GROVE
SCIENTIFIC & ENGINEERING

December 5, 2000

Mr. Cleave Holiday
Bureau of Air Regulations
Florida Department of Environmental Protection
Mail Stop 5505
2600 Blair Stone Road
Tallahassee, Florida 32399

RECEIVED
DEC 06 2000
BUREAU OF AIR REGULATION

0210051-003-AV

RE: ISC Modeling for Landfill

Dear Mr. Holiday:

Thanks for your offer today to answer some questions for us regarding modeling emissions from landfills. As you may recall from our phone conversation today, we are working on modeling SO2 emissions from a landfill in Naples, which is a potential PSD source.

The potential SO2 emissions are 1750 TPY. The source is a flare, which is mounted on top of a 34-ft high stack located at the base of Cells 3 and 4, as shown in the attached drawing. The drawing is a 3-sheet composite of the site plan with elevations, showing the gas gathering and transporting pipelines. The discharge from the 12-inch diameter stack is 3000 SCFM of landfill gas, approximately 50% methane and 50% CO2. The flare manufacturer stated that the gas temperature is approximately 1400°F,

As you will note from the site plan, the slopes of the sides of the cells are on the order of 7° to 11°, and the cells are shaped like a pyramid with a flat top. Our earlier conversations with Alex Meng indicated that the cells could be modeled as buildings, with vertical walls and sharp corners resulting in large wakes. However, we feel this approach is very conservative and results in SO2 concentrations on the order of 40,000 micrograms/cubic meter with ISC. These high concentrations are due to the downwash from the "buildings". When the downwash is eliminated, the SO2 concentrations are on the order of 100 micrograms/cubic meter. Thus, the question of downwash is critical. Must we use the conservative approach which results in large wakes and high concentrations, or may we consider the cells as aerodynamic shapes resulting in insignificant downwash?

We know of no previous attempts to model landfill emissions, and are looking for some guidance to predict rational results. Your help would be greatly appreciated.

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PHONE (407) 298-2282 ■ FAX (407) 290-9038 ■ WEBSITE www.grovescientific.com

The landfill requires a timely response due to interest from local groups regarding current emissions. If you have any questions or comments, please call me or Bruno Ferraro at (407) 298-2282 or e-mail at jkasper@grovescientific.com.

Sincerely,
Grove Scientific & Engineering Company

John M. Kasper, P.E.
Environmental/Mechanical Engineer

Cc: Ray Devers, P.E., SCS Engineers
John Wong, WMI

Attachment: Landfill Site Plan

FEDERAL EXPRESS

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February 9, 2001

Mr. Ronald D. Blackburn
District Air Program Administrator
Florida Department of Environmental Protection
P.O. Box 2549
Ft. Myers, Florida 33902-2549

RE: ISC Modeling for Naples Landfill
Waste Management of Florida
Permit Number: 0210051-003-AV

Dear Mr. Blackburn:

On behalf of Waste Management of Florida, we have attached the results of modified ISCST3 modeling for the Naples Landfill, submitted as required by the Department after review of the modeling results submitted December 20, 2000. The modeling results are in Attachment 1, and the results are summarized in Table 1 below. Also included in Attachment 2 are calculations and additional modeling results referenced in the discussion below.

As you may recall from the latest air permit application, the landfill has proposed a larger flare to control landfill gas. A plot plan, a drawing of the flare, some flare manufacturer's data, and an analysis of the landfill gas were submitted December 20. The stack height has since been increased by the manufacturer to 20.8 meters, and the stack now rests on a foundation 4 ft above ground level. Thus, the total stack height is now 22 meters, as reflected in the modeling.

The ISCST3 model was downloaded from the EPA web site and FDEP Tallahassee graciously provided preprocessed meteorological data for the nearest station, Fort Myers. The meteorological data are for the five years 1987 through 1991. All of the landfill cells may be modeled as low buildings per EPA 450/4-80-023. The flare was located outside the area of influence of the cells to avoid the effects of downwash. This approach to avoiding downwash was confirmed with the Department.

The ISCST3 model allows for various source type inputs, specifically point, area, volume and open pit sources. Unfortunately, a flare source input option is not supplied for the ISCST3 model. However, three studies have documented approaches for adjusting the point source stack parameters to account for the combustion in the flare. These three studies are documented on the web site www.beeline-software.com. A copy of the printout from that web site is included in Attachment 2. The Department directed GSE to select the appropriate approach for use in this modeling effort, and document its conclusions. GSE's selection and documentation is shown below and in Attachment 2, along with calculations for the adjusted stack parameters.

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GSE evaluated each of the three approaches for calculating the stack variables using the data available for the Naples Landfill. All three methods assume a stack gas temperature of 1273 °K and a stack gas discharge velocity of 20 m/sec. The assumed stack discharge velocity of 20 m/sec is close to the calculated stack velocity of 19.4 m/sec based on 3000 SCFM design flow in the actual 12-inch stack. The assumed gas temperature is somewhat higher than the 1400°F in the manufacturer's specifications. However, manufacturer's data are not used in any of the three methods. The other stack parameters, stack height and stack diameter, were calculated as described below.

The Ohio EPA Method uses a calculated heat release to find an equivalent stack height and diameter. The heat release was calculated based on the design flow of the flare, 3000 SCFM, and the minimum methane content of 38% from the landfill gas analysis submitted December 20. A nominal heating value of 1000 BTU/SCF was used for the methane in the landfill gas. The total heat release was then calculated to be:

Q = (38%)(3000 SCF/min)(1000 BTU/SCF)(60 min/hr)(MMBTU/1000000 BTU)
Q = 68.4 MMBTU/hr

The equivalent stack height and the equivalent stack diameter were calculated as:

$H = 22.0 + 0.944(68.4)^{0.478} = 29.13$ M
$Dequiv = 0.1755\ (68.4)^{0.5} = 1.45$ M

The use of an equivalent stack height is similar to the use of an equivalent release height in the SCREEN3 model, which does have a flare modeling option.

The LA DEQ Method also uses a calculated heat release, but assumes only 45% is released as sensible heat. And effective stack diameter is calculated based on this heat release, and no adjustment is made to the stack height. The heat release is calculated as:

Q_H = (38%)(3000 SCF/min)(1000 BTU/SCF)(min/60 sec)(252 cal/BTU)(45%)
Q_H = 2,160,000 cal/sec

The effective stack diameter was calculated to be:

$Ds = (9.88E\text{-}4)(2{,}160{,}000)^{0.5} = 1.45$ M

The resultant effective stack diameter using this method is the same as that for the Ohio EPA Method. However, the reduced heat release is not thoroughly documented on the web site.

The TNRCC Method makes no adjustment for stack height, but uses the calculated heat release to determine effective stack diameter, as in the other two approaches. Here, a net heat release is calculated based on the total heat release and the molecular weight of the landfill gas mixture. The gas composition, as listed in the analysis submitted previously, is 38% CH4, 31% CO2 and 4.7% O2. The balance, 26.3% is considered to be a mixture of saturated water vapor and nitrogen. The gas temperature is 116°F, and saturated water vapor at this temperature is 10% of

the total mixture. Thus, 16.3% of the mixture is N2. The molecular weight of the mixture is then 27.6. The net heat release was then calculated to be:

$$Qnet = (38\%)(3000\ SCF/min)(1000\ BTU/SCF)(min/60\ sec)(252\ cal/BTU)(1-0.048*27.6^{0.5})$$

$$Qnet = 3{,}581{,}000\ cal/sec$$

The effective stack diameter was calculated to be:

$$Deff = (Qnet*10^{-6})^{0.5} = 1.89\ M$$

All three methods make some assumptions based on the calculated heat release. With no experimental data for comparison of the three methods, all appear equally good on a technical basis. The adjusted stack parameters from all three methods were used in the SCREEN3 model to get a comparison of calculated ground level concentrations for each of the three methods. The results are shown in Attachment 2. The TNRCC Method yields the lowest calculated ground level concentrations, and was used for further ISCST3 modeling.

The emission rate of 13.5 gm/sec was based on a maximum measured sulfur concentration and the design flow rate of 3000 SCFM. This emission rate thus represents the maximum short-term emission rate, not just the anticipated annual emission rate.

The ISCST3 runs shown in Attachment 1 have the following inputs:

1. There is no downwash, because the stack has been moved outside the area of influence of the cells,
2. The emission rate is 13.5 gm/sec, or 468 TPY,
3. The flare stack has been modeled as a point source with stack variables adjusted per the TNRCC Method,
4. The stack height is 22 m,
5. The stack exhaust gas temperature is 1273°K,
6. The stack exhaust gas velocity is 20 m/sec,
7. The effective stack diameter is 1.89 m.

Attachment 1 contains a separate ISCST3 run for each of the five years of meteorological data. A polar coordinate receptor grid was used because the maximum concentration may be located beyond the property lines. The maximum distance used in the polar grid was 3500 m. The results of the ISCST3 runs are shown in Table 1 below.

The calculated ground level concentrations are below Class II 3-hour and annual impact levels for all five years. However, the calculated ground level concentrations exceed the Class II 24-hour impact levels for 1987 and 1991 by small amounts.

In an effort to speed up the review process, we have been in direct contact with FDEP Tallahassee and have copied them on these modeling results. We ask that the Department review these results as soon as possible to prevent further delay on this project. Our collective goal is to

solve the odor issues at the landfill and provide the general public with relief and a long-term solution.

If you have any questions or comments, please call me or Bruno Ferraro at (407) 298-2282 or e-mail at jkasper@grovescientific.com.

Sincerely,
Grove Scientific & Engineering Company

John M. Kasper, P.E.
Environmental/Mechanical Engineer

Cc: Ray Dever, P.E., SCS Engineers
John Wong, WMI
Carolyn McCreedy, WMI
Cleve Hollady, P.E., FDEP Tallahassee
Joe Kahn, P.E., FDEP, Tallahassee

ATTACHMENT 1

ISCST3 MODELING RESULTS

Table 1. Results of ISCST3 Modeling for the Collier County Landfill

Averaging Period, Hrs.	Calculated Ground Level Concentrations, ugm/m^3					Class II Area Impact Levels, ugm/m^3
	1987	1988	1989	1990	1991	
3	14.0	15.4	13.0	14.5	16.5	25
24	6.1	4.6	4.1	4.7	5.4	5
8760	0.4	0.4	0.4	0.6	0.4	1

1987

```
CO STARTING
  TITLEONE 1987 Collier County Landfill SO2 Modeling 2/01
  TITLETWO ISCST3 Code from EPA 11/00, Met Data from FDEP 11/00
  MODELOPT DFAULT CONC RURAL
  AVERTIME 3 8 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED

SO STARTING
  LOCATION FLARESTK POINT 134259 202604
  SRCPARAM FLARESTK 13.5 22.0 1273. 20.0 1.89
  SRCGROUP ALL
SO FINISHED

RE STARTING
  GRIDPOLR  POL1  STA
        POL1  ORIG  134259.0 202604.0
        POL1  DIST  200. 500. 800. 900. 1000. 1100. 1500. 2000.
        POL1  DIST  2500. 3000. 3500.
        POL1  GDIR  36   10.   10.
        POL1  END
RE FINISHED

ME STARTING
  INPUTFIL Fmypre87.asc  (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
  ANEMHGHT 6.0 meters
  SURFDATA 12835  1987   FTMYERS
  UAIRDATA 12842  1987   TAMPA
ME FINISHED

OU STARTING
  RECTABLE ALLAVE FIRST
  MAXTABLE ALLAVE 10
OU FINISHED

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 3 Short Term Average(s) of: 3-HR 8-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 396 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

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

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: nlflat87.inp
**Output Print File: nlflat87.out

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	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
FLARESTK	0	0.13500E+02	134259.0	202604.0	0.0	22.00	1273.00	20.00	1.89	NO	

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	FLARESTK,

CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 134259.00 ; Y-ORIG = 202604.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

200.0, 500.0, 800.0, 900.0, 1000.0, 1100.0, 1500.0, 2000.0, 2500.0, 3000.0,
3500.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

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

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

