	0.121588	0.112243	0.103752
500.00	0.157042	0.147006	0.136461	0.125617	0.115582	0.106621	0.098443
400.00	0.150437	0.137857	0.128874	0.119513	0.112343	0.111096	0.109766
300.00	0.139533	0.129827	0.128766	0.128462	0.126750	0.124466	0.122426
200.00	0.143102	0.147910	0.145093	0.144582	0.142820	0.138647	0.135672
100.00	0.163658	0.168356	0.163389	0.161957	0.158998	0.153249	0.149166
0.00	0.189681	0.191637	0.183185	0.179905	0.175359	0.167823	0.162516
-100.00	0.166671	0.171288	0.165838	0.164719	0.161943	0.156175	0.152139
-200.00	0.149371	0.154248	0.150666	0.150622	0.149162	0.144880	0.141925
-300.00	0.157395	0.139036	0.137773	0.138107	0.136340	0.134229	0.132137
-400.00	0.186019	0.160767	0.147003	0.134518	0.125578	0.124451	0.122984
-500.00	0.200823	0.182254	0.165169	0.149376	0.136150	0.124936	0.115169
-600.00	0.221969	0.200354	0.181512	0.163603	0.149333	0.136843	0.125970
-700.00	0.221638	0.214919	0.193647	0.176351	0.161081	0.147705	0.135998
-800.00	0.220780	0.211467	0.204494	0.186807	0.171108	0.157227	0.144981
-900.00	0.217368	0.209193	0.201795	0.195062	0.179343	0.165297	0.152790
-1000.00	0.214355	0.206152	0.198760	0.192033	0.185865	0.171929	0.159399
-1100.00	0.210352	0.202467	0.195305	0.188762	0.182754	0.177217	0.163731
-1200.00	0.205679	0.198259	0.191465	0.185223	0.179471	0.173035	0.167963

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 ANNUAL AVERAGE CONCENTRATION VALUES FOR GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

RANK	CONC	AT	RECEPTOR (XR,YR) OF TYPE			RANK	CONC	AT	RECEPTOR (XR,YR) OF TYPE		
1.	3.285457	AT (	-100.00,	0.00)	GC	6.	1.417221	AT (	-600.00,	0.00)	GC
2.	2.182873	AT (	-200.00,	0.00)	GC	7.	1.370189	AT (	-700.00,	0.00)	GC
3.	1.925716	AT (	-100.00,	100.00)	GC	8.	1.367858	AT (	-400.00,	0.00)	GC
4.	1.475849	AT (	-300.00,	0.00)	GC	9.	1.236694	AT (	-800.00,	0.00)	GC
5.	1.430278	AT (	-500.00,	0.00)	GC	10.	1.171356	AT (	-900.00,	0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCLT2 Finishes Successfully ***
****

ISC MODEL RESULTS
NO_x ANNUAL
100 METER GRID
YEAR 1983

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Default Wind Profile Exponents.
5. Default Vertical Potential Temperature Gradients.
6. "Upper Bound" Values For Supersquat Buildings.
7. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 STAR Average(s) for the Following Months: 0 0 0 0 0 0 0 0 0 0 0 0
Seasons/Quarters: 0 0 0 0
and Annual: 1

**Model Assumes 1 STAR Summaries In Data File for the Averaging Periods Identified Above

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: NOX

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Long Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Maximum Long Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of Long Term Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: st19n83.ann ; **Output Print File: st19n83.out
**Error Message File: st19n83.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.27800E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	12.5,	22.1,	0	2	12.5,	27.0,	0	3	12.5,	28.1,	0	4	12.5,	27.9,	0
5	12.5,	24.5,	0	6	12.5,	27.9,	0	7	12.5,	28.1,	0	8	12.5,	27.1,	0
9	12.5,	22.1,	0	10	12.5,	27.0,	0	11	12.5,	28.1,	0	12	12.5,	27.9,	0
13	12.5,	24.5,	0	14	12.5,	27.9,	0	15	12.5,	28.1,	0	16	12.5,	27.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE SPEED FOR EACH WIND SPEED CATEGORY ***
(METERS/SEC)

1.50, 2.50, 4.30, 6.80, 9.50, 12.50,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** AVERAGE AMBIENT AIR TEMPERATURE (KELVIN) ***

	STABILITY CATEGORY A	STABILITY CATEGORY B	STABILITY CATEGORY C	STABILITY CATEGORY D	STABILITY CATEGORY E	STABILITY CATEGORY F
ANNUAL	301.4000	301.4000	301.4000	296.8000	292.2000	292.2000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE MIXING LAYER HEIGHT (METERS) ***

ANNUAL

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY A	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000
STABILITY CATEGORY B	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY C	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY D	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY E	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000
STABILITY CATEGORY F	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb83.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1983 YEAR: 1983

ANNUAL: STABILITY CATEGORY A

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00011000	0.00034300	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00007300	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00003700	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00015100	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00055700	0.00080000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00022400	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00074900	0.00045700	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00029700	0.00045700	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00018800	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00026000	0.00034300	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00026000	0.00034300	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00003700	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00026000	0.00034300	0.00000000	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY B

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00189600	0.00353900	0.00114200	0.00000000	0.00000000	0.00000000
22.500	0.00037600	0.00114200	0.00091400	0.00000000	0.00000000	0.00000000
45.000	0.00021300	0.00080000	0.00274000	0.00000000	0.00000000	0.00000000
67.500	0.00037600	0.00114200	0.00091400	0.00000000	0.00000000	0.00000000
90.000	0.00038800	0.00125600	0.00331100	0.00000000	0.00000000	0.00000000
112.500	0.00056300	0.00171300	0.00479500	0.00000000	0.00000000	0.00000000
135.000	0.00106900	0.00171300	0.00399600	0.00000000	0.00000000	0.00000000
157.500	0.00049000	0.00102800	0.00068500	0.00000000	0.00000000	0.00000000
180.000	0.00196600	0.00182700	0.00194100	0.00000000	0.00000000	0.00000000
202.500	0.00050200	0.00114200	0.00034300	0.00000000	0.00000000	0.00000000
225.000	0.00088900	0.00239800	0.00045700	0.00000000	0.00000000	0.00000000
247.500	0.00085700	0.00091400	0.00137000	0.00000000	0.00000000	0.00000000
270.000	0.00053900	0.00148500	0.00114200	0.00000000	0.00000000	0.00000000
292.500	0.00050200	0.00114200	0.00045700	0.00000000	0.00000000	0.00000000
315.000	0.00118700	0.00045700	0.00034300	0.00000000	0.00000000	0.00000000
337.500	0.00075500	0.00114200	0.00125600	0.00000000	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb83.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1983 YEAR: 1983

ANNUAL: STABILITY CATEGORY C

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00098400	0.00433800	0.00616500	0.00091400	0.00011500	0.00000000
22.500	0.00020200	0.00068500	0.00296900	0.00125600	0.00000000	0.00000000
45.000	0.00035400	0.00091400	0.00639300	0.00251200	0.00011500	0.00000000
67.500	0.00006300	0.00057100	0.00719200	0.00399600	0.00011500	0.00000000
90.000	0.00020100	0.00182700	0.01198700	0.00764900	0.00000000	0.00000000
112.500	0.00015100	0.00137000	0.01016000	0.00513700	0.00011500	0.00000000
135.000	0.00048000	0.00205500	0.01232900	0.00388200	0.00000000	0.00000000
157.500	0.00031500	0.00171300	0.00399600	0.00262600	0.00000000	0.00000000
180.000	0.00080800	0.00274000	0.00525200	0.00148500	0.00022900	0.00000000
202.500	0.00065800	0.00137000	0.00251200	0.00045700	0.00000000	0.00000000
225.000	0.00039200	0.00125600	0.00285400	0.00080000	0.00011500	0.00000000
247.500	0.00026500	0.00125600	0.00216900	0.00057100	0.00000000	0.00000000
270.000	0.00046700	0.00194100	0.00365300	0.00057100	0.00045700	0.00022900
292.500	0.00008800	0.00080000	0.00194100	0.00022900	0.00011500	0.00000000
315.000	0.00015100	0.00137000	0.00433800	0.00045700	0.00000000	0.00000000
337.500	0.00059400	0.00194100	0.00399600	0.00080000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY D

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00070400	0.00376800	0.01221500	0.00924700	0.00080000	0.00000000
22.500	0.00017500	0.00091400	0.00445300	0.00593700	0.00022900	0.00000000
45.000	0.00019500	0.00125600	0.00627900	0.01232900	0.00251200	0.00022900
67.500	0.00016800	0.00080000	0.00970400	0.02465800	0.00376800	0.00102800
90.000	0.00021500	0.00159900	0.01917900	0.03264900	0.00331100	0.00296900
112.500	0.00017500	0.00091400	0.00993200	0.01175800	0.00022900	0.00000000
135.000	0.00023500	0.00194100	0.01232900	0.01963500	0.00137000	0.00000000
157.500	0.00022100	0.00171300	0.01038900	0.01655300	0.00216900	0.00000000
180.000	0.00079700	0.00536600	0.01335700	0.01164400	0.00114200	0.00000000
202.500	0.00022100	0.00171300	0.00525200	0.00296900	0.00080000	0.00000000
225.000	0.00071800	0.00194100	0.00468100	0.00548000	0.00114200	0.00000000
247.500	0.00022100	0.00171300	0.00308300	0.00456700	0.00068500	0.00034300
270.000	0.00055000	0.00319700	0.00399600	0.00867600	0.00239800	0.00034300
292.500	0.00012700	0.00216900	0.00308300	0.00490900	0.00194100	0.00022900
315.000	0.00018100	0.00102800	0.00685000	0.00936100	0.00034300	0.00000000
337.500	0.00024100	0.00205500	0.01084500	0.00787700	0.00045700	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb83.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1983 YEAR: 1983

ANNUAL: STABILITY CATEGORY E

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00000000	0.00924700	0.00388200	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00137000	0.00171300	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00216900	0.00479500	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00171300	0.00879000	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00593700	0.01198700	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00605100	0.01107400	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00513700	0.01187300	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00388200	0.00411000	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01358500	0.00353900	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00673600	0.00125600	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00411000	0.00148500	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00468100	0.00194100	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00685000	0.00513700	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00285400	0.00376800	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00639300	0.00742100	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00513700	0.00525200	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY F