```
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
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1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 111111
```

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

FILE: Fmypre87.asc
FORMAT: (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
SURFACE STATION NO.: 12835 UPPER AIR STATION NO.: 12842
NAME: FTMYERS NAME: TAMPA
YEAR: 1987 YEAR: 1987

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
87	01	01	01	11.0	5.66	294.8	4	598.5	598.5	0.0000	0.0	0.0000	0	0.00
87	01	01	02	8.0	6.17	292.0	4	651.6	651.6	0.0000	0.0	0.0000	0	0.00
87	01	01	03	14.0	4.63	292.0	5	704.6	1306.0	0.0000	0.0	0.0000	0	0.00
87	01	01	04	33.0	5.66	293.7	4	757.6	757.6	0.0000	0.0	0.0000	0	0.00
87	01	01	05	53.0	6.69	293.7	4	810.7	810.7	0.0000	0.0	0.0000	0	0.00
87	01	01	06	62.0	5.14	292.6	5	863.7	1306.0	0.0000	0.0	0.0000	0	0.00
87	01	01	07	115.0	6.17	292.6	4	916.7	916.7	0.0000	0.0	0.0000	0	0.00
87	01	01	08	103.0	7.72	292.6	4	969.8	969.8	0.0000	0.0	0.0000	0	0.00
87	01	01	09	107.0	10.29	293.2	4	1022.8	1022.8	0.0000	0.0	0.0000	0	0.00
87	01	01	10	111.0	6.17	293.2	4	1075.9	1075.9	0.0000	0.0	0.0000	0	0.00
87	01	01	11	114.0	10.29	293.7	4	1128.9	1128.9	0.0000	0.0	0.0000	0	0.00
87	01	01	12	116.0	10.29	293.7	4	1181.9	1181.9	0.0000	0.0	0.0000	0	0.00
87	01	01	13	123.0	10.29	292.0	4	1235.0	1235.0	0.0000	0.0	0.0000	0	0.00
87	01	01	14	119.0	12.86	293.7	4	1288.0	1288.0	0.0000	0.0	0.0000	0	0.00
87	01	01	15	122.0	8.75	292.6	4	1288.0	1288.0	0.0000	0.0	0.0000	0	0.00
87	01	01	16	124.0	8.75	291.5	4	1288.0	1288.0	0.0000	0.0	0.0000	0	0.00
87	01	01	17	151.0	8.23	290.9	4	1288.0	1288.0	0.0000	0.0	0.0000	0	0.00
87	01	01	18	127.0	9.26	289.8	4	1286.4	1286.4	0.0000	0.0	0.0000	0	0.00
87	01	01	19	144.0	4.12	288.7	5	1281.2	1079.4	0.0000	0.0	0.0000	0	0.00
87	01	01	20	137.0	4.12	288.2	5	1276.1	919.7	0.0000	0.0	0.0000	0	0.00
87	01	01	21	150.0	2.06	287.0	6	1270.9	760.0	0.0000	0.0	0.0000	0	0.00
87	01	01	22	152.0	0.00	284.8	7	1265.7	600.4	0.0000	0.0	0.0000	0	0.00
87	01	01	23	300.0	2.06	284.3	6	1260.6	440.7	0.0000	0.0	0.0000	0	0.00
87	01	01	24	300.0	0.00	283.7	7	1255.4	281.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00	1100.00	1500.00	2000.00	2500.00
10.00	0.00011	0.00948	0.08280	0.10547	0.12035	0.13126	0.16033	0.17302	0.17134
20.00	0.00007	0.00756	0.06089	0.07609	0.08540	0.09210	0.10837	0.11357	0.11066
30.00	0.00007	0.00892	0.06869	0.08558	0.09626	0.10407	0.12148	0.12475	0.11944
40.00	0.00004	0.01041	0.08114	0.10065	0.11264	0.12116	0.13809	0.13752	0.12807
50.00	0.00005	0.01082	0.08943	0.11188	0.12611	0.13666	0.15962	0.16242	0.15363
60.00	0.00006	0.01078	0.08750	0.10958	0.12365	0.13444	0.15855	0.16234	0.15399
70.00	0.00006	0.00794	0.07044	0.08938	0.10147	0.11080	0.13263	0.13679	0.12947
80.00	0.00006	0.00760	0.06020	0.07626	0.08650	0.09405	0.11173	0.11656	0.11262
90.00	0.00003	0.00817	0.06509	0.08386	0.09666	0.10611	0.13012	0.14065	0.14039
100.00	0.00001	0.00821	0.06502	0.08371	0.09616	0.10527	0.12717	0.13441	0.13138
110.00	0.00005	0.00995	0.07677	0.09871	0.11355	0.12423	0.15001	0.15937	0.15692
120.00	0.00012	0.01190	0.09789	0.12758	0.14853	0.16338	0.20194	0.21975	0.21980
130.00	0.00010	0.01100	0.09308	0.12187	0.14192	0.15636	0.19431	0.21176	0.21162
140.00	0.00005	0.00833	0.07968	0.10604	0.12461	0.13811	0.17656	0.19839	0.20244
150.00	0.00003	0.00698	0.06734	0.08880	0.10351	0.11418	0.14314	0.15768	0.15899
160.00	0.00001	0.00776	0.07261	0.09516	0.11072	0.12245	0.15584	0.17579	0.18097
170.00	0.00002	0.00976	0.09619	0.12542	0.14518	0.15975	0.19810	0.21489	0.21367
180.00	0.00008	0.01251	0.12812	0.16913	0.19781	0.21948	0.28078	0.31454	0.32025
190.00	0.00020	0.01416	0.13798	0.18155	0.21181	0.23471	0.30161	0.34322	0.35517
200.00	0.00029	0.01574	0.14453	0.18947	0.22073	0.24442	0.31401	0.35833	0.37188
210.00	0.00036	0.01560	0.13545	0.17647	0.20393	0.22490	0.28534	0.32152	0.33083
220.00	0.00043	0.01905	0.15065	0.19478	0.22487	0.24828	0.31479	0.35349	0.36257
230.00	0.00057	0.02109	0.16373	0.20977	0.24084	0.26468	0.32889	0.36278	0.36816
240.00	0.00065	0.02157	0.16925	0.21554	0.24635	0.26990	0.33112	0.36094	0.36344
250.00	0.00055	0.02123	0.16976	0.21518	0.24554	0.26846	0.32469	0.34703	0.34429
260.00	0.00049	0.01729	0.13534	0.16904	0.19016	0.20584	0.24111	0.24958	0.24164
270.00	0.00047	0.01747	0.12813	0.15972	0.18002	0.19537	0.23400	0.25229	0.25394
280.00	0.00047	0.01511	0.11671	0.14531	0.16337	0.17682	0.20985	0.22329	0.22123
290.00	0.00055	0.01547	0.11886	0.14822	0.16694	0.18140	0.21680	0.23096	0.22888
300.00	0.00046	0.01432	0.11618	0.14688	0.16675	0.18245	0.22224	0.23917	0.23829
310.00	0.00033	0.01345	0.10552	0.13353	0.15138	0.16538	0.20010	0.21300	0.21019
320.00	0.00028	0.01446	0.10535	0.13210	0.14929	0.16247	0.19236	0.19770	0.18861
330.00	0.00025	0.01254	0.08769	0.10986	0.12403	0.13478	0.16009	0.16662	0.16137
340.00	0.00022	0.01056	0.07453	0.09321	0.10504	0.11377	0.13610	0.14579	0.14532
350.00	0.00022	0.00962	0.07257	0.09079	0.10199	0.10987	0.13001	0.13905	0.13870
360.00	0.00017	0.01032	0.08925	0.11433	0.13084	0.14260	0.17519	0.19271	0.19490

CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3000.00	3500.00
10.00	0.16425	0.15451
20.00	0.10527	0.09874
30.00	0.11229	0.10466
40.00	0.11711	0.10637
50.00	0.14231	0.13064
60.00	0.14308	0.13179
70.00	0.11904	0.10811
80.00	0.10609	0.09864
90.00	0.13619	0.12974
100.00	0.12510	0.11728
110.00	0.15057	0.14218
120.00	0.21308	0.20272
130.00	0.20458	0.19394
140.00	0.19850	0.18987
150.00	0.15517	0.14830
160.00	0.17985	0.17455
170.00	0.20577	0.19445
180.00	0.31421	0.30121
190.00	0.35461	0.34557
200.00	0.37253	0.36432
210.00	0.32945	0.32075
220.00	0.36064	0.35109
230.00	0.36369	0.35247
240.00	0.35674	0.34404
250.00	0.33447	0.32034
260.00	0.23043	0.21770
270.00	0.25107	0.24455
280.00	0.21471	0.20551
290.00	0.22255	0.21354
300.00	0.23244	0.22337
310.00	0.20347	0.19463
320.00	0.17674	0.16428
330.00	0.15390	0.14551
340.00	0.14209	0.13712
350.00	0.13552	0.13047
360.00	0.19055	0.18222

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.05922c(87092203)	1.90470 (87070612)	6.91997 (87092015)	7.73352 (87022715)	8.97954 (87022715)
20.0	0.05462c(87110506)	2.18917 (87092015)	7.19604 (87092015)	6.54689 (87092015)	6.47279 (87061412)
30.0	0.11522c(87111103)	2.37104 (87092015)	7.95075 (87092015)	7.46394 (87092015)	6.93476 (87071212)
40.0	0.06103c(87111103)	2.01744 (87092015)	7.35154 (87092015)	7.41530 (87092015)	7.17547 (87071212)
50.0	0.05838 (87111106)	1.96719 (87080315)	8.13459 (87080515)	8.95041 (87080515)	9.20319 (87080515)
60.0	0.04632c(87010806)	3.51428 (87041815)	10.24583 (87041815)	10.97681 (87041815)	11.16330 (87041815)
70.0	0.05062 (87041909)	2.05328 (87080515)	7.30368 (87062215)	7.76367 (87062215)	8.04162 (87042515)
80.0	0.05418c(87042124)	1.93865 (87062215)	8.17938 (87050112)	9.06727 (87050112)	9.36911 (87050112)
90.0	0.05066 (87041121)	2.29427 (87081918)	8.29993 (87050112)	9.36187 (87050112)	9.80046 (87050112)
100.0	0.00990 (87041121)	2.39793 (87041715)	6.55583 (87040915)	7.36406 (87040915)	7.73883 (87040915)
110.0	0.06375 (87102624)	2.73923 (87041715)	11.32545 (87072715)	11.87334 (87072715)	11.83751 (87072715)
120.0	0.10456 (87102624)	3.56827 (87041712)	12.06684 (87041712)	13.17567 (87041712)	13.61793 (87041712)
130.0	0.11210 (87081024)	3.84489 (87091415)	12.14254 (87091415)	13.28814 (87091415)	13.73022 (87091415)
140.0	0.05208 (87081024)	1.88622 (87091415)	8.09908 (87041912)	9.55177 (87041912)	10.58784 (87040415)
150.0	0.05832 (87102703)	1.81454 (87081615)	7.35851 (87042212)	9.43631 (87042212)	10.91716 (87042212)
160.0	0.01994 (87102703)	1.96420 (87080315)	5.89900 (87080315)	6.37162 (87010712)	7.32040 (87010712)
170.0	0.01497c(87100203)	1.93700 (87091812)	7.65770 (87091812)	7.52556 (87091812)	8.28388 (87022315)
180.0	0.07681c(87100203)	2.32190 (87032112)	10.92301 (87032112)	11.35490 (87032112)	11.32566 (87032112)
190.0	0.10151c(87100203)	1.96724 (87091815)	8.69732 (87032112)	9.92498 (87092515)	11.29847 (87092515)
200.0	0.10538 (87110518)	1.96438c(87091412)	10.02546 (87072615)	9.51584 (87072615)	8.65649 (87050912)
210.0	0.09508 (87110518)	2.00347 (87052215)	8.78527 (87072615)	9.15335 (87071112)	9.63335 (87071112)
220.0	0.10910 (87122306)	2.84667 (87052215)	7.23927 (87080812)	7.35556 (87080812)	7.39716 (87071112)
230.0	0.08704 (87122621)	2.44632 (87082815)	7.98057 (87052115)	8.18917 (87062912)	8.99293 (87031412)
240.0	0.10532 (87060124)	2.63816 (87082815)	9.99395 (87052115)	9.94647 (87052115)	9.50085 (87052115)
250.0	0.10077 (87122103)	1.91622 (87052115)	10.01417 (87081812)	12.05272 (87081812)	13.30216 (87081812)
260.0	0.10946c(87051903)	2.18033 (87052215)	9.71955 (87052012)	8.94639 (87052012)	8.48413 (87062112)
270.0	0.15323 (87121921)	2.25017 (87052012)	9.34317 (87052012)	8.95684 (87060812)	9.62683 (87060812)
280.0	0.09691c(87021706)	1.85377 (87061915)	7.82438 (87061915)	7.74674 (87061915)	7.83394 (87071912)
290.0	0.15601c(87062203)	1.97951 (87081612)	8.57324 (87072512)	9.52861 (87072512)	9.61785 (87072512)
300.0	0.09400 (87122206)	1.86839 (87081715)	7.15277 (87083115)	8.40628 (87083115)	9.16563 (87083115)
310.0	0.13351 (87122206)	2.30627 (87072612)	7.56428 (87072612)	6.49176 (87072612)	7.14208 (87061115)
320.0	0.06880 (87122206)	3.43828 (87070615)	8.38183 (87072612)	8.16701 (87050312)	9.22081 (87050312)
330.0	0.10495 (87012909)	4.85341 (87070615)	8.16321 (87072612)	7.69598 (87072612)	7.92949 (87031812)
340.0	0.09452 (87012909)	3.45426 (87061915)	5.69769 (87072612)	6.76899 (87032312)	7.72032 (87032312)
350.0	0.05996 (87071303)	3.87626 (87061915)	7.21948 (87062212)	8.61714 (87062212)	9.42327 (87062212)
360.0	0.05957 (87081903)	1.65794 (87070612)	6.92245 (87032715)	8.50051 (87032715)	9.60807 (87032715)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	9.98993 (87022715)	11.79397 (87022715)	11.06099 (87022715)	9.41906 (87011715)	9.14999 (87022218)
20.0	7.04552 (87061412)	7.73387 (87061412)	6.70868 (87061412)	6.82294 (87012209)	6.77414 (87012209)
30.0	7.32298 (87071212)	8.10641 (87061515)	7.62196 (87061515)	6.65415 (87050115)	6.02131 (87050115)
40.0	7.64669 (87071212)	9.35614 (87062612)	10.11378 (87062612)	9.66750 (87062612)	8.84133 (87062612)
50.0	9.16673 (87080515)	9.30078 (87050218)	9.89918 (87050218)	9.39469 (87050218)	8.59128 (87050218)
60.0	11.02761 (87041815)	9.33953 (87041815)	9.21255 (87042915)	8.59499 (87042915)	7.80457 (87042915)
70.0	8.63546 (87042515)	9.05325 (87042515)	9.01992 (87090815)	8.06481 (87090815)	6.88700 (87090815)
80.0	9.32574 (87050112)	7.65738 (87050112)	8.21720 (87010421)	8.83398 (87010421)	8.86008 (87010421)
90.0	9.89493 (87050112)	8.57170 (87050112)	8.26340 (87041618)	8.48256 (87042421)	9.08166 (87042421)
100.0	7.86577 (87040915)	7.06538 (87040915)	7.80570 (87041612)	8.11840 (87041612)	7.93070 (87041612)
110.0	11.53045 (87072715)	9.34132 (87072715)	7.96853 (87012212)	7.72995 (87042518)	7.52293 (87042518)
120.0	13.65982 (87041712)	13.39002 (87010115)	13.36232 (87010115)	12.33490 (87010115)	11.13304 (87041718)
130.0	13.76008 (87091415)	11.82012 (87091415)	11.70741 (87040518)	12.08193 (87040518)	11.72714 (87040518)
140.0	11.24004 (87040415)	12.26294 (87040415)	11.86325 (87040415)	11.01006 (87111112)	10.65470 (87111112)
150.0	12.05812 (87042212)	13.65835 (87042212)	12.23577 (87042212)	10.07102 (87042212)	9.16423 (87010215)
160.0	7.99194 (87010712)	8.45591 (87010712)	6.93478 (87010712)	7.18480 (87092118)	7.75653 (87092118)
170.0	9.16875 (87022315)	10.19507 (87022315)	10.00044 (87020912)	10.36365 (87020912)	10.08680 (87020912)
180.0	11.18588 (87032112)	11.11794 (87042615)	11.14139 (87100312)	10.63646 (87100812)	10.73687 (87100812)
190.0	12.23200 (87092515)	12.62540 (87092515)	10.18250 (87092515)	9.01521 (87110612)	8.79363 (87100506)
200.0	9.35058 (87050912)	10.36622 (87030512)	11.39147 (87030512)	11.21311 (87030512)	10.52815 (87030512)
210.0	9.77291 (87071112)	8.98601 (87010615)	8.45177 (87103024)	9.39995 (87103024)	9.66416 (87103024)
220.0	7.61114 (87010615)	9.11584 (87010615)	8.91061 (87010615)	8.68022 (87082415)	8.33683 (87082415)
230.0	10.05631 (87031412)	11.96931 (87031412)	11.19895 (87031412)	9.46635 (87031412)	8.45918 (87030703)
240.0	9.41275 (87052715)	10.65164 (87052715)	9.63252 (87052715)	8.00623 (87052715)	7.45426 (87101009)
250.0	14.00944 (87081812)	13.37922 (87081812)	10.66380 (87081815)	9.71616 (87123015)	9.14033 (87123015)
260.0	8.86659 (87062112)	8.75029 (87082712)	7.46115 (87071812)	7.28510 (87071818)	7.36234 (87060718)
270.0	9.98203 (87060812)	9.50867 (87060812)	8.88574 (87110812)	7.59078 (87110812)	7.50721 (87052418)
280.0	8.32816 (87071912)	9.51991 (87051712)	9.32342 (87051712)	9.98581 (87121912)	10.25785 (87121912)
290.0	9.32315 (87072512)	10.23181 (87062012)	9.39384 (87062012)	8.23511 (87082412)	7.26992 (87082412)
300.0	9.63338 (87083115)	10.85696 (87061212)	9.74221 (87061212)	8.41660 (87072012)	7.22241 (87072012)
310.0	7.98790 (87061115)	9.30900 (87061115)	8.40007 (87061115)	7.31605 (87031718)	7.10894 (87031718)
320.0	9.99641 (87050312)	10.89254 (87050312)	9.62635 (87050312)	7.90817 (87050312)	7.68888 (87022612)
330.0	8.95669 (87031812)	11.26742 (87031812)	11.39586 (87031812)	10.37123 (87031812)	9.13139 (87031812)
340.0	8.43970 (87032312)	9.37345 (87032312)	8.34156 (87032312)	7.54147 (87011512)	6.87291 (87030103)
350.0	9.84645 (87062212)	9.20286 (87062212)	8.49189 (87030715)	8.40461 (87030715)	7.91396 (87030715)
360.0	10.30715 (87032715)	11.68181 (87032715)	11.81155 (87032715)	11.26683 (87032715)	10.47928 (87032715)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	8.88119 (87022218)
20.0	6.45799 (87012209)
30.0	5.48802 (87062618)
40.0	7.93781 (87062612)
50.0	7.74444 (87050218)
60.0	7.00876 (87042915)
70.0	5.80784 (87090815)
80.0	8.51877 (87010421)
90.0	9.21783 (87042421)
100.0	7.47975 (87041612)
110.0	7.07362 (87042518)
120.0	10.05959 (87041718)
130.0	11.00544 (87040518)
140.0	9.97291 (87111112)
150.0	9.08637 (87010215)
160.0	7.88441 (87092118)
170.0	9.90428 (87101518)
180.0	10.37288 (87100812)
190.0	9.67004 (87100506)
200.0	9.65260 (87030512)
210.0	9.88272 (87110706)
220.0	7.84606 (87112121)
230.0	7.92586 (87030703)
240.0	7.23545 (87101009)
250.0	8.39684 (87123015)
260.0	7.32810 (87060718)
270.0	7.18572 (87052418)
280.0	10.03710 (87121912)
290.0	6.52004 (87121421)
300.0	6.18247 (87090215)
310.0	6.67229 (87031718)
320.0	7.35968 (87022612)
330.0	7.96282 (87031812)
340.0	7.03836 (87030103)
350.0	7.26905 (87030715)
360.0	9.59474 (87032715)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.03151c(87110508)	0.73277 (87092116)	3.53050c(87080116)	3.67230c(87080116)	3.94535 (87022716)
20.0	0.02793c(87110508)	0.83580 (87092016)	2.96973 (87092016)	3.60277 (87061416)	4.12044 (87061416)
30.0	0.04973c(87111108)	0.89463 (87092016)	3.25157 (87092016)	3.65534 (87061516)	4.15448 (87061516)
40.0	0.03457c(87111108)	0.86892c(87062916)	2.94585 (87050816)	3.50420 (87050816)	3.82414 (87050816)
50.0	0.02718c(87111108)	0.79805 (87041816)	3.25647 (87081516)	3.91487 (87081516)	4.56446 (87062516)
60.0	0.02316c(87010808)	1.33930 (87041816)	4.39508 (87041816)	4.90553 (87041816)	5.14206 (87041816)
70.0	0.03641 (87041908)	0.78282 (87041816)	3.50437 (87041816)	4.20043 (87041816)	4.65170 (87041816)
80.0	0.02322c(87042124)	0.83085c(87062216)	4.36386 (87042516)	5.13828 (87042516)	5.58553 (87042516)
90.0	0.02533c(87041124)	0.98138c(87081924)	3.13382 (87050116)	3.53746 (87050116)	3.70250 (87050116)
100.0	0.00495c(87041124)	0.91020 (87041716)	2.90578 (87042416)	3.37787 (87041616)	3.85360 (87041616)
110.0	0.02391 (87102624)	1.51774 (87041716)	4.26178 (87041716)	4.52950 (87041716)	4.55442 (87041716)
120.0	0.03921 (87102624)	1.94658 (87041716)	8.33998 (87041716)	9.68975 (87041716)	10.52389 (87041716)
130.0	0.04204 (87081024)	1.64843c(87091416)	5.21219c(87091416)	5.70494c(87091416)	5.89457c(87091416)
140.0	0.01953 (87081024)	0.82553c(87091416)	3.60509 (87041916)	4.32497 (87041916)	4.75838 (87041916)
150.0	0.02499c(87102708)	0.68045 (87081616)	3.15321 (87042216)	4.10067 (87042216)	4.78619 (87042216)
160.0	0.00855c(87102708)	0.73657 (87080316)	2.21213 (87080316)	2.73070c(87010716)	3.13732c(87010716)
170.0	0.00642c(87100208)	0.92087 (87091816)	3.65754 (87091816)	4.37280 (87020916)	5.40767 (87020916)
180.0	0.03292c(87100208)	1.27052 (87091816)	5.30636 (87032116)	5.90918 (87032116)	6.23685 (87032116)
190.0	0.04351c(87100208)	1.07404 (87091816)	6.07600 (87092516)	7.70915 (87092516)	8.83660 (87092516)
200.0	0.03952 (87110524)	0.84225c(87091416)	4.18785 (87092516)	5.29114 (87092516)	5.98643 (87092516)
210.0	0.04498c(87122308)	0.75898 (87052216)	3.47260 (87080816)	4.17441 (87092616)	4.82395 (87092616)
220.0	0.05455c(87122308)	1.07276 (87052216)	3.55524 (87080816)	4.08729 (87031416)	4.71902 (87031416)
230.0	0.05073c(87102008)	1.03796 (87082816)	5.13469 (87052116)	5.62581 (87052116)	5.81130 (87052116)
240.0	0.05266c(87060124)	1.34148 (87082816)	5.90407 (87052116)	6.43186 (87052116)	6.83430 (87052716)
250.0	0.05100c(87122108)	0.91248 (87082816)	7.62636 (87081816)	9.51058 (87081816)	10.80503 (87081816)
260.0	0.05015 (87080408)	0.90878 (87052016)	5.48036 (87052016)	6.05252 (87081816)	6.79837 (87081816)
270.0	0.05750 (87121924)	0.94346 (87062116)	4.22250 (87052016)	4.06367 (87052016)	3.70457 (87052016)
280.0	0.04846c(87021708)	0.69522 (87061916)	3.40743 (87072216)	4.03217 (87072216)	4.38136 (87072216)
290.0	0.07801c(87062208)	0.74232 (87081616)	3.39022 (87072216)	4.00164 (87052316)	4.53044 (87052316)
300.0	0.03968c(87062208)	0.70253 (87081716)	4.33429 (87083116)	5.13815 (87083116)	5.62545 (87083116)
310.0	0.05689c(87110508)	0.86510 (87072616)	2.84236 (87072616)	3.39109 (87061116)	3.98258 (87061116)
320.0	0.03072c(87110508)	1.29229 (87070616)	3.33167 (87072616)	3.84085 (87032316)	4.22886 (87032316)
330.0	0.05326c(87012908)	1.82121 (87070616)	3.54284 (87072616)	3.57044 (87072616)	4.17851 (87031816)
340.0	0.04731c(87012908)	1.29652 (87061916)	3.03576 (87032316)	3.86675 (87032316)	4.44271 (87032316)
350.0	0.03166c(87081308)	1.45369 (87061916)	3.09406c(87062216)	3.69306c(87062216)	4.03855c(87062216)
360.0	0.04798c(87061324)	0.62327 (87070616)	3.57936c(87080116)	3.68199 (87032716)	4.23926 (87032716)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	4.41903 (87022716)	5.45677 (87022716)	6.19701 (87022224)	6.87347 (87022224)	7.08380 (87022224)
20.0	4.51338 (87061416)	5.05084 (87061416)	4.47119 (87061416)	3.83389c(87061424)	4.06789c(87061424)
30.0	4.51241 (87061516)	5.02747 (87062616)	5.23808 (87062616)	4.88564 (87062616)	4.38966 (87062616)
40.0	4.01988 (87050816)	4.85114 (87062616)	5.15771 (87062616)	4.90540 (87062616)	4.48907 (87062616)
50.0	5.12075 (87062516)	6.14986 (87062516)	5.78103 (87062516)	4.89376 (87062516)	4.05598c(87121216)
60.0	5.21898 (87041816)	4.93936 (87042916)	4.90314 (87042916)	4.44662 (87042916)	3.93363 (87042916)
70.0	4.97192 (87041816)	5.50541 (87041816)	5.20153 (87041816)	4.54561 (87041816)	3.87414 (87041816)
80.0	5.84596 (87042516)	5.82304 (87042516)	4.93441 (87042516)	4.03123 (87042516)	3.66841 (87120416)
90.0	3.73783 (87050116)	4.35212 (87042516)	5.57960 (87042424)	6.54156 (87042424)	7.07326 (87042424)
100.0	4.14050 (87041616)	4.74739 (87041616)	4.83295 (87041616)	4.59796 (87041616)	4.24798 (87041616)
110.0	4.79674 (87042416)	5.07853 (87042416)	4.61112 (87042416)	4.04572 (87010116)	3.94487c(87062324)
120.0	10.93007 (87041716)	10.94532 (87041716)	9.68305 (87041716)	8.30837 (87041716)	7.11824 (87041716)
130.0	5.90646c(87091416)	5.07135c(87091416)	5.36409 (87012224)	5.39602 (87012224)	5.13966 (87012224)
140.0	5.03909 (87041916)	5.37056 (87111116)	6.05565 (87111116)	6.05924 (87111116)	5.75003 (87111116)
150.0	5.33893 (87042216)	6.29868 (87042216)	5.87814 (87042216)	4.97869 (87042216)	4.71827 (87011116)
160.0	3.42512c(87010716)	3.82191c(87021716)	4.50437 (87121624)	5.32025 (87121624)	5.76837 (87121624)
170.0	6.16243 (87020916)	8.29033 (87020916)	9.27509 (87020916)	9.23102 (87020916)	8.74377 (87020916)
180.0	6.47828 (87032116)	6.89356 (87100316)	7.99450 (87100816)	8.47443 (87100816)	8.40260 (87100816)
190.0	9.64893 (87092516)	10.35221 (87092516)	8.69653 (87092516)	6.79622 (87092516)	6.22143 (87100216)
200.0	6.46094 (87092516)	6.94306 (87092616)	6.39545 (87092616)	6.38585 (87030516)	6.13960 (87030516)
210.0	5.33073 (87092616)	6.07857 (87092616)	6.07524 (87103024)	6.65774 (87103024)	6.77404 (87103024)
220.0	5.22414 (87031416)	6.09416 (87031416)	5.70058 (87031416)	5.63660 (87110216)	5.51161 (87110216)
230.0	5.84211 (87052116)	6.10241 (87052916)	5.75615 (87112216)	5.47693 (87112216)	4.94122 (87112216)
240.0	7.26645 (87052716)	7.52935 (87052716)	6.51666 (87052716)	5.35813 (87052716)	4.85552 (87102416)
250.0	11.72931 (87081816)	12.52294 (87081816)	10.59961 (87081816)	8.35043 (87081816)	6.53588 (87081816)
260.0	7.30952 (87081816)	7.57267 (87081816)	6.22685 (87081816)	4.78815 (87081816)	3.83223 (87071816)
270.0	3.82128 (87060816)	3.82012 (87122316)	4.41464 (87052424)	4.96470 (87052424)	5.20434 (87052424)
280.0	4.55288 (87072216)	5.07044 (87051716)	4.93273 (87051716)	4.41202 (87051716)	4.50722 (87121916)
290.0	4.89172 (87052316)	5.36726 (87052316)	4.95532 (87052316)	4.32216 (87052316)	3.73418 (87052316)
300.0	5.90975 (87083116)	6.53114 (87031716)	6.26246 (87031716)	5.56698 (87031716)	5.16187c(87070208)
310.0	4.46864 (87061116)	5.35531 (87061116)	5.03598 (87061116)	4.27533 (87061116)	3.53486 (87061116)
320.0	4.48981 (87032316)	4.78066 (87070316)	4.41298 (87070316)	4.02472 (87022616)	4.08449 (87032516)
330.0	4.72858 (87031816)	6.14973 (87031816)	6.63034 (87031816)	6.43273 (87031816)	5.99193 (87031816)
340.0	4.89199 (87032316)	5.56392 (87032316)	5.04260 (87032316)	4.85990c(87021524)	4.87073c(87021524)
350.0	4.21990c(87062216)	5.20555 (87030716)	5.57149 (87030716)	5.34657 (87030716)	4.92097 (87030716)
360.0	4.60486 (87032716)	5.47201 (87032716)	5.77789 (87032716)	6.14254 (87011916)	6.27238 (87030724)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	6.95758 (87022224)
20.0	4.14670c(87061424)
30.0	3.88790 (87062616)
40.0	4.04039 (87062616)
50.0	3.54731c(87121216)
60.0	3.45655 (87042916)
70.0	3.28433 (87041816)
80.0	3.35314 (87120416)
90.0	7.27406 (87042424)
100.0	3.86130 (87041616)
110.0	4.02997 (87042324)
120.0	6.12747 (87041716)
130.0	4.75319 (87012224)
140.0	5.30619 (87111116)
150.0	4.40238 (87011116)
160.0	5.91999 (87121624)
170.0	8.06839 (87020916)
180.0	8.00878 (87100816)
190.0	5.88601 (87100216)
200.0	5.75922 (87031308)
210.0	6.57943 (87103024)
220.0	5.20035 (87110216)
230.0	4.94990 (87101008)
240.0	4.42874 (87102416)
250.0	6.63598 (87060824)
260.0	3.40848 (87071816)
270.0	5.22840 (87052424)
280.0	4.49217 (87121916)
290.0	3.64169 (87122516)
300.0	5.79287c(87070208)
310.0	3.50140c(87110924)
320.0	3.98006 (87032516)
330.0	5.46739 (87031816)
340.0	4.69926 (87030108)
350.0	4.44423 (87030716)
360.0	6.26521 (87030724)

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.00945c(87110524)	0.32568c(87092124)	1.48496c(87092024)	1.60548c(87092024)	1.66093c(87092024)
20.0	0.00908c(87091924)	0.37147c(87092024)	1.49183c(87061424)	1.93941c(87061424)	2.25787c(87061424)
30.0	0.01514c(87111124)	0.39765c(87092024)	1.44711c(87092024)	1.57367c(87061424)	1.81359c(87061424)
40.0	0.01052c(87111124)	0.33834c(87092024)	1.35835c(87092024)	1.55742c(87050824)	1.69962c(87050824)
50.0	0.00827c(87111124)	0.35647c(87050224)	1.58967c(87050224)	1.70853c(87081524)	1.95359c(87062524)
60.0	0.00772c(87010824)	0.45285 (87041824)	1.51602 (87041824)	1.71103 (87041824)	1.80479 (87041824)
70.0	0.01214 (87041924)	0.26782c(87080524)	1.23383 (87041824)	1.50588 (87041824)	1.68440 (87041824)
80.0	0.00856c(87042124)	0.32311c(87062224)	1.57896c(87050124)	1.79218c(87050124)	1.92756 (87042524)
90.0	0.00844c(87041124)	0.32989c(87081924)	1.39281c(87050124)	1.57220c(87050124)	1.72260c(87041024)
100.0	0.00165c(87041124)	0.31719 (87041724)	1.17974c(87042424)	1.37764c(87042424)	1.47793c(87042424)
110.0	0.00797 (87102624)	0.51549 (87041724)	1.51466c(87072724)	1.60812c(87072724)	1.76025c(87042424)
120.0	0.01307 (87102624)	0.70016 (87041724)	3.36490 (87041724)	4.05167 (87041724)	4.52787 (87041724)
130.0	0.01401 (87081024)	0.64106c(87091424)	2.02696c(87091424)	2.21859c(87091424)	2.29233c(87091424)
140.0	0.00651 (87081024)	0.32104c(87091424)	1.41220 (87033124)	2.00084 (87033124)	2.45541 (87033124)
150.0	0.00833c(87102724)	0.28675c(87081624)	1.13736c(87042224)	1.47556c(87042224)	1.72263c(87042224)
160.0	0.00285c(87102724)	0.28650c(87081624)	0.87390c(87081624)	1.00226c(87042024)	1.10092 (87010524)
170.0	0.00195c(87100224)	0.40961c(87091824)	1.62563c(87091824)	1.77161 (87020924)	2.19720 (87020924)
180.0	0.01002c(87100224)	0.57395c(87091824)	1.98770c(87091824)	2.11424 (87032124)	2.26083 (87032124)
190.0	0.01325c(87100224)	0.47737c(87091824)	2.38208c(87092524)	3.02627c(87092524)	3.47077c(87092524)
200.0	0.01581c(87110524)	0.34107c(87080924)	1.72916c(87080924)	2.03364c(87092524)	2.36686c(87092624)
210.0	0.01426c(87110524)	0.32340c(87051224)	1.45921c(87092624)	1.89918c(87092624)	2.21222c(87092624)
220.0	0.01488c(87122324)	0.41368c(87052224)	1.39694c(87091724)	1.53408c(87052924)	1.72711c(87052924)
230.0	0.01602c(87102024)	0.42392c(87091724)	2.30458c(87052124)	2.53517c(87052124)	2.62290c(87052124)
240.0	0.01588c(87060124)	0.51985c(87052124)	2.65275c(87052124)	2.90005c(87052124)	2.99311c(87052124)
250.0	0.01611c(87122124)	0.40167c(87081824)	3.41321c(87081824)	4.29328c(87081824)	4.92106c(87081824)
260.0	0.01911c(87080424)	0.44174c(87052024)	2.52386c(87052024)	2.64473c(87081824)	2.98197c(87081824)
270.0	0.02091c(87121924)	0.44582c(87062124)	1.88043c(87052024)	1.81174c(87052024)	1.65848c(87062124)
280.0	0.01630c(87021724)	0.26558c(87061924)	1.19172c(87072224)	1.40928c(87072224)	1.53073c(87072224)
290.0	0.02617c(87062224)	0.34299c(87081624)	1.28599c(87072524)	1.42929c(87072524)	1.57652c(87052324)
300.0	0.01484c(87122224)	0.31675c(87081724)	1.51886c(87083124)	1.80130c(87083124)	1.97416c(87083124)
310.0	0.02116c(87122224)	0.37003c(87072624)	1.48708c(87050324)	1.70773c(87050324)	1.81221c(87050324)
320.0	0.01109c(87122224)	0.46992c(87070624)	2.09298c(87050324)	2.42625c(87050324)	2.61726c(87050324)
330.0	0.01775c(87012924)	0.66226c(87070624)	1.49177c(87072624)	1.50338c(87072624)	1.48426c(87072624)
340.0	0.01577c(87012924)	0.49391c(87061924)	1.09707 (87032324)	1.41607 (87032324)	1.63116 (87032324)
350.0	0.01189c(87061324)	0.55379c(87061924)	1.21765c(87062224)	1.45420c(87062224)	1.59285c(87062224)
360.0	0.01866c(87061324)	0.22664c(87070624)	1.31871c(87080124)	1.34333c(87080124)	1.68188 (87030724)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	1.79716 (87022224)	2.53452 (87022224)	3.05483 (87022224)	3.25015 (87022224)	3.25217 (87022224)
20.0	2.51460c(87061424)	3.07105c(87061424)	3.10765c(87061424)	2.88584c(87061424)	2.63526c(87061424)
30.0	1.99882c(87061424)	2.37372c(87062624)	2.59363c(87062624)	2.53118c(87062624)	2.36480c(87062624)
40.0	1.78661c(87050824)	2.06702c(87062624)	2.26286c(87062624)	2.22182c(87062624)	2.10251c(87062624)
50.0	2.19080c(87062524)	2.63277c(87062524)	2.48228c(87062524)	2.10847c(87062524)	2.05312c(87121224)
60.0	1.84175 (87041824)	2.23066c(87042924)	2.42408c(87042924)	2.42244c(87042924)	2.37569c(87042924)
70.0	1.81309 (87041824)	2.08109 (87041824)	2.07912 (87041824)	2.03321c(87042924)	2.03234c(87042924)
80.0	2.02733 (87042524)	2.07891 (87042524)	1.85990 (87042524)	1.81755 (87120424)	1.84023 (87120424)
90.0	1.90533c(87041024)	2.35911c(87041024)	2.54276c(87041024)	2.54623c(87042424)	2.73332c(87042424)
100.0	1.53790c(87041624)	1.76391c(87041624)	1.79726c(87041624)	1.77222c(87081224)	1.75650c(87081224)
110.0	1.87552c(87042424)	2.00478c(87042424)	1.85199c(87042424)	1.73284c(87010124)	1.62562c(87010124)
120.0	4.79959 (87041724)	5.24394 (87041724)	5.16174 (87041724)	4.84586 (87041724)	4.49113 (87041724)
130.0	2.29696c(87091424)	2.63943 (87012224)	3.01322 (87012224)	3.05248 (87012224)	2.92737 (87012224)
140.0	2.74392 (87033124)	3.52407 (87033124)	3.85431 (87033124)	3.79115 (87033124)	3.56008 (87033124)
150.0	1.92282c(87042224)	2.55244 (87011124)	3.03301 (87011124)	3.16569 (87011124)	3.10847 (87011124)
160.0	1.25867 (87010524)	1.85690c(87021724)	2.28113c(87021724)	2.44562c(87021724)	2.49861c(87021724)
170.0	2.50663 (87020924)	3.41429 (87020924)	3.89910 (87020924)	3.95211 (87020924)	3.80164 (87020924)
180.0	2.45198c(87092524)	3.40382 (87100824)	4.33869 (87100824)	4.77055 (87100824)	4.88793 (87100824)
190.0	3.79406c(87092524)	4.10844c(87092524)	3.54657 (87101424)	3.62844 (87101424)	3.64185c(87100224)
200.0	2.63600c(87092624)	3.12069c(87092624)	3.32333 (87030524)	3.54595 (87030524)	3.55991 (87030524)
210.0	2.45871c(87092624)	2.98518 (87103024)	3.76939 (87103024)	4.12343 (87103024)	4.19455 (87103024)
220.0	1.92149 (87110224)	2.69170 (87110224)	3.21382 (87110224)	3.37351 (87110224)	3.32616 (87110224)
230.0	2.75151c(87052924)	3.27266c(87052924)	3.35089c(87052924)	3.18817c(87052924)	2.96378c(87052924)
240.0	3.01184c(87052124)	2.98682c(87052724)	2.70996c(87052724)	2.56327c(87061024)	2.60151c(87061024)
250.0	5.38601c(87081824)	6.06375c(87081824)	5.68819c(87081824)	5.07108c(87081824)	4.57030c(87081824)
260.0	3.21874c(87081824)	3.40091c(87081824)	2.87653c(87081824)	2.28148c(87081824)	1.93782c(87091624)
270.0	1.56451c(87062124)	1.67419c(87122324)	1.87966 (87111624)	2.11519 (87111624)	2.22275 (87111624)
280.0	1.62391c(87051724)	1.95267c(87051724)	2.27935 (87111624)	2.48825 (87111624)	2.54990 (87111624)
290.0	1.70217c(87052324)	1.86762c(87052324)	2.00060c(87122524)	2.35477c(87122524)	2.57361c(87122524)
300.0	2.11764c(87031724)	2.46797c(87031724)	2.45452c(87031724)	2.26084c(87031724)	2.09299c(87070224)
310.0	1.98907c(87061124)	2.38270c(87061124)	2.24011c(87061124)	1.98498 (87080324)	1.91228 (87080324)
320.0	2.72869c(87050324)	2.67230c(87050324)	2.20345c(87050324)	2.02515 (87032524)	2.14779 (87032524)
330.0	1.61912 (87031824)	2.10253 (87031824)	2.26709 (87031824)	2.19965 (87031824)	2.04878 (87031824)
340.0	1.79890 (87032324)	2.27268 (87032424)	2.64469 (87032424)	2.74018 (87032424)	2.69561 (87032424)
350.0	1.66779c(87062224)	2.18755 (87030724)	2.39135 (87030724)	2.33501 (87030724)	2.34377 (87022824)
360.0	1.92530 (87030724)	2.71693 (87030724)	3.28561 (87030724)	3.49520 (87030724)	3.50108 (87030724)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	3.12851 (87022224)
20.0	2.40677c(87061424)
30.0	2.16088c(87062624)
40.0	1.95642c(87062624)
50.0	1.96802c(87121224)
60.0	2.29783c(87042924)
70.0	1.98940c(87042924)
80.0	1.80410 (87120424)
90.0	2.79982c(87042424)
100.0	1.68275c(87081224)
110.0	1.49202c(87010124)
120.0	4.13983 (87041724)
130.0	2.72222 (87012224)
140.0	3.26256 (87033124)
150.0	2.94465 (87011124)
160.0	2.47620c(87021724)
170.0	3.55085 (87020924)
180.0	4.79694 (87100824)
190.0	3.60510 (87100524)
200.0	3.43741 (87030524)
210.0	4.07657 (87103024)
220.0	3.15787 (87110224)
230.0	2.81635c(87052724)
240.0	2.57016c(87061024)
250.0	4.19567c(87081824)
260.0	1.89957c(87091624)
270.0	2.24049 (87111624)
280.0	2.51587 (87111624)
290.0	2.67214c(87122524)
300.0	2.34093c(87070224)
310.0	1.81472 (87080324)
320.0	2.16275 (87032524)
330.0	1.86906 (87031824)
340.0	2.57217 (87032424)
350.0	2.37390 (87022824)
360.0	3.38191 (87030724)

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	14.00944	(87081812) AT	(133225.34, 202227.78) GP	6.	13.61793	(87041712) AT	(135125.03, 202104.00) GP
2.	13.76008	(87091415) AT	(135101.66, 201896.94) GP	7.	13.39002	(87010115) AT	(135558.03, 201854.00) GP
3.	13.73022	(87091415) AT	(135025.05, 201961.22) GP	8.	13.37922	(87081812) AT	(132849.47, 202090.97) GP
4.	13.65982	(87041712) AT	(135211.63, 202054.00) GP	9.	13.36232	(87010115) AT	(135991.05, 201604.00) GP
5.	13.65835	(87042212) AT	(135009.00, 201304.97) GP	10.	13.30216	(87081812) AT	(133319.31, 202261.98) GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	12.52294	(87081816) AT	(132849.47, 202090.97) GP	6.	10.59961	(87081816) AT	(132379.61, 201919.95) GP
2.	11.72931	(87081816) AT	(133225.34, 202227.78) GP	7.	10.52389	(87041716) AT	(135125.03, 202104.00) GP
3.	10.94532	(87041716) AT	(135558.03, 201854.00) GP	8.	10.35221	(87092516) AT	(133998.53, 201126.78) GP
4.	10.93007	(87041716) AT	(135211.63, 202054.00) GP	9.	9.68975	(87041716) AT	(135038.42, 202154.00) GP
5.	10.80503	(87081816) AT	(133319.31, 202261.98) GP	10.	9.68305	(87041716) AT	(135991.05, 201604.00) GP

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	6.06375c	(87081824) AT	(132849.47, 202090.97) GP	6.	5.07108c	(87081824) AT	(131909.77, 201748.95) GP
2.	5.68819c	(87081824) AT	(132379.61, 201919.95) GP	7.	4.92106c	(87081824) AT	(133319.31, 202261.98) GP
3.	5.38601c	(87081824) AT	(133225.34, 202227.78) GP	8.	4.88793	(87100824) AT	(134259.00, 199604.00) GP
4.	5.24394	(87041724) AT	(135558.03, 201854.00) GP	9.	4.84586	(87041724) AT	(136424.06, 201354.00) GP
5.	5.16174	(87041724) AT	(135991.05, 201604.00) GP	10.	4.79959	(87041724) AT	(135211.63, 202054.00) GP

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.37253 AT (133232.94, 199784.92, 0.00, 0.00)	GP	POL1
	2ND HIGHEST VALUE IS	0.37188 AT (133403.95, 200254.77, 0.00, 0.00)	GP	POL1
	3RD HIGHEST VALUE IS	0.36816 AT (132343.89, 200997.03, 0.00, 0.00)	GP	POL1
	4TH HIGHEST VALUE IS	0.36432 AT (133061.92, 199315.08, 0.00, 0.00)	GP	POL1
	5TH HIGHEST VALUE IS	0.36369 AT (131960.86, 200675.64, 0.00, 0.00)	GP	POL1
	6TH HIGHEST VALUE IS	0.36344 AT (132093.94, 201354.00, 0.00, 0.00)	GP	POL1
	7TH HIGHEST VALUE IS	0.36278 AT (132726.91, 201318.42, 0.00, 0.00)	GP	POL1
	8TH HIGHEST VALUE IS	0.36257 AT (132652.03, 200688.89, 0.00, 0.00)	GP	POL1
	9TH HIGHEST VALUE IS	0.36094 AT (132526.95, 201604.00, 0.00, 0.00)	GP	POL1
	10TH HIGHEST VALUE IS	0.36064 AT (132330.64, 200305.86, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	14.00944	ON 87081812: AT (133225.34, 202227.78, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	12.52294	ON 87081816: AT (132849.47, 202090.97, 0.00, 0.00)	GP	POL1

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	6.06375c	ON 87081824: AT (132849.47, 202090.97, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1059 Informational Message(s)

A Total of 1059 Calm Hours Identified

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

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

****
*** ISCST3 Finishes Successfully ***
****

1988