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.01026700	0.00650700	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00201600	0.00171300	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00182800	0.00205500	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00180600	0.00285400	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00328200	0.00479500	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00540800	0.00810600	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00770100	0.01016000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00767600	0.00319700	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01446200	0.01038900	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00602700	0.00422400	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00722500	0.00582200	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00733300	0.00353900	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01391900	0.01232900	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00767200	0.00490900	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.01019000	0.00844800	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00951900	0.00787700	0.00000000	0.00000000	0.00000000	0.00000000

SUM OF FREQUENCIES, FTOTAL = 1.00015

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-1200.00	-1100.00	-1000.00	-900.00	-800.00	-700.00	-600.00	-500.00	-400.00
1200.00	0.405049	0.402107	0.398624	0.389773	0.377533	0.361607	0.341878	0.318515	0.336523
1100.00	0.408793	0.437088	0.432377	0.424230	0.412087	0.395474	0.374120	0.348112	0.346430
1000.00	0.413215	0.440505	0.470463	0.463507	0.451869	0.434816	0.411827	0.382791	0.356583
900.00	0.413649	0.442123	0.473608	0.508378	0.497854	0.480801	0.456206	0.424540	0.385110
800.00	0.412226	0.441614	0.474329	0.510724	0.551179	0.534716	0.510954	0.474538	0.428109
700.00	0.408774	0.438717	0.472234	0.509742	0.551542	0.601024	0.574540	0.534537	0.478806
600.00	0.403250	0.433317	0.467092	0.504892	0.549724	0.597434	0.651244	0.604805	0.569746
500.00	0.395813	0.425559	0.458969	0.497024	0.540447	0.587323	0.636637	0.726005	0.651521
400.00	0.448002	0.455347	0.459829	0.486802	0.526959	0.569570	0.641028	0.694481	0.753751
300.00	0.505640	0.520110	0.532402	0.542266	0.544694	0.549400	0.611138	0.649962	0.689103
200.00	0.565734	0.588588	0.611780	0.630564	0.643179	0.672906	0.658190	0.618254	0.612334
100.00	0.626691	0.658774	0.692739	0.724415	0.750679	0.806691	0.808362	0.783714	0.703437
0.00	0.686683	0.728305	0.773661	0.819519	0.863223	0.950490	0.979997	0.987858	0.942042
-100.00	0.629402	0.661779	0.695579	0.727160	0.752583	0.811641	0.812580	0.786286	0.708241
-200.00	0.571154	0.594677	0.617709	0.636552	0.648504	0.683799	0.667950	0.626440	0.566820
-300.00	0.513618	0.529196	0.542448	0.551665	0.553606	0.545370	0.567985	0.540201	0.492936
-400.00	0.458261	0.467175	0.473034	0.481267	0.486987	0.484206	0.496698	0.471757	0.436687
-500.00	0.406696	0.417633	0.426475	0.432225	0.433816	0.428906	0.414233	0.414938	0.362583
-600.00	0.373529	0.380804	0.385807	0.387646	0.386037	0.379040	0.367384	0.335075	0.304535
-700.00	0.342237	0.346475	0.348430	0.347481	0.343062	0.335615	0.316113	0.287110	0.247115
-800.00	0.313066	0.314860	0.314478	0.311517	0.305757	0.292795	0.273792	0.246937	0.212754
-900.00	0.286133	0.286012	0.283896	0.279561	0.270656	0.257130	0.238282	0.213938	0.184385
-1000.00	0.261454	0.259871	0.256508	0.250191	0.240520	0.226974	0.209161	0.186970	0.172407
-1100.00	0.237995	0.236296	0.231700	0.224612	0.214634	0.201426	0.184777	0.164714	0.182150
-1200.00	0.217452	0.214174	0.209838	0.202335	0.192361	0.179698	0.164249	0.146109	0.188918

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-300.00	-200.00	-100.00	0.00	100.00	200.00	300.00	400.00	500.00
1200.00	0.356854	0.377880	0.399159	0.420188	0.364042	0.308246	0.254511	0.204240	0.159770
1100.00	0.367668	0.390018	0.413006	0.436062	0.372319	0.309346	0.249356	0.194099	0.167130
1000.00	0.378886	0.403428	0.428650	0.454501	0.381252	0.309443	0.241233	0.180230	0.175476
900.00	0.389423	0.414047	0.441009	0.469566	0.385314	0.303610	0.228490	0.181029	0.185349
800.00	0.398348	0.422319	0.449593	0.481686	0.384183	0.291661	0.208812	0.190391	0.197093
700.00	0.412215	0.451074	0.479862	0.515553	0.396018	0.284855	0.190154	0.200329	0.209842
600.00	0.488059	0.450573	0.476044	0.514572	0.375674	0.251732	0.206986	0.221376	0.223560
500.00	0.548868	0.441684	0.460408	0.500775	0.339777	0.203713	0.213246	0.234410	0.251889
400.00	0.628058	0.470323	0.417833	0.450718	0.271956	0.188286	0.219178	0.248993	0.237339
300.00	0.720840	0.511367	0.410475	0.439842	0.204756	0.173838	0.222428	0.224987	0.220991
200.00	0.589983	0.747846	0.621123	0.616132	0.202907	0.211423	0.184210	0.203391	0.213210
100.00	0.641431	0.771255	1.434034	0.973175	0.429116	0.231273	0.205910	0.237955	0.272197
0.00	1.009599	1.476653	2.198054	0.000000	0.771314	0.470189	0.329727	0.323031	0.346232
-100.00	0.670532	0.796006	0.856571	0.799299	0.667756	0.261211	0.199540	0.226123	0.262021
-200.00	0.469753	0.457632	0.298066	0.510893	0.380258	0.289589	0.202977	0.194460	0.194046
-300.00	0.426560	0.279268	0.214002	0.368817	0.301471	0.259198	0.269806	0.247776	0.226504
-400.00	0.349475	0.235665	0.259758	0.388421	0.329163	0.305378	0.297339	0.295285	0.267468
-500.00	0.289106	0.214941	0.318246	0.443587	0.380276	0.338050	0.317905	0.307922	0.303130
-600.00	0.244296	0.251971	0.353372	0.467354	0.407185	0.361051	0.332999	0.317295	0.290580
-700.00	0.199134	0.278608	0.374072	0.476271	0.421581	0.374994	0.320253	0.304925	0.293649
-800.00	0.207098	0.282090	0.364856	0.451457	0.404231	0.362459	0.326315	0.305493	0.292424
-900.00	0.221310	0.290825	0.365541	0.441809	0.400898	0.362505	0.328084	0.302080	0.287698
-1000.00	0.230264	0.293830	0.360430	0.427634	0.392162	0.358124	0.325098	0.296485	0.282309
-1100.00	0.235121	0.291958	0.350962	0.410038	0.379239	0.349208	0.320780	0.294609	0.276291
-1200.00	0.237335	0.288523	0.341112	0.393479	0.366744	0.340341	0.314956	0.291142	0.269597

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00
1200.00	0.161648	0.162880	0.163425	0.163311	0.162610	0.160513	0.158777
1100.00	0.169509	0.171058	0.171732	0.171582	0.170712	0.169248	0.159712
1000.00	0.178516	0.180453	0.181263	0.181037	0.179928	0.169960	0.160975
900.00	0.188850	0.191332	0.192276	0.191909	0.180394	0.170075	0.160827
800.00	0.202230	0.203938	0.205084	0.191837	0.180028	0.169495	0.160097
700.00	0.216425	0.220293	0.203854	0.190593	0.178719	0.168152	0.158746
600.00	0.233238	0.216894	0.202288	0.188026	0.176433	0.166042	0.156784
500.00	0.225035	0.211321	0.197718	0.184735	0.173261	0.163264	0.154302
400.00	0.224828	0.203564	0.192102	0.180839	0.173826	0.174958	0.175040
300.00	0.213951	0.196092	0.198705	0.201832	0.201986	0.200320	0.198291
200.00	0.231467	0.241157	0.235727	0.235787	0.233421	0.227597	0.222919
100.00	0.285331	0.289984	0.277047	0.272622	0.266009	0.256032	0.248300
0.00	0.348033	0.343479	0.321171	0.310668	0.299184	0.284689	0.273690
-100.00	0.278028	0.285024	0.273356	0.270036	0.264147	0.254596	0.247236
-200.00	0.218161	0.232138	0.228997	0.231007	0.229969	0.224926	0.220937
-300.00	0.210213	0.185342	0.189639	0.195327	0.196998	0.196641	0.195561
-400.00	0.243230	0.211234	0.193626	0.177320	0.167831	0.170508	0.171738
-500.00	0.259914	0.236849	0.215229	0.195351	0.178224	0.163668	0.150924
-600.00	0.285298	0.258441	0.234738	0.212163	0.193964	0.177948	0.163938
-700.00	0.283976	0.275797	0.249078	0.227332	0.208014	0.191003	0.176050
-800.00	0.281674	0.270242	0.261912	0.239771	0.220016	0.202469	0.186927
-900.00	0.276078	0.266425	0.257637	0.249581	0.229881	0.212205	0.196406
-1000.00	0.271527	0.261879	0.253134	0.245115	0.237700	0.220223	0.204452
-1100.00	0.266072	0.256814	0.248350	0.240556	0.233341	0.226636	0.209084
-1200.00	0.260089	0.251367	0.243323	0.235874	0.228954	0.220478	0.214176

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 ANNUAL AVERAGE CONCENTRATION VALUES FOR GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

RANK	CONC	AT	RECEPTOR (XR,YR) OF TYPE			RANK	CONC	AT	RECEPTOR (XR,YR) OF TYPE		
1.	2.198054	AT (	-100.00,	0.00)	GC	6.	0.979997	AT (	-600.00,	0.00)	GC
2.	1.476653	AT (	-200.00,	0.00)	GC	7.	0.973175	AT (	0.00,	100.00)	GC
3.	1.434034	AT (	-100.00,	100.00)	GC	8.	0.950490	AT (	-700.00,	0.00)	GC
4.	1.009599	AT (	-300.00,	0.00)	GC	9.	0.942042	AT (	-400.00,	0.00)	GC
5.	0.987858	AT (	-500.00,	0.00)	GC	10.	0.863223	AT (	-800.00,	0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCLT2 Finishes Successfully ***
****

ISC MODEL RESULTS
NO_x ANNUAL
100 METER GRID
YEAR 1984

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Default Wind Profile Exponents.
5. Default Vertical Potential Temperature Gradients.
6. "Upper Bound" Values For Supersquat Buildings.
7. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 STAR Average(s) for the Following Months: 0 0 0 0 0 0 0 0 0 0 0 0
Seasons/Quarters: 0 0 0 0
and Annual: 1