```
CO STARTING
  TITLEONE 1988 Collier County Landfill SO2 Modeling 2/01
  TITLETWO ISCST3 Code from EPA 11/00, Met Data from FDEP 11/00
  MODELOPT DFAULT CONC RURAL
  AVERTIME 3 8 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED

SO STARTING
  LOCATION FLARESTK POINT 134259 202604
  SRCPARAM FLARESTK 13.5 22.0 1273. 20.0 1.89
  SRCGROUP ALL
SO FINISHED

RE STARTING
  GRIDPOLR  POL1  STA
        POL1  ORIG  134259.0 202604.0
        POL1  DIST  200. 500. 800. 900. 1000. 1100. 1500. 2000.
        POL1  DIST  2500. 3000. 3500.
        POL1  GDIR  36   10.   10.
        POL1  END
RE FINISHED

ME STARTING
  INPUTFIL Fmypre88.asc  (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
  ANEMHGHT 6.0 meters
  SURFDATA 12835  1988   FTMYERS
  UAIRDATA 12842  1988   TAMPA
ME FINISHED

OU STARTING
  RECTABLE ALLAVE FIRST
  MAXTABLE ALLAVE 10
OU FINISHED

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

CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 3 Short Term Average(s) of: 3-HR 8-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 396 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

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

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: nlflat88.inp
**Output Print File: nlflat88.out

CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	STACK Y (METERS)	STACK ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
FLARESTK	0	0.13500E+02	134259.0	202604.0	0.0	22.00	1273.00	20.00	1.89	NO	

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	FLARESTK,

CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 134259.00 ; Y-ORIG = 202604.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

200.0, 500.0, 800.0, 900.0, 1000.0, 1100.0, 1500.0, 2000.0, 2500.0, 3000.0,
3500.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

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

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

```
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 1111111111 1111111111 1111111111 1111111111
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1111111111 1111111111 1111111111 1111111111 1111111111
1111111111 111111
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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 CATEGORY	WIND SPEED 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 CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

CONC RURAL FLAT DFAULT

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

FILE: Fmypre88.asc
FORMAT: (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
SURFACE STATION NO.: 12835 UPPER AIR STATION NO.: 12842
NAME: FTMYERS NAME: TAMPA
YEAR: 1988 YEAR: 1988

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
88	01	01	01	221.0	3.09	289.8	5	1716.3	229.0	0.0000	0.0	0.0000	0	0.00
88	01	01	02	218.0	2.57	289.8	4	1721.8	1721.8	0.0000	0.0	0.0000	0	0.00
88	01	01	03	234.0	3.60	289.3	4	1727.3	1727.3	0.0000	0.0	0.0000	0	0.00
88	01	01	04	243.0	5.14	290.4	4	1732.8	1732.8	0.0000	0.0	0.0000	0	0.00
88	01	01	05	253.0	4.12	290.4	4	1738.4	1738.4	0.0000	0.0	0.0000	0	0.00
88	01	01	06	252.0	3.09	290.4	4	1743.9	1743.9	0.0000	0.0	0.0000	0	0.00
88	01	01	07	275.0	3.60	289.8	4	1749.4	1749.4	0.0000	0.0	0.0000	0	0.00
88	01	01	08	253.0	4.12	290.4	4	1754.9	1754.9	0.0000	0.0	0.0000	0	0.00
88	01	01	09	247.0	5.14	292.0	4	1760.4	1760.4	0.0000	0.0	0.0000	0	0.00
88	01	01	10	271.0	5.14	295.4	4	1765.9	1765.9	0.0000	0.0	0.0000	0	0.00
88	01	01	11	304.0	5.14	297.6	3	1771.5	1771.5	0.0000	0.0	0.0000	0	0.00
88	01	01	12	266.0	6.69	298.7	4	1777.0	1777.0	0.0000	0.0	0.0000	0	0.00
88	01	01	13	293.0	7.20	299.3	4	1782.5	1782.5	0.0000	0.0	0.0000	0	0.00
88	01	01	14	289.0	7.72	299.8	4	1788.0	1788.0	0.0000	0.0	0.0000	0	0.00
88	01	01	15	302.0	6.17	299.8	4	1788.0	1788.0	0.0000	0.0	0.0000	0	0.00
88	01	01	16	284.0	6.17	299.3	4	1788.0	1788.0	0.0000	0.0	0.0000	0	0.00
88	01	01	17	291.0	5.14	298.7	4	1788.0	1788.0	0.0000	0.0	0.0000	0	0.00
88	01	01	18	287.0	5.14	297.0	4	1789.2	1789.2	0.0000	0.0	0.0000	0	0.00
88	01	01	19	284.0	4.63	295.4	4	1793.0	1793.0	0.0000	0.0	0.0000	0	0.00
88	01	01	20	247.0	3.09	294.3	5	1796.9	1161.2	0.0000	0.0	0.0000	0	0.00
88	01	01	21	300.0	4.12	293.7	5	1800.7	889.4	0.0000	0.0	0.0000	0	0.00
88	01	01	22	292.0	3.09	292.6	6	1804.5	617.6	0.0000	0.0	0.0000	0	0.00
88	01	01	23	290.0	2.06	290.9	6	1808.4	345.8	0.0000	0.0	0.0000	0	0.00
88	01	01	24	290.0	0.00	289.8	7	1812.2	74.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

CONC RURAL FLAT DFAULT

*** THE PERIOD (8784 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00	1100.00	1500.00	2000.00	2500.00
10.00	0.00004	0.00927	0.07465	0.09268	0.10410	0.11192	0.13280	0.14190	0.14049
20.00	0.00001	0.00891	0.06801	0.08286	0.09179	0.09777	0.11196	0.11592	0.11266
30.00	0.00000	0.01027	0.07119	0.08584	0.09450	0.10016	0.11126	0.11032	0.10302
40.00	0.00001	0.01055	0.07364	0.09020	0.10034	0.10740	0.12270	0.12398	0.11687
50.00	0.00002	0.00987	0.07528	0.09360	0.10508	0.11333	0.13238	0.13689	0.13183
60.00	0.00001	0.01084	0.08885	0.11082	0.12485	0.13509	0.15675	0.15847	0.14930
70.00	0.00001	0.01117	0.08675	0.10593	0.11741	0.12538	0.13946	0.13602	0.12477
80.00	0.00002	0.01170	0.08413	0.10180	0.11219	0.11920	0.13179	0.12902	0.11887
90.00	0.00005	0.01252	0.09177	0.11350	0.12718	0.13665	0.15834	0.16387	0.15855
100.00	0.00005	0.01155	0.09125	0.11428	0.12895	0.13917	0.16188	0.16596	0.15847
110.00	0.00007	0.01436	0.11221	0.14234	0.16281	0.17739	0.21127	0.22084	0.21416
120.00	0.00010	0.01639	0.11476	0.14524	0.16624	0.18128	0.21722	0.23018	0.22624
130.00	0.00010	0.01126	0.08634	0.11159	0.12912	0.14201	0.17633	0.19416	0.19662
140.00	0.00006	0.00691	0.05967	0.07764	0.08978	0.09880	0.12229	0.13364	0.13461
150.00	0.00002	0.00633	0.05698	0.07426	0.08610	0.09509	0.11881	0.13058	0.13178
160.00	0.00002	0.00556	0.05630	0.07393	0.08570	0.09473	0.12002	0.13424	0.13669
170.00	0.00006	0.00548	0.06588	0.08772	0.10243	0.11384	0.14696	0.16657	0.17083
180.00	0.00009	0.00793	0.09396	0.12671	0.14969	0.16746	0.21951	0.25019	0.25686
190.00	0.00013	0.00883	0.09419	0.12636	0.14806	0.16469	0.21364	0.24384	0.25206
200.00	0.00028	0.01005	0.10220	0.13764	0.16268	0.18195	0.23997	0.27719	0.28836
210.00	0.00046	0.01126	0.09972	0.13174	0.15361	0.17049	0.22070	0.25276	0.26239
220.00	0.00060	0.01403	0.11710	0.15335	0.17838	0.19806	0.25838	0.30081	0.31729
230.00	0.00082	0.01684	0.13567	0.17662	0.20497	0.22761	0.29480	0.33964	0.35596
240.00	0.00091	0.01794	0.15480	0.20339	0.23732	0.26422	0.34331	0.39425	0.41096
250.00	0.00092	0.01878	0.15873	0.20712	0.24044	0.26639	0.33832	0.37946	0.38908
260.00	0.00082	0.01855	0.15060	0.19411	0.22343	0.24626	0.30638	0.33662	0.34048
270.00	0.00076	0.01900	0.15342	0.19867	0.22988	0.25433	0.32124	0.35713	0.36335
280.00	0.00078	0.01951	0.15923	0.20484	0.23541	0.25912	0.32061	0.34785	0.34717
290.00	0.00075	0.02127	0.18187	0.23378	0.26935	0.29734	0.36603	0.38910	0.38067
300.00	0.00061	0.01766	0.15671	0.20182	0.23209	0.25579	0.31555	0.33819	0.33389
310.00	0.00044	0.01333	0.10949	0.13828	0.15641	0.17040	0.20496	0.21523	0.20860
320.00	0.00029	0.01062	0.08331	0.10338	0.11587	0.12538	0.14918	0.15740	0.15411
330.00	0.00027	0.00919	0.06536	0.08035	0.08924	0.09575	0.11151	0.11679	0.11464
340.00	0.00018	0.00781	0.05442	0.06732	0.07506	0.08058	0.09478	0.10052	0.09909
350.00	0.00013	0.00760	0.05835	0.07257	0.08146	0.08781	0.10519	0.11340	0.11281
360.00	0.00009	0.01061	0.08238	0.10304	0.11666	0.12626	0.15175	0.16205	0.15947

CONC RURAL FLAT DFAULT

*** THE PERIOD (8784 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3000.00	3500.00
10.00	0.13496	0.12722
20.00	0.10698	0.10006
30.00	0.09457	0.08617
40.00	0.10773	0.09827
50.00	0.12407	0.11533
60.00	0.13789	0.12631
70.00	0.11301	0.10211
80.00	0.10777	0.09719
90.00	0.15011	0.14024
100.00	0.14801	0.13668
110.00	0.20271	0.18931
120.00	0.21724	0.20579
130.00	0.19324	0.18601
140.00	0.13186	0.12673
150.00	0.12927	0.12449
160.00	0.13428	0.12906
170.00	0.16852	0.16229
180.00	0.25287	0.24268
190.00	0.25015	0.24178
200.00	0.28785	0.27963
210.00	0.26267	0.25653
220.00	0.32254	0.31923
230.00	0.36166	0.35885
240.00	0.41430	0.40764
250.00	0.38732	0.37759
260.00	0.33577	0.32511
270.00	0.35962	0.34941
280.00	0.33821	0.32450
290.00	0.36467	0.34536
300.00	0.32223	0.30654
310.00	0.19777	0.18550
320.00	0.14799	0.14060
330.00	0.11074	0.10582
340.00	0.09525	0.09023
350.00	0.10900	0.10352
360.00	0.15207	0.14244

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.04720c(88062624)	1.94419 (88081715)	5.85181 (88081715)	6.70933 (88071312)	7.41416 (88071312)
20.0	0.00791c(88062624)	1.94058 (88082612)	7.07438 (88042415)	8.27013 (88042415)	8.96914 (88042415)
30.0	0.00270c(88062724)	2.57740 (88041015)	10.27729 (88041015)	11.43355 (88041015)	11.96546 (88041015)
40.0	0.03325c(88062724)	3.21262 (88041212)	7.42662 (88060515)	8.90005 (88052312)	10.28362 (88052312)
50.0	0.05721c(88062724)	4.63644 (88060515)	12.15561 (88060515)	11.77099 (88060515)	11.01940 (88060515)
60.0	0.01664c(88062724)	4.07722 (88060515)	10.73861 (88060515)	10.90157 (88060515)	11.58960 (88052615)
70.0	0.00348 (88122818)	2.76320 (88081715)	9.83151 (88080612)	9.15658 (88080612)	9.92664 (88062715)
80.0	0.03307c(88102721)	5.52659 (88081715)	10.59270 (88080612)	9.86505 (88080612)	8.54693 (88080612)
90.0	0.05702c(88102721)	3.49342 (88081715)	6.87301 (88080612)	6.41833 (88080612)	7.20908 (88102112)
100.0	0.04710c(88042324)	2.00922 (88080615)	8.71210 (88070112)	10.75613 (88070112)	12.12825 (88070112)
110.0	0.05855c(88030124)	4.10003 (88040715)	12.64428 (88040815)	14.22934 (88040815)	15.08354 (88040815)
120.0	0.05871c(88042503)	6.80994 (88040715)	11.73936 (88070312)	11.04436 (88040715)	10.97073 (88050612)
130.0	0.10342c(88042503)	3.04884 (88070312)	9.71008 (88070312)	8.27500 (88070312)	7.30157 (88041312)
140.0	0.05728c(88063003)	2.09112 (88050615)	6.48870 (88052715)	6.36944 (88052715)	5.97655 (88052715)
150.0	0.01630c(88063003)	2.49224 (88052715)	9.70900 (88052715)	9.50095 (88052715)	8.95556 (88052715)
160.0	0.02781c(88030124)	1.91001 (88052715)	9.16018 (88040915)	8.55043 (88040915)	7.39393 (88040915)
170.0	0.08836 (88021106)	1.31634 (88040915)	10.01140 (88040915)	9.33610 (88040915)	8.08607 (88040915)
180.0	0.10890 (88021106)	1.92647 (88070315)	6.98309 (88040915)	6.53846 (88040915)	6.66952 (88022712)
190.0	0.05706c(88062906)	2.25949 (88070315)	7.46340 (88070315)	6.93701 (88120212)	8.32415 (88120212)
200.0	0.10142c(88032103)	2.27358 (88070315)	7.71467 (88070315)	6.61217 (88070315)	7.13595 (88012712)
210.0	0.14205c(88032103)	2.14841 (88070315)	7.47976 (88070315)	6.84847 (88011412)	7.89788 (88011412)
220.0	0.16414c(88061106)	1.86892 (88032112)	7.05856 (88032112)	6.78634 (88032112)	6.69993 (88102612)
230.0	0.15140c(88061106)	1.96422 (88081715)	7.61828 (88052012)	8.34865 (88102612)	9.64752 (88102612)
240.0	0.13581 (88122403)	1.91880 (88041412)	5.88433 (88041412)	6.96639 (88091215)	7.79183 (88091215)
250.0	0.12819 (88080306)	1.66456 (88091212)	6.85176 (88052912)	8.19213 (88052912)	9.00865 (88052912)
260.0	0.10923 (88071306)	1.94959 (88051012)	8.77636 (88091115)	10.61009 (88091115)	11.83900 (88091115)
270.0	0.09472 (88121418)	1.88246 (88051012)	7.67778 (88051012)	9.11218 (88083015)	10.22484 (88081915)
280.0	0.10994c(88082203)	2.32047 (88061815)	8.47672 (88061815)	9.29430 (88061815)	9.61089 (88061815)
290.0	0.09769c(88062003)	2.59029 (88072712)	8.94724 (88072712)	10.23047 (88090212)	10.98188 (88071212)
300.0	0.11749 (88060603)	3.00614 (88072712)	10.78452 (88072712)	10.16708 (88091512)	11.74560 (88091512)
310.0	0.16000c(88052606)	4.32910 (88071815)	8.61816 (88071812)	8.47465 (88071812)	8.04823 (88071812)
320.0	0.07443c(88052606)	2.42162 (88071815)	9.78026 (88082315)	9.62360 (88082315)	9.71939 (88041012)
330.0	0.11828c(88060803)	3.11418 (88072615)	9.34104 (88082315)	9.37317 (88082315)	8.85658 (88082315)
340.0	0.10039c(88042209)	3.11421 (88072615)	5.82255 (88072615)	6.61531 (88072212)	7.56995 (88072212)
350.0	0.10347c(88080103)	1.80845 (88062815)	5.53040 (88062815)	5.72836 (88041812)	6.11690 (88041812)
360.0	0.05877c(88080103)	2.37033 (88031812)	9.81179 (88041812)	11.61714 (88041812)	12.74241 (88041812)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	7.85862 (88071312)	7.90549 (88060712)	8.61311 (88012015)	8.76966 (88012015)	8.42486 (88012015)
20.0	9.51434 (88071312)	10.60903 (88071312)	9.50541 (88071312)	7.85625 (88071312)	7.17112 (88121112)
30.0	12.12067 (88041015)	10.80994 (88041015)	9.95727 (88110512)	9.73061 (88110512)	9.07052 (88110512)
40.0	11.38222 (88052312)	13.14990 (88052312)	12.05576 (88052312)	10.07939 (88052312)	8.25103 (88052312)
50.0	10.94434 (88041115)	11.23617 (88072215)	10.50362 (88072215)	8.85014 (88072215)	7.26327 (88072215)
60.0	12.29937 (88052615)	12.41199 (88052615)	10.25242 (88052615)	8.18977 (88041212)	7.77563 (88041212)
70.0	11.05255 (88062715)	12.95741 (88062715)	11.96828 (88062715)	10.03415 (88062715)	8.22212 (88062715)
80.0	8.06115 (88052215)	9.89001 (88052215)	9.42155 (88052215)	8.03057 (88052215)	7.26465 (88032118)
90.0	7.98469 (88102112)	9.62654 (88112309)	10.31396 (88112309)	10.03140 (88112309)	9.36037 (88112309)
100.0	13.11214 (88070112)	14.03631 (88070112)	12.12615 (88070112)	9.78453 (88070112)	7.83130 (88070112)
110.0	15.41384 (88040815)	14.47406 (88040815)	11.84800 (88040815)	12.34034 (88021215)	12.18357 (88021215)
120.0	11.28965 (88050612)	10.50728 (88050612)	8.88362 (88050512)	9.31238 (88021218)	9.48903 (88021218)
130.0	7.99162 (88042815)	9.83424 (88050709)	10.48815 (88050709)	9.97199 (88050709)	9.31948 (88031915)
140.0	5.55326 (88022915)	7.85983 (88022915)	8.48976 (88022915)	7.81359 (88022915)	7.23639 (88031503)
150.0	9.20669 (88040712)	9.63753 (88040712)	8.23481 (88040712)	6.92585 (88031015)	6.21489 (88031015)
160.0	6.16699 (88040915)	6.50861 (88121712)	6.56935 (88022615)	7.27886 (88012303)	8.44004 (88012303)
170.0	8.48159 (88022712)	9.88428 (88022712)	9.21053 (88022712)	8.01705 (88022106)	7.96109 (88022106)
180.0	7.35088 (88022712)	8.39244 (88031509)	10.18580 (88031509)	10.74950 (88031509)	10.61207 (88031509)
190.0	9.45313 (88120212)	12.02831 (88120212)	12.21755 (88120212)	11.13464 (88120212)	9.81181 (88120212)
200.0	8.03625 (88012712)	10.21163 (88012712)	10.76112 (88012712)	10.27641 (88012712)	9.46141 (88012712)
210.0	8.71393 (88011412)	9.91395 (88011412)	8.95509 (88011412)	9.25777 (88010609)	9.42495 (88010609)
220.0	7.25433 (88102612)	8.11913 (88072915)	8.13518 (88070318)	7.49357 (88100606)	8.13432 (88100606)
230.0	10.61917 (88102612)	11.70341 (88102612)	10.06862 (88102612)	8.35648 (88121412)	7.41105 (88101421)
240.0	8.24910 (88091215)	8.86310 (88102812)	9.23995 (88102815)	8.72961 (88100612)	8.92266 (88100612)
250.0	9.49966 (88052912)	9.71922 (88071912)	9.61142 (88071912)	10.06698 (88091315)	9.99193 (88091315)
260.0	12.63030 (88091115)	13.42239 (88091115)	12.04754 (88091115)	10.23479 (88091115)	9.20924 (88091703)
270.0	11.11901 (88081915)	12.01005 (88081915)	12.98953 (88091318)	12.96503 (88091318)	12.31211 (88091318)
280.0	9.70117 (88071115)	9.46359 (88071115)	9.10357 (88071215)	8.90088 (88112209)	8.86113 (88112209)
290.0	11.60512 (88071212)	11.64557 (88071212)	11.04256 (88090312)	10.95747 (88090312)	10.38930 (88090312)
300.0	12.99222 (88091512)	14.96781 (88091512)	13.70434 (88091512)	11.46279 (88091512)	9.39637 (88091512)
310.0	7.95077 (88032612)	9.04941 (88081712)	9.03886 (88052512)	8.30355 (88052512)	7.22593 (88052512)
320.0	10.58967 (88041012)	11.54102 (88041012)	10.04722 (88041012)	8.11481 (88041012)	6.48245 (88041012)
330.0	8.14247 (88082315)	7.92143 (88041012)	6.33928 (88123112)	5.41310 (88123112)	5.46234 (88021903)
340.0	8.27106 (88072212)	8.96925 (88072212)	7.65522 (88072315)	6.71416 (88072315)	6.12423 (88040409)
350.0	6.28586 (88041812)	5.86377 (88041812)	6.36136 (88022015)	6.55847 (88022015)	6.35778 (88022015)
360.0	13.39165 (88041812)	13.54494 (88041812)	11.74615 (88041812)	9.82781 (88041812)	8.53669 (88012112)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	7.84350 (88012015)
20.0	6.98088 (88121112)
30.0	8.26074 (88110512)
40.0	7.06047 (88041918)
50.0	6.31353 (88060715)
60.0	7.19742 (88041212)
70.0	6.74633 (88062715)
80.0	7.13967 (88032118)
90.0	8.55132 (88112309)
100.0	6.32773 (88070112)
110.0	11.59343 (88021215)
120.0	9.20704 (88021218)
130.0	8.52518 (88031915)
140.0	7.07910 (88031503)
150.0	6.77296 (88121321)
160.0	9.23337 (88012303)
170.0	7.62024 (88022106)
180.0	10.08028 (88031509)
190.0	8.55949 (88120212)
200.0	8.67190 (88011409)
210.0	9.15572 (88010609)
220.0	8.36084 (88100606)
230.0	7.76396 (88101421)
240.0	8.70062 (88100612)
250.0	9.52670 (88091315)
260.0	10.16914 (88091703)
270.0	11.39166 (88091318)
280.0	8.47473 (88112209)
290.0	9.61357 (88090312)
300.0	9.00464 (88112218)
310.0	6.95235 (88073118)
320.0	5.22118 (88041012)
330.0	5.95662 (88021903)
340.0	5.78958 (88040409)
350.0	5.95581 (88022015)
360.0	8.17875 (88012112)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.02360c(88062624)	0.72907 (88081716)	3.75032 (88082116)	4.50450 (88082116)	4.97478 (88082116)
20.0	0.00395c(88062624)	0.74367 (88082616)	4.02237 (88082116)	4.73309 (88082116)	5.13917 (88082116)
30.0	0.00116c(88062724)	1.07426c(88080816)	3.85398 (88041016)	4.28758 (88041016)	4.48705 (88041016)
40.0	0.01425c(88062724)	1.20651 (88041216)	4.30525c(88040516)	4.34067c(88040516)	4.69238 (88052316)
50.0	0.02452c(88062724)	1.73866 (88060516)	4.55835 (88060516)	4.43189c(88040516)	4.21626c(88040516)
60.0	0.00713c(88062724)	1.52896 (88060516)	5.35630 (88042616)	6.38532 (88042616)	7.00846 (88042616)
70.0	0.00174c(88122824)	1.03714 (88081716)	5.41160 (88062716)	6.59341 (88062716)	7.35392 (88062716)
80.0	0.01654c(88102724)	2.14694 (88081716)	5.12305 (88080616)	5.22185 (88042216)	5.79328 (88042216)
90.0	0.02851c(88102724)	1.64916 (88081716)	4.86941 (88080616)	4.49103 (88080616)	3.88369 (88080616)
100.0	0.02018c(88042324)	1.11113 (88041316)	3.94847 (88080616)	4.52387 (88070116)	5.13771 (88070116)
110.0	0.02509c(88030124)	1.62670 (88040716)	5.01028 (88040816)	5.71676 (88040816)	6.11582 (88040816)
120.0	0.02936c(88042508)	2.55820 (88040716)	5.59567 (88041316)	6.58606 (88041316)	7.16586 (88041316)
130.0	0.05171c(88042508)	1.14332 (88070316)	3.64128 (88070316)	4.29453 (88041316)	4.70198 (88041316)
140.0	0.02864c(88063008)	0.79219 (88050616)	2.71206 (88052716)	2.75668 (88052716)	2.83776 (88092616)
150.0	0.00815c(88063008)	0.97515 (88052716)	4.14349 (88052716)	4.20435 (88052716)	4.07831 (88052716)
160.0	0.01192c(88030124)	0.86979 (88052716)	4.09226 (88052716)	4.27197 (88052716)	4.24751 (88052716)
170.0	0.03314 (88021108)	0.49512 (88052716)	3.75491 (88040916)	3.50168 (88040916)	3.03281 (88040916)
180.0	0.04084 (88021108)	0.72243 (88070316)	2.66004 (88040916)	3.62938 (88021616)	4.39540 (88021616)
190.0	0.02853c(88062908)	0.84767 (88070316)	2.81358 (88070316)	3.01275 (88120216)	3.63654 (88120216)
200.0	0.05071c(88032108)	0.85852 (88070316)	3.09132 (88070316)	2.79477 (88012716)	3.40315 (88012716)
210.0	0.07102c(88032108)	0.82956 (88070316)	3.53166 (88070316)	3.57902 (88070316)	3.48548 (88070316)
220.0	0.08207c(88061108)	0.70153 (88032116)	3.32941 (88070316)	3.73506 (88070316)	3.98797 (88070316)
230.0	0.07570c(88061108)	0.76240 (88080916)	3.93587 (88062516)	4.99780 (88062516)	5.73211 (88062516)
240.0	0.06934 (88080308)	0.71955 (88041416)	3.98601 (88091216)	4.90636 (88091216)	5.53476 (88091216)
250.0	0.06064c(88060308)	0.99192 (88091216)	4.65344 (88091216)	5.43263 (88091216)	5.88542 (88091216)
260.0	0.05512c(88041508)	1.05339 (88091116)	5.75439 (88091116)	6.84066 (88091116)	7.53114 (88091116)
270.0	0.05882c(88081808)	0.70592 (88051016)	4.83600 (88080316)	5.95769 (88080316)	6.68535 (88080316)
280.0	0.07679c(88020308)	0.98591 (88061816)	5.02314 (88071116)	6.13042 (88071116)	6.81084 (88071116)
290.0	0.05489c(88071108)	0.97335 (88072716)	5.22200 (88071116)	6.54104 (88071116)	7.40052 (88071116)
300.0	0.08041c(88030108)	1.60649 (88071816)	4.24066 (88072716)	5.23924 (88091516)	6.06811 (88091516)
310.0	0.08000c(88052608)	2.42927 (88071816)	5.86718 (88071816)	5.70369 (88071816)	5.36777 (88071816)
320.0	0.03722c(88052608)	1.35926 (88071816)	5.70597 (88082316)	5.67049 (88082316)	5.28967 (88082316)
330.0	0.07402c(88060808)	1.35578 (88072616)	4.77047 (88082316)	4.94815 (88082316)	4.81612 (88082316)
340.0	0.05020c(88042208)	1.21921 (88072616)	2.78697 (88072616)	2.69446 (88072616)	2.84011 (88072216)
350.0	0.04434c(88080108)	0.71297c(88082216)	2.43117 (88090816)	2.94105 (88090816)	3.27137 (88090816)
360.0	0.02919c(88051808)	1.32361 (88031816)	6.10429 (88041816)	7.10342 (88041816)	7.69161 (88041816)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	5.28845 (88082116)	5.44448 (88082116)	5.34247 (88012016)	5.54183 (88012016)	5.40400 (88012016)
20.0	5.37197 (88082116)	5.21916 (88082116)	4.21392 (88082116)	3.70571 (88121116)	3.80362 (88121116)
30.0	4.54525 (88041016)	4.68895 (88042416)	4.69574 (88110516)	4.64652 (88110516)	4.37276 (88110516)
40.0	5.15554 (88052316)	5.80493 (88052316)	5.19727 (88052316)	4.27933 (88052316)	3.47382 (88052316)
50.0	4.29549 (88041116)	4.65585c(88040616)	4.20430c(88040616)	3.95979 (88060716)	3.59062 (88060716)
60.0	7.40521 (88042616)	7.47090 (88042616)	6.22720 (88042616)	5.38669 (88041216)	5.09155 (88041216)
70.0	7.88367 (88062716)	8.27507 (88062716)	7.07092 (88062716)	5.67743 (88062716)	4.57645 (88042616)
80.0	6.16822 (88042216)	6.37472 (88042216)	5.82474 (88102116)	5.36115 (88102116)	4.80337 (88102116)
90.0	3.80713 (88051916)	4.39175 (88041224)	4.59134 (88041224)	4.46871 (88040724)	4.16717 (88040724)
100.0	5.57845 (88070116)	6.17946 (88070116)	5.68840 (88070116)	4.92989 (88070116)	4.55552 (88040724)
110.0	6.31332 (88040816)	6.15872 (88040816)	5.85550 (88041124)	5.73482 (88041124)	5.37751 (88041124)
120.0	7.49541 (88041316)	7.41946 (88050616)	6.50017 (88050616)	5.41829 (88050616)	4.49431 (88050616)
130.0	4.93816 (88041316)	4.88349 (88041316)	5.36116 (88112324)	5.62776 (88112324)	5.54298 (88112324)
140.0	3.17320 (88092616)	3.96389 (88022916)	4.14977 (88022916)	4.20782 (88031508)	4.19172 (88031508)
150.0	3.89597 (88052716)	3.97474 (88121716)	4.14503 (88121716)	4.02922 (88031416)	4.14949c(88121324)
160.0	4.16463 (88052716)	4.78733 (88121316)	5.67380 (88121316)	5.87416 (88121316)	5.72942 (88121316)
170.0	3.42651 (88021616)	4.66078 (88021616)	4.92040 (88021616)	4.88513 (88012216)	4.66194 (88012216)
180.0	5.10519 (88021616)	7.00738 (88021616)	7.48717 (88021616)	6.93218 (88021616)	6.25285 (88022116)
190.0	4.13166 (88120216)	5.32707 (88120216)	5.54875 (88120216)	5.79295 (88020624)	6.11229 (88020624)
200.0	3.85313 (88012716)	5.03245 (88012716)	5.64492 (88101408)	6.04584 (88101408)	6.03748 (88101408)
210.0	3.86864 (88011416)	4.67915 (88103016)	4.72567 (88103016)	4.91549 (88010608)	4.99302 (88010608)
220.0	4.20072 (88070316)	4.52437 (88070316)	5.15195 (88050216)	5.35126 (88050216)	5.26267 (88050216)
230.0	6.29147 (88062516)	7.04227 (88062516)	6.28839 (88062516)	5.17839 (88062516)	5.58055 (88091308)
240.0	5.93348 (88091216)	7.31667 (88102816)	7.57614 (88102816)	6.87955 (88102816)	5.96032 (88102816)
250.0	6.10960 (88091216)	6.07508 (88091216)	5.76955 (88061316)	6.14615 (88061316)	6.14885 (88091316)
260.0	7.94289 (88091116)	8.19289 (88091116)	7.25330 (88091116)	6.14818 (88091116)	5.18995 (88091116)
270.0	7.18687 (88080316)	7.49698 (88080316)	6.27981 (88080316)	4.94034 (88080316)	4.21290c(88040124)
280.0	7.26308 (88071116)	7.49689 (88071116)	6.37292 (88071116)	5.11859 (88071116)	5.24765 (88090224)
290.0	8.02364 (88071116)	8.65545 (88071116)	7.73743 (88091416)	7.28382 (88091416)	6.67628 (88091416)
300.0	6.72750 (88091516)	7.81007 (88091516)	7.18829 (88091516)	6.02588 (88091516)	4.94291 (88091516)
310.0	4.99163 (88071816)	5.06707 (88091516)	4.63375 (88091516)	3.85147 (88091516)	3.13085 (88091516)
320.0	4.82901 (88082316)	4.32788 (88041016)	3.76771 (88041016)	3.36678c(88120616)	3.14777 (88031216)
330.0	4.59313 (88082316)	3.77429 (88082316)	2.99601 (88082316)	3.01505 (88090508)	3.53227 (88090508)
340.0	3.10286 (88072216)	3.36425 (88072216)	2.87071 (88072316)	2.51781 (88072316)	2.38118 (88011916)
350.0	3.50404 (88122816)	4.29722 (88122816)	4.16379 (88122816)	3.75775 (88012108)	4.07310 (88012108)
360.0	7.99773 (88041816)	7.86060 (88041816)	7.42707 (88012116)	7.46793 (88012116)	7.13512 (88012116)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	5.08768 (88012016)
20.0	3.71935 (88121116)
30.0	4.00828 (88110516)
40.0	3.23447 (88041916)
50.0	3.42533c(88041724)
60.0	4.69473 (88041216)
70.0	3.93227 (88042616)
80.0	4.26180 (88102116)
90.0	3.79749 (88040724)
100.0	4.15227 (88040724)
110.0	4.93266 (88041124)
120.0	3.93062 (88050708)
130.0	5.25521 (88112324)
140.0	4.05016 (88031508)
150.0	4.59415c(88121324)
160.0	5.39773 (88121316)
170.0	4.53057 (88031608)
180.0	5.81410 (88022116)
190.0	6.10787 (88020624)
200.0	5.80647 (88101316)
210.0	4.84670 (88010608)
220.0	4.99995 (88050216)
230.0	5.95852 (88091308)
240.0	5.10812 (88100616)
250.0	5.93974 (88091316)
260.0	5.06085 (88091708)
270.0	4.58507c(88040124)
280.0	5.68685 (88090224)
290.0	6.03871 (88091416)
300.0	4.72295 (88112216)
310.0	2.77698 (88090216)
320.0	2.92506 (88031216)
330.0	3.85450 (88090508)
340.0	2.26141 (88011916)
350.0	4.15109 (88012108)
360.0	6.62936 (88012116)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.00787c(88062624)	0.30548c(88062624)	1.68479c(88082124)	2.02985c(88082124)	2.24409c(88082124)
20.0	0.00132c(88062624)	0.33052c(88082624)	1.87559c(88082124)	2.24293c(88082124)	2.45994c(88082124)
30.0	0.00039c(88062724)	0.42957c(88041024)	1.71288c(88041024)	1.90559c(88041024)	1.99424c(88041024)
40.0	0.00475c(88062724)	0.40217 (88041224)	2.03271c(88040524)	2.18127c(88040524)	2.22217c(88040524)
50.0	0.00817c(88062724)	0.66791c(88060524)	1.88914c(88060524)	1.89833c(88060524)	1.92173c(88041124)
60.0	0.00238c(88062724)	0.58315c(88060524)	1.97722 (88042624)	2.41667 (88042624)	2.69955 (88042624)
70.0	0.00058c(88122824)	0.37714c(88081724)	2.22552c(88062724)	2.73938c(88062724)	3.07622c(88062724)
80.0	0.00551c(88102724)	0.78071c(88081724)	2.28914c(88080624)	2.43699c(88042224)	2.71244c(88042224)
90.0	0.00950c(88102724)	0.59969c(88081724)	2.21863c(88080624)	2.08255c(88080624)	1.83673c(88080624)
100.0	0.00785c(88042324)	0.37120 (88041324)	1.75647c(88080624)	1.95450 (88040724)	2.30389 (88040724)
110.0	0.01361c(88030124)	0.55319 (88040724)	1.87465 (88040824)	2.21045 (88040824)	2.42930 (88040824)
120.0	0.01283c(88030124)	0.85684 (88040724)	2.14547 (88050624)	2.61348 (88050624)	2.94079 (88050624)
130.0	0.01477c(88042524)	0.40774 (88050624)	1.39648 (88041324)	1.70789 (88041324)	1.91600 (88041324)
140.0	0.00955c(88063024)	0.26689 (88050624)	0.95818c(88052724)	1.03735 (88040724)	1.18953 (88040724)
150.0	0.00272c(88063024)	0.33921c(88052724)	1.44636c(88052724)	1.47037c(88052724)	1.42682c(88052724)
160.0	0.00439c(88030124)	0.30254c(88052724)	1.42346c(88052724)	1.48601c(88052724)	1.47749c(88052724)
170.0	0.01105 (88021124)	0.18343c(88040924)	1.36920c(88040924)	1.27727c(88040924)	1.36425 (88022124)
180.0	0.01361 (88021124)	0.24081 (88070324)	0.97614c(88040924)	1.42329 (88020624)	1.78007 (88020624)
190.0	0.00901c(88062924)	0.28256 (88070324)	1.15540 (88070524)	1.56695 (88020624)	1.99339 (88020624)
200.0	0.01521c(88032124)	0.28643 (88070324)	1.03586 (88070324)	1.40447 (88010524)	1.78426 (88010524)
210.0	0.02131c(88032124)	0.28296 (88070324)	1.34161 (88070324)	1.42630 (88070324)	1.44068 (88070324)
220.0	0.02736c(88061124)	0.28168c(88032124)	1.41798 (88070324)	1.67897 (88070324)	1.86075 (88070324)
230.0	0.02524c(88061124)	0.26785c(88081724)	1.58197c(88062524)	2.00751c(88062524)	2.30202c(88062524)
240.0	0.02412c(88080324)	0.31980c(88041424)	1.59925 (88091224)	2.03032 (88091224)	2.34955 (88091224)
250.0	0.01927c(88080324)	0.33338 (88091224)	1.67395 (88091224)	1.99895 (88091224)	2.19928 (88091224)
260.0	0.03068c(88081624)	0.35252 (88091124)	2.02903 (88091124)	2.45567 (88091124)	2.73005 (88091124)
270.0	0.01961c(88081824)	0.28344c(88080524)	1.78822c(88080324)	2.21934c(88080324)	2.50654c(88080324)
280.0	0.02560c(88020324)	0.44730c(88061824)	1.93144c(88071124)	2.37594c(88071124)	2.65354c(88071124)
290.0	0.01773c(88072724)	0.42905c(88072724)	1.98173c(88071124)	2.48461c(88071124)	2.81706c(88071124)
300.0	0.02539c(88030124)	0.64260c(88071824)	1.69738c(88072724)	1.85016 (88091524)	2.14643 (88091524)
310.0	0.02526c(88052624)	0.97171c(88071824)	2.34687c(88071824)	2.28148c(88071824)	2.14711c(88071824)
320.0	0.01229c(88082324)	0.54370c(88071824)	2.53895c(88082324)	2.52351c(88082324)	2.35375c(88082324)
330.0	0.02253c(88060824)	0.57397c(88072624)	2.16460c(88082324)	2.25681c(88082324)	2.20523c(88082324)
340.0	0.01673c(88042224)	0.51574c(88072624)	1.25310c(88072624)	1.25119c(88072624)	1.20968c(88072224)
350.0	0.01478c(88080124)	0.28554c(88062824)	0.88359c(88122824)	1.17563c(88122824)	1.38321c(88122824)
360.0	0.00973c(88051824)	0.44682 (88031824)	2.12699c(88041824)	2.47646c(88041824)	2.68163c(88041824)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	2.38703c(88082124)	2.46889c(88082124)	2.25375c(88022024)	2.33843c(88022024)	2.29804c(88022024)
20.0	2.59163c(88082124)	2.63786c(88082124)	2.31378c(88082124)	2.08657c(88121124)	2.17482c(88121124)
30.0	2.02011c(88041024)	2.11085c(88042424)	1.90929c(88042424)	1.65913c(88042424)	1.62714 (88042624)
40.0	2.22281c(88040524)	2.21140c(88052324)	1.97991c(88052324)	1.99444 (88041924)	1.98809 (88041924)
50.0	2.02106c(88041124)	2.06936c(88041124)	2.15926 (88042624)	2.22213 (88042624)	2.20241 (88042624)
60.0	2.88679 (88042624)	3.10397 (88042624)	2.85786 (88042624)	2.51265 (88042624)	2.20390 (88042624)
70.0	3.32071c(88062724)	3.59961c(88062724)	3.20818c(88062724)	2.68005c(88062724)	2.22903c(88062724)
80.0	2.89864c(88042224)	3.03856c(88042224)	2.66327c(88042224)	2.22103c(88042224)	1.85259c(88042224)
90.0	1.68797c(88042224)	2.15095 (88041224)	2.45340 (88041224)	2.50814 (88041224)	2.43894 (88041224)
100.0	2.52033 (88040724)	2.98075 (88040724)	3.00208 (88040724)	2.78356 (88040724)	2.50528 (88040724)
110.0	2.56068 (88040824)	2.75534 (88040824)	2.66896 (88040824)	2.54881c(88041124)	2.39001c(88041124)
120.0	3.13969 (88050624)	3.42700 (88050624)	3.27838 (88050624)	2.98480 (88050624)	2.83432c(88050524)
130.0	2.05115 (88041324)	2.76264 (88031924)	3.25562 (88031924)	3.40015 (88031924)	3.34919 (88031924)
140.0	1.27675 (88031524)	1.70014 (88031524)	1.89826 (88031524)	1.89160 (88031524)	1.80797 (88031524)
150.0	1.36342c(88052724)	1.71863c(88121324)	2.15296c(88121324)	2.34502c(88121324)	2.42662c(88121324)
160.0	1.44862c(88052724)	1.87034c(88121324)	2.22443c(88121324)	2.31094c(88121324)	2.25972c(88121324)
170.0	1.56500 (88022124)	2.22979 (88022124)	2.72194 (88022124)	2.90737 (88022124)	2.91930 (88022124)
180.0	2.02282 (88020624)	2.76847 (88020624)	3.22239 (88020624)	3.31891 (88020624)	3.49289c(88121824)
190.0	2.30222 (88020624)	3.36857 (88020624)	4.20677 (88020624)	4.57352 (88020624)	4.63610 (88020624)
200.0	2.05561 (88010524)	2.96226 (88010524)	3.62340 (88010524)	3.86955 (88010524)	3.86554 (88010524)
210.0	1.52843 (88011424)	1.86447 (88011424)	2.20342 (88010624)	2.41056 (88010624)	2.44990 (88010624)
220.0	2.02337 (88070324)	2.41163 (88070324)	2.38814 (88070324)	2.52993 (88050224)	2.53395 (88050224)
230.0	2.52622c(88062524)	2.82857c(88062524)	2.52946c(88062524)	2.30577 (88070624)	2.23874 (88070624)
240.0	2.56828 (88091224)	3.30475c(88102824)	3.63749c(88102824)	3.55125c(88102824)	3.35307c(88102824)
250.0	2.30981 (88091224)	2.42429 (88091224)	2.78856 (88061324)	3.07194 (88061324)	3.15550 (88061324)
260.0	2.90099 (88091124)	3.11897 (88091124)	2.95092 (88091124)	2.68672 (88091124)	2.95450 (88091724)
270.0	2.71558c(88080324)	2.96633c(88080324)	2.67637c(88080324)	2.30066 (88050324)	2.19413 (88050324)
280.0	2.84692c(88071124)	3.05276c(88071124)	2.77441c(88071124)	2.39714c(88071124)	2.20663 (88030824)
290.0	3.06072c(88071124)	3.36837c(88071124)	3.05672c(88071124)	2.64802 (88091424)	2.47656 (88091424)
300.0	2.38333 (88091524)	2.79672 (88091524)	2.73042 (88112224)	2.94140 (88112224)	2.96404 (88112224)
310.0	1.99665c(88071824)	1.79963c(88071624)	1.78067 (88090824)	1.83379 (88090824)	1.80322 (88090824)
320.0	2.14863c(88082324)	1.92350c(88041024)	1.87048c(88011924)	1.84311c(88011924)	1.75583c(88011924)
330.0	2.11344c(88082324)	1.78077c(88082324)	1.46825c(88082324)	1.21499c(88100324)	1.20347c(88100324)
340.0	1.32109c(88072224)	1.43413c(88072224)	1.25965 (88040424)	1.33341 (88040424)	1.36672 (88040424)
350.0	1.55735c(88122824)	1.90987c(88122824)	1.94781c(88021924)	2.23924c(88021924)	2.37573c(88021924)
360.0	2.78836c(88041824)	2.91651 (88031824)	2.88001c(88022024)	3.04278c(88022024)	3.04536c(88022024)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	2.18713c(88022024)
20.0	2.15375c(88121124)
30.0	1.70494 (88042624)
40.0	1.90278 (88041924)
50.0	2.12459 (88042624)
60.0	1.98399c(88102424)
70.0	1.87739c(88062724)
80.0	1.77078 (88042724)
90.0	2.30215 (88041224)
100.0	2.22850 (88040724)
110.0	2.20394c(88021224)
120.0	2.68126c(88050524)
130.0	3.18297 (88031924)
140.0	1.69439 (88031524)
150.0	2.42932c(88121324)
160.0	2.13220c(88121324)
170.0	2.82539 (88022124)
180.0	3.63795c(88121824)
190.0	4.49638 (88020624)
200.0	3.70742 (88010524)
210.0	2.37850 (88010624)
220.0	2.43966 (88050224)
230.0	2.21902 (88101624)
240.0	3.31708 (88060124)
250.0	3.10389 (88061324)
260.0	3.18308 (88091724)
270.0	2.16872c(88040124)
280.0	2.19982 (88090224)
290.0	2.43986 (88091524)
300.0	2.86282 (88112224)
310.0	1.72139 (88090824)
320.0	1.65220c(88011924)
330.0	1.28750 (88090524)
340.0	1.37437 (88040424)
350.0	2.39706c(88021924)
360.0	2.95516c(88022024)

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	15.41384	(88040815) AT	(135292.66, 202227.78) GP	6.	14.03631	(88070112) AT	(135736.22, 202343.53) GP
2.	15.08354	(88040815) AT	(135198.69, 202261.98) GP	7.	13.70434	(88091512) AT	(132526.95, 203604.00) GP
3.	14.96781	(88091512) AT	(132959.97, 203354.00) GP	8.	13.54494	(88041812) AT	(134259.00, 204104.00) GP
4.	14.47406	(88040815) AT	(135668.53, 202090.97) GP	9.	13.42239	(88091115) AT	(132781.78, 202343.53) GP
5.	14.22934	(88040815) AT	(135104.72, 202296.19) GP	10.	13.39165	(88041812) AT	(134259.00, 203704.00) GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	8.65545	(88071116) AT	(132849.47, 203117.03) GP	6.	7.94289	(88091116) AT	(133175.72, 202412.98) GP
2.	8.27507	(88062716) AT	(135668.53, 203117.03) GP	7.	7.88367	(88062716) AT	(135292.66, 202980.22) GP
3.	8.19289	(88091116) AT	(132781.78, 202343.53) GP	8.	7.86060	(88041816) AT	(134259.00, 204104.00) GP
4.	8.02364	(88071116) AT	(133225.34, 202980.22) GP	9.	7.81007	(88091516) AT	(132959.97, 203354.00) GP
5.	7.99773	(88041816) AT	(134259.00, 203704.00) GP	10.	7.73743	(88091416) AT	(132379.61, 203288.05) GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	4.63610	(88020624) AT	(133738.06, 199649.58) GP	6.	3.86554	(88010524) AT	(133232.94, 199784.92) GP
2.	4.57352	(88020624) AT	(133824.88, 200141.98) GP	7.	3.70742	(88010524) AT	(133061.92, 199315.08) GP
3.	4.49638	(88020624) AT	(133651.23, 199157.17) GP	8.	3.63795c	(88121824) AT	(134259.00, 199104.00) GP
4.	4.20677	(88020624) AT	(133911.70, 200634.39) GP	9.	3.63749c	(88102824) AT	(132526.95, 201604.00) GP
5.	3.86955	(88010524) AT	(133403.95, 200254.77) GP	10.	3.62340	(88010524) AT	(133574.95, 200724.61) GP

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

CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM PERIOD (8784 HRS) RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	0.41430 AT (131660.92, 201104.00, 0.00, 0.00) GP POL1
	2ND HIGHEST VALUE IS	0.41096 AT (132093.94, 201354.00, 0.00, 0.00) GP POL1
	3RD HIGHEST VALUE IS	0.40764 AT (131227.91, 200854.00, 0.00, 0.00) GP POL1
	4TH HIGHEST VALUE IS	0.39425 AT (132526.95, 201604.00, 0.00, 0.00) GP POL1
	5TH HIGHEST VALUE IS	0.38910 AT (132379.61, 203288.05, 0.00, 0.00) GP POL1
	6TH HIGHEST VALUE IS	0.38908 AT (131909.77, 201748.95, 0.00, 0.00) GP POL1
	7TH HIGHEST VALUE IS	0.38732 AT (131439.92, 201577.94, 0.00, 0.00) GP POL1
	8TH HIGHEST VALUE IS	0.38067 AT (131909.77, 203459.05, 0.00, 0.00) GP POL1
	9TH HIGHEST VALUE IS	0.37946 AT (132379.61, 201919.95, 0.00, 0.00) GP POL1
	10TH HIGHEST VALUE IS	0.37759 AT (130970.08, 201406.92, 0.00, 0.00) GP POL1

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	15.41384	ON 88040815: AT (135292.66, 202227.78, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	8.65545	ON 88071116: AT (132849.47, 203117.03, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	4.63610	ON 88020624: AT (133738.06, 199649.58, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 948 Informational Message(s)

A Total of 948 Calm Hours Identified

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

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

****
*** ISCST3 Finishes Successfully ***
****

1989