**Model Assumes 1 STAR Summaries In Data File for the Averaging Periods Identified Above

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: NOX

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Long Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Maximum Long Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of Long Term Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: st19n84.ann ; **Output Print File: st19n84.out
**Error Message File: st19n84.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.27800E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	12.5,	22.1,	0	2	12.5,	27.0,	0	3	12.5,	28.1,	0	4	12.5,	27.9,	0
5	12.5,	24.5,	0	6	12.5,	27.9,	0	7	12.5,	28.1,	0	8	12.5,	27.1,	0
9	12.5,	22.1,	0	10	12.5,	27.0,	0	11	12.5,	28.1,	0	12	12.5,	27.9,	0
13	12.5,	24.5,	0	14	12.5,	27.9,	0	15	12.5,	28.1,	0	16	12.5,	27.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE SPEED FOR EACH WIND SPEED CATEGORY ***
(METERS/SEC)

1.50, 2.50, 4.30, 6.80, 9.50, 12.50,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** AVERAGE AMBIENT AIR TEMPERATURE (KELVIN) ***

	STABILITY CATEGORY A	STABILITY CATEGORY B	STABILITY CATEGORY C	STABILITY CATEGORY D	STABILITY CATEGORY E	STABILITY CATEGORY F
ANNUAL	301.4000	301.4000	301.4000	296.8000	292.2000	292.2000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE MIXING LAYER HEIGHT (METERS) ***

ANNUAL

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY A	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000
STABILITY CATEGORY B	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY C	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY D	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY E	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000
STABILITY CATEGORY F	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb84.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1984 YEAR: 1984

ANNUAL: STABILITY CATEGORY A

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00017300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00008700	0.00011400	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00017300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00037300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00037300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00017300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00037300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00054600	0.00045600	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00026000	0.00034200	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00020100	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00017300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00017300	0.00022800	0.00000000	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY B

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00195600	0.00250500	0.00125300	0.00000000	0.00000000	0.00000000
22.500	0.00095300	0.00113900	0.00034200	0.00000000	0.00000000	0.00000000
45.000	0.00039500	0.00113900	0.00148000	0.00000000	0.00000000	0.00000000
67.500	0.00049500	0.00034200	0.00091100	0.00000000	0.00000000	0.00000000
90.000	0.00095500	0.00239100	0.00353000	0.00000000	0.00000000	0.00000000
112.500	0.00020500	0.00091100	0.00205000	0.00000000	0.00000000	0.00000000
135.000	0.00062300	0.00091100	0.00353000	0.00000000	0.00000000	0.00000000
157.500	0.00067400	0.00113900	0.00136700	0.00000000	0.00000000	0.00000000
180.000	0.00163600	0.00045600	0.00079700	0.00000000	0.00000000	0.00000000
202.500	0.00085100	0.00068400	0.00079700	0.00000000	0.00000000	0.00000000
225.000	0.00067400	0.00113900	0.00034200	0.00000000	0.00000000	0.00000000
247.500	0.00057200	0.00068400	0.00102500	0.00000000	0.00000000	0.00000000
270.000	0.00139600	0.00125300	0.00113900	0.00000000	0.00000000	0.00000000
292.500	0.00054600	0.00057000	0.00045600	0.00000000	0.00000000	0.00000000
315.000	0.00096400	0.00057000	0.00045600	0.00000000	0.00000000	0.00000000
337.500	0.00066000	0.00045600	0.00079700	0.00000000	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb84.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1984 YEAR: 1984

ANNUAL: STABILITY CATEGORY C

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00097100	0.00239100	0.00512300	0.00102500	0.00000000	0.00000000
22.500	0.00024500	0.00045600	0.00239100	0.00136700	0.00000000	0.00000000
45.000	0.00019300	0.00022800	0.00375700	0.00261900	0.00022800	0.00000000
67.500	0.00013200	0.00057000	0.00671700	0.00273300	0.00034200	0.00000000
90.000	0.00037700	0.00102500	0.01218200	0.00660300	0.00034200	0.00000000
112.500	0.00042900	0.00125300	0.01058800	0.00626200	0.00000000	0.00000000
135.000	0.00018400	0.00079700	0.01206800	0.00535100	0.00000000	0.00000000
157.500	0.00015800	0.00068400	0.00626200	0.00387100	0.00000000	0.00000000
180.000	0.00086600	0.00193600	0.00489600	0.00205000	0.00000000	0.00000000
202.500	0.00040300	0.00113900	0.00159400	0.00079700	0.00000000	0.00000000
225.000	0.00048100	0.00148000	0.00205000	0.00045600	0.00000000	0.00000000
247.500	0.00013200	0.00057000	0.00284700	0.00057000	0.00011400	0.00000000
270.000	0.00062200	0.00148000	0.00330200	0.00159400	0.00022800	0.00011400
292.500	0.00051700	0.00102500	0.00261900	0.00125300	0.00000000	0.00000000
315.000	0.00050800	0.00159400	0.00307400	0.00045600	0.00000000	0.00000000
337.500	0.00073500	0.00136700	0.00375700	0.00102500	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY D

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00043300	0.00364300	0.01149900	0.01377600	0.00193600	0.00034200
22.500	0.00002900	0.00034200	0.00398500	0.01092900	0.00170800	0.00011400
45.000	0.00015300	0.00034200	0.00444000	0.02151700	0.00353000	0.00011400
67.500	0.00018200	0.00068400	0.00853900	0.03620300	0.00455400	0.00011400
90.000	0.00021100	0.00102500	0.02618400	0.06796500	0.00762800	0.00034200
112.500	0.00032700	0.00239100	0.01924000	0.02094800	0.00022800	0.00000000
135.000	0.00031700	0.00227700	0.01707700	0.01684900	0.00000000	0.00011400
157.500	0.00024000	0.00136700	0.01081600	0.01013300	0.00000000	0.00000000
180.000	0.00035600	0.00273300	0.00853900	0.00910800	0.00068400	0.00000000
202.500	0.00065900	0.00193600	0.00341600	0.00239100	0.00045600	0.00011400
225.000	0.00069700	0.00239100	0.00432700	0.00261900	0.00034200	0.00000000
247.500	0.00053500	0.00193600	0.00455400	0.00216400	0.00022800	0.00011400
270.000	0.00037300	0.00148000	0.00421300	0.00785600	0.00182200	0.00079700
292.500	0.00019200	0.00079700	0.00387100	0.00694500	0.00045600	0.00034200
315.000	0.00063900	0.00170800	0.00535100	0.00626200	0.00091100	0.00011400
337.500	0.00035600	0.00273300	0.00797000	0.00853900	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb84.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1984 YEAR: 1984

ANNUAL: STABILITY CATEGORY E

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00000000	0.00341600	0.00375700	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00034200	0.00364300	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00113900	0.00284700	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00079700	0.00808300	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00353000	0.01696300	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00489600	0.01366200	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00671700	0.00922200	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00409900	0.00546500	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.00853900	0.00501000	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00341600	0.00057000	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00432700	0.00079700	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00273300	0.00307400	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00432700	0.00364300	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00273300	0.00261900	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00261900	0.00637600	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00227700	0.00626200	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY F

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00733800	0.00649000	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00088900	0.00045600	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00104600	0.00068400	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00178500	0.00148000	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00443000	0.00421300	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00797000	0.00797000	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.01194600	0.00956300	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00815700	0.00432700	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01458500	0.00865300	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00822800	0.00387100	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00839100	0.00466800	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00785100	0.00444000	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01021900	0.00649000	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00813500	0.00569300	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.01006200	0.00626200	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00782900	0.00580700	0.00000000	0.00000000	0.00000000	0.00000000

SUM OF FREQUENCIES, FTOTAL = 1.00015

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-1200.00	-1100.00	-1000.00	-900.00	-800.00	-700.00	-600.00	-500.00	-400.00
1200.00	0.393747	0.388123	0.381903	0.370441	0.355745	0.337626	0.316083	0.291409	0.294906
1100.00	0.408838	0.422502	0.414989	0.404127	0.389460	0.370639	0.347536	0.320395	0.309203
1000.00	0.426599	0.439129	0.452078	0.442297	0.428065	0.408804	0.384172	0.354258	0.325384
900.00	0.442692	0.456510	0.470742	0.485536	0.472330	0.453066	0.426961	0.394691	0.356231
800.00	0.459366	0.474584	0.490198	0.506285	0.523098	0.504386	0.479246	0.442754	0.397839
700.00	0.476548	0.493280	0.510380	0.527812	0.545523	0.566612	0.538865	0.499168	0.445908
600.00	0.494160	0.512532	0.531238	0.549964	0.570972	0.589803	0.609454	0.563601	0.530179
500.00	0.512150	0.532314	0.552765	0.573654	0.594847	0.613546	0.626993	0.677503	0.604595
400.00	0.601134	0.598780	0.588555	0.599267	0.620162	0.636525	0.683892	0.691240	0.695700
300.00	0.699643	0.710066	0.713878	0.709293	0.689294	0.662530	0.710661	0.706789	0.692075
200.00	0.803673	0.829427	0.852230	0.865980	0.866132	0.895384	0.844009	0.750098	0.693499
100.00	0.910532	0.953426	0.996577	1.034861	1.061661	1.140325	1.124217	1.063042	0.922607
0.00	1.017024	1.077821	1.142661	1.207922	1.268100	1.404080	1.441000	1.440681	1.363106
-100.00	0.899661	0.941933	0.983927	1.021244	1.046776	1.124877	1.108280	1.046229	0.909371
-200.00	0.781309	0.805737	0.826190	0.837995	0.835705	0.863032	0.810284	0.716747	0.634501
-300.00	0.665550	0.673996	0.675610	0.666994	0.643624	0.608514	0.633918	0.596578	0.532917
-400.00	0.555445	0.550594	0.537592	0.536806	0.540056	0.532435	0.544066	0.508211	0.457601
-500.00	0.454927	0.465618	0.473401	0.476925	0.474676	0.464298	0.441011	0.436504	0.392961
-600.00	0.414057	0.420325	0.423482	0.422421	0.416225	0.403374	0.383977	0.358379	0.341577
-700.00	0.375513	0.378148	0.377689	0.373342	0.364391	0.350748	0.337601	0.316097	0.284705
-800.00	0.339608	0.339351	0.336172	0.329550	0.319175	0.311805	0.298852	0.279305	0.253410
-900.00	0.306491	0.304003	0.298852	0.290751	0.286755	0.278748	0.266097	0.248539	0.226323
-1000.00	0.276184	0.272023	0.265502	0.263509	0.258647	0.250420	0.238448	0.222612	0.212298
-1100.00	0.248058	0.243235	0.242451	0.239569	0.234208	0.226030	0.214814	0.200555	0.215035
-1200.00	0.223000	0.223029	0.221965	0.218492	0.212887	0.204923	0.194478	0.181604	0.215660

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-300.00	-200.00	-100.00	0.00	100.00	200.00	300.00	400.00	500.00
1200.00	0.298892	0.302440	0.305557	0.308286	0.268701	0.229289	0.191261	0.155615	0.123989
1100.00	0.312334	0.314979	0.317235	0.319271	0.274612	0.230407	0.188206	0.149243	0.129528
1000.00	0.327503	0.329747	0.330905	0.332159	0.281200	0.231155	0.183331	0.140562	0.135502
900.00	0.344337	0.343317	0.342306	0.341979	0.283924	0.227536	0.175585	0.141867	0.142171
800.00	0.361972	0.356819	0.351579	0.349321	0.282918	0.219872	0.163300	0.148094	0.149687
700.00	0.384973	0.387768	0.377054	0.370770	0.290718	0.216328	0.151756	0.154042	0.157006
600.00	0.452600	0.399453	0.379647	0.368633	0.276852	0.195292	0.162906	0.167363	0.164105
500.00	0.508211	0.407400	0.376869	0.359810	0.253347	0.164874	0.165055	0.173596	0.181150
400.00	0.579809	0.436793	0.356135	0.329138	0.208801	0.150676	0.164833	0.179825	0.176285
300.00	0.664269	0.473433	0.366675	0.335501	0.164667	0.131585	0.159629	0.168100	0.170837
200.00	0.616818	0.710116	0.570150	0.484530	0.158267	0.138948	0.137681	0.158325	0.172367
100.00	0.818015	0.927247	1.375884	0.771427	0.273656	0.187467	0.174117	0.204975	0.239420
0.00	1.472139	2.214594	3.410887	0.000000	0.662315	0.428265	0.305546	0.300813	0.321746
-100.00	0.816764	0.911044	1.000869	0.924995	0.520231	0.272019	0.215775	0.234799	0.264300
-200.00	0.516893	0.498468	0.390920	0.591660	0.340785	0.231993	0.192300	0.209187	0.221636
-300.00	0.446407	0.318241	0.272827	0.411476	0.282490	0.219551	0.219928	0.223895	0.224133
-400.00	0.381372	0.284509	0.302101	0.410867	0.311890	0.260250	0.246835	0.240229	0.234230
-500.00	0.331255	0.269640	0.351982	0.455825	0.362540	0.290935	0.266900	0.253357	0.244671
-600.00	0.292614	0.298135	0.379493	0.473062	0.389794	0.320414	0.281393	0.263559	0.237278
-700.00	0.246986	0.315872	0.392299	0.475044	0.402892	0.338666	0.271602	0.255130	0.242001
-800.00	0.249463	0.308393	0.373413	0.442193	0.383161	0.329305	0.281927	0.257267	0.242951
-900.00	0.255799	0.310491	0.369165	0.429129	0.378968	0.331219	0.287927	0.255821	0.240843
-1000.00	0.258011	0.307780	0.359885	0.412357	0.369585	0.328169	0.288483	0.253534	0.237798
-1100.00	0.256782	0.301236	0.347117	0.392862	0.356333	0.320519	0.286522	0.255204	0.233920
-1200.00	0.253767	0.293726	0.334496	0.374864	0.343502	0.312445	0.282553	0.254523	0.229245

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00
1200.00	0.124506	0.125007	0.125397	0.125624	0.125671	0.124692	0.124276
1100.00	0.130133	0.130680	0.131056	0.131209	0.131125	0.130821	0.125645
1000.00	0.136270	0.136895	0.137263	0.137322	0.137076	0.132210	0.127713
900.00	0.142890	0.143706	0.144076	0.144022	0.138572	0.133547	0.128903
800.00	0.151222	0.151125	0.151584	0.145533	0.139974	0.134832	0.130068
700.00	0.159169	0.160599	0.152839	0.146891	0.141298	0.136083	0.131227
600.00	0.168115	0.161217	0.155044	0.148086	0.142600	0.137354	0.132426
500.00	0.166416	0.161512	0.155944	0.149661	0.143985	0.138739	0.133741
400.00	0.172863	0.161352	0.157101	0.152040	0.148929	0.151583	0.152552
300.00	0.171656	0.162040	0.168927	0.174372	0.175746	0.175302	0.173673
200.00	0.195764	0.209155	0.206640	0.207903	0.206070	0.201006	0.196204
100.00	0.254635	0.260373	0.249057	0.244551	0.237521	0.227988	0.219582
0.00	0.322883	0.316738	0.294551	0.282641	0.269755	0.255366	0.243119
-100.00	0.275314	0.277425	0.262509	0.255976	0.247257	0.236279	0.226748
-200.00	0.236523	0.242778	0.233445	0.230567	0.225391	0.217459	0.210417
-300.00	0.222424	0.206770	0.207804	0.207420	0.203784	0.199444	0.194564
-400.00	0.227591	0.209567	0.201669	0.192705	0.184884	0.182673	0.179554
-500.00	0.222617	0.214100	0.204290	0.193553	0.183726	0.174650	0.166085
-600.00	0.229340	0.217950	0.207171	0.195338	0.185563	0.176278	0.167604
-700.00	0.230598	0.220948	0.207950	0.197320	0.187255	0.177854	0.169115
-800.00	0.230848	0.218759	0.209472	0.198648	0.188552	0.179153	0.170430
-900.00	0.228271	0.217579	0.207960	0.199292	0.189332	0.180057	0.171442
-1000.00	0.226083	0.215544	0.206031	0.197410	0.189571	0.180527	0.172103
-1100.00	0.222881	0.212816	0.203632	0.195245	0.187581	0.180573	0.171162
-1200.00	0.218993	0.209528	0.200803	0.192771	0.185387	0.177359	0.170960

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 ANNUAL AVERAGE CONCENTRATION VALUES FOR GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

RANK	CONC	AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	AT	RECEPTOR (XR,YR) OF TYPE
1.	3.410887	AT (	-100.00, 0.00) GC	6.	1.404080	AT (	-700.00, 0.00) GC
2.	2.214594	AT (	-200.00, 0.00) GC	7.	1.375884	AT (	-100.00, 100.00) GC
3.	1.472139	AT (	-300.00, 0.00) GC	8.	1.363106	AT (	-400.00, 0.00) GC
4.	1.441000	AT (	-600.00, 0.00) GC	9.	1.268100	AT (	-800.00, 0.00) GC
5.	1.440681	AT (	-500.00, 0.00) GC	10.	1.207922	AT (	-900.00, 0.00) GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCLT2 Finishes Successfully ***
****

ISC MODEL RESULTS
NO_x ANNUAL
100 METER GRID
YEAR 1985

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Default Wind Profile Exponents.
5. Default Vertical Potential Temperature Gradients.
6. "Upper Bound" Values For Supersquat Buildings.
7. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 STAR Average(s) for the Following Months: 0 0 0 0 0 0 0 0 0 0 0 0
Seasons/Quarters: 0 0 0 0
and Annual: 1

**Model Assumes 1 STAR Summaries In Data File for the Averaging Periods Identified Above

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: NOX

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Long Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Maximum Long Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of Long Term Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: st19n85.ann ; **Output Print File: st19n85.out
**Error Message File: st19n85.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.27800E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	12.5,	22.1,	0	2	12.5,	27.0,	0	3	12.5,	28.1,	0	4	12.5,	27.9,	0
5	12.5,	24.5,	0	6	12.5,	27.9,	0	7	12.5,	28.1,	0	8	12.5,	27.1,	0
9	12.5,	22.1,	0	10	12.5,	27.0,	0	11	12.5,	28.1,	0	12	12.5,	27.9,	0
13	12.5,	24.5,	0	14	12.5,	27.9,	0	15	12.5,	28.1,	0	16	12.5,	27.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0,	-1100.0,	-1000.0,	-900.0,	-800.0,	-700.0,	-600.0,	-500.0,	-400.0,	-300.0,
-200.0,	-100.0,	0.0,	100.0,	200.0,	300.0,	400.0,	500.0,	600.0,	700.0,
800.0,	900.0,	1000.0,	1100.0,	1200.0,					

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0,	-1100.0,	-1000.0,	-900.0,	-800.0,	-700.0,	-600.0,	-500.0,	-400.0,	-300.0,
-200.0,	-100.0,	0.0,	100.0,	200.0,	300.0,	400.0,	500.0,	600.0,	700.0,
800.0,	900.0,	1000.0,	1100.0,	1200.0,					

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE SPEED FOR EACH WIND SPEED CATEGORY ***
(METERS/SEC)

1.50, 2.50, 4.30, 6.80, 9.50, 12.50,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** AVERAGE AMBIENT AIR TEMPERATURE (KELVIN) ***

	STABILITY CATEGORY A	STABILITY CATEGORY B	STABILITY CATEGORY C	STABILITY CATEGORY D	STABILITY CATEGORY E	STABILITY CATEGORY F
ANNUAL	301.4000	301.4000	301.4000	296.8000	292.2000	292.2000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE MIXING LAYER HEIGHT (METERS) ***

ANNUAL

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY A	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000
STABILITY CATEGORY B	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY C	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY D	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY E	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000
STABILITY CATEGORY F	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb85.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1985 YEAR: 1985

ANNUAL: STABILITY CATEGORY A

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00014700	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00018000	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00006600	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00021300	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00016400	0.00057100	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00009800	0.00034300	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00016400	0.00057100	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00003300	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY B