```
CO STARTING
  TITLEONE 1989 Collier County Landfill SO2 Modeling 2/01
  TITLETWO ISCST3 Code from EPA 11/00, Met Data from FDEP 11/00
  MODELOPT DFAULT CONC RURAL
  AVERTIME 3 8 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED

SO STARTING
  LOCATION FLARESTK POINT 134259 202604
  SRCPARAM FLARESTK 13.5 22.0 1273. 20.0 1.89
  SRCGROUP ALL
SO FINISHED

RE STARTING
  GRIDPOLR  POL1  STA
        POL1  ORIG  134259.0 202604.0
        POL1  DIST  200. 500. 800. 900. 1000. 1100. 1500. 2000.
        POL1  DIST  2500. 3000. 3500.
        POL1  GDIR  36   10.   10.
        POL1  END
RE FINISHED

ME STARTING
  INPUTFIL Fmypre89.asc  (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
  ANEMHGHT 6.0 meters
  SURFDATA 12835  1989   FTMYERS
  UAIRDATA 12842  1989   TAMPA
ME FINISHED

OU STARTING
  RECTABLE ALLAVE FIRST
  MAXTABLE ALLAVE 10
OU FINISHED

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

CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 3 Short Term Average(s) of: 3-HR 8-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 396 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

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

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: nlflat89.inp
**Output Print File: nlflat89.out

CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	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
FLARESTK	0	0.13500E+02	134259.0	202604.0	0.0	22.00	1273.00	20.00	1.89	NO	

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	FLARESTK,

CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 134259.00 ; Y-ORIG = 202604.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

200.0, 500.0, 800.0, 900.0, 1000.0, 1100.0, 1500.0, 2000.0, 2500.0, 3000.0,
3500.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

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

*** 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

CONC RURAL FLAT DFAULT

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

FILE: Fmypre89.asc
FORMAT: (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
SURFACE STATION NO.: 12835 UPPER AIR STATION NO.: 12842
NAME: FTMYERS NAME: TAMPA
YEAR: 1989 YEAR: 1989

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
89	01	01	01	181.0	1.00	291.5	7	999.5	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	02	178.0	0.00	290.9	7	999.1	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	03	184.0	0.00	290.4	7	998.8	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	04	183.0	0.00	289.8	7	998.4	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	05	183.0	0.00	289.3	7	998.1	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	06	182.0	0.00	289.3	6	997.8	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	07	185.0	0.00	289.3	7	997.4	590.0	0.0000	0.0	0.0000	0	0.00
89	01	01	08	183.0	0.00	288.7	6	99.3	630.4	0.0000	0.0	0.0000	0	0.00
89	01	01	09	287.0	2.06	290.4	5	248.6	691.2	0.0000	0.0	0.0000	0	0.00
89	01	01	10	271.0	2.06	295.4	4	397.9	751.9	0.0000	0.0	0.0000	0	0.00
89	01	01	11	304.0	2.57	298.7	3	547.1	812.7	0.0000	0.0	0.0000	0	0.00
89	01	01	12	16.0	4.12	299.3	3	696.4	873.5	0.0000	0.0	0.0000	0	0.00
89	01	01	13	323.0	3.09	300.9	2	845.7	934.2	0.0000	0.0	0.0000	0	0.00
89	01	01	14	349.0	3.09	300.9	2	995.0	995.0	0.0000	0.0	0.0000	0	0.00
89	01	01	15	62.0	4.12	300.9	3	995.0	995.0	0.0000	0.0	0.0000	0	0.00
89	01	01	16	74.0	2.57	299.8	3	995.0	995.0	0.0000	0.0	0.0000	0	0.00
89	01	01	17	61.0	3.60	298.7	4	995.0	995.0	0.0000	0.0	0.0000	0	0.00
89	01	01	18	47.0	2.06	296.5	5	993.9	991.6	0.0000	0.0	0.0000	0	0.00
89	01	01	19	54.0	0.00	294.8	6	990.5	980.5	0.0000	0.0	0.0000	0	0.00
89	01	01	20	47.0	0.00	293.2	7	987.0	969.4	0.0000	0.0	0.0000	0	0.00
89	01	01	21	50.0	0.00	293.2	7	983.6	958.3	0.0000	0.0	0.0000	0	0.00
89	01	01	22	52.0	0.00	292.0	7	980.2	947.2	0.0000	0.0	0.0000	0	0.00
89	01	01	23	50.0	0.00	292.0	7	976.7	936.1	0.0000	0.0	0.0000	0	0.00
89	01	01	24	50.0	0.00	290.9	7	973.3	925.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00	1100.00	1500.00	2000.00	2500.00
10.00	0.00013	0.01014	0.08991	0.11385	0.12869	0.13948	0.16300	0.16605	0.15758
20.00	0.00008	0.01147	0.09662	0.11995	0.13408	0.14444	0.16642	0.16747	0.15668
30.00	0.00003	0.01519	0.11996	0.14589	0.16131	0.17212	0.19248	0.18915	0.17442
40.00	0.00002	0.01734	0.13267	0.15935	0.17445	0.18481	0.20440	0.20195	0.18830
50.00	0.00006	0.01897	0.15294	0.18574	0.20500	0.21881	0.24487	0.23940	0.21870
60.00	0.00008	0.01857	0.15667	0.19364	0.21660	0.23381	0.26918	0.26936	0.25134
70.00	0.00005	0.01205	0.10643	0.13150	0.14621	0.15686	0.17393	0.16515	0.14711
80.00	0.00007	0.00685	0.06742	0.08519	0.09572	0.10352	0.11955	0.12016	0.11282
90.00	0.00009	0.00914	0.07854	0.09990	0.11368	0.12438	0.15137	0.16193	0.15991
100.00	0.00006	0.01240	0.09339	0.11479	0.12782	0.13695	0.15447	0.15345	0.14366
110.00	0.00007	0.01365	0.10522	0.12962	0.14509	0.15605	0.17937	0.18217	0.17380
120.00	0.00009	0.01440	0.11412	0.14299	0.16192	0.17557	0.20915	0.22144	0.21824
130.00	0.00007	0.01190	0.09391	0.11730	0.13191	0.14244	0.16722	0.17485	0.17075
140.00	0.00005	0.01046	0.08122	0.10235	0.11593	0.12587	0.15007	0.15855	0.15574
150.00	0.00009	0.01034	0.08054	0.10234	0.11674	0.12748	0.15465	0.16533	0.16338
160.00	0.00012	0.00851	0.07115	0.09114	0.10409	0.11399	0.14059	0.15333	0.15330
170.00	0.00011	0.00761	0.06798	0.08840	0.10164	0.11189	0.14088	0.15790	0.16188
180.00	0.00014	0.00877	0.08462	0.11270	0.13230	0.14763	0.19220	0.22033	0.22928
190.00	0.00015	0.00788	0.08501	0.11318	0.13221	0.14710	0.18685	0.20530	0.20570
200.00	0.00015	0.00868	0.09247	0.12345	0.14484	0.16211	0.21066	0.23730	0.24247
210.00	0.00024	0.01061	0.10160	0.13399	0.15600	0.17388	0.22373	0.25021	0.25471
220.00	0.00049	0.01420	0.10648	0.13598	0.15489	0.17034	0.21384	0.23886	0.24504
230.00	0.00075	0.01793	0.12031	0.15200	0.17265	0.18979	0.24084	0.27489	0.28689
240.00	0.00067	0.01833	0.13245	0.16785	0.19121	0.21058	0.26615	0.29841	0.30548
250.00	0.00047	0.01798	0.13597	0.17169	0.19477	0.21364	0.26555	0.29176	0.29404
260.00	0.00043	0.01853	0.13738	0.17102	0.19164	0.20792	0.24896	0.26316	0.25698
270.00	0.00062	0.02161	0.15686	0.19650	0.22232	0.24296	0.29679	0.32132	0.32134
280.00	0.00077	0.01868	0.15233	0.19316	0.21933	0.23985	0.28876	0.30385	0.29635
290.00	0.00069	0.01616	0.14617	0.18896	0.21699	0.23968	0.29570	0.31563	0.30993
300.00	0.00052	0.01704	0.15365	0.20059	0.23216	0.25789	0.32338	0.35071	0.34929
310.00	0.00035	0.01386	0.13729	0.17895	0.20650	0.22915	0.28426	0.30041	0.29067
320.00	0.00028	0.01117	0.11016	0.14249	0.16364	0.18119	0.22443	0.23759	0.23049
330.00	0.00019	0.00909	0.08507	0.10822	0.12286	0.13468	0.16259	0.16864	0.16097
340.00	0.00011	0.00851	0.07006	0.08731	0.09757	0.10550	0.12342	0.12673	0.12098
350.00	0.00010	0.00995	0.08364	0.10478	0.11798	0.12792	0.14874	0.14949	0.13984
360.00	0.00015	0.01001	0.09416	0.12044	0.13773	0.15100	0.18213	0.18950	0.18230

CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3000.00	3500.00
10.00	0.14650	0.13494
20.00	0.14341	0.13023
30.00	0.15849	0.14347
40.00	0.17344	0.15902
50.00	0.19656	0.17605
60.00	0.23041	0.21000
70.00	0.12967	0.11455
80.00	0.10418	0.09557
90.00	0.15377	0.14554
100.00	0.13261	0.12165
110.00	0.16343	0.15246
120.00	0.21021	0.19938
130.00	0.16341	0.15435
140.00	0.14981	0.14220
150.00	0.15780	0.15033
160.00	0.14884	0.14189
170.00	0.16045	0.15555
180.00	0.23046	0.22585
190.00	0.20018	0.19126
200.00	0.24020	0.23324
210.00	0.25213	0.24497
220.00	0.24521	0.24087
230.00	0.29146	0.28953
240.00	0.30457	0.29811
250.00	0.28939	0.28022
260.00	0.24588	0.23288
270.00	0.31524	0.30469
280.00	0.28450	0.27050
290.00	0.29831	0.28393
300.00	0.34038	0.32710
310.00	0.27481	0.25724
320.00	0.21911	0.20649
330.00	0.15117	0.14110
340.00	0.11366	0.10624
350.00	0.12892	0.11844
360.00	0.17146	0.15963

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.09515 (89071021)	1.73661 (89100112)	7.74186 (89100112)	8.89644 (89100112)	9.55439 (89100112)
20.0	0.05437 (89020221)	1.55978 (89060512)	6.25064 (89060815)	7.54561 (89032615)	8.38380 (89032615)
30.0	0.03777 (89020221)	1.95596 (89083112)	6.25669 (89083112)	7.47436 (89030415)	8.77716 (89030415)
40.0	0.01651c(89123021)	1.94688 (89061115)	7.74882 (89052312)	7.65374 (89052312)	8.00445 (89052315)
50.0	0.08208c(89123021)	2.24075c(89060312)	7.87998c(89060312)	9.47706 (89040815)	10.54728 (89040815)
60.0	0.11196c(89123021)	1.92739 (89042715)	8.24376c(89060312)	8.26109c(89060312)	8.42069 (89040915)
70.0	0.05450c(89123021)	2.47047 (89042715)	9.77678 (89083115)	11.19643 (89083115)	11.96376 (89083115)
80.0	0.07568c(89081509)	1.16670 (89051212)	5.31147 (89081512)	6.48432 (89081512)	7.21047 (89081512)
90.0	0.11392c(89081509)	2.02043 (89041615)	5.83482 (89051212)	7.09207 (89060315)	7.83973 (89060315)
100.0	0.05805c(89081509)	3.16085 (89041615)	8.96046 (89041615)	9.52106 (89041615)	9.63132 (89041615)
110.0	0.05425c(89032403)	1.95115 (89042715)	6.05744 (89042712)	6.41027 (89042712)	7.07910 (89041015)
120.0	0.11219 (89061721)	1.95963 (89041612)	6.33040c(89041112)	7.78142 (89112115)	8.77862 (89112115)
130.0	0.08254 (89061721)	1.64059 (89050312)	6.31134 (89050715)	7.85181 (89112115)	8.91856 (89112115)
140.0	0.04688 (89020121)	2.42526 (89082215)	6.70150 (89032515)	6.41270 (89032515)	6.97705 (89022324)
150.0	0.08750 (89092921)	2.42542 (89082215)	6.61585 (89040615)	7.73118 (89040615)	8.36535 (89040615)
160.0	0.10068c(89112103)	1.93519 (89052712)	6.50644 (89052712)	5.89673 (89052712)	6.13448 (89050815)
170.0	0.05801c(89031124)	1.78024 (89052712)	6.85538 (89050815)	8.02273 (89050815)	8.68620 (89050815)
180.0	0.10704c(89010103)	1.96420 (89061115)	6.45282 (89052712)	6.60581 (89052015)	7.15135 (89052015)
190.0	0.06923 (89120424)	1.28832 (89061115)	6.19661 (89052712)	6.80120 (89040612)	7.60438 (89040612)
200.0	0.05921 (89120321)	0.63048 (89052712)	6.30701 (89042712)	6.90019 (89042712)	7.18626 (89040115)
210.0	0.05865 (89062221)	1.17487 (89042415)	9.54203 (89042712)	10.47188 (89042712)	10.66657 (89042712)
220.0	0.14444 (89120124)	1.92753 (89042415)	8.98300 (89073015)	8.35080 (89042712)	8.28911 (89042712)
230.0	0.24096 (89120124)	2.62178 (89073015)	11.04927 (89073015)	9.84339 (89073015)	9.26697 (89041815)
240.0	0.25017 (89111403)	1.99402 (89073015)	8.23909 (89073015)	8.75524 (89080512)	9.84837 (89080512)
250.0	0.12927 (89111403)	1.56424c(89040218)	6.48479 (89080512)	7.81354 (89080512)	8.57837 (89080512)
260.0	0.13527c(89092421)	2.03222 (89061715)	7.58318 (89061715)	8.96852 (89042312)	9.99266 (89042312)
270.0	0.17230c(89092421)	2.24557 (89090712)	9.23520 (89082315)	10.92671 (89082315)	11.89948 (89082315)
280.0	0.11616 (89073106)	1.77242 (89071015)	7.08483 (89072515)	9.05355 (89072515)	10.45354 (89072515)
290.0	0.11204 (89062806)	1.12848 (89082312)	7.51264 (89082312)	8.98941 (89082312)	9.89478 (89082312)
300.0	0.10922c(89082121)	1.70224 (89090912)	7.69872 (89082312)	9.19978 (89021515)	10.50867 (89021515)
310.0	0.08681c(89103109)	2.22111 (89090912)	8.78086 (89090912)	8.42991 (89090912)	9.10632 (89072212)
320.0	0.11305 (89091221)	2.14618 (89090912)	8.89101 (89090912)	8.39609 (89090912)	7.75251 (89091412)
330.0	0.07994c(89101024)	2.13200 (89090912)	8.39899 (89081812)	8.44877 (89081812)	7.96095 (89081812)
340.0	0.10390c(89101024)	1.95851 (89091515)	8.48281 (89081812)	8.80532 (89081812)	8.56338 (89081812)
350.0	0.05691 (89050121)	1.72010 (89042412)	5.35600 (89042412)	5.92828 (89033012)	6.27719 (89033012)
360.0	0.10858c(89123121)	1.84352 (89042412)	6.70794 (89022812)	8.39796 (89022812)	9.53167 (89022812)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	10.06411 (89060812)	10.19507 (89060812)	10.27640 (89032218)	10.37399 (89032218)	9.92527 (89032218)
20.0	8.92917 (89032615)	9.25197 (89020715)	8.61941 (89020715)	7.98996 (89121915)	7.50630 (89121915)
30.0	9.85693 (89030415)	11.87156 (89030415)	11.18282 (89030415)	9.47882 (89030415)	7.81817 (89030415)
40.0	8.50582 (89052315)	9.82059 (89061618)	9.72305 (89061618)	8.70478 (89061618)	7.88549 (89013018)
50.0	11.21453 (89040815)	11.57260 (89040815)	10.12501 (89040815)	8.56225 (89040815)	7.27247 (89040815)
60.0	8.77680 (89040915)	9.54237 (89051712)	8.35504 (89051712)	6.92773 (89040918)	7.28108 (89033121)
70.0	12.37275 (89083115)	11.87378 (89083115)	9.67800 (89083115)	7.60879 (89083115)	6.06761 (89081615)
80.0	7.70336 (89081512)	8.03169 (89081512)	6.89120 (89081512)	5.56220 (89081512)	5.54145 (89101818)
90.0	8.32062 (89060315)	9.73803 (89051515)	9.27534 (89051515)	7.92878 (89051515)	6.71195 (89071618)
100.0	9.50850 (89041615)	9.41620 (89040715)	9.05576 (89040715)	8.07107 (89040715)	7.06196 (89051218)
110.0	7.48579 (89041015)	8.14566 (89052515)	8.15082 (89071118)	7.54130 (89071118)	6.85365 (89071118)
120.0	9.52634 (89112115)	10.42519 (89112115)	9.41170 (89111615)	9.29315 (89111615)	8.72590 (89111615)
130.0	9.74179 (89112115)	10.87788 (89112115)	9.66011 (89112115)	8.85142 (89022321)	8.48793 (89121312)
140.0	7.70703 (89022324)	9.39963 (89022324)	9.68062 (89022324)	9.08698 (89022324)	8.23867 (89022324)
150.0	8.72537 (89040615)	8.49949 (89040615)	7.01250 (89031006)	8.06138 (89031006)	8.53285 (89031006)
160.0	6.39946 (89050815)	6.30357 (89070409)	7.70841 (89070409)	7.82761 (89070409)	7.30994 (89070409)
170.0	9.03405 (89050815)	9.42412 (89122403)	11.14216 (89122403)	11.57011 (89122403)	11.30540 (89122403)
180.0	7.40474 (89052015)	7.73661 (89100315)	7.48518 (89100312)	7.01657 (89122409)	7.41042 (89122409)
190.0	8.15896 (89040612)	10.10485 (89012412)	9.98367 (89012412)	8.90951 (89012412)	7.74045 (89012412)
200.0	7.96176 (89040115)	9.20878 (89040115)	11.52766 (89051209)	12.19785 (89051209)	11.93188 (89051209)
210.0	10.71142 (89042712)	10.84794 (89042712)	10.41738 (89040115)	9.39759 (89102512)	8.20775 (89102512)
220.0	8.08153 (89042712)	8.12975 (89110312)	8.23817 (89112412)	7.42093 (89112412)	6.38371 (89112412)
230.0	10.16455 (89041815)	11.24685 (89041815)	9.85950 (89041815)	7.98196 (89041815)	7.20411 (89070918)
240.0	10.61462 (89080512)	11.31432 (89080512)	9.89315 (89080512)	8.11409 (89080512)	6.92857 (89110415)
250.0	9.02897 (89080515)	10.38892 (89080515)	9.20329 (89080515)	8.72872 (89092715)	8.40264 (89092715)
260.0	10.74052 (89042312)	11.68956 (89042312)	10.61038 (89042312)	8.95303 (89042312)	7.41614 (89042312)
270.0	12.42896 (89082315)	11.84673 (89082315)	11.05148 (89053115)	9.72160 (89053115)	8.22313 (89053115)
280.0	11.53037 (89072515)	12.97178 (89072515)	11.47264 (89072515)	9.32507 (89072515)	7.67637 (89021421)
290.0	10.50603 (89082312)	10.92169 (89082312)	9.46498 (89082312)	8.43216 (89082918)	7.52741 (89082918)
300.0	11.49996 (89021515)	12.93032 (89021515)	11.88665 (89021515)	10.11218 (89021515)	9.26266 (89092312)
310.0	9.70291 (89072212)	11.08167 (89030412)	10.29209 (89030412)	8.61161 (89030412)	7.36712 (89091118)
320.0	8.80133 (89091412)	10.82736 (89091412)	10.48542 (89091412)	9.20852 (89091412)	7.86015 (89091412)
330.0	7.29201 (89081812)	8.61209 (89091415)	7.89763 (89091415)	6.54374 (89091415)	5.37257 (89120818)
340.0	8.09047 (89081812)	8.91633 (89100715)	8.80772 (89100715)	7.61350 (89100715)	6.31685 (89100715)
350.0	6.88704 (89061612)	8.05394 (89031512)	8.42892 (89010615)	8.44178 (89010615)	8.02237 (89010615)
360.0	10.31465 (89022812)	12.95363 (89061315)	12.92779 (89061315)	11.40172 (89061315)	9.83139 (89100115)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	9.22385 (89032218)
20.0	6.88597 (89121915)
30.0	6.44176 (89030415)
40.0	7.59157 (89013018)
50.0	6.23025 (89040815)
60.0	7.57815 (89033121)
70.0	5.17518 (89081615)
80.0	5.77538 (89101818)
90.0	6.50607 (89100218)
100.0	6.65314 (89051218)
110.0	6.37702 (89042521)
120.0	7.98690 (89111615)
130.0	8.09036 (89121312)
140.0	7.52609 (89122315)
150.0	8.54773 (89031006)
160.0	6.66597 (89031003)
170.0	10.67066 (89122403)
180.0	8.10937 (89112921)
190.0	6.69050 (89012412)
200.0	11.21158 (89051209)
210.0	7.28302 (89072406)
220.0	5.42003 (89112412)
230.0	7.14289 (89042309)
240.0	7.35351 (89120118)
250.0	7.82621 (89092715)
260.0	6.52796 (89100421)
270.0	8.73702 (89092924)
280.0	8.41168 (89021421)
290.0	6.66353 (89082918)
300.0	8.55030 (89092312)
310.0	6.93213 (89120806)
320.0	6.86065 (89091312)
330.0	5.38154 (89120818)
340.0	6.45295 (89112306)
350.0	7.41794 (89010615)
360.0	9.46705 (89100115)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.04078c(89071024)	0.94818 (89060816)	4.64571 (89060816)	5.37042 (89060816)	5.78689 (89060816)
20.0	0.02784c(89020224)	0.64720 (89050116)	3.45767 (89050116)	4.01531 (89050116)	4.33268 (89050116)
30.0	0.01888c(89020224)	0.83047c(89081616)	4.10659c(89051316)	5.03142c(89051316)	5.63552 (89060716)
40.0	0.00826c(89123024)	1.02351 (89061116)	5.40054 (89052316)	5.90980 (89052316)	6.09719 (89052316)
50.0	0.04104c(89123024)	1.08259 (89052316)	6.03954 (89052316)	6.71710 (89052316)	7.03939 (89052316)
60.0	0.05598c(89123024)	0.96899c(89091716)	4.77340c(89091716)	5.00354c(89091716)	5.32454 (89051716)
70.0	0.02725c(89123024)	0.92789 (89042716)	3.94527 (89083116)	4.56241 (89083116)	4.89491 (89083116)
80.0	0.03784c(89081508)	0.45405 (89051216)	2.98590 (89081516)	3.64560 (89081516)	4.05230 (89081516)
90.0	0.05696c(89081508)	0.90091 (89051216)	3.62639 (89051216)	3.60492 (89051216)	3.89538 (89081516)
100.0	0.02903c(89081508)	1.42491 (89041616)	4.80173 (89041616)	5.10004 (89041616)	5.15160 (89041616)
110.0	0.02713c(89032408)	1.18671 (89041616)	4.50999 (89042716)	4.65428c(89041116)	5.23129c(89041116)
120.0	0.04207 (89061724)	0.97903c(89071316)	4.61966c(89051816)	5.01457c(89041116)	5.54041c(89041116)
130.0	0.03095 (89061724)	0.68975c(89071316)	3.73310 (89092116)	4.61535 (89092116)	5.20933 (89092116)
140.0	0.02344c(89020124)	0.90947 (89082216)	2.68111 (89032516)	2.97216 (89050216)	3.35627 (89050216)
150.0	0.03281 (89092924)	0.90953 (89082216)	2.48527 (89040616)	2.90571 (89040616)	3.14444 (89040616)
160.0	0.05034c(89112108)	0.83062c(89052716)	2.79868c(89052716)	3.07944 (89122324)	3.83259 (89122324)
170.0	0.02900c(89031124)	0.79793c(89052716)	3.11670c(89052716)	3.44944 (89031016)	4.04024 (89031016)
180.0	0.05352c(89010108)	0.76010 (89061116)	4.16510c(89052716)	4.15773c(89052716)	4.44653 (89031016)
190.0	0.03057c(89010108)	0.66206c(89052716)	4.99714c(89052716)	5.31705c(89052716)	5.30315c(89052716)
200.0	0.02223 (89120324)	0.46764c(89052716)	4.04723c(89052716)	4.38824c(89052716)	4.42219c(89052716)
210.0	0.04355 (89062224)	0.44058 (89042416)	3.82170 (89042716)	4.28857 (89042716)	4.87874 (89040116)
220.0	0.05419 (89120124)	0.89755c(89073016)	4.49150c(89073016)	4.16489 (89042216)	4.54791 (89042216)
230.0	0.11346c(89111408)	1.31089c(89073016)	5.52463c(89073016)	4.92169c(89073016)	5.66667 (89041816)
240.0	0.17381c(89111408)	0.99701c(89073016)	4.98140 (89041816)	6.26200 (89041816)	7.12250 (89041816)
250.0	0.10193c(89111408)	0.67667 (89061716)	4.54465 (89080516)	5.72377 (89080516)	6.49441 (89080516)
260.0	0.05839c(89092424)	0.81007 (89061716)	3.41496 (89042316)	4.10856 (89042316)	4.68478 (89080516)
270.0	0.07535c(89092424)	0.98053c(89052016)	4.50707 (89090716)	5.25100 (89072516)	5.99221 (89072516)
280.0	0.05027c(89090308)	0.82957c(89071016)	4.45275c(89071016)	5.30606 (89072516)	6.00587 (89072516)
290.0	0.05026c(89090308)	0.44737 (89082316)	3.61044c(89083016)	4.34192 (89070916)	4.89055 (89070916)
300.0	0.05461c(89082124)	0.74381c(89090916)	3.85852 (89072316)	4.77275 (89072316)	5.37496 (89072316)
310.0	0.04340c(89103108)	1.02616c(89090916)	5.13113c(89090916)	5.49040c(89090916)	5.60702c(89090916)
320.0	0.04847c(89091224)	0.98212c(89090916)	4.91802c(89090916)	5.57613c(89091416)	6.64831c(89091416)
330.0	0.05919c(89101024)	1.01944c(89081816)	5.30553c(89081816)	5.07206c(89081816)	4.58993c(89081816)
340.0	0.06020c(89101024)	1.33531c(89081816)	6.14595c(89081816)	5.91886c(89081816)	5.43084c(89081816)
350.0	0.02522c(89123124)	0.86831c(89081816)	3.79989c(89081816)	4.07772 (89050116)	4.39313 (89050116)
360.0	0.05429c(89123124)	0.69133 (89042416)	2.84458 (89061316)	3.79234 (89061316)	4.50795 (89061316)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	6.02363 (89060816)	5.86161 (89060816)	5.53367 (89060916)	5.08587 (89060916)	4.51118 (89060916)
20.0	4.50042 (89050116)	5.27625c(89121916)	6.20851c(89121916)	6.45052c(89121916)	6.32611c(89121916)
30.0	6.09720 (89060716)	6.60950 (89060716)	5.79543 (89060716)	4.71465 (89060716)	4.15174c(89121916)
40.0	6.16558 (89052316)	5.81784 (89052316)	5.08187c(89051316)	4.30805 (89060716)	3.83642 (89033116)
50.0	7.21783 (89052316)	7.06836 (89052316)	5.95647 (89052316)	4.74776 (89052316)	4.11571 (89040816)
60.0	5.77527 (89051716)	6.18315 (89051716)	5.30774 (89051716)	4.26089 (89051716)	3.87133 (89010324)
70.0	5.07774 (89083116)	5.36096 (89071516)	4.47612 (89071516)	3.50968 (89040916)	2.86572 (89040916)
80.0	4.31882 (89081516)	4.51479 (89081516)	3.94803 (89081516)	3.27217 (89081516)	2.69822 (89081516)
90.0	4.14591 (89081516)	4.24865 (89081516)	3.56570 (89081516)	3.29098c(89071624)	3.21590c(89071624)
100.0	5.10951 (89041616)	4.53647 (89041616)	3.70190 (89040716)	3.34929 (89040716)	2.96000 (89040716)
110.0	5.59662c(89041116)	5.87712c(89041116)	5.27833c(89041116)	4.62991c(89041116)	4.07884c(89041116)
120.0	5.89044c(89041116)	6.15724c(89041116)	5.50534c(89041116)	4.73214c(89041116)	4.05604c(89041116)
130.0	5.64998 (89092116)	6.18352 (89092116)	6.03206 (89121316)	6.27864 (89121316)	6.14034 (89121316)
140.0	3.63933 (89050216)	3.96831 (89050216)	4.23151 (89120916)	4.75941 (89120916)	4.96694 (89120916)
150.0	3.27909 (89040616)	3.79751c(89120516)	4.34666 (89031008)	4.99117 (89031008)	5.27683 (89031008)
160.0	4.32634 (89122324)	5.71524 (89122324)	6.35863 (89122324)	6.30616 (89122324)	5.94853 (89122324)
170.0	4.50226 (89031016)	5.37226 (89031016)	5.14159 (89031016)	4.48830 (89122408)	4.44853c(89070408)
180.0	4.99590 (89031016)	6.18161 (89031016)	6.16538 (89100316)	5.56108 (89100316)	4.94045 (89102616)
190.0	5.93759 (89012416)	7.78717 (89012416)	8.12164 (89012416)	7.51545 (89012416)	6.67834 (89012416)
200.0	4.34574c(89052716)	4.80025 (89040116)	4.68718 (89102316)	4.88113 (89102316)	4.81164 (89102316)
210.0	5.48243 (89040116)	6.69635 (89102516)	7.03094 (89102516)	6.50563 (89102516)	5.75489 (89102516)
220.0	4.78308 (89042216)	5.13128 (89110316)	5.08222 (89110316)	4.58825 (89110316)	4.23171 (89030816)
230.0	6.22291 (89041816)	7.02889 (89041816)	6.44034 (89041816)	5.49700 (89041816)	5.81415c(89062124)
240.0	7.75068 (89041816)	8.38087 (89041816)	7.20619 (89041816)	5.75706 (89041816)	4.84428 (89113016)
250.0	7.04628 (89080516)	7.53243 (89080516)	6.88518 (89111216)	6.11629 (89111216)	5.28737 (89111216)
260.0	5.17415 (89080516)	5.89039 (89080516)	5.58616 (89053116)	4.90966 (89053116)	4.23329 (89053116)
270.0	6.52235 (89072516)	7.28566 (89072516)	6.72599 (89072516)	5.81109 (89072516)	4.96234 (89072516)
280.0	6.50613 (89072516)	7.05042 (89072516)	6.19025 (89072516)	5.07385 (89072516)	4.12160 (89072516)
290.0	5.28563 (89070916)	5.73485 (89070916)	5.16043 (89070916)	4.60820 (89082916)	4.29823 (89112816)
300.0	5.80656 (89072316)	6.22556 (89072316)	5.40749 (89072316)	4.78714 (89082816)	4.25291 (89092316)
310.0	5.69902c(89090916)	5.86526c(89090916)	5.47015c(89090916)	5.48257 (89091016)	5.26549 (89091016)
320.0	7.55004c(89091416)	9.35529c(89091416)	9.10204c(89091416)	8.00393c(89091416)	6.85931c(89091416)
330.0	4.91561c(89091416)	5.69502c(89091416)	5.13711c(89091416)	4.21664c(89091416)	3.39205c(89091416)
340.0	4.89130c(89081816)	4.47083 (89043016)	4.30592 (89043016)	3.70266 (89043016)	3.08416 (89043016)
350.0	4.56330 (89050116)	4.36845 (89050116)	4.68631 (89032316)	4.65774 (89032316)	4.39897 (89032316)
360.0	5.11384 (89061316)	6.33508 (89061316)	6.09948 (89061316)	5.50959 (89123116)	5.18100 (89123116)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	3.95620 (89060916)
20.0	6.01110c(89121916)
30.0	4.07674c(89121916)
40.0	4.11299c(89040824)
50.0	3.59314 (89040816)
60.0	4.13477 (89010324)
70.0	2.45209 (89062516)
80.0	2.41814c(89101824)
90.0	2.98092c(89071624)
100.0	2.88317 (89040724)
110.0	3.80895 (89042524)
120.0	3.50733c(89041116)
130.0	5.79503 (89121316)
140.0	4.92950 (89120916)
150.0	5.27883 (89031008)
160.0	5.46763 (89122324)
170.0	4.65807c(89070408)
180.0	4.49387 (89112924)
190.0	5.86120 (89012416)
200.0	4.66109 (89113008)
210.0	5.01401 (89102516)
220.0	4.23977 (89030816)
230.0	6.20911c(89062124)
240.0	4.38699 (89113016)
250.0	5.49369 (89101208)
260.0	3.67897 (89051916)
270.0	4.55214 (89112516)
280.0	4.16806 (89021424)
290.0	3.99389 (89112816)
300.0	4.28419c(89022808)
310.0	4.87793 (89091016)
320.0	5.92789 (89101116)
330.0	2.84014c(89091516)
340.0	3.21889 (89112308)
350.0	4.04580 (89032316)
360.0	4.75103 (89123116)