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00148400	0.00137000	0.00057100	0.00000000	0.00000000	0.00000000
22.500	0.00022300	0.00068500	0.00045700	0.00000000	0.00000000	0.00000000
45.000	0.00009400	0.00068500	0.00091400	0.00000000	0.00000000	0.00000000
67.500	0.00071100	0.00045700	0.00228400	0.00000000	0.00000000	0.00000000
90.000	0.00063800	0.00182700	0.00582200	0.00000000	0.00000000	0.00000000
112.500	0.00053900	0.00205500	0.00365300	0.00000000	0.00000000	0.00000000
135.000	0.00051400	0.00091400	0.00445300	0.00000000	0.00000000	0.00000000
157.500	0.00046200	0.00148500	0.00228400	0.00000000	0.00000000	0.00000000
180.000	0.00121300	0.00319700	0.00228400	0.00000000	0.00000000	0.00000000
202.500	0.00078900	0.00102800	0.00080000	0.00000000	0.00000000	0.00000000
225.000	0.00093400	0.00114200	0.00080000	0.00000000	0.00000000	0.00000000
247.500	0.00062800	0.00080000	0.00114200	0.00000000	0.00000000	0.00000000
270.000	0.00112600	0.00159900	0.00194100	0.00000000	0.00000000	0.00000000
292.500	0.00129200	0.00091400	0.00114200	0.00000000	0.00000000	0.00000000
315.000	0.00157700	0.00205500	0.00102800	0.00000000	0.00000000	0.00000000
337.500	0.00114100	0.00171300	0.00057100	0.00000000	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb85.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1985 YEAR: 1985

ANNUAL: STABILITY CATEGORY C

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00039900	0.00182700	0.00308300	0.00091400	0.00000000	0.00000000
22.500	0.00029500	0.00057100	0.00137000	0.00114200	0.00000000	0.00000000
45.000	0.00006700	0.00080000	0.00513700	0.00342500	0.00034300	0.00000000
67.500	0.00019000	0.00080000	0.00776300	0.00342500	0.00045700	0.00011500
90.000	0.00010500	0.00125600	0.01735200	0.00764900	0.00034300	0.00000000
112.500	0.00031400	0.00080000	0.01392700	0.00468100	0.00000000	0.00000000
135.000	0.00020900	0.00102800	0.01529700	0.00490900	0.00000000	0.00000000
157.500	0.00014300	0.00171300	0.00776300	0.00171300	0.00000000	0.00000000
180.000	0.00073200	0.00433800	0.00548000	0.00068500	0.00000000	0.00000000
202.500	0.00026600	0.00171300	0.00285400	0.00034300	0.00000000	0.00000000
225.000	0.00028500	0.00194100	0.00331100	0.00068500	0.00000000	0.00000000
247.500	0.00054200	0.00205500	0.00296900	0.00057100	0.00000000	0.00000000
270.000	0.00058900	0.00262600	0.00365300	0.00114200	0.00000000	0.00000000
292.500	0.00025700	0.00159900	0.00342500	0.00080000	0.00000000	0.00000000
315.000	0.00043700	0.00228400	0.00331100	0.00102800	0.00022900	0.00000000
337.500	0.00054200	0.00205500	0.00365300	0.00080000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY D

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00075100	0.00228400	0.00559400	0.00662200	0.00034300	0.00000000
22.500	0.00067200	0.00102800	0.00216900	0.00353900	0.00045700	0.00011500
45.000	0.00003600	0.00057100	0.00570800	0.01324300	0.00262600	0.00000000
67.500	0.00006500	0.00102800	0.01427000	0.02534300	0.00502300	0.00102800
90.000	0.00038000	0.00216900	0.03036600	0.03915600	0.00548000	0.00022900
112.500	0.00007900	0.00125600	0.01449800	0.00993200	0.00022900	0.00000000
135.000	0.00025800	0.00216900	0.01655300	0.01198700	0.00034300	0.00000000
157.500	0.00022900	0.00171300	0.00924700	0.00856200	0.00045700	0.00000000
180.000	0.00062300	0.00411000	0.00879000	0.00627900	0.00034300	0.00000000
202.500	0.00038700	0.00228400	0.00388200	0.00137000	0.00000000	0.00000000
225.000	0.00038000	0.00216900	0.00342500	0.00342500	0.00022900	0.00000000
247.500	0.00046500	0.00159900	0.00479500	0.00296900	0.00011500	0.00000000
270.000	0.00062900	0.00228400	0.00411000	0.00433800	0.00068500	0.00000000
292.500	0.00032300	0.00319700	0.00376800	0.00536600	0.00080000	0.00022900
315.000	0.00127200	0.00285400	0.00513700	0.00764900	0.00068500	0.00000000
337.500	0.00076500	0.00251200	0.00411000	0.00639300	0.00045700	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb85.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1985 YEAR: 1985

ANNUAL: STABILITY CATEGORY E

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00000000	0.00262600	0.00159900	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00068500	0.00091400	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00080000	0.00570800	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00182700	0.00924700	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00639300	0.01986400	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00844800	0.00605100	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00890500	0.00559400	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00468100	0.00559400	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.00947500	0.00376800	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00468100	0.00114200	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00399600	0.00285400	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00376800	0.00239800	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00719200	0.00365300	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00513700	0.00376800	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00490900	0.00753500	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00548000	0.00399600	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY F

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00540100	0.00319700	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00123100	0.00114200	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00066000	0.00171300	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00131900	0.00342500	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00560700	0.01232900	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00572100	0.01221500	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00963300	0.01141600	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00620700	0.00639300	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.01433600	0.01575400	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.01061600	0.00924700	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00976100	0.00936100	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00614000	0.00468100	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.01263100	0.01153000	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00896100	0.01016000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.01058200	0.00913300	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00798400	0.00787700	0.00000000	0.00000000	0.00000000	0.00000000

SUM OF FREQUENCIES, FTOTAL = 1.00015

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-1200.00	-1100.00	-1000.00	-900.00	-800.00	-700.00	-600.00	-500.00	-400.00
1200.00	0.384640	0.380661	0.376194	0.366720	0.354151	0.338248	0.318942	0.296431	0.307186
1100.00	0.393181	0.413899	0.408300	0.399549	0.387161	0.370738	0.350074	0.325300	0.319718
1000.00	0.403326	0.423128	0.444376	0.436834	0.425048	0.408387	0.386421	0.359109	0.333653
900.00	0.410784	0.431902	0.454663	0.479193	0.468613	0.452172	0.428964	0.399686	0.364270
800.00	0.417664	0.440045	0.464254	0.490421	0.518743	0.503064	0.481611	0.448315	0.406379
700.00	0.423854	0.447402	0.472936	0.500560	0.530229	0.565498	0.541258	0.505103	0.455404
600.00	0.429301	0.453892	0.480577	0.509232	0.543037	0.576106	0.612064	0.570531	0.537408
500.00	0.434059	0.459570	0.487193	0.517446	0.551066	0.584049	0.615457	0.680729	0.612232
400.00	0.519493	0.516895	0.508173	0.526437	0.557919	0.588296	0.643573	0.672939	0.703027
300.00	0.614195	0.622953	0.627062	0.625136	0.609658	0.593203	0.643132	0.659778	0.669552
200.00	0.713829	0.736134	0.758152	0.771281	0.773520	0.793413	0.750444	0.669296	0.631412
100.00	0.815725	0.853065	0.893090	0.927611	0.953424	1.016394	1.003728	0.951725	0.822691
0.00	0.916756	0.969682	1.028719	1.086602	1.141216	1.254718	1.288330	1.292448	1.223022
-100.00	0.822352	0.860563	0.900923	0.936285	0.962540	1.031588	1.022118	0.975891	0.861704
-200.00	0.727053	0.751155	0.773978	0.788946	0.792998	0.823792	0.786429	0.715139	0.628414
-300.00	0.633700	0.645198	0.652294	0.651495	0.638829	0.612675	0.626585	0.576831	0.497567
-400.00	0.544721	0.545757	0.540879	0.540353	0.537032	0.521249	0.518513	0.467812	0.398966
-500.00	0.462831	0.469466	0.472225	0.469547	0.459857	0.439796	0.405086	0.380562	0.315314
-600.00	0.415082	0.416638	0.414064	0.406012	0.391677	0.368541	0.336868	0.294059	0.248800
-700.00	0.370469	0.367947	0.361327	0.349632	0.331929	0.308261	0.279757	0.240054	0.187847
-800.00	0.329345	0.323686	0.314159	0.300106	0.281084	0.260681	0.232741	0.195625	0.149872
-900.00	0.291846	0.283874	0.272382	0.256985	0.241941	0.221169	0.193911	0.159980	0.119733
-1000.00	0.257936	0.248339	0.235625	0.224230	0.208607	0.188165	0.162492	0.131523	0.104668
-1100.00	0.226614	0.216793	0.207971	0.195964	0.180315	0.160646	0.136750	0.108717	0.107669
-1200.00	0.199236	0.192391	0.183835	0.171635	0.156324	0.137671	0.115597	0.090262	0.109382

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-300.00	-200.00	-100.00	0.00	100.00	200.00	300.00	400.00	500.00
1200.00	0.319216	0.331264	0.343093	0.354455	0.309657	0.265286	0.222687	0.182959	0.147924
1100.00	0.331790	0.344000	0.356130	0.367981	0.316877	0.266617	0.218905	0.175097	0.153671
1000.00	0.346022	0.359710	0.372401	0.385148	0.326073	0.268476	0.212883	0.164093	0.160034
900.00	0.361228	0.372515	0.384533	0.397238	0.329075	0.263427	0.203455	0.165577	0.167553
800.00	0.376216	0.384562	0.393947	0.406258	0.327217	0.252836	0.186825	0.171752	0.176910
700.00	0.397445	0.411171	0.416496	0.426483	0.331090	0.243472	0.170282	0.177825	0.185505
600.00	0.463722	0.419504	0.415641	0.421215	0.310982	0.214120	0.179666	0.191239	0.194606
500.00	0.520055	0.423698	0.406438	0.404430	0.277984	0.172923	0.181297	0.198928	0.214217
400.00	0.590272	0.449873	0.374555	0.358749	0.221057	0.158385	0.184626	0.208983	0.205303
300.00	0.671044	0.475824	0.365698	0.336180	0.165342	0.147171	0.188333	0.193487	0.196216
200.00	0.573357	0.694828	0.540591	0.449506	0.167870	0.182363	0.159301	0.179116	0.193762
100.00	0.700635	0.756126	1.263386	0.718060	0.377209	0.204466	0.175349	0.205208	0.238201
0.00	1.299762	1.896365	2.838652	0.000000	0.532001	0.339729	0.259182	0.272235	0.297356
-100.00	0.789192	0.886005	0.853954	0.440610	0.637362	0.302248	0.225820	0.240542	0.267324
-200.00	0.493420	0.430682	0.221387	0.287850	0.296524	0.292717	0.232881	0.243255	0.250564
-300.00	0.388729	0.233232	0.130701	0.204458	0.214342	0.233089	0.286788	0.280257	0.271704
-400.00	0.298321	0.169191	0.150950	0.209101	0.219369	0.247822	0.283027	0.315870	0.299049
-500.00	0.226703	0.133570	0.178783	0.235297	0.241382	0.258780	0.278932	0.302498	0.323340
-600.00	0.173206	0.149253	0.194954	0.246887	0.250407	0.262512	0.276531	0.291410	0.292957
-700.00	0.126689	0.159870	0.203513	0.250400	0.253208	0.260980	0.260060	0.269473	0.279574
-800.00	0.124109	0.158424	0.196229	0.235886	0.238937	0.245297	0.252751	0.259374	0.265967
-900.00	0.128902	0.160841	0.195119	0.230090	0.233235	0.237895	0.243277	0.248453	0.251766
-1000.00	0.131335	0.160602	0.191135	0.221912	0.225072	0.229078	0.231855	0.235579	0.239178
-1100.00	0.132009	0.158054	0.185035	0.212008	0.214950	0.218340	0.221784	0.224976	0.227842
-1200.00	0.131535	0.154895	0.178840	0.202640	0.205651	0.208842	0.211973	0.214835	0.217278

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00
1200.00	0.149427	0.150674	0.151570	0.152084	0.152227	0.150984	0.150345
1100.00	0.155579	0.157121	0.158183	0.158741	0.158823	0.158487	0.151668
1000.00	0.162519	0.164444	0.165706	0.166297	0.166278	0.159818	0.153814
900.00	0.170228	0.172789	0.174294	0.174900	0.167677	0.161016	0.154825
800.00	0.181371	0.182204	0.184153	0.176159	0.168843	0.162065	0.155743
700.00	0.191461	0.195633	0.184717	0.177025	0.169766	0.162969	0.156582
600.00	0.203398	0.194603	0.186673	0.177432	0.170492	0.163778	0.157390
500.00	0.198799	0.192731	0.185954	0.178358	0.171141	0.164610	0.158261
400.00	0.201995	0.190126	0.185324	0.179454	0.174473	0.174094	0.172715
300.00	0.198106	0.188515	0.192675	0.195103	0.194198	0.191741	0.188876
200.00	0.212530	0.222803	0.218963	0.219159	0.216816	0.210883	0.206083
100.00	0.252051	0.258066	0.249259	0.245888	0.240211	0.231067	0.223953
0.00	0.300959	0.298663	0.282909	0.274244	0.264510	0.251714	0.242010
-100.00	0.276323	0.278851	0.266583	0.261007	0.253461	0.242457	0.234091
-200.00	0.261087	0.264468	0.253843	0.249502	0.243419	0.233769	0.226437
-300.00	0.265319	0.246682	0.243870	0.239863	0.232528	0.225724	0.219173
-400.00	0.284443	0.260096	0.248141	0.236145	0.224228	0.218390	0.212390
-500.00	0.289935	0.273866	0.258256	0.242280	0.228860	0.217099	0.206456
-600.00	0.305014	0.284806	0.267146	0.249013	0.235007	0.222364	0.211057
-700.00	0.287373	0.292779	0.271536	0.254957	0.240109	0.226896	0.215120
-800.00	0.271796	0.273721	0.276108	0.259075	0.243945	0.230471	0.218453
-900.00	0.255488	0.258856	0.260831	0.261529	0.246482	0.233026	0.220978
-1000.00	0.242582	0.245284	0.247071	0.247894	0.247812	0.234597	0.222701
-1100.00	0.230622	0.232946	0.234606	0.235527	0.235729	0.235280	0.221887
-1200.00	0.219647	0.221707	0.223276	0.224276	0.224699	0.222793	0.221941

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 ANNUAL AVERAGE CONCENTRATION VALUES FOR GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

RANK	CONC	AT	RECEPTOR (XR,YR)	OF TYPE	RANK	CONC	AT	RECEPTOR (XR,YR)	OF TYPE
1.	2.838652	AT (	-100.00, 0.00)	GC	6.	1.263386	AT (	-100.00, 100.00)	GC
2.	1.896365	AT (	-200.00, 0.00)	GC	7.	1.254718	AT (	-700.00, 0.00)	GC
3.	1.299762	AT (	-300.00, 0.00)	GC	8.	1.223022	AT (	-400.00, 0.00)	GC
4.	1.292448	AT (	-500.00, 0.00)	GC	9.	1.141216	AT (	-800.00, 0.00)	GC
5.	1.288330	AT (	-600.00, 0.00)	GC	10.	1.086602	AT (	-900.00, 0.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCLT2 Finishes Successfully ***
****

ISC MODEL RESULTS
NO_x ANNUAL
100 METER GRID
YEAR 1986

```
NO ECHO

************************************
*** SETUP Finishes Successfully ***
************************************
```

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

- -

**Model Is Setup For Calculation of Average CONCentration Values.

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Default Wind Profile Exponents.
5. Default Vertical Potential Temperature Gradients.
6. "Upper Bound" Values For Supersquat Buildings.
7. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 1 STAR Average(s) for the Following Months: 0 0 0 0 0 0 0 0 0 0 0 0
Seasons/Quarters: 0 0 0 0
and Annual: 1

**Model Assumes 1 STAR Summaries In Data File for the Averaging Periods Identified Above

**This Run Includes: 1 Source(s); 1 Source Group(s); and 625 Receptor(s)

**The Model Assumes A Pollutant Type of: NOX

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of Long Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Maximum Long Term Values (MAXTABLE Keyword)
Model Outputs External File(s) of Long Term Values for Plotting (PLOTFILE Keyword)

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SECOND ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/CUBIC-METER

**Input Runstream File: st19n86.ann ; **Output Print File: st19n86.out
**Error Message File: st19n86.err

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	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
3	0	0.27800E+01	0.0	0.0	0.0	19.81	541.00	14.00	1.22	YES	

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	3 ,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 3

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	12.5,	22.1,	0	2	12.5,	27.0,	0	3	12.5,	28.1,	0	4	12.5,	27.9,	0
5	12.5,	24.5,	0	6	12.5,	27.9,	0	7	12.5,	28.1,	0	8	12.5,	27.1,	0
9	12.5,	22.1,	0	10	12.5,	27.0,	0	11	12.5,	28.1,	0	12	12.5,	27.9,	0
13	12.5,	24.5,	0	14	12.5,	27.9,	0	15	12.5,	28.1,	0	16	12.5,	27.1,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** Y-COORDINATES OF GRID ***
(METERS)

-1200.0, -1100.0, -1000.0, -900.0, -800.0, -700.0, -600.0, -500.0, -400.0, -300.0,
-200.0, -100.0, 0.0, 100.0, 200.0, 300.0, 400.0, 500.0, 600.0, 700.0,
800.0, 900.0, 1000.0, 1100.0, 1200.0,

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

* SOURCE-RECEPTOR COMBINATIONS LESS THAN 1.0 METER OR 3*ZLB *
IN DISTANCE. CALCULATIONS MAY NOT BE PERFORMED.

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
3	0.0	0.0	0.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE SPEED FOR EACH WIND SPEED CATEGORY ***
(METERS/SEC)

1.50, 2.50, 4.30, 6.80, 9.50, 12.50,

*** WIND PROFILE EXPONENTS ***

STABILITY	WIND SPEED CATEGORY					
CATEGORY	1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

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

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

*** AVERAGE AMBIENT AIR TEMPERATURE (KELVIN) ***

	STABILITY CATEGORY A	STABILITY CATEGORY B	STABILITY CATEGORY C	STABILITY CATEGORY D	STABILITY CATEGORY E	STABILITY CATEGORY F
ANNUAL	301.4000	301.4000	301.4000	296.8000	292.2000	292.2000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** AVERAGE MIXING LAYER HEIGHT (METERS) ***

ANNUAL

	WIND SPEED CATEGORY 1	WIND SPEED CATEGORY 2	WIND SPEED CATEGORY 3	WIND SPEED CATEGORY 4	WIND SPEED CATEGORY 5	WIND SPEED CATEGORY 6
STABILITY CATEGORY A	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000	1950.0000
STABILITY CATEGORY B	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY C	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY D	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000	1300.0000
STABILITY CATEGORY E	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000
STABILITY CATEGORY F	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000	10000.0000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb86.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1986 YEAR: 1986

ANNUAL: STABILITY CATEGORY A

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00003700	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00007400	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00003700	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00007400	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00025600	0.00080000	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00007400	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00022400	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00018800	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00033800	0.00011500	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00007400	0.00022900	0.00000000	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY B

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00054800	0.00125600	0.00125600	0.00000000	0.00000000	0.00000000
22.500	0.00016300	0.00080000	0.00159900	0.00000000	0.00000000	0.00000000
45.000	0.00053000	0.00091400	0.00285400	0.00000000	0.00000000	0.00000000
67.500	0.00008000	0.00148500	0.00262600	0.00000000	0.00000000	0.00000000
90.000	0.00047700	0.00216900	0.00399600	0.00000000	0.00000000	0.00000000
112.500	0.00081300	0.00171300	0.00228400	0.00000000	0.00000000	0.00000000
135.000	0.00027100	0.00057100	0.00228400	0.00000000	0.00000000	0.00000000
157.500	0.00014500	0.00045700	0.00102800	0.00000000	0.00000000	0.00000000
180.000	0.00069300	0.00171300	0.00137000	0.00000000	0.00000000	0.00000000
202.500	0.00044600	0.00159900	0.00148500	0.00000000	0.00000000	0.00000000
225.000	0.00039200	0.00057100	0.00102800	0.00000000	0.00000000	0.00000000
247.500	0.00053600	0.00102800	0.00091400	0.00000000	0.00000000	0.00000000
270.000	0.00087900	0.00068500	0.00068500	0.00000000	0.00000000	0.00000000
292.500	0.00092700	0.00159900	0.00080000	0.00000000	0.00000000	0.00000000
315.000	0.00075200	0.00057100	0.00091400	0.00000000	0.00000000	0.00000000
337.500	0.00080100	0.00148500	0.00080000	0.00000000	0.00000000	0.00000000

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb86.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1986 YEAR: 1986