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.01298c(89071024)	0.34548c(89060824)	1.75478c(89060824)	2.05653c(89060824)	2.23444c(89060824)
20.0	0.00928c(89020224)	0.23495c(89060524)	1.28406 (89050124)	1.53492 (89050124)	1.69524 (89050124)
30.0	0.00629c(89020224)	0.32296c(89081624)	1.47571c(89061124)	1.73823 (89060724)	1.96735 (89060724)
40.0	0.00275c(89123024)	0.45491c(89061124)	2.43423c(89052324)	2.68149c(89052324)	2.77804c(89052324)
50.0	0.01368c(89123024)	0.48132c(89052324)	2.68998c(89052324)	2.99391c(89052324)	3.13726c(89052324)
60.0	0.01866c(89123024)	0.33463c(89060324)	1.74549c(89060324)	2.16173c(89040924)	2.43523c(89040924)
70.0	0.00908c(89123024)	0.42008c(89042724)	1.68139c(89083124)	1.95151c(89083124)	2.12607c(89071524)
80.0	0.01261c(89081524)	0.17276c(89081524)	1.33080c(89081524)	1.62367c(89081524)	1.80422c(89081524)
90.0	0.01899c(89081524)	0.34855c(89041624)	1.38220c(89081524)	1.67700c(89081524)	1.87053c(89081524)
100.0	0.00968c(89081524)	0.63329c(89041624)	2.13419c(89041624)	2.26681c(89041624)	2.28970c(89041624)
110.0	0.00814c(89032424)	0.52771c(89041624)	2.02805c(89042724)	2.08649c(89041624)	2.07190c(89041124)
120.0	0.01603c(89061724)	0.35619c(89041624)	1.74655c(89042724)	1.88470c(89041124)	2.08165c(89041124)
130.0	0.01179c(89061724)	0.25303 (89050724)	1.24561 (89092124)	1.54024 (89092124)	1.73828 (89092124)
140.0	0.00781c(89020124)	0.40421c(89082224)	1.02596c(89070424)	1.25918c(89070424)	1.39475c(89070424)
150.0	0.01094 (89092924)	0.40424c(89082224)	1.17581c(89040624)	1.42961c(89040624)	1.60250c(89040624)
160.0	0.01678c(89112124)	0.31743c(89072924)	1.03109c(89052724)	1.26079 (89122324)	1.57207 (89122324)
170.0	0.00791c(89031124)	0.29398c(89052724)	1.14826c(89052724)	1.34238 (89031024)	1.59192 (89031024)
180.0	0.01784c(89010124)	0.34016c(89061124)	1.53451c(89052724)	1.53179c(89052724)	1.74234 (89100324)
190.0	0.01019c(89010124)	0.24559c(89061124)	1.84105c(89052724)	1.95891c(89052724)	1.98534c(89012424)
200.0	0.00889c(89120324)	0.17229c(89052724)	1.49108c(89052724)	1.61672c(89052724)	1.62923c(89052724)
210.0	0.01459 (89062224)	0.16021c(89042424)	1.69853c(89042724)	1.90603c(89042724)	1.97877c(89042724)
220.0	0.01808 (89120124)	0.31898c(89073024)	1.53077c(89073024)	1.65425c(89042224)	1.82048c(89042224)
230.0	0.03583c(89111424)	0.43722c(89073024)	1.84158c(89073024)	2.16082c(89041824)	2.49416c(89041824)
240.0	0.05489c(89111424)	0.36057c(89060224)	2.11763c(89041824)	2.66199c(89041824)	3.02936c(89041824)
250.0	0.03220c(89111424)	0.27702c(89060224)	2.01994c(89080524)	2.54407c(89080524)	2.88656c(89080524)
260.0	0.02044c(89092424)	0.32869c(89061724)	1.39889c(89080524)	1.81068c(89080524)	2.08898c(89080524)
270.0	0.02638c(89092424)	0.40150c(89090724)	1.89771c(89090724)	1.98824c(89090724)	2.20290c(89072524)
280.0	0.01564c(89081824)	0.29200c(89071024)	1.54809c(89072524)	1.92948c(89072524)	2.18395c(89072524)
290.0	0.01649c(89082924)	0.21514c(89082324)	1.43263c(89083024)	1.77415c(89082924)	2.10842c(89082924)
300.0	0.02208c(89082824)	0.28810c(89090924)	1.71748c(89072324)	2.12522c(89072324)	2.39245c(89072324)
310.0	0.01450c(89091224)	0.37819c(89090924)	1.90430c(89090924)	2.04487c(89090924)	2.09044c(89090924)
320.0	0.01885c(89091224)	0.36595c(89090924)	1.82032c(89090924)	2.31397c(89091424)	2.76334c(89091424)
330.0	0.01801c(89101024)	0.37568c(89090924)	1.95467c(89081824)	1.86865c(89081824)	1.88944c(89091424)
340.0	0.01832c(89101024)	0.49195c(89081824)	2.26430c(89081824)	2.18063c(89081824)	2.00084c(89081824)
350.0	0.00841c(89123124)	0.31990c(89081824)	1.39996c(89081824)	1.43010 (89050124)	1.55039 (89050124)
360.0	0.01810c(89123124)	0.25139c(89042424)	1.26426c(89061324)	1.68548c(89061324)	2.00353c(89061324)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	2.34077c(89060824)	2.70305c(89032224)	2.77625c(89032224)	2.64381c(89032224)	2.44104c(89032224)
20.0	1.78973 (89050124)	2.07279c(89121924)	2.43650c(89121924)	2.53069c(89121924)	2.48152c(89121924)
30.0	2.13692 (89060724)	2.37342 (89060724)	2.17624 (89060724)	1.87018 (89060724)	1.71954c(89041524)
40.0	2.81917c(89052324)	2.71289c(89052324)	2.31542c(89052324)	1.91247c(89052324)	1.86239c(89040824)
50.0	3.21635c(89052324)	3.14914c(89052324)	2.65428c(89052324)	2.23489c(89040824)	1.98932c(89040824)
60.0	2.64868c(89040924)	3.02366c(89040924)	2.87497c(89040924)	2.50007c(89040924)	2.32734c(89033124)
70.0	2.34423c(89071524)	2.61104c(89071524)	2.31711c(89071524)	1.94036c(89071524)	1.63216c(89071524)
80.0	1.92242c(89081524)	2.00901c(89081524)	1.75690c(89081524)	1.45631c(89081524)	1.34534 (89051024)
90.0	2.00374c(89081524)	2.15123c(89081524)	1.99440c(89081524)	1.83163c(89031224)	1.68587c(89031224)
100.0	2.27098c(89041624)	2.31316c(89040724)	2.48520c(89040724)	2.44253c(89040724)	2.33009c(89040724)
110.0	2.23178c(89041124)	2.43693c(89041124)	2.32103c(89041124)	2.14975c(89041124)	1.98239c(89041124)
120.0	2.21240c(89041124)	2.38039c(89040624)	2.54195c(89040624)	2.44062c(89040624)	2.29299c(89040624)
130.0	1.88512 (89092124)	2.06281 (89092124)	2.02924c(89052524)	2.09765 (89121324)	2.05069 (89121324)
140.0	1.48651c(89070424)	1.66832 (89120924)	2.19349 (89120924)	2.50205 (89120924)	2.64062 (89120924)
150.0	1.71565c(89040624)	1.90204c(89040624)	1.87248c(89040624)	1.78441 (89102924)	1.82988 (89102924)
160.0	1.78018 (89122324)	2.39671 (89122324)	2.73835 (89122324)	2.77958 (89122324)	2.67204 (89122324)
170.0	1.78536 (89031024)	2.22195 (89031024)	2.29974 (89122424)	2.53440 (89122424)	2.62700 (89122424)
180.0	1.99282 (89100324)	2.65379 (89100324)	2.93441 (89100324)	2.92481 (89100324)	2.82915 (89100324)
190.0	2.28100c(89012424)	3.08807c(89012424)	3.43606c(89012424)	3.40696c(89012424)	3.26645c(89012424)
200.0	1.60106c(89052724)	1.71066c(89102324)	2.09821c(89102324)	2.33699 (89102424)	2.47517 (89102424)
210.0	2.03140 (89040124)	2.61847 (89102524)	2.95765 (89102524)	2.95551 (89102524)	2.84376 (89102524)
220.0	1.92985c(89042224)	2.08278c(89110324)	2.07108c(89110324)	1.87741c(89110324)	1.90009c(89030824)
230.0	2.74678c(89041824)	3.17881c(89041824)	3.08342c(89041824)	2.82051c(89041824)	2.59019c(89041824)
240.0	3.29782c(89041824)	3.58006c(89041824)	3.10560c(89041824)	2.50727c(89041824)	2.64147 (89012124)
250.0	3.13178c(89080524)	3.34778c(89080524)	3.20415 (89101224)	3.41330 (89101224)	3.45963 (89101224)
260.0	2.30633c(89080524)	2.62458c(89080524)	2.36440c(89080524)	2.10223 (89051924)	1.99914 (89051924)
270.0	2.39907c(89072524)	2.69405c(89072524)	2.73198 (89050424)	2.90555c(89081924)	3.01249c(89081924)
280.0	2.36587c(89072524)	2.56379c(89072524)	2.25100c(89072524)	2.05941 (89050424)	2.02782 (89021424)
290.0	2.39919c(89082924)	3.09652c(89082924)	3.20992c(89082924)	2.97747c(89082924)	2.67084c(89082924)
300.0	2.58385c(89072324)	2.76903c(89072324)	2.97948c(89082924)	3.15385c(89082924)	3.14807c(89082924)
310.0	2.12632c(89090924)	2.89875c(89091224)	3.35314c(89091224)	3.42925c(89091224)	3.37108c(89091224)
320.0	3.14695c(89091424)	4.00162c(89091424)	4.08542c(89091424)	3.77080c(89091424)	3.50197c(89101124)
330.0	2.11307c(89091424)	2.53512c(89091424)	2.45960c(89091424)	2.18928c(89091424)	1.92021c(89091424)
340.0	1.80206c(89081824)	2.08911c(89043024)	2.13496c(89043024)	1.98062c(89043024)	1.80713c(89043024)
350.0	1.61827 (89050124)	1.80066c(89010624)	2.03601c(89010624)	2.00767c(89010624)	1.87614c(89010624)
360.0	2.27282c(89061324)	2.81559c(89061324)	3.10077c(89123124)	3.22467c(89123124)	3.18355c(89123124)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	2.21720c(89032224)
20.0	2.35752c(89121924)
30.0	1.70922c(89121924)
40.0	1.84947c(89040824)
50.0	1.79302c(89110924)
60.0	2.23548c(89033124)
70.0	1.39132c(89071524)
80.0	1.36494 (89051024)
90.0	1.54112c(89031224)
100.0	2.19219c(89040724)
110.0	1.82080c(89041124)
120.0	2.13675c(89040624)
130.0	1.93484 (89121324)
140.0	2.64137 (89120924)
150.0	1.81780 (89102924)
160.0	2.49083 (89122324)
170.0	2.61479 (89122424)
180.0	2.69307 (89100324)
190.0	3.08871c(89012424)
200.0	2.51214 (89102424)
210.0	2.68851 (89102524)
220.0	1.89199c(89030824)
230.0	2.37956c(89041824)
240.0	2.69567 (89012124)
250.0	3.41328 (89101224)
260.0	1.88697 (89051924)
270.0	3.03492c(89081924)
280.0	2.16885 (89021424)
290.0	2.37255c(89082924)
300.0	3.04223c(89082924)
310.0	3.26216c(89091224)
320.0	3.54673c(89101124)
330.0	1.69000c(89091424)
340.0	1.65433c(89043024)
350.0	1.70869c(89010624)
360.0	3.04760c(89123124)

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	12.97178	(89072515) AT	(132781.78, 202864.47) GP	6.	12.37275	(89083115) AT	(135292.66, 202980.22) GP
2.	12.95363	(89061315) AT	(134259.00, 204104.00) GP	7.	12.19785	(89051209) AT	(133403.95, 200254.77) GP
3.	12.93032	(89021515) AT	(132959.97, 203354.00) GP	8.	11.96376	(89083115) AT	(135198.69, 202946.02) GP
4.	12.92779	(89061315) AT	(134259.00, 204604.00) GP	9.	11.93188	(89051209) AT	(133232.94, 199784.92) GP
5.	12.42896	(89082315) AT	(133159.00, 202604.00) GP	10.	11.89948	(89082315) AT	(133259.00, 202604.00) GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR)	OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR)	OF TYPE
1.	4.08542c	(89091424) AT	(132973.42, 204136.09)	GP	6.	3.58006c	(89041824) AT	(132959.97, 201854.00)	GP
2.	4.00162c	(89091424) AT	(133294.81, 203753.06)	GP	7.	3.54673c	(89101124) AT	(132009.25, 205285.16)	GP
3.	3.78128c	(89091324) AT	(132973.42, 204136.09)	GP	8.	3.52280c	(89091324) AT	(133294.81, 203753.06)	GP
4.	3.77080c	(89091424) AT	(132652.03, 204519.11)	GP	9.	3.50197c	(89101124) AT	(132330.64, 204902.14)	GP
5.	3.59425c	(89091324) AT	(132652.03, 204519.11)	GP	10.	3.45963	(89101224) AT	(131439.92, 201577.94)	GP

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.35071 AT (132526.95, 203604.00, 0.00, 0.00)	GP	POL1
	2ND HIGHEST VALUE IS	0.34929 AT (132093.94, 203854.00, 0.00, 0.00)	GP	POL1
	3RD HIGHEST VALUE IS	0.34038 AT (131660.92, 204104.00, 0.00, 0.00)	GP	POL1
	4TH HIGHEST VALUE IS	0.32710 AT (131227.91, 204354.00, 0.00, 0.00)	GP	POL1
	5TH HIGHEST VALUE IS	0.32338 AT (132959.97, 203354.00, 0.00, 0.00)	GP	POL1
	6TH HIGHEST VALUE IS	0.32134 AT (131759.00, 202604.00, 0.00, 0.00)	GP	POL1
	7TH HIGHEST VALUE IS	0.32132 AT (132259.00, 202604.00, 0.00, 0.00)	GP	POL1
	8TH HIGHEST VALUE IS	0.31563 AT (132379.61, 203288.05, 0.00, 0.00)	GP	POL1
	9TH HIGHEST VALUE IS	0.31524 AT (131259.00, 202604.00, 0.00, 0.00)	GP	POL1
	10TH HIGHEST VALUE IS	0.30993 AT (131909.77, 203459.05, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	9.35529c	(89091416) AT	(133294.81, 203753.06) GP	6.	7.78717	(89012416) AT	(133998.53, 201126.78) GP
2.	9.10204c	(89091416) AT	(132973.42, 204136.09) GP	7.	7.75068	(89041816) AT	(133306.38, 202054.00) GP
3.	8.38087	(89041816) AT	(132959.97, 201854.00) GP	8.	7.55004c	(89091416) AT	(133551.94, 203446.66) GP
4.	8.12164	(89012416) AT	(133911.70, 200634.39) GP	9.	7.53243	(89080516) AT	(132849.47, 202090.97) GP
5.	8.00393c	(89091416) AT	(132652.03, 204519.11) GP	10.	7.51545	(89012416) AT	(133824.88, 200141.98) GP

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

CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	12.97178	ON 89072515: AT (132781.78, 202864.47, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	9.35529c	ON 89091416: AT (133294.81, 203753.06, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	4.08542c	ON 89091424: AT (132973.42, 204136.09, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1654 Informational Message(s)

A Total of 1654 Calm Hours Identified

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

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

****
*** ISCST3 Finishes Successfully ***
****

1990

```
CO STARTING
  TITLEONE 1990 Collier County Landfill SO2 Modeling 2/01
  TITLETWO ISCST3 Code from EPA 11/00, Met Data from FDEP 11/00
  MODELOPT DFAULT CONC RURAL
  AVERTIME 3 8 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED

SO STARTING
  LOCATION FLARESTK POINT 134259 202604
  SRCPARAM FLARESTK 13.5 22.0 1273. 20.0 1.89
  SRCGROUP ALL
SO FINISHED

RE STARTING
  GRIDPOLR  POL1  STA
        POL1  ORIG  134259.0 202604.0
        POL1  DIST  200. 500. 800. 900. 1000. 1100. 1500. 2000.
        POL1  DIST  2500. 3000. 3500.
        POL1  GDIR  36   10.   10.
        POL1  END
RE FINISHED

ME STARTING
  INPUTFIL Fmypre90.asc  (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
  ANEMHGHT 6.0 meters
  SURFDATA 12835  1990   FTMYERS
  UAIRDATA 12842  1990   TAMPA
ME FINISHED

OU STARTING
  RECTABLE ALLAVE FIRST
  MAXTABLE ALLAVE 10
OU FINISHED

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

CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 3 Short Term Average(s) of: 3-HR 8-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 396 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

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

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: nlflat90.inp
**Output Print File: nlflat90.out

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	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
FLARESTK	0	0.13500E+02	134259.0	202604.0	0.0	22.00	1273.00	20.00	1.89	NO	

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	FLARESTK,

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 134259.00 ; Y-ORIG = 202604.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

200.0, 500.0, 800.0, 900.0, 1000.0, 1100.0, 1500.0, 2000.0, 2500.0, 3000.0,
3500.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** 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
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1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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

CONC RURAL FLAT DFAULT

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

FILE: Fmypre90.asc
FORMAT: (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
SURFACE STATION NO.: 12835 UPPER AIR STATION NO.: 12842
NAME: FTMYERS NAME: TAMPA
YEAR: 1990 YEAR: 1990

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
90	01	01	01	181.0	1.00	291.5	7	0.0	335.0	0.0000	0.0	0.0000	0	0.00
90	01	01	02	358.0	2.06	291.5	6	0.0	335.0	0.0000	0.0	0.0000	0	0.00
90	01	01	03	4.0	2.06	292.0	5	0.0	335.0	0.0000	0.0	0.0000	0	0.00
90	01	01	04	3.0	2.06	292.0	5	0.0	335.0	0.0000	0.0	0.0000	0	0.00
90	01	01	05	23.0	2.57	292.6	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	06	22.0	2.06	292.6	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	07	35.0	2.06	292.6	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	08	33.0	4.12	292.6	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	09	47.0	3.09	292.6	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	10	51.0	4.12	293.2	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	11	94.0	3.09	294.3	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	12	86.0	3.09	295.4	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	13	153.0	5.14	296.5	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	14	149.0	6.17	298.2	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	15	162.0	5.14	296.5	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	16	174.0	5.14	296.5	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	17	181.0	5.14	294.8	4	0.0	0.0	0.0000	0.0	0.0000	0	0.00
90	01	01	18	197.0	4.12	293.7	4	19.8	19.8	0.0000	0.0	0.0000	0	0.00
90	01	01	19	214.0	4.12	292.0	5	84.2	55.1	0.0000	0.0	0.0000	0	0.00
90	01	01	20	187.0	6.17	290.9	4	148.7	148.7	0.0000	0.0	0.0000	0	0.00
90	01	01	21	210.0	6.17	289.3	4	213.1	213.1	0.0000	0.0	0.0000	0	0.00
90	01	01	22	222.0	5.14	287.6	5	277.6	181.6	0.0000	0.0	0.0000	0	0.00
90	01	01	23	220.0	5.14	285.9	5	342.1	223.8	0.0000	0.0	0.0000	0	0.00
90	01	01	24	200.0	5.14	285.4	5	406.5	266.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00	1100.00	1500.00	2000.00	2500.00
10.00	0.00007	0.00822	0.07192	0.09050	0.10217	0.11095	0.13330	0.14167	0.13915
20.00	0.00002	0.01017	0.08125	0.10110	0.11379	0.12342	0.15075	0.16484	0.16549
30.00	0.00002	0.01065	0.07511	0.09003	0.09811	0.10393	0.11884	0.12368	0.12013
40.00	0.00004	0.01334	0.09536	0.11471	0.12581	0.13388	0.15182	0.15425	0.14688
50.00	0.00002	0.01505	0.11941	0.14584	0.16170	0.17345	0.19648	0.19418	0.17945
60.00	0.00001	0.01420	0.12462	0.15433	0.17316	0.18779	0.21894	0.22048	0.20586
70.00	0.00001	0.01177	0.09749	0.11850	0.13029	0.13888	0.15332	0.14663	0.13137
80.00	0.00001	0.01350	0.09246	0.10993	0.11940	0.12620	0.13813	0.13311	0.12066
90.00	0.00006	0.01624	0.10266	0.12194	0.13335	0.14167	0.15939	0.15944	0.14942
100.00	0.00009	0.01248	0.09235	0.11234	0.12473	0.13369	0.15631	0.16329	0.15850
110.00	0.00005	0.01020	0.07856	0.09604	0.10662	0.11415	0.13472	0.14454	0.14414
120.00	0.00005	0.01192	0.09008	0.11181	0.12623	0.13668	0.16557	0.17919	0.17832
130.00	0.00008	0.01046	0.07619	0.09340	0.10404	0.11153	0.13140	0.14001	0.13847
140.00	0.00010	0.00860	0.06906	0.08635	0.09756	0.10583	0.12853	0.14042	0.14172
150.00	0.00008	0.00802	0.06287	0.07865	0.08886	0.09667	0.11671	0.12493	0.12383
160.00	0.00005	0.00835	0.06313	0.07885	0.08914	0.09715	0.11785	0.12607	0.12459
170.00	0.00003	0.00804	0.06124	0.07533	0.08378	0.09020	0.10560	0.10913	0.10467
180.00	0.00010	0.01039	0.07579	0.09416	0.10625	0.11567	0.14202	0.15683	0.15924
190.00	0.00022	0.00939	0.07340	0.09174	0.10332	0.11224	0.13596	0.14628	0.14467
200.00	0.00033	0.00990	0.08330	0.10748	0.12370	0.13658	0.17359	0.19477	0.19899
210.00	0.00046	0.01235	0.10092	0.13171	0.15292	0.16986	0.21825	0.24693	0.25449
220.00	0.00069	0.01726	0.13591	0.17740	0.20650	0.22974	0.29428	0.33092	0.33991
230.00	0.00076	0.02250	0.17374	0.22670	0.26362	0.29334	0.37693	0.42762	0.44305
240.00	0.00068	0.02707	0.21266	0.27790	0.32387	0.36054	0.46404	0.52746	0.54705
250.00	0.00048	0.02649	0.20556	0.26595	0.30771	0.34060	0.42841	0.47530	0.48498
260.00	0.00027	0.01830	0.15663	0.20155	0.23076	0.25328	0.30733	0.32492	0.31816
270.00	0.00023	0.01749	0.15899	0.20822	0.24285	0.27041	0.34583	0.38465	0.39035
280.00	0.00021	0.01437	0.12614	0.16292	0.18711	0.20645	0.25817	0.28196	0.28192
290.00	0.00027	0.01562	0.12876	0.16413	0.18732	0.20592	0.25482	0.27553	0.27323
300.00	0.00034	0.01729	0.13385	0.16913	0.19257	0.21145	0.26181	0.28576	0.28633
310.00	0.00027	0.01312	0.10775	0.13520	0.15258	0.16610	0.19927	0.21067	0.20613
320.00	0.00019	0.00863	0.06924	0.08621	0.09642	0.10428	0.12278	0.12832	0.12493
330.00	0.00011	0.00535	0.04907	0.06333	0.07245	0.07975	0.09848	0.10577	0.10435
340.00	0.00005	0.00418	0.04038	0.05340	0.06205	0.06897	0.08665	0.09325	0.09200
350.00	0.00007	0.00562	0.04377	0.05644	0.06455	0.07087	0.08558	0.08875	0.08485
360.00	0.00012	0.00746	0.06298	0.08102	0.09308	0.10244	0.12711	0.13877	0.13949

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3000.00	3500.00
10.00	0.13324	0.12559
20.00	0.16061	0.15271
30.00	0.11370	0.10608
40.00	0.13716	0.12693
50.00	0.16322	0.14790
60.00	0.18838	0.17124
70.00	0.11594	0.10215
80.00	0.10803	0.09660
90.00	0.13788	0.12655
100.00	0.15028	0.14065
110.00	0.14019	0.13409
120.00	0.17217	0.16317
130.00	0.13346	0.12660
140.00	0.13926	0.13419
150.00	0.12031	0.11548
160.00	0.12055	0.11526
170.00	0.09826	0.09125
180.00	0.15693	0.15164
190.00	0.13901	0.13137
200.00	0.19703	0.19112
210.00	0.25464	0.24941
220.00	0.34046	0.33459
230.00	0.44677	0.44089
240.00	0.55105	0.54282
250.00	0.48308	0.47223
260.00	0.30537	0.28958
270.00	0.38501	0.37246
280.00	0.27457	0.26319
290.00	0.26448	0.25256
300.00	0.27982	0.26923
310.00	0.19763	0.18709
320.00	0.11977	0.11387
330.00	0.10065	0.09590
340.00	0.08868	0.08452
350.00	0.07943	0.07369
360.00	0.13658	0.13147

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.05106 (90121921)	1.85685 (90040515)	6.14410 (90091612)	7.48879 (90091612)	8.35791 (90091612)
20.0	0.01446 (90121921)	2.04841 (90062015)	6.51495 (90062015)	7.48940 (90051712)	8.36000 (90051712)
30.0	0.03885 (90121921)	1.97410 (90062212)	6.72060 (90062015)	6.15024 (90031518)	6.71803 (90031518)
40.0	0.05528 (90121921)	2.48752 (90062015)	9.95286 (90062315)	11.59394 (90062315)	12.55866 (90062315)
50.0	0.01286 (90121921)	3.33264 (90062015)	11.53522 (90090812)	10.82532 (90090812)	10.68728 (90052815)
60.0	0.00324c(90012921)	2.26764 (90062015)	11.07239 (90090812)	10.57083 (90090812)	10.77825 (90062515)
70.0	0.00311 (90091521)	2.66864 (90080912)	9.24038 (90080912)	9.02460 (90080912)	8.60283 (90073015)
80.0	0.01371c(90111321)	2.78719 (90080912)	8.84296 (90080912)	8.16049 (90080912)	7.78130 (90080315)
90.0	0.07315c(90111321)	3.12379c(90062715)	9.84867 (90081015)	9.62187 (90081015)	10.33816 (90061112)
100.0	0.09731c(90111321)	2.26921 (90061618)	8.36836 (90041615)	8.68809 (90041615)	8.43319 (90041615)
110.0	0.03141c(90111321)	2.03363 (90032715)	9.05999 (90041615)	9.90143 (90041615)	10.07367 (90041615)
120.0	0.10733 (90010921)	3.48524 (90032715)	11.34229 (90032715)	10.83342 (90032715)	9.96980 (90032715)
130.0	0.17439 (90010921)	2.42124 (90032715)	8.01309 (90032715)	7.44017 (90032715)	7.61359 (90040312)
140.0	0.12609 (90010921)	1.67683 (90040512)	5.98494 (90040512)	6.59564 (90061812)	7.26814 (90061812)
150.0	0.10061c(90081221)	2.05108 (90082915)	6.51508 (90082915)	6.22196 (90040512)	6.75456 (90072812)
160.0	0.10062c(90081221)	1.95412 (90043015)	6.58422 (90082915)	6.93691 (90040512)	7.57850 (90040512)
170.0	0.03007c(90081221)	2.34461 (90061715)	8.49077 (90061715)	8.03713 (90061715)	8.31569 (90041215)
180.0	0.05858 (90101506)	3.59866 (90041815)	11.05024 (90041815)	9.91740 (90061715)	9.62042 (90061715)
190.0	0.10548 (90101521)	3.59875 (90041815)	11.05019 (90041815)	9.43104 (90041815)	8.82809 (90061715)
200.0	0.14366 (90100209)	1.74650 (90041815)	7.25425 (90061415)	9.06112 (90061415)	10.30378 (90061415)
210.0	0.16884 (90100209)	1.94893 (90080412)	6.46760 (90080412)	7.49805 (90041312)	8.62539 (90041312)
220.0	0.23808 (90112006)	2.19967 (90092715)	9.71946 (90092715)	10.01295 (90092715)	9.92159 (90092715)
230.0	0.26007 (90112006)	1.95075 (90092715)	10.89899 (90041315)	12.80067 (90041315)	13.89798 (90041315)
240.0	0.20326 (90112003)	1.41788 (90100112)	7.77504 (90041315)	9.14098 (90041315)	10.20341 (90090212)
250.0	0.10891 (90112003)	2.13993 (90081018)	8.40281 (90042012)	9.89470 (90042012)	10.78194 (90042012)
260.0	0.11297 (90100521)	2.91318 (90072515)	11.43765 (90072515)	10.99063 (90072515)	10.47142 (90072515)
270.0	0.05777c(90040603)	3.16033 (90072515)	13.24738 (90072515)	13.32166 (90072515)	13.32817 (90072515)
280.0	0.09742c(90111321)	1.96459 (90072612)	8.36363 (90072515)	8.96665 (90042715)	10.22702 (90042715)
290.0	0.08213c(90012409)	2.00939 (90051915)	6.61451 (90051212)	7.91291 (90051212)	8.65582 (90051212)
300.0	0.11198c(90012409)	2.85197 (90051915)	7.66808 (90051212)	9.13958 (90051212)	9.98913 (90051212)
310.0	0.11212 (90112718)	1.96066 (90092612)	7.28431 (90051612)	8.69475 (90051612)	9.55686 (90051612)
320.0	0.10543 (90080621)	1.38170 (90092612)	7.60100 (90090112)	8.82587 (90090112)	9.47247 (90090112)
330.0	0.10053 (90051421)	1.94417 (90091415)	6.05136 (90090112)	7.39806 (90030212)	8.69457 (90030212)
340.0	0.04251c(90120321)	1.57834 (90091415)	4.97342 (90091415)	5.64399 (90031512)	6.63420 (90031512)
350.0	0.05444c(90082903)	3.98598 (90112012)	7.56312 (90112012)	7.57270 (90112012)	7.33318 (90112012)
360.0	0.05975 (90101124)	1.85458 (90112012)	5.95307 (90031715)	7.35050 (90031715)	8.31247 (90031715)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	8.90934 (90091612)	8.89676 (90091612)	7.73070 (90121915)	8.00721 (90050918)	8.32866 (90050918)
20.0	8.91284 (90051712)	8.90318 (90051712)	7.53672 (90010809)	8.07912 (90030218)	8.33117 (90030218)
30.0	7.04647 (90031518)	7.42860 (90041712)	7.43899 (90040618)	7.16188 (90040618)	7.23181 (90050418)
40.0	13.08967 (90062315)	12.71947 (90062315)	10.63550 (90062315)	8.87233 (90062315)	7.90977 (90062018)
50.0	11.52145 (90052815)	12.40069 (90052815)	10.87788 (90052815)	8.88586 (90052815)	7.24762 (90062315)
60.0	11.85285 (90062515)	13.22714 (90062515)	11.64921 (90062515)	9.45541 (90062515)	7.89526 (90060615)
70.0	8.87696 (90073015)	8.82564 (90073115)	7.59382 (90073115)	7.70439 (90051015)	7.47463 (90051015)
80.0	8.42204 (90080315)	9.11175 (90080315)	7.98184 (90080315)	6.49942 (90080315)	5.22891 (90080315)
90.0	11.39456 (90061112)	12.98559 (90061112)	11.77834 (90061112)	9.78195 (90061112)	7.97198 (90061112)
100.0	8.89364 (90082115)	9.14570 (90082115)	9.98542 (90062318)	10.60213 (90062318)	10.56205 (90062318)
110.0	9.97500 (90041615)	8.65984 (90041615)	8.71460 (90072718)	9.13517 (90072718)	8.97107 (90072718)
120.0	9.03108 (90032715)	8.97924 (90032015)	8.61872 (90102512)	8.72612 (90102512)	8.35463 (90102512)
130.0	7.94652 (90040312)	8.21068 (90040312)	7.94671 (90081815)	7.72639 (90022418)	7.36462 (90022418)
140.0	7.65583 (90061812)	9.50840 (90120812)	10.81248 (90120812)	10.88512 (90120812)	10.38329 (90120812)
150.0	7.56549 (90072812)	8.59466 (90072812)	7.38617 (90032009)	7.19004 (90032009)	6.52553 (90032009)
160.0	7.97791 (90040512)	8.02826 (90040512)	7.72271 (90120912)	7.28292 (90120912)	7.48712 (90120424)
170.0	8.47378 (90041215)	7.50317 (90041215)	6.69804 (90080612)	5.89050 (90121112)	5.52839 (90121112)
180.0	9.14268 (90061715)	9.11205 (90030412)	8.69320 (90030412)	8.50952 (90011309)	8.60047 (90011309)
190.0	8.50359 (90061715)	8.93833 (90061712)	8.11188 (90061712)	7.71400 (90120506)	7.47633 (90120506)
200.0	11.25215 (90061415)	12.68218 (90061415)	11.68470 (90061415)	9.90497 (90061415)	8.82084 (90022603)
210.0	9.50229 (90041312)	10.81566 (90041312)	9.82774 (90041312)	8.19444 (90041312)	7.09075 (90092409)
220.0	9.72935 (90092715)	8.57047 (90090215)	8.89994 (90022612)	9.04399 (90022612)	8.67960 (90022612)
230.0	14.50042 (90041315)	13.88169 (90041315)	11.73859 (90051115)	9.54770 (90051115)	8.40193 (90110221)
240.0	10.96749 (90090212)	11.18427 (90090212)	11.65561 (90113015)	11.57956 (90113015)	10.94355 (90113015)
250.0	11.27699 (90042012)	11.21628 (90042012)	9.99423 (90032412)	9.19304 (90041918)	9.12149 (90041918)
260.0	10.03641 (90072515)	8.77793 (90042615)	8.21195 (90042615)	7.05317 (90011512)	6.47523 (90011512)
270.0	13.40377 (90072515)	13.36487 (90010315)	13.29467 (90010315)	11.69554 (90010315)	9.90100 (90010315)
280.0	11.12869 (90042715)	12.48031 (90042715)	11.74390 (90042715)	10.42670 (90042715)	9.16708 (90042715)
290.0	9.10149 (90051212)	9.04183 (90051212)	8.82689 (90122015)	8.07746 (90122015)	7.21069 (90042803)
300.0	10.48611 (90051212)	10.31631 (90051212)	9.21998 (90020912)	8.26668 (90020912)	7.09055 (90020912)
310.0	10.07163 (90051612)	9.89516 (90051612)	8.71619 (90022115)	7.77370 (90062009)	7.24780 (90062009)
320.0	9.73432 (90090112)	8.68445 (90090112)	7.58843 (90013112)	7.09769 (90013112)	6.23838 (90013112)
330.0	9.77203 (90030212)	11.79995 (90030212)	11.13776 (90030212)	9.45180 (90030212)	8.13970 (90101015)
340.0	7.45823 (90031512)	9.01780 (90031512)	8.52834 (90031512)	7.42741 (90033012)	6.87483 (90033012)
350.0	6.97075 (90112012)	5.81473 (90072012)	5.72241 (90092915)	5.80413 (90092915)	5.41624 (90092915)
360.0	8.92465 (90031715)	9.93962 (90031715)	9.69182 (90031715)	8.94128 (90031715)	8.09401 (90031715)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	8.21815 (90050918)
20.0	8.17844 (90030218)
30.0	7.45456 (90050418)
40.0	7.14403 (90062018)
50.0	6.84754 (90062315)
60.0	7.12731 (90112318)
70.0	7.04211 (90051015)
80.0	4.49340 (90091712)
90.0	7.51812 (90061918)
100.0	10.11915 (90062318)
110.0	8.49944 (90072718)
120.0	7.76498 (90102512)
130.0	6.77335 (90022418)
140.0	9.63111 (90120812)
150.0	6.41078 (90032021)
160.0	7.62177 (90120424)
170.0	5.08108 (90121112)
180.0	8.37385 (90122503)
190.0	7.01199 (90120506)
200.0	9.55739 (90022603)
210.0	7.22909 (90111809)
220.0	8.08072 (90022612)
230.0	9.15409 (90110221)
240.0	10.41490 (90100812)
250.0	8.70935 (90041918)
260.0	6.17910 (90060803)
270.0	8.90997 (90101021)
280.0	8.29729 (90052609)
290.0	8.15017 (90042803)
300.0	7.09467 (90022203)
310.0	6.53238 (90062009)
320.0	5.36657 (90013112)
330.0	7.52758 (90101015)
340.0	6.37221 (90021009)
350.0	4.86806 (90092915)
360.0	7.25501 (90031715)

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.02553c(90121924)	0.69632 (90040516)	3.27098c(90091616)	3.94259c(90091616)	4.34761c(90091616)
20.0	0.00723c(90121924)	0.76863 (90062016)	3.22031c(90091616)	3.83527c(90091616)	4.16930c(90091616)
30.0	0.01943c(90121924)	0.83051c(90050116)	2.77185 (90062016)	2.73544 (90041716)	3.05136 (90041716)
40.0	0.02767c(90121924)	1.11510 (90062016)	4.99687 (90062016)	5.16184 (90062016)	5.08521 (90062016)
50.0	0.00644c(90121924)	1.53653 (90062016)	6.55220 (90062016)	6.91164 (90062016)	6.94135 (90062016)
60.0	0.00162c(90012924)	0.98028 (90062016)	4.95352 (90090816)	5.02125 (90090816)	5.49177c(90062516)
70.0	0.00155c(90091524)	1.01558 (90080916)	3.66253 (90080916)	3.81615 (90073116)	4.26710 (90073116)
80.0	0.00588c(90111324)	1.12904c(90082216)	4.40531c(90082216)	4.29974c(90082216)	4.11747 (90080916)
90.0	0.03135c(90111324)	1.56190c(90062716)	4.81193c(90042916)	4.40670c(90061016)	4.65479c(90061016)
100.0	0.04171c(90111324)	1.63683c(90042916)	6.12693c(90042916)	5.78033c(90042916)	5.30583c(90042916)
110.0	0.01346c(90111324)	1.16852c(90042916)	4.09648c(90042916)	4.24347c(90041616)	4.31729c(90041616)
120.0	0.04600c(90010924)	1.30713 (90032716)	4.25790 (90032716)	4.06873 (90032716)	4.05126c(90072316)
130.0	0.07474c(90010924)	0.90796 (90032716)	3.80464 (90040316)	4.58351 (90040316)	5.09040 (90040316)
140.0	0.05404c(90010924)	0.62882 (90040516)	2.68145c(90061816)	3.30210c(90061816)	3.68551c(90061816)
150.0	0.05031c(90081224)	0.76915 (90082916)	2.44316 (90082916)	2.64697 (90030416)	3.10811 (90030416)
160.0	0.05031c(90081224)	0.73280 (90043016)	2.79168 (90061716)	2.81288 (90061716)	2.87661 (90081816)
170.0	0.01503c(90081224)	0.90549 (90061716)	3.85565 (90061716)	3.95299 (90061716)	3.87490 (90061716)
180.0	0.02505c(90111224)	1.54709c(90041816)	5.00135c(90041816)	5.38801 (90061716)	5.55912 (90061716)
190.0	0.04904c(90111224)	1.54664c(90041816)	4.97654c(90041816)	5.53615 (90061716)	5.89594 (90061716)
200.0	0.07183c(90100208)	0.74975c(90041816)	2.77746c(90041816)	3.46145 (90061416)	3.93111 (90061416)
210.0	0.08442c(90100208)	0.84481c(90080416)	3.52657 (90092716)	3.76450 (90092716)	3.88538 (90092416)
220.0	0.13788c(90112008)	0.93461 (90092716)	4.43895 (90092716)	5.32431 (90061316)	6.04883 (90061316)
230.0	0.17847c(90112008)	0.75748 (90092716)	6.76346 (90051116)	8.36023 (90051116)	9.41326 (90051116)
240.0	0.14152c(90112008)	0.58713 (90042016)	4.09543 (90051116)	4.96434 (90042016)	5.57275 (90090216)
250.0	0.06904c(90112908)	1.07632 (90041916)	5.86791 (90041916)	6.97820 (90041916)	7.68804 (90041916)
260.0	0.04236 (90100524)	1.45659c(90072516)	5.71882c(90072516)	5.49531c(90072516)	5.23571c(90072516)
270.0	0.02889c(90040608)	1.58017c(90072516)	6.62369c(90072516)	6.66083c(90072516)	6.66408c(90072516)
280.0	0.04175c(90111324)	0.82533c(90072516)	4.18181c(90072516)	5.08864 (90042716)	5.75524 (90042716)
290.0	0.04501c(90101908)	0.83976c(90082616)	3.76157 (90051216)	4.45575 (90051216)	4.83526 (90051216)
300.0	0.04199 (90012416)	1.10786 (90051916)	4.91767 (90051216)	5.89277 (90051216)	6.47215 (90051216)
310.0	0.04757c(90080624)	0.73525 (90092616)	3.36965 (90050216)	3.68028 (90050216)	3.80630 (90050316)
320.0	0.05271c(90080624)	0.51814 (90092616)	3.62344 (90090116)	4.03972 (90090116)	4.16914 (90090116)
330.0	0.03770 (90051424)	0.83323c(90091416)	2.50881c(90091416)	2.78081 (90090116)	3.26046 (90030216)
340.0	0.01822c(90120324)	0.67643c(90091416)	2.13147c(90091416)	2.54372c(90072016)	3.02020c(90072016)
350.0	0.02722c(90082908)	2.01211c(90112016)	4.13386c(90112016)	4.25315c(90112016)	4.19549c(90112016)
360.0	0.02919c(90010724)	0.92880c(90112016)	3.37067 (90031716)	4.33817 (90031716)	5.03319 (90031716)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	4.58625c(90091616)	4.77245 (90021016)	5.69336 (90021016)	5.93084 (90021016)	5.79698 (90021016)
20.0	4.33991c(90091616)	4.03044c(90091616)	3.93423c(90022016)	3.79730c(90021916)	4.04660c(90021916)
30.0	3.26960 (90041716)	3.40681 (90041716)	2.86145 (90041716)	2.73415 (90051924)	2.93483 (90051924)
40.0	4.97184 (90062016)	5.58590c(90112416)	6.11104c(90112416)	5.76887c(90112416)	5.13433c(90112416)
50.0	6.83797 (90062016)	5.93622 (90062016)	5.02706 (90053116)	4.15821 (90052916)	3.66655 (90052916)
60.0	6.12578c(90062516)	7.38642c(90062516)	7.24311c(90062516)	6.45331c(90062516)	5.59601 (90072216)
70.0	4.58034 (90073116)	4.82408 (90073116)	4.14380 (90073116)	3.45046 (90091716)	3.01886c(90070316)
80.0	4.01175 (90080916)	4.48153 (90073016)	4.19009 (90073016)	3.58333 (90073016)	2.98740 (90073016)
90.0	4.75472c(90061016)	4.92062 (90061116)	4.58244 (90101216)	4.21127 (90101216)	3.67168 (90101216)
100.0	4.90139c(90042916)	5.09801 (90061116)	5.24929 (90061116)	4.92955 (90061116)	4.48192 (90061116)
110.0	4.27500c(90041616)	4.17993c(90061624)	4.89975 (90011216)	5.23223 (90011216)	5.23255 (90011216)
120.0	4.45092c(90072316)	5.15700c(90072316)	5.35065 (90111016)	5.36200 (90111016)	5.09182 (90111016)
130.0	5.36785 (90040316)	5.72492 (90040316)	5.43264 (90040316)	4.91649 (90040316)	4.37955 (90040316)
140.0	3.99756 (90120816)	5.39643 (90120816)	6.11614 (90120816)	6.13962 (90120816)	5.84024 (90120816)
150.0	3.48160 (90030416)	4.10113 (90030416)	4.68336 (90032008)	5.03270 (90032008)	5.05308 (90032008)
160.0	3.19549 (90081816)	3.67887 (90120916)	4.08012 (90120916)	4.03143 (90120916)	3.78537 (90120916)
170.0	3.93232 (90041216)	3.48015 (90041216)	2.80628c(90061616)	2.64063 (90121116)	2.44728 (90121116)
180.0	5.60277 (90061716)	5.05384 (90061716)	4.71935 (90111116)	4.94926 (90011308)	5.05839 (90011308)
190.0	6.08924 (90061716)	5.83852 (90061716)	4.95665 (90120508)	5.00563 (90120508)	4.78312 (90120508)
200.0	4.28854 (90061416)	4.81929 (90061416)	4.42911 (90061416)	4.71404 (90113008)	4.72279 (90113008)
210.0	4.46503 (90092416)	6.10944 (90092416)	6.79369 (90092416)	6.64761 (90092416)	6.18361 (90092416)
220.0	6.58214 (90061316)	7.16163 (90061316)	6.50632 (90022616)	6.53097 (90022616)	6.21323 (90022616)
230.0	10.15247 (90051116)	10.74043 (90051116)	9.15803 (90051116)	7.31193 (90051116)	5.80125 (90051116)
240.0	6.00415 (90090216)	6.80787 (90112116)	6.88165 (90110316)	6.37658 (90110316)	5.86470 (90022716)
250.0	8.10196 (90041916)	8.35766 (90041916)	7.44943 (90041916)	6.37789 (90041916)	5.58921 (90041924)
260.0	5.56158 (90063016)	6.17520 (90063016)	5.44262 (90112616)	4.90565 (90112616)	4.26267 (90112616)
270.0	6.70189c(90072516)	7.28818 (90030816)	7.68333 (90030816)	7.33742 (90030816)	6.73382 (90030816)
280.0	6.21862 (90042716)	6.83604 (90042716)	6.33020 (90042716)	5.55213 (90042716)	4.83195 (90042716)
290.0	5.03976 (90051216)	5.18367 (90041016)	4.82418 (90021316)	4.63228 (90021316)	4.24359 (90021316)
300.0	6.82340 (90051216)	6.77715 (90051216)	5.58301 (90051216)	4.73244 (90070816)	5.35394 (90022208)
310.0	4.01003 (90050316)	4.74050 (90022116)	4.70335 (90022116)	4.12989 (90022116)	3.55111 (90020216)
320.0	4.15106 (90090116)	3.46368 (90090116)	2.84566 (90013116)	2.66163 (90013116)	2.33939 (90013116)
330.0	3.66451 (90030216)	4.42498 (90030216)	4.38534 (90101016)	4.39974 (90101016)	4.18027 (90101016)
340.0	3.42067c(90072016)	4.19745c(90072016)	4.00109c(90072016)	3.41920c(90072016)	3.26136c(90041108)
350.0	4.05659c(90112016)	3.22284c(90112016)	2.56490c(90072016)	2.75501 (90110916)	2.80323 (90110916)
360.0	5.51171 (90031716)	6.55108 (90031716)	6.70276 (90031716)	6.34422 (90031716)	5.82593 (90031716)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	5.46556 (90021016)
20.0	4.07846c(90021916)
30.0	2.97897 (90051924)
40.0	4.46743c(90112416)
50.0	3.46283c(90051624)
60.0	5.47491c(90050524)
70.0	2.76496 (90040308)
80.0	2.48489 (90073016)
90.0	3.14606 (90101216)
100.0	4.01785 (90061116)
110.0	5.02868 (90011216)
120.0	4.69647 (90111016)
130.0	3.87352 (90040316)
140.0	5.40151 (90120816)
150.0	4.90725 (90032008)
160.0	3.64155 (90120424)
170.0	2.21937 (90121116)
180.0	5.16674 (90111108)
190.0	4.43678 (90120508)
200.0	4.53181 (90113008)
210.0	5.61727 (90092416)
220.0	5.74890 (90022616)
230.0	6.08084 (90110224)
240.0	5.64590 (90022716)
250.0	5.80308 (90041924)
260.0	3.66250 (90112616)
270.0	6.06983 (90030816)
280.0	4.24201 (90052608)
290.0	4.10764 (90050824)
300.0	5.86999 (90022208)
310.0	3.38829 (90020216)
320.0	2.56511c(90072208)
330.0	3.86035 (90101016)
340.0	3.47439c(90041108)
350.0	2.72396 (90110916)
360.0	5.26573 (90031716)

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.00851c(90121924)	0.30948c(90040524)	1.27223c(90091624)	1.53336c(90091624)	1.69083c(90091624)
20.0	0.00241c(90121924)	0.34233c(90062024)	1.25234c(90091624)	1.49149c(90091624)	1.62140c(90091624)
30.0	0.00648c(90121924)	0.34678c(90062024)	1.36492c(90062024)	1.28432c(90062024)	1.39756c(90040624)
40.0	0.00922c(90121924)	0.51857c(90062024)	2.51867c(90062024)	2.72171c(90062024)	2.79350c(90062024)
50.0	0.00215c(90121924)	0.68618c(90062024)	2.99734c(90062024)	3.19115c(90062024)	3.22598c(90062024)
60.0	0.00054c(90012924)	0.43579c(90062024)	1.80755c(90090824)	1.83564c(90090824)	2.10890c(90062524)
70.0	0.00052c(90091524)	0.45137c(90080924)	1.62779c(90080924)	1.77225c(90073124)	1.98835c(90073124)
80.0	0.00229c(90111324)	0.49265c(90080924)	1.86844c(90080924)	1.87929c(90080924)	1.82999c(90080924)
90.0	0.01219c(90111324)	0.46857c(90062724)	1.67743c(90081924)	1.77715c(90081924)	1.77941c(90081924)
100.0	0.01622c(90111324)	0.54561c(90042924)	2.04231c(90042924)	1.92678c(90042924)	1.90996c(90061124)
110.0	0.00523c(90111324)	0.38951c(90042924)	1.53659c(90041624)	1.68660c(90041624)	1.71903c(90041624)
120.0	0.01464c(90010924)	0.58117c(90032724)	1.91172c(90032724)	1.83832c(90032724)	2.15754c(90072324)
130.0	0.02378c(90010924)	0.40395c(90032724)	1.40158 (90040324)	1.72752 (90040324)	1.95082 (90040324)
140.0	0.01719c(90010924)	0.27947c(90040524)	1.04279c(90061824)	1.28415c(90061824)	1.61170c(90120824)
150.0	0.01677c(90081224)	0.32648c(90082924)	1.03144c(90082924)	1.12780c(90081824)	1.32551c(90081824)
160.0	0.01677c(90081224)	0.32569c(90043024)	1.24082c(90061724)	1.25027c(90061724)	1.36692c(90081824)
170.0	0.00501c(90081224)	0.40244c(90061724)	1.71362c(90061724)	1.75688c(90061724)	1.72218c(90061724)
180.0	0.01169 (90101524)	0.60165c(90041824)	2.17997c(90061724)	2.39469c(90061724)	2.47073c(90061724)
190.0	0.01677 (90101524)	0.60147c(90041824)	2.15251c(90061724)	2.46400c(90061724)	2.62340c(90061724)
200.0	0.01959c(90100224)	0.29157c(90041824)	1.12868c(90051824)	1.31892c(90061424)	1.49774c(90061424)
210.0	0.02684c(90112124)	0.32913c(90080424)	1.57268c(90092724)	1.68140c(90092724)	1.69004c(90092724)
220.0	0.04596c(90112024)	0.41583c(90092724)	1.98713c(90092724)	2.10418c(90092724)	2.19958 (90061324)
230.0	0.05949c(90112024)	0.36761c(90092724)	2.88632c(90051124)	3.58097c(90051124)	4.03967c(90051124)
240.0	0.04717c(90112024)	0.23962c(90100124)	1.88261c(90051124)	2.30590c(90051124)	2.56729c(90051124)
250.0	0.02180c(90112924)	0.39317 (90041924)	2.28678 (90041924)	2.80937 (90041924)	3.18093 (90041924)
260.0	0.01540c(90100524)	0.51300c(90072524)	1.95958c(90072524)	1.89799c(90072524)	1.84412c(90063024)
270.0	0.00963c(90040624)	0.55233c(90072524)	2.26498c(90072524)	2.29366c(90072524)	2.31428c(90072524)
280.0	0.01624c(90111324)	0.31024c(90072624)	1.40289 (90042724)	1.74715 (90042724)	1.97910 (90042724)
290.0	0.01369c(90012424)	0.32687c(90082624)	1.44035c(90051224)	1.70583c(90051224)	1.85113c(90051224)
300.0	0.01867c(90012424)	0.39135 (90051924)	1.92215c(90051224)	2.31166c(90051224)	2.54656c(90051224)
310.0	0.01586c(90080624)	0.32681c(90092624)	1.49762c(90050224)	1.63568c(90050224)	1.66854c(90050224)
320.0	0.01757c(90080624)	0.23028c(90092624)	1.61042c(90090124)	1.79543c(90090124)	1.85295c(90090124)
330.0	0.01587c(90051424)	0.32404c(90091424)	1.07748c(90090124)	1.23591c(90090124)	1.30419c(90030224)
340.0	0.00580c(90120324)	0.26306c(90091424)	0.82890c(90091424)	0.85576c(90031524)	1.00673c(90072024)
350.0	0.00860c(90082924)	0.67070c(90112024)	1.37795c(90112024)	1.41772c(90112024)	1.39850c(90112024)
360.0	0.00973c(90010724)	0.30960c(90112024)	1.12631 (90031724)	1.45008 (90031724)	1.68216 (90031724)

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	1.78362c(90091624)	1.94452 (90021024)	2.44308 (90021024)	2.67411 (90021024)	2.75030 (90021024)
20.0	1.68774c(90091624)	1.81141c(90030224)	2.19288c(90030224)	2.36730c(90030224)	2.42737c(90030224)
30.0	1.51852c(90040624)	1.71210c(90040624)	1.63708c(90040624)	1.47535c(90040624)	1.46600c(90020424)
40.0	2.84002c(90062024)	2.94384c(90062024)	2.88577c(90062024)	2.65164c(90062024)	2.37746c(90062024)
50.0	3.19961c(90062024)	2.84682c(90062024)	2.31715c(90062024)	2.11344 (90052924)	2.06339 (90052924)
60.0	2.35088c(90062524)	2.83741c(90062524)	2.81874c(90060424)	2.50535c(90062524)	2.24375c(90072224)
70.0	2.14018c(90073124)	2.30346c(90073124)	2.07275c(90073124)	1.77041c(90073124)	1.51716c(90073124)