ANNUAL: STABILITY CATEGORY C

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00040400	0.00216900	0.00376800	0.00091400	0.00000000	0.00011500
22.500	0.00012800	0.00045700	0.00365300	0.00080000	0.00000000	0.00000000
45.000	0.00001700	0.00068500	0.00559400	0.00308300	0.00011500	0.00000000
67.500	0.00002000	0.00080000	0.00627900	0.00513700	0.00000000	0.00000000
90.000	0.00029000	0.00228400	0.01701000	0.01175800	0.00022900	0.00000000
112.500	0.00014200	0.00102800	0.01061700	0.00685000	0.00011500	0.00000000
135.000	0.00004200	0.00171300	0.00719200	0.00411000	0.00034300	0.00000000
157.500	0.00048800	0.00080000	0.00308300	0.00114200	0.00011500	0.00000000
180.000	0.00041800	0.00274000	0.00685000	0.00159900	0.00011500	0.00000000
202.500	0.00026700	0.00137000	0.00456700	0.00125600	0.00000000	0.00000000
225.000	0.00004500	0.00182700	0.00388200	0.00080000	0.00000000	0.00000000
247.500	0.00004200	0.00171300	0.00216900	0.00057100	0.00000000	0.00000000
270.000	0.00040100	0.00205500	0.00274000	0.00102800	0.00000000	0.00000000
292.500	0.00026200	0.00114200	0.00285400	0.00091400	0.00000000	0.00000000
315.000	0.00007800	0.00319700	0.00319700	0.00057100	0.00000000	0.00000000
337.500	0.00016200	0.00182700	0.00399600	0.00022900	0.00011500	0.00000000

ANNUAL: STABILITY CATEGORY D

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00005400	0.00319700	0.00753500	0.01016000	0.00080000	0.00000000
22.500	0.00013600	0.00114200	0.00251200	0.00924700	0.00125600	0.00011500
45.000	0.00014700	0.00182700	0.00799100	0.01438400	0.00239800	0.00045700
67.500	0.00002200	0.00125600	0.00970400	0.02956700	0.00308300	0.00022900
90.000	0.00014700	0.00182700	0.02100500	0.06118800	0.00707800	0.00045700
112.500	0.00003100	0.00182700	0.01324300	0.02500000	0.00148500	0.00000000
135.000	0.00002200	0.00125600	0.01084500	0.01723800	0.00159900	0.00057100
157.500	0.00002000	0.00114200	0.00616500	0.00673600	0.00045700	0.00022900
180.000	0.00026500	0.00194100	0.00993200	0.00787700	0.00034300	0.00000000
202.500	0.00002200	0.00125600	0.00582200	0.00308300	0.00011500	0.00000000
225.000	0.00038300	0.00205500	0.00559400	0.00468100	0.00045700	0.00011500
247.500	0.00016100	0.00262600	0.00319700	0.00194100	0.00022900	0.00000000
270.000	0.00016800	0.00308300	0.00308300	0.00353900	0.00068500	0.00011500
292.500	0.00062500	0.00262600	0.00399600	0.00445300	0.00068500	0.00022900
315.000	0.00026100	0.00171300	0.00696400	0.00570800	0.00034300	0.00011500
337.500	0.00028300	0.00296900	0.01038900	0.00627900	0.00022900	0.00011500

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** FREQUENCY OF OCCURRENCE OF WIND SPEED, DIRECTION AND STABILITY ***

FILE: jfwpb86.Y FORMAT: (6F10.6)
SURFACE STATION NO.: 12844 UPPER AIR STATION NO.: 12844
NAME: WESTPALMBEACH-FL NAME: WESTPALMBEACH-FL
YEAR: 1986 YEAR: 1986

ANNUAL: STABILITY CATEGORY E

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00000000	0.00490900	0.00137000	0.00000000	0.00000000	0.00000000
22.500	0.00000000	0.00125600	0.00182700	0.00000000	0.00000000	0.00000000
45.000	0.00000000	0.00125600	0.00536600	0.00000000	0.00000000	0.00000000
67.500	0.00000000	0.00194100	0.00901900	0.00000000	0.00000000	0.00000000
90.000	0.00000000	0.00319700	0.02534300	0.00000000	0.00000000	0.00000000
112.500	0.00000000	0.00445300	0.01267200	0.00000000	0.00000000	0.00000000
135.000	0.00000000	0.00559400	0.00605100	0.00000000	0.00000000	0.00000000
157.500	0.00000000	0.00388200	0.00456700	0.00000000	0.00000000	0.00000000
180.000	0.00000000	0.01027400	0.00559400	0.00000000	0.00000000	0.00000000
202.500	0.00000000	0.00422400	0.00194100	0.00000000	0.00000000	0.00000000
225.000	0.00000000	0.00479500	0.00137000	0.00000000	0.00000000	0.00000000
247.500	0.00000000	0.00411000	0.00182700	0.00000000	0.00000000	0.00000000
270.000	0.00000000	0.00536600	0.00262600	0.00000000	0.00000000	0.00000000
292.500	0.00000000	0.00548000	0.00411000	0.00000000	0.00000000	0.00000000
315.000	0.00000000	0.00673600	0.00593700	0.00000000	0.00000000	0.00000000
337.500	0.00000000	0.00502300	0.00502300	0.00000000	0.00000000	0.00000000

ANNUAL: STABILITY CATEGORY F

DIRECTION (DEGREES)	WIND SPEED CATEGORY 1 (1.500 M/S)	WIND SPEED CATEGORY 2 (2.500 M/S)	WIND SPEED CATEGORY 3 (4.300 M/S)	WIND SPEED CATEGORY 4 (6.800 M/S)	WIND SPEED CATEGORY 5 (9.500 M/S)	WIND SPEED CATEGORY 6 (12.500 M/S)
0.000	0.00323100	0.00353900	0.00000000	0.00000000	0.00000000	0.00000000
22.500	0.00099800	0.00194100	0.00000000	0.00000000	0.00000000	0.00000000
45.000	0.00128800	0.00331100	0.00000000	0.00000000	0.00000000	0.00000000
67.500	0.00173900	0.00388200	0.00000000	0.00000000	0.00000000	0.00000000
90.000	0.00561900	0.01073100	0.00000000	0.00000000	0.00000000	0.00000000
112.500	0.00417900	0.00936100	0.00000000	0.00000000	0.00000000	0.00000000
135.000	0.00378500	0.00605100	0.00000000	0.00000000	0.00000000	0.00000000
157.500	0.00404300	0.00822000	0.00000000	0.00000000	0.00000000	0.00000000
180.000	0.00627900	0.01735200	0.00000000	0.00000000	0.00000000	0.00000000
202.500	0.00629100	0.00993200	0.00000000	0.00000000	0.00000000	0.00000000
225.000	0.00673600	0.01153000	0.00000000	0.00000000	0.00000000	0.00000000
247.500	0.00797300	0.01118800	0.00000000	0.00000000	0.00000000	0.00000000
270.000	0.00785300	0.01232900	0.00000000	0.00000000	0.00000000	0.00000000
292.500	0.00720400	0.00901900	0.00000000	0.00000000	0.00000000	0.00000000
315.000	0.00742400	0.01301400	0.00000000	0.00000000	0.00000000	0.00000000
337.500	0.00584500	0.00833400	0.00000000	0.00000000	0.00000000	0.00000000

SUM OF FREQUENCIES, FTOTAL = 1.00016

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-1200.00	-1100.00	-1000.00	-900.00	-800.00	-700.00	-600.00	-500.00	-400.00
1200.00	0.305054	0.298820	0.291294	0.278877	0.262935	0.243212	0.219637	0.192418	0.218686
1100.00	0.328175	0.329039	0.320430	0.308187	0.291791	0.270819	0.245061	0.214657	0.216922
1000.00	0.355018	0.355377	0.353852	0.342241	0.325772	0.303780	0.275822	0.241870	0.213336
900.00	0.382531	0.384518	0.384373	0.381771	0.365826	0.343255	0.313154	0.275737	0.232461
800.00	0.412543	0.416663	0.418440	0.417337	0.412970	0.390473	0.360542	0.318900	0.267529
700.00	0.445096	0.451953	0.456342	0.457460	0.454435	0.448628	0.416360	0.371102	0.311206
600.00	0.480141	0.490436	0.498275	0.502464	0.503737	0.497184	0.484549	0.434144	0.387287
500.00	0.517520	0.532020	0.544273	0.553169	0.557981	0.553724	0.536974	0.542215	0.464556
400.00	0.613789	0.613164	0.604768	0.610763	0.619351	0.617523	0.634234	0.605166	0.562743
300.00	0.719270	0.732200	0.739195	0.737634	0.719905	0.690545	0.716471	0.683514	0.626417
200.00	0.830153	0.859226	0.886905	0.905002	0.909796	0.938172	0.889722	0.794866	0.711763
100.00	0.943513	0.990522	1.040030	1.084399	1.118697	1.197977	1.190076	1.135834	0.994109
0.00	1.055927	1.121566	1.194189	1.267290	1.337828	1.476169	1.527545	1.544716	1.476835
-100.00	0.928803	0.974038	1.021100	1.062960	1.094326	1.170501	1.159396	1.101243	0.957388
-200.00	0.800598	0.826070	0.848817	0.861822	0.860634	0.882329	0.827037	0.725902	0.645054
-300.00	0.675256	0.682913	0.683757	0.673754	0.647427	0.610548	0.636929	0.604623	0.545459
-400.00	0.556141	0.548863	0.532715	0.533185	0.540152	0.537078	0.550557	0.518995	0.471648
-500.00	0.447753	0.460180	0.470273	0.476876	0.478599	0.472197	0.453279	0.450532	0.400820
-600.00	0.410726	0.418889	0.424449	0.426276	0.424071	0.414824	0.398911	0.367603	0.342237
-700.00	0.375962	0.380631	0.382643	0.381183	0.375392	0.365694	0.346628	0.318581	0.280322
-800.00	0.343684	0.345571	0.344902	0.341115	0.333772	0.320865	0.302307	0.275960	0.242913
-900.00	0.313982	0.313711	0.311083	0.305745	0.296709	0.283048	0.264137	0.240044	0.211062
-1000.00	0.286837	0.284936	0.280922	0.274378	0.264413	0.250541	0.232432	0.210075	0.190794
-1100.00	0.261271	0.259054	0.254189	0.246742	0.236327	0.222631	0.205494	0.185022	0.185580
-1200.00	0.238786	0.235211	0.230410	0.222436	0.211908	0.198632	0.182552	0.163825	0.180430

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS)								
	-300.00	-200.00	-100.00	0.00	100.00	200.00	300.00	400.00	500.00
1200.00	0.249157	0.281632	0.315303	0.349188	0.315827	0.282398	0.249895	0.219154	0.191450
1100.00	0.250253	0.286350	0.324233	0.362680	0.325235	0.288012	0.252214	0.218844	0.199270
1000.00	0.250371	0.292539	0.335871	0.380289	0.337626	0.295631	0.253994	0.217262	0.207187
900.00	0.248311	0.292991	0.341852	0.392669	0.344464	0.297723	0.254543	0.224113	0.215581
800.00	0.241299	0.289545	0.343813	0.402272	0.347610	0.296406	0.250500	0.231593	0.224598
700.00	0.241506	0.293907	0.356168	0.424900	0.360041	0.301226	0.245675	0.237028	0.230904
600.00	0.299990	0.277699	0.344072	0.421918	0.348870	0.287234	0.257188	0.250169	0.234886
500.00	0.360152	0.253002	0.322655	0.409907	0.326938	0.263639	0.253283	0.251043	0.250242
400.00	0.442802	0.290402	0.280312	0.371734	0.281006	0.240943	0.244260	0.250288	0.226236
300.00	0.544819	0.355665	0.256432	0.372196	0.241897	0.206148	0.230350	0.211683	0.195777
200.00	0.589897	0.589942	0.392505	0.529026	0.266652	0.227137	0.168013	0.166803	0.166728
100.00	0.880297	0.953437	1.161576	0.858724	0.464571	0.189799	0.145802	0.160006	0.180685
0.00	1.590314	2.341673	3.547940	0.000000	0.446927	0.265028	0.187018	0.186659	0.204647
-100.00	0.837904	0.887885	0.962987	0.627179	0.582345	0.271188	0.196845	0.197409	0.212783
-200.00	0.525323	0.500987	0.372562	0.413332	0.329246	0.252138	0.204054	0.219800	0.229501
-300.00	0.459920	0.322831	0.249562	0.289583	0.255444	0.227340	0.241752	0.243176	0.242282
-400.00	0.390696	0.288458	0.258938	0.287934	0.267779	0.267542	0.264942	0.267085	0.260116
-500.00	0.333018	0.262718	0.283526	0.316413	0.298620	0.296836	0.284488	0.279101	0.278436
-600.00	0.286238	0.265702	0.292372	0.325247	0.310848	0.307758	0.300703	0.289241	0.268509
-700.00	0.235752	0.264565	0.293453	0.325073	0.314328	0.310188	0.291172	0.279616	0.271924
-800.00	0.224230	0.248281	0.274067	0.301393	0.293669	0.290499	0.289649	0.281133	0.271337
-900.00	0.218546	0.242301	0.267167	0.292125	0.286886	0.283724	0.282194	0.278636	0.267080
-1000.00	0.212114	0.234944	0.257942	0.280639	0.277081	0.274742	0.271695	0.270412	0.261930
-1100.00	0.205552	0.226312	0.247266	0.267738	0.265193	0.263346	0.261962	0.260838	0.256355
-1200.00	0.199028	0.218123	0.237214	0.255745	0.254210	0.253016	0.252035	0.251139	0.250008

GEP STRUCTURE DOWNWASH PROGRAM OUTPUT TABLE

GEP Table

ENSR

Input Data
File Name: STA19S.TAB
Date: 3-3-1993

Model: ISCST

Wake Area Section Option: Maximum of all directions within sector.

Wake Area Shape Option: ISC Rectangle 1/2L*2L*5L.

Combine Structures: Combine buildings within one "L"
crosswind and 1.00 "L" upwind
-downwind of each other.

Number of Buildings: 2

Number of Tanks: 0

Number of Stacks: 1

Plant Rotation Angle: .000½

Input Data (cont.)

Building No. 1
Name: OLDCOMP
Height: 36.00 (FT)

Corner	East (FT)	North (FT)
1	360.00	460.00
2	360.00	535.00
3	408.00	535.00
4	408.00	460.00
5	360.00	460.00

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE ANNUAL AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

*** NETWORK ID: E3 ; NETWORK TYPE: GRIDCART ***

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

Y-COORD (METERS)	X-COORD (METERS) 600.00	700.00	800.00	900.00	1000.00	1100.00	1200.00
1200.00	0.187202	0.183354	0.179805	0.176484	0.173345	0.169357	0.166356
1100.00	0.194472	0.190162	0.186202	0.182503	0.179007	0.175682	0.165472
1000.00	0.201882	0.197126	0.192769	0.188698	0.184844	0.174182	0.164806
900.00	0.209099	0.204132	0.199441	0.195034	0.182633	0.171835	0.162421
800.00	0.218851	0.210888	0.206180	0.191706	0.179264	0.168535	0.159255
700.00	0.225441	0.220614	0.200850	0.186766	0.174617	0.164219	0.155281
600.00	0.231733	0.212232	0.196213	0.179937	0.168651	0.158895	0.150531
500.00	0.217222	0.200641	0.186281	0.172279	0.161446	0.152684	0.145122
400.00	0.207775	0.185527	0.174425	0.164642	0.155680	0.153826	0.151674
300.00	0.184811	0.169024	0.168307	0.168143	0.164741	0.162018	0.159381
200.00	0.176939	0.182726	0.178513	0.178420	0.176743	0.171145	0.167794
100.00	0.190679	0.196766	0.191289	0.190529	0.187791	0.181061	0.176762
0.00	0.211557	0.215106	0.206883	0.204151	0.199797	0.191591	0.186078
-100.00	0.217525	0.219471	0.209572	0.206124	0.201106	0.192636	0.186793
-200.00	0.230452	0.227881	0.215016	0.209388	0.203181	0.194127	0.187726
-300.00	0.241892	0.228094	0.221344	0.213330	0.203879	0.195784	0.188740
-400.00	0.253312	0.235160	0.226983	0.217529	0.205889	0.197391	0.189710
-500.00	0.254267	0.244691	0.233764	0.221287	0.210021	0.200011	0.190623
-600.00	0.266837	0.253516	0.240924	0.226124	0.214931	0.204332	0.194528
-700.00	0.265844	0.261105	0.244171	0.231558	0.219626	0.208584	0.198430
-800.00	0.263874	0.254651	0.249211	0.235982	0.223722	0.212414	0.202031
-900.00	0.257906	0.251038	0.244901	0.239344	0.227011	0.215624	0.205153
-1000.00	0.253679	0.246565	0.240296	0.234637	0.229428	0.218130	0.207703
-1100.00	0.248438	0.241521	0.235366	0.229795	0.224678	0.219924	0.207749
-1200.00	0.242613	0.236057	0.230168	0.224810	0.219881	0.213399	0.208842

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 ANNUAL AVERAGE CONCENTRATION VALUES FOR GROUP: ALL ***
INCLUDING SOURCE(S): 3 ,

** CONC OF NOX IN MICROGRAMS/CUBIC-METER **

RANK	CONC	AT	RECEPTOR (XR,YR)	OF TYPE	RANK	CONC	AT	RECEPTOR (XR,YR)	OF TYPE
1.	3.547940	AT (	-100.00, 0.00)	GC	6.	1.476835	AT (	-400.00, 0.00)	GC
2.	2.341673	AT (	-200.00, 0.00)	GC	7.	1.476169	AT (	-700.00, 0.00)	GC
3.	1.590314	AT (	-300.00, 0.00)	GC	8.	1.337828	AT (	-800.00, 0.00)	GC
4.	1.544716	AT (	-500.00, 0.00)	GC	9.	1.267290	AT (	-900.00, 0.00)	GC
5.	1.527545	AT (	-600.00, 0.00)	GC	10.	1.197977	AT (	-700.00, 100.00)	GC

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

*** MODELING OPTIONS USED: CONC RURAL FLAT DFAULT

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCLT2 Finishes Successfully ***
****

Input Data (cont.)

Building No. 2
Name: NEWCOMP
Height: 41.00 (FT)

Corner	East (FT)	North (FT)
1	360.00	535.00
2	360.00	605.00
3	420.00	605.00
4	420.00	535.00
5	360.00	535.00

Input Data (cont.)

Stack Parameters

Stack No.	Height (FT)	Location East (FT)	Location North (FT)
1	65.00	435.00	568.00

GEP Table

ENSR

STACK ID 1

Sector No.	Critical Flow Vector (deg)	GEP Stack Height (FT)	Controlling Structures Name-1	Name-2	Height (FT)	Projected Width (FT)
1	15.00	102.500	NEWCOMP		41.000	76.074
2	25.00	102.500	NEWCOMP		41.000	83.962
3	35.00	102.500	NEWCOMP		41.000	89.300
4	45.00	102.500	NEWCOMP		41.000	91.924
5	49.00	102.500	NEWCOMP		41.000	92.193
6	55.00	102.500	NEWCOMP		41.000	91.755
7	65.00	102.500	NEWCOMP		41.000	88.799
8	75.00	102.500	NEWCOMP		41.000	83.144
9	95.00	102.500	NEWCOMP		41.000	74.963
10	105.00	102.500	NEWCOMP		41.000	83.144
11	115.00	102.500	NEWCOMP		41.000	88.799
12	125.00	102.500	NEWCOMP		41.000	91.756
13	131.00	102.500	NEWCOMP		41.000	92.194
14	135.00	102.500	NEWCOMP		41.000	91.924
15	145.00	102.500	NEWCOMP		41.000	89.300
16	155.00	102.500	NEWCOMP		41.000	83.962
17	165.00	102.500	NEWCOMP		41.000	76.073
18	185.00	102.500	NEWCOMP		41.000	65.873
19	195.00	102.500	NEWCOMP		41.000	76.073
20	205.00	102.500	NEWCOMP		41.000	83.962
21	215.00	102.500	NEWCOMP		41.000	89.300
22	225.00	102.500	NEWCOMP		41.000	91.924
23	229.00	102.500	NEWCOMP		41.000	92.193
24	235.00	102.500	NEWCOMP		41.000	91.755
25	245.00	102.500	NEWCOMP		41.000	88.799
26	255.00	102.500	NEWCOMP		41.000	83.144
27	275.00	102.500	NEWCOMP		41.000	74.963
28	285.00	102.500	NEWCOMP		41.000	83.144
29	295.00	102.500	NEWCOMP		41.000	88.799
30	305.00	102.500	NEWCOMP		41.000	91.756
31	311.00	102.500	NEWCOMP		41.000	92.194
32	315.00	102.500	NEWCOMP		41.000	91.924
33	325.00	102.500	NEWCOMP		41.000	89.300
34	335.00	102.500	NEWCOMP		41.000	83.962
35	345.00	102.500	NEWCOMP		41.000	76.073
36	365.00	102.500	NEWCOMP		41.000	65.873