80.0	1.91687c(90073024)	2.27929c(90073024)	2.30227c(90073024)	2.15002c(90073024)	1.97612c(90073024)
90.0	1.92495c(90061124)	2.19057c(90061124)	2.12786c(90061924)	2.23535c(90061924)	2.22199c(90061924)
100.0	2.14008c(90061124)	2.71014c(90061124)	2.87587c(90061124)	2.76685c(90061124)	2.56262c(90061124)
110.0	1.70529c(90041624)	2.05956c(90011224)	2.62137c(90011224)	2.89142c(90011224)	2.98566c(90011224)
120.0	2.40751c(90072324)	3.04732c(90072324)	3.31254c(90072324)	3.28737c(90072324)	3.15862c(90072324)
130.0	2.08162 (90040324)	2.32352 (90040324)	2.30522 (90040324)	2.15284 (90040324)	1.96167 (90040324)
140.0	1.84486c(90120824)	2.59332c(90120824)	3.11661c(90120824)	3.28321c(90120824)	3.26853c(90120824)
150.0	1.47674c(90081824)	2.20917 (90032024)	2.78481 (90032024)	3.00925 (90032024)	3.06819 (90032024)
160.0	1.52370c(90081824)	1.76255c(90081824)	2.08999c(90120924)	2.20158c(90120924)	2.20505c(90120924)
170.0	1.67357c(90061724)	1.43771c(90061724)	1.43161 (90102624)	1.39320 (90102624)	1.29702 (90102624)
180.0	2.49012c(90061724)	2.27896 (90041224)	2.73666 (90111124)	2.91141 (90111124)	2.93696 (90111124)
190.0	2.70882c(90061724)	2.59629c(90061724)	2.09799c(90061724)	1.84614 (90120524)	1.73341 (90120524)
200.0	1.63384c(90061424)	1.83594c(90061424)	1.72204c(90032524)	1.73744 (90022624)	1.88751 (90022624)
210.0	1.66418 (90092424)	2.31076 (90092424)	2.62987 (90092424)	2.63177 (90092424)	2.49703 (90092424)
220.0	2.41402 (90061324)	2.78469 (90061324)	2.91892 (90110124)	3.27260 (90110124)	3.43217 (90110124)
230.0	4.36259c(90051124)	4.65679c(90051124)	4.03977c(90051124)	3.29546c(90051124)	3.30745 (90110224)
240.0	2.72855c(90051124)	3.29523c(90092024)	3.86848c(90092024)	3.94958c(90092024)	3.83542c(90092024)
250.0	3.42680 (90041924)	3.94913 (90041924)	4.13373 (90041924)	4.09793 (90041924)	3.99921 (90041924)
260.0	2.04897c(90063024)	2.28418c(90063024)	2.21997 (90042524)	2.20477 (90042524)	2.08461 (90042524)
270.0	2.37448 (90042624)	3.01878 (90042624)	3.21231 (90030824)	3.14975 (90030824)	2.95236 (90030824)
280.0	2.14343 (90042724)	2.40248 (90042724)	2.32982 (90042724)	2.32613 (90052624)	2.47343 (90052624)
290.0	1.92945c(90051224)	2.46729c(90021324)	2.93207c(90021324)	3.08180c(90021324)	3.10163c(90021324)
300.0	2.69206c(90051224)	2.72748c(90051224)	2.39230c(90070824)	2.19176c(90122124)	2.21473c(90122124)
310.0	1.67041c(90050224)	1.64981c(90121724)	1.62177 (90021524)	1.63969 (90021524)	1.59130 (90021524)
320.0	1.84492c(90090124)	1.53941c(90090124)	1.26474c(90013124)	1.18295c(90013124)	1.07185c(90082524)
330.0	1.46581c(90030224)	1.76999c(90030224)	1.67066c(90030224)	1.46665 (90101024)	1.39347 (90101024)
340.0	1.14022c(90072024)	1.39915c(90072024)	1.33370c(90072024)	1.32287 (90051924)	1.32400 (90051924)
350.0	1.35220c(90112024)	1.07428c(90112024)	1.16027 (90110924)	1.30079 (90110924)	1.35301 (90110924)
360.0	1.84181 (90031724)	2.18842 (90031724)	2.23872 (90031724)	2.11869 (90031724)	1.94536 (90031724)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	2.71199 (90021024)
20.0	2.40587c(90030224)
30.0	1.44957c(90020424)
40.0	2.11678c(90062024)
50.0	1.97959 (90052924)
60.0	2.00661c(90050524)
70.0	1.31124c(90073124)
80.0	1.81690c(90073024)
90.0	2.12799c(90061924)
100.0	2.32899c(90061124)
110.0	2.95624c(90011224)
120.0	2.98623c(90072324)
130.0	1.76411 (90040324)
140.0	3.15420c(90120824)
150.0	3.03539 (90032024)
160.0	2.14558c(90120924)
170.0	1.22962 (90022424)
180.0	2.87854 (90111124)
190.0	1.58884 (90120524)
200.0	1.95310 (90022624)
210.0	2.39657c(90111224)
220.0	3.44975 (90110124)
230.0	3.29454 (90110224)
240.0	3.64213c(90092024)
250.0	3.84251 (90041924)
260.0	1.92160 (90042524)
270.0	2.70419 (90030824)
280.0	2.51133 (90052624)
290.0	3.03857c(90021324)
300.0	2.14309c(90122124)
310.0	1.50336 (90021524)
320.0	1.06808c(90082524)
330.0	1.28682 (90101024)
340.0	1.30108 (90051924)
350.0	1.33857 (90110924)
360.0	1.75807 (90031724)

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR)	OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR)	OF TYPE
1.	14.50042	(90041315) AT	(133416.34, 201896.94)	GP	6.	13.32946	(90072515) AT	(132759.00, 202604.00)	GP
2.	13.89798	(90041315) AT	(133492.95, 201961.22)	GP	7.	13.32817	(90072515) AT	(133259.00, 202604.00)	GP
3.	13.88169	(90041315) AT	(133109.94, 201639.81)	GP	8.	13.32166	(90072515) AT	(133359.00, 202604.00)	GP
4.	13.40377	(90072515) AT	(133159.00, 202604.00)	GP	9.	13.29467	(90010315) AT	(132259.00, 202604.00)	GP
5.	13.36487	(90010315) AT	(132759.00, 202604.00)	GP	10.	13.27706	(90051115) AT	(133109.94, 201639.81)	GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	10.74043	(90051116) AT	(133109.94, 201639.81) GP	6.	8.35766	(90041916) AT	(132849.47, 202090.97) GP
2.	10.15247	(90051116) AT	(133416.34, 201896.94) GP	7.	8.10196	(90041916) AT	(133225.34, 202227.78) GP
3.	9.41326	(90051116) AT	(133492.95, 201961.22) GP	8.	7.76563	(90042016) AT	(132849.47, 202090.97) GP
4.	9.15803	(90051116) AT	(132726.91, 201318.42) GP	9.	7.68804	(90041916) AT	(133319.31, 202261.98) GP
5.	8.36023	(90051116) AT	(133569.56, 202025.48) GP	10.	7.68333	(90030816) AT	(132259.00, 202604.00) GP

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	4.65679c	(90051124) AT	(133109.94, 201639.81) GP	6.	4.03967c	(90051124) AT	(133492.95, 201961.22) GP
2.	4.36259c	(90051124) AT	(133416.34, 201896.94) GP	7.	3.99921	(90041924) AT	(131439.92, 201577.94) GP
3.	4.13373	(90041924) AT	(132379.61, 201919.95) GP	8.	3.94958c	(90092024) AT	(132093.94, 201354.00) GP
4.	4.09793	(90041924) AT	(131909.77, 201748.95) GP	9.	3.94913	(90041924) AT	(132849.47, 202090.97) GP
5.	4.03977c	(90051124) AT	(132726.91, 201318.42) GP	10.	3.86848c	(90092024) AT	(132526.95, 201604.00) GP

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.55105 AT (131660.92, 201104.00, 0.00, 0.00)	GP	POL1
	2ND HIGHEST VALUE IS	0.54705 AT (132093.94, 201354.00, 0.00, 0.00)	GP	POL1
	3RD HIGHEST VALUE IS	0.54282 AT (131227.91, 200854.00, 0.00, 0.00)	GP	POL1
	4TH HIGHEST VALUE IS	0.52746 AT (132526.95, 201604.00, 0.00, 0.00)	GP	POL1
	5TH HIGHEST VALUE IS	0.48498 AT (131909.77, 201748.95, 0.00, 0.00)	GP	POL1
	6TH HIGHEST VALUE IS	0.48308 AT (131439.92, 201577.94, 0.00, 0.00)	GP	POL1
	7TH HIGHEST VALUE IS	0.47530 AT (132379.61, 201919.95, 0.00, 0.00)	GP	POL1
	8TH HIGHEST VALUE IS	0.47223 AT (130970.08, 201406.92, 0.00, 0.00)	GP	POL1
	9TH HIGHEST VALUE IS	0.46404 AT (132959.97, 201854.00, 0.00, 0.00)	GP	POL1
	10TH HIGHEST VALUE IS	0.44677 AT (131960.86, 200675.64, 0.00, 0.00)	GP	POL1

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	14.50042	ON 90041315: AT (133416.34, 201896.94, 0.00, 0.00)	GP	POL1

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	10.74043	ON 90051116: AT (133109.94, 201639.81, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	4.65679c	ON 90051124: AT (133109.94, 201639.81, 0.00, 0.00)	GP	POL1

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1424 Informational Message(s)

A Total of 1407 Calm Hours Identified

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

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

****
*** ISCST3 Finishes Successfully ***
****

1991

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CO STARTING
  TITLEONE 1991 Collier County Landfill SO2 Modeling 2/01
  TITLETWO ISCST3 Code from EPA 11/00, Met Data from FDEP 11/00
  MODELOPT DFAULT CONC RURAL
  AVERTIME 3 8 24 PERIOD
  POLLUTID SO2
  RUNORNOT RUN
CO FINISHED

SO STARTING
  LOCATION FLARESTK POINT 134259 202604
  SRCPARAM FLARESTK 13.5 22.0 1273. 20.0 1.89
  SRCGROUP ALL
SO FINISHED

RE STARTING
  GRIDPOLR  POL1  STA
        POL1  ORIG  134259.0 202604.0
        POL1  DIST  200. 500. 800. 900. 1000. 1100. 1500. 2000.
        POL1  DIST  2500. 3000. 3500.
        POL1  GDIR  36   10.   10.
        POL1  END
RE FINISHED

ME STARTING
  INPUTFIL Fmypre91.asc  (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
  ANEMHGHT 6.0 meters
  SURFDATA 12835  1991   FTMYERS
  UAIRDATA 12842  1991   TAMPA
ME FINISHED

OU STARTING
  RECTABLE ALLAVE FIRST
  MAXTABLE ALLAVE 10
OU FINISHED

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

CONC RURAL FLAT DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

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

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates 3 Short Term Average(s) of: 3-HR 8-HR 24-HR
and Calculates PERIOD Averages

**This Run Includes: 1 Source(s); 1 Source Group(s); and 396 Receptor(s)

**The Model Assumes A Pollutant Type of: SO2

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

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 6.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: nlflat91.inp
**Output Print File: nlflat91.out

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	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
FLARESTK	0	0.13500E+02	134259.0	202604.0	0.0	22.00	1273.00	20.00	1.89	NO	

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	FLARESTK,

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 134259.00 ; Y-ORIG = 202604.00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

200.0, 500.0, 800.0, 900.0, 1000.0, 1100.0, 1500.0, 2000.0, 2500.0, 3000.0,
3500.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

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

CONC RURAL FLAT DFAULT

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

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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

CONC RURAL FLAT DFAULT

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

FILE: Fmypre91.asc
FORMAT: (4I2,F9.4,F9.4,F6.1,I2,2(1X,F6.1))
SURFACE STATION NO.: 12835 UPPER AIR STATION NO.: 12842
NAME: FTMYERS NAME: TAMPA
YEAR: 1991 YEAR: 1991

YR	MN	DY	HR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	MIXING HEIGHT (M) URBAN	USTAR (M/S)	M-O LENGTH (M)	Z-0 (M)	IPCODE	PRATE (mm/HR)
91	01	01	01	181.0	1.00	292.6	7	1597.7	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	02	178.0	0.00	291.5	7	1612.5	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	03	184.0	0.00	291.5	7	1627.4	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	04	183.0	0.00	290.9	7	1642.3	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	05	183.0	0.00	290.4	7	1657.2	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	06	182.0	0.00	290.4	7	1672.0	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	07	235.0	2.06	290.4	6	1686.9	383.0	0.0000	0.0	0.0000	0	0.00
91	01	01	08	223.0	2.57	290.9	5	178.7	523.5	0.0000	0.0	0.0000	0	0.00
91	01	01	09	227.0	3.09	292.6	4	447.4	734.7	0.0000	0.0	0.0000	0	0.00
91	01	01	10	241.0	4.12	295.9	3	716.1	946.0	0.0000	0.0	0.0000	0	0.00
91	01	01	11	304.0	4.12	298.7	3	984.9	1157.2	0.0000	0.0	0.0000	0	0.00
91	01	01	12	266.0	5.14	301.5	3	1253.6	1368.5	0.0000	0.0	0.0000	0	0.00
91	01	01	13	303.0	4.12	302.0	3	1522.3	1579.7	0.0000	0.0	0.0000	0	0.00
91	01	01	14	319.0	5.14	302.6	3	1791.0	1791.0	0.0000	0.0	0.0000	0	0.00
91	01	01	15	282.0	4.12	302.6	3	1791.0	1791.0	0.0000	0.0	0.0000	0	0.00
91	01	01	16	244.0	3.09	301.5	3	1791.0	1791.0	0.0000	0.0	0.0000	0	0.00
91	01	01	17	281.0	2.06	300.4	4	1791.0	1791.0	0.0000	0.0	0.0000	0	0.00
91	01	01	18	27.0	3.09	298.2	5	1787.5	1726.2	0.0000	0.0	0.0000	0	0.00
91	01	01	19	84.0	2.57	297.6	4	1776.3	1776.3	0.0000	0.0	0.0000	0	0.00
91	01	01	20	117.0	3.60	298.2	4	1765.0	1765.0	0.0000	0.0	0.0000	0	0.00
91	01	01	21	80.0	1.54	297.0	4	1753.7	1753.7	0.0000	0.0	0.0000	0	0.00
91	01	01	22	312.0	1.54	295.9	5	1742.4	880.7	0.0000	0.0	0.0000	0	0.00
91	01	01	23	300.0	2.06	295.4	5	1731.2	669.4	0.0000	0.0	0.0000	0	0.00
91	01	01	24	300.0	0.00	294.8	6	1719.9	458.0	0.0000	0.0	0.0000	0	0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00	1100.00	1500.00	2000.00	2500.00
10.00	0.00042	0.01339	0.10505	0.12934	0.14405	0.15485	0.18353	0.19497	0.19173
20.00	0.00036	0.01229	0.10273	0.12657	0.14126	0.15196	0.17728	0.18293	0.17546
30.00	0.00023	0.01171	0.10077	0.12486	0.13964	0.15022	0.17231	0.17332	0.16311
40.00	0.00019	0.01086	0.09528	0.11858	0.13228	0.14216	0.16248	0.16319	0.15343
50.00	0.00015	0.01293	0.11426	0.14213	0.15864	0.17084	0.19373	0.19046	0.17526
60.00	0.00009	0.01633	0.14267	0.17834	0.20121	0.21898	0.25379	0.24951	0.22710
70.00	0.00007	0.01366	0.11377	0.13991	0.15554	0.16739	0.18845	0.18138	0.16267
80.00	0.00004	0.01141	0.08719	0.10474	0.11406	0.12066	0.13226	0.12844	0.11769
90.00	0.00001	0.01233	0.09817	0.11817	0.12977	0.13799	0.15366	0.15102	0.13932
100.00	0.00003	0.01114	0.08931	0.10668	0.11614	0.12237	0.13352	0.13007	0.11933
110.00	0.00010	0.01168	0.09740	0.11982	0.13322	0.14214	0.16255	0.16652	0.15892
120.00	0.00012	0.01060	0.09297	0.11615	0.13095	0.14174	0.16970	0.18085	0.17774
130.00	0.00006	0.00863	0.07286	0.08998	0.10057	0.10841	0.13086	0.14300	0.14392
140.00	0.00003	0.00686	0.05265	0.06344	0.06929	0.07353	0.08878	0.10136	0.10649
150.00	0.00006	0.00705	0.04798	0.05688	0.06195	0.06589	0.08026	0.09142	0.09484
160.00	0.00008	0.00710	0.04647	0.05622	0.06221	0.06685	0.08337	0.09693	0.10247
170.00	0.00010	0.00633	0.04630	0.05794	0.06545	0.07120	0.09019	0.10450	0.10980
180.00	0.00013	0.00570	0.04762	0.06109	0.06964	0.07625	0.09733	0.11309	0.11964
190.00	0.00009	0.00623	0.05668	0.07310	0.08325	0.09096	0.11379	0.12848	0.13289
200.00	0.00010	0.01030	0.08826	0.11403	0.13090	0.14400	0.18126	0.20375	0.21004
210.00	0.00027	0.01564	0.11854	0.15277	0.17499	0.19244	0.24220	0.27288	0.28251
220.00	0.00044	0.01915	0.14006	0.17920	0.20456	0.22518	0.28655	0.32642	0.33932
230.00	0.00065	0.02490	0.17151	0.21491	0.24296	0.26575	0.33455	0.38035	0.39516
240.00	0.00091	0.02946	0.19764	0.24391	0.27281	0.29588	0.36466	0.40931	0.42225
250.00	0.00089	0.02997	0.20345	0.25034	0.27992	0.30373	0.37380	0.41626	0.42512
260.00	0.00094	0.02387	0.17222	0.21019	0.23262	0.25024	0.29771	0.31777	0.31321
270.00	0.00109	0.02297	0.16025	0.19613	0.21790	0.23494	0.28380	0.31139	0.31518
280.00	0.00098	0.02217	0.15450	0.18716	0.20593	0.22001	0.25660	0.27368	0.27278
290.00	0.00087	0.02300	0.16136	0.19472	0.21384	0.22798	0.25967	0.26762	0.25995
300.00	0.00065	0.02489	0.18056	0.21983	0.24387	0.26209	0.30143	0.30712	0.29352
310.00	0.00051	0.02344	0.16711	0.20163	0.22203	0.23722	0.26607	0.26291	0.24489
320.00	0.00060	0.01972	0.13745	0.16452	0.17998	0.19124	0.21107	0.20516	0.18873
330.00	0.00067	0.01615	0.11262	0.13561	0.14901	0.15918	0.17955	0.17848	0.16699
340.00	0.00061	0.01323	0.09854	0.12045	0.13351	0.14356	0.16596	0.16967	0.16247
350.00	0.00052	0.01400	0.10619	0.13061	0.14548	0.15629	0.18074	0.18613	0.17983
360.00	0.00046	0.01609	0.11747	0.14524	0.16282	0.17562	0.20990	0.22657	0.22696

CONC RURAL FLAT DFAULT

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3000.00	3500.00
10.00	0.18347	0.17291
20.00	0.16468	0.15292
30.00	0.15103	0.13911
40.00	0.14190	0.13052
50.00	0.15890	0.14371
60.00	0.20294	0.18099
70.00	0.14362	0.12678
80.00	0.10670	0.09671
90.00	0.12659	0.11467
100.00	0.10791	0.09726
110.00	0.14805	0.13635
120.00	0.17013	0.16050
130.00	0.14081	0.13525
140.00	0.10786	0.10623
150.00	0.09470	0.09232
160.00	0.10437	0.10354
170.00	0.11101	0.10941
180.00	0.12208	0.12125
190.00	0.13295	0.12993
200.00	0.20988	0.20505
210.00	0.28430	0.28005
220.00	0.34257	0.33822
230.00	0.39899	0.39408
240.00	0.42355	0.41581
250.00	0.42219	0.41168
260.00	0.30173	0.28711
270.00	0.31142	0.30254
280.00	0.26713	0.25817
290.00	0.25009	0.23905
300.00	0.27792	0.26242
310.00	0.22700	0.21059
320.00	0.17320	0.15942
330.00	0.15543	0.14464
340.00	0.15363	0.14457
350.00	0.17118	0.16147
360.00	0.22150	0.21260

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.10514c(91053103)	2.41042 (91081515)	10.68080 (91081515)	9.54187 (91081515)	9.23388 (91071715)
20.0	0.10830 (91070203)	1.85870c(91072315)	7.66677 (91071412)	9.25647 (91071412)	10.31195 (91071412)
30.0	0.10065c(91051421)	1.89726 (91052315)	8.07319 (91042715)	10.11135 (91042715)	11.53753 (91042715)
40.0	0.10929 (91050521)	2.01727 (91042315)	8.38116 (91042315)	9.67923 (91042315)	10.44474 (91042315)
50.0	0.09778c(91060303)	2.34840 (91041515)	8.95504 (91070215)	10.48405 (91070215)	11.28601 (91070215)
60.0	0.07367c(91060303)	3.51223 (91041515)	12.37003 (91041515)	12.97651 (91071112)	14.57378 (91071112)
70.0	0.06039 (91060406)	2.14182 (91041515)	9.75767 (91062215)	8.74561 (91062215)	9.04495 (91053115)
80.0	0.05452 (91061703)	2.62082 (91062215)	11.05743c(91070912)	11.26493c(91070912)	10.91712c(91070912)
90.0	0.01321 (91052921)	2.06916 (91081315)	11.37886c(91070912)	11.60829c(91070912)	11.26403c(91070912)
100.0	0.06368 (91052921)	1.33329 (91060312)	8.52375 (91072815)	8.82908 (91072815)	9.08470 (91053112)
110.0	0.15154 (91052921)	4.05919 (91042115)	12.17948 (91042115)	13.01820 (91042115)	13.23099 (91042115)
120.0	0.16420 (91052921)	1.58810 (91081215)	7.42450 (91063012)	7.42966 (91092715)	8.73338 (91092715)
130.0	0.08040 (91052921)	1.82762 (91060112)	10.16539 (91063012)	9.46926 (91063012)	8.22115 (91063012)
140.0	0.02004 (91021006)	2.27704 (91060112)	9.33455 (91060112)	8.34811 (91060112)	7.19437 (91063012)
150.0	0.05910 (91021006)	1.97439c(91080315)	9.16998 (91060112)	8.46136 (91060112)	7.47329 (91060112)
160.0	0.05665 (91092709)	1.96064 (91091312)	6.25874 (91060112)	5.95728 (91060112)	5.38219 (91060112)
170.0	0.08880c(91062406)	2.75474 (91081615)	8.82531 (91081615)	7.52156 (91081615)	6.13128 (91081615)
180.0	0.10916c(91062406)	2.79846 (91081615)	9.03063 (91081615)	7.72640 (91081615)	7.41855 (91080412)
190.0	0.06125c(91010103)	2.06237 (91081615)	7.29371 (91081615)	6.56321 (91081615)	5.64387 (91081615)
200.0	0.05883 (91090903)	1.58665 (91072615)	7.86337 (91020215)	9.90105 (91020215)	11.30784 (91020215)
210.0	0.10351 (91090903)	3.18415 (91062418)	7.16378 (91062418)	8.18771 (91040115)	9.19529 (91040115)
220.0	0.15814 (91121509)	1.86195 (91042615)	5.66437 (91042615)	5.57370 (91091612)	6.45316 (91091612)
230.0	0.22498 (91062506)	1.96255 (91092212)	8.02887 (91062512)	7.34683 (91062812)	6.96387 (91062812)
240.0	0.26187 (91062506)	2.46952 (91062512)	11.01199 (91062512)	10.00130 (91062512)	8.62025 (91061012)
250.0	0.16664 (91050724)	2.23661 (91062512)	9.59637 (91062512)	10.46815 (91060612)	11.49211 (91060612)
260.0	0.11116 (91062706)	2.88006 (91062415)	9.19729 (91062415)	7.89352 (91091815)	8.67704 (91091815)
270.0	0.15490 (91040706)	2.94131 (91062415)	9.36865 (91062415)	8.84520 (91091912)	9.95344 (91091912)
280.0	0.15363c(91060206)	1.99691 (91062415)	7.52302 (91041315)	8.81712 (91041315)	9.59134 (91041315)
290.0	0.11597 (91061506)	1.96736 (91071812)	6.09587 (91040715)	7.00499 (91050312)	7.58497 (91050312)
300.0	0.10421c(91053024)	2.03430 (91080615)	8.97763 (91040712)	11.11197 (91040712)	12.55289 (91040712)
310.0	0.11330c(91010124)	2.17794c(91082315)	9.30266 (91080615)	9.81036 (91050815)	10.33552 (91050815)
320.0	0.11008 (91062606)	2.08754 (91082915)	9.04957 (91070712)	8.26060 (91042912)	9.28376 (91042912)
330.0	0.10935 (91081321)	2.44723 (91070712)	10.21835 (91070712)	9.07506 (91070712)	7.91676 (91061412)
340.0	0.11204 (91063024)	1.96082 (91042512)	7.42389 (91070712)	6.51934 (91070712)	6.65786 (91061412)
350.0	0.10920 (91091921)	2.58202 (91080212)	10.65740 (91080212)	10.86983 (91080212)	10.65201 (91080212)
360.0	0.10920 (91092609)	2.71265 (91080212)	10.72374 (91081515)	9.54075 (91081515)	10.33254 (91030312)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	9.29342 (91071412)	9.39466 (91071412)	9.38634 (91022218)	9.98976 (91022218)	9.92624 (91022218)
20.0	11.01153 (91071412)	11.30610 (91071412)	9.53114 (91071412)	9.13381 (91033012)	8.61090 (91033012)
30.0	12.62583 (91042715)	14.11624 (91042715)	12.66752 (91042715)	10.47857 (91042715)	8.53132 (91042715)
40.0	10.83059 (91042315)	10.84812 (91042315)	9.68335 (91042315)	8.41399 (91042315)	7.30288 (91042315)
50.0	11.62784 (91070215)	11.51442 (91080115)	12.21662 (91080115)	11.66100 (91080115)	10.61225 (91080115)
60.0	15.68017 (91071112)	16.53788 (91071112)	14.32865 (91071112)	11.95644 (91071112)	10.11979 (91071112)
70.0	9.31353 (91053115)	8.86068 (91071112)	7.73796 (91062518)	7.78645 (91062518)	7.45573 (91062518)
80.0	10.30226c(91070912)	8.01758c(91070912)	6.87813 (91080318)	7.06194 (91080318)	6.74471 (91080318)
90.0	10.64219c(91070912)	8.84418 (91060412)	8.19630 (91060412)	6.82104 (91060412)	5.70631 (91121018)
100.0	9.08573 (91053112)	9.40380 (91050515)	8.23629 (91050515)	6.68591 (91050515)	5.36896 (91050515)
110.0	13.08031 (91042115)	12.11569 (91030415)	12.18892 (91030415)	11.24875 (91030415)	10.06592 (91030415)
120.0	9.76145 (91092715)	11.21793 (91092715)	9.88390 (91092715)	8.22787 (91012215)	7.41709 (91080918)
130.0	8.36430 (91092715)	9.46400 (91092715)	8.75286 (91101615)	8.43245 (91122912)	8.47356 (91030424)
140.0	6.11226 (91063012)	5.72489 (91112415)	7.26952 (91120403)	8.42345 (91120403)	8.96106 (91120403)
150.0	6.66764 (91060112)	7.89664 (91081712)	8.21170 (91081712)	7.63732 (91081712)	6.78309 (91081712)
160.0	5.51458 (91031912)	6.29137 (91030924)	7.82438 (91030924)	8.43637 (91030924)	8.47245 (91030924)
170.0	6.02240 (91080412)	6.15729 (91080412)	6.41105 (91031003)	7.07581 (91031003)	7.23732 (91031003)
180.0	8.08908 (91080412)	8.52757 (91080412)	7.25087 (91011715)	6.96723 (91011715)	6.44856 (91110324)
190.0	4.81668 (91081615)	5.38289 (91011715)	6.31342 (91121609)	6.88234 (91112503)	7.24148 (91112503)
200.0	12.35421 (91020215)	13.61020 (91020215)	12.01451 (91020215)	9.82922 (91020215)	7.94026 (91020215)
210.0	9.81981 (91040115)	10.94600 (91040115)	10.92269 (91040115)	10.35771 (91040115)	9.61658 (91040115)
220.0	7.14778 (91091612)	8.67560 (91101812)	8.60983 (91060809)	7.73057 (91060809)	7.10746 (91120718)
230.0	7.37343 (91102012)	9.04707 (91102012)	8.67706 (91102012)	7.82313 (91061115)	7.62737 (91100112)
240.0	9.61061 (91101815)	12.24468 (91101815)	12.08141 (91101815)	10.54164 (91101815)	8.86268 (91101815)
250.0	12.13785 (91060612)	12.33769 (91060612)	10.84988 (91060612)	9.42583 (91060612)	8.84500 (91020315)
260.0	9.20998 (91091815)	9.70041 (91111815)	9.25153 (91111815)	7.91443 (91111815)	7.09221 (91102215)
270.0	10.71035 (91091912)	11.11664 (91091912)	9.17099 (91091912)	8.20561 (91102112)	7.25155 (91102112)
280.0	10.05507 (91041315)	9.90801 (91041315)	8.73951 (91111915)	8.19744 (91111915)	7.47560 (91052115)
290.0	8.05760 (91041412)	8.52427 (91052818)	8.18665 (91052818)	6.98710 (91050818)	6.08721 (91050818)
300.0	13.58758 (91040712)	14.62299 (91040712)	12.74302 (91040712)	10.36484 (91040712)	8.35047 (91040712)
310.0	10.46412 (91050815)	9.38306 (91032015)	9.00216 (91032015)	7.83530c(91030609)	8.79980c(91030609)
320.0	9.95293 (91042912)	10.65987 (91042912)	10.32390 (91010712)	9.02134 (91010712)	7.59175 (91010712)
330.0	8.44637 (91061412)	8.33234 (91061412)	6.66615 (91081412)	5.72570 (91081412)	4.83663 (91081412)
340.0	7.07090 (91061412)	6.97691 (91041612)	7.61061 (91110212)	7.35789 (91110212)	6.65128 (91110212)
350.0	10.87943 (91042312)	10.77551 (91042312)	9.68831 (91030309)	9.17909 (91030309)	8.43980 (91030309)
360.0	10.70184 (91030312)	10.76510 (91030312)	11.03001 (91122315)	10.35298 (91122315)	9.15352 (91122315)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	9.47214 (91022218)
20.0	7.91751 (91033012)
30.0	6.97954 (91042715)
40.0	7.06580 (91030818)
50.0	9.50659 (91080115)
60.0	8.74686 (91071112)
70.0	6.94340 (91062518)
80.0	6.24427 (91080318)
90.0	6.05624 (91121018)
100.0	5.47723 (91030518)
110.0	9.38024 (91042018)
120.0	6.65870 (91080918)
130.0	8.51118 (91030424)
140.0	9.00506 (91120403)
150.0	5.91568 (91081712)
160.0	8.14658 (91030924)
170.0	7.06086 (91031003)
180.0	6.69661 (91031103)
190.0	7.21785 (91112503)
200.0	6.72019 (91040106)
210.0	8.80415 (91040115)
220.0	7.60312 (91102603)
230.0	7.74156 (91100112)
240.0	8.01807 (91093018)
250.0	9.60015 (91111424)
260.0	7.20810 (91061124)
270.0	6.73703c(91050721)
280.0	7.10240 (91052115)
290.0	6.09353 (91072621)
300.0	7.04180 (91080103)
310.0	9.25830c(91030609)
320.0	6.67435 (91042912)
330.0	5.13553 (91042306)
340.0	6.23517c(91122324)
350.0	7.65064 (91030309)
360.0	8.72085 (91031315)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.05633c(91092608)	1.20521c(91081516)	5.34041c(91081516)	4.77095c(91081516)	4.29676c(91122316)
20.0	0.05415c(91070208)	0.92935c(91072316)	3.58265 (91062316)	4.27317 (91062316)	4.68537 (91062316)
30.0	0.05033c(91051424)	0.71147 (91052316)	4.10553 (91042716)	5.15816 (91042716)	5.89956 (91042716)
40.0	0.04099 (91050524)	0.75757 (91042316)	3.37458 (91051716)	3.65335 (91042316)	3.94284 (91042316)
50.0	0.04889c(91060308)	0.88283 (91041516)	7.01526 (91070216)	8.52850 (91070216)	9.45647 (91070216)
60.0	0.03684c(91060308)	1.33711 (91041516)	6.77319 (91070216)	8.12346 (91070216)	8.90735 (91070216)
70.0	0.02302 (91060408)	0.87887c(91062216)	5.57287c(91070916)	6.15452c(91070916)	6.30928c(91070916)
80.0	0.02045 (91061708)	1.12321c(91062216)	7.89490c(91070916)	8.60340c(91070916)	8.81479c(91070916)
90.0	0.00496 (91052924)	0.90197c(91070916)	7.58392c(91070916)	8.16714c(91070916)	8.28672c(91070916)
100.0	0.02388 (91052924)	0.91138 (91042116)	5.24878c(91081216)	5.54985c(91081216)	5.50411c(91081216)
110.0	0.05683 (91052924)	1.90703 (91042116)	6.43931 (91042116)	7.06798 (91042116)	7.33177 (91042116)
120.0	0.06158 (91052924)	0.75548c(91081216)	3.06913c(91072616)	3.69347 (91021516)	4.15758 (91021516)
130.0	0.03015 (91052924)	0.78327c(91060116)	3.81202 (91063016)	3.55097 (91063016)	3.08293 (91063016)
140.0	0.01019c(91021008)	0.97588c(91060116)	4.00052c(91060116)	3.57776c(91060116)	3.04526c(91060116)
150.0	0.03046c(91021008)	0.98719c(91080316)	3.92999c(91060116)	3.62630c(91060116)	3.57149 (91081716)
160.0	0.02833c(91092708)	1.65769c(91081616)	5.21528c(91081616)	4.46329c(91081616)	3.65396c(91081616)
170.0	0.04440c(91062408)	1.85707c(91081616)	5.91402c(91081616)	5.04012c(91081616)	4.11191c(91081616)
180.0	0.05458c(91062408)	1.45637c(91081616)	4.87632c(91081616)	4.16881c(91081616)	3.39497c(91081616)
190.0	0.03062c(91010108)	0.92090c(91081616)	3.39167c(91081616)	3.06893c(91081616)	3.05385c(91091516)
200.0	0.02942c(91090908)	0.74199c(91062424)	3.77732 (91020216)	4.79720 (91020216)	5.59389 (91101016)
210.0	0.05175c(91090908)	1.59684c(91062424)	4.58149 (91040116)	5.46894 (91040116)	6.03011 (91040116)
220.0	0.07909c(91121508)	0.89334 (91092016)	3.80042 (91042616)	4.00446 (91042616)	4.05592 (91042616)
230.0	0.11249c(91062508)	1.01476 (91042616)	4.64543 (91062516)	4.47949 (91042616)	4.53836 (91072116)
240.0	0.13094c(91062508)	1.62835 (91062516)	6.80865c(91091116)	6.69049c(91091116)	6.25620c(91091116)
250.0	0.07142c(91050724)	1.49196 (91062516)	6.52910c(91091116)	6.62285c(91091116)	6.39595c(91091116)
260.0	0.06726 (91040608)	1.34491 (91062416)	5.79228 (91062416)	5.38087 (91062416)	4.80693 (91062416)
270.0	0.07910 (91040708)	1.38511 (91062416)	5.84121 (91062416)	5.35264 (91062416)	4.69994 (91062416)
280.0	0.07681c(91060208)	0.99619c(91070516)	3.82790 (91062416)	3.80534 (91041316)	4.40090 (91111916)
290.0	0.05271c(91070308)	0.92346c(91081016)	4.26586 (91040716)	4.81030 (91040716)	5.34384 (91052816)
300.0	0.05210c(91053024)	0.94144 (91061516)	5.33766 (91051016)	6.42387 (91051016)	7.10401 (91051016)
310.0	0.04856c(91010124)	0.99679 (91061516)	4.55415 (91052416)	5.62267 (91052416)	6.31965 (91052416)
320.0	0.06106c(91081008)	0.92645c(91072316)	3.80976 (91070716)	4.13282 (91042916)	4.66292 (91042916)
330.0	0.05134c(91070824)	0.92072 (91070716)	3.89178 (91070716)	3.74334 (91061416)	4.16263 (91061416)
340.0	0.05602c(91063024)	0.90355 (91042516)	3.39704 (91042516)	3.37499 (91042516)	3.79140c(91072916)
350.0	0.05069c(91071308)	1.01219 (91080216)	4.39448 (91080216)	4.55984 (91080216)	4.50633 (91080216)
360.0	0.06869c(91092608)	1.27604c(91081516)	5.36368c(91081516)	5.11582 (91080216)	5.20012 (91032916)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	4.91039c(91122316)	6.43392c(91122316)	6.92439 (91030616)	6.82396 (91030616)	6.44169 (91030616)
20.0	4.93848 (91062316)	4.97490 (91062316)	4.61143 (91070316)	4.63528 (91070316)	4.33057 (91070316)
30.0	6.46723 (91042716)	7.25429 (91042716)	6.51527 (91042716)	5.48101 (91012816)	4.90204 (91012816)
40.0	4.08815 (91042316)	4.46817 (91051316)	4.46818 (91051316)	3.96010 (91051316)	3.74381c(91032624)
50.0	10.05773 (91070216)	10.25191 (91070216)	8.59457 (91070216)	6.83597 (91070216)	5.42885 (91070216)
60.0	9.34534 (91070216)	9.30545 (91071116)	8.17518 (91071116)	6.80559 (91071116)	5.68689 (91071116)
70.0	6.26908c(91070916)	5.97775 (91082116)	5.90518 (91082116)	5.24076 (91082116)	4.50855 (91082116)
80.0	8.76576c(91070916)	7.69828c(91070916)	6.07998c(91070916)	4.79381c(91070916)	4.17828 (91041916)
90.0	8.16024c(91070916)	6.97996c(91070916)	6.41985 (91060416)	5.84567 (91060416)	5.22319 (91060416)
100.0	5.31926c(91081216)	4.39295c(91081216)	3.65358 (91041816)	2.93846c(91072716)	2.62202c(91072716)
110.0	7.78724 (91030416)	9.63443 (91030416)	10.11408 (91030416)	9.64878 (91030416)	8.86076 (91030416)
120.0	4.35050 (91021516)	4.71332c(91021116)	4.84705c(91021116)	4.54128c(91021116)	4.66267c(91041824)
130.0	3.20224 (91012216)	4.15428 (91012216)	4.17974 (91012216)	4.64029 (91030424)	4.81966 (91030424)
140.0	2.86040 (91020916)	4.01902 (91020916)	4.82817 (91120408)	5.38795 (91120408)	5.56748 (91120408)
150.0	3.92303 (91081716)	4.50829 (91081716)	4.28457 (91081716)	3.76123 (91081716)	3.21907 (91081716)
160.0	3.25815 (91081716)	3.45015 (91110816)	3.83155 (91030924)	4.08910 (91030924)	4.07312 (91030924)
170.0	3.57998 (91031916)	3.87538 (91031916)	3.43362 (91031916)	3.57852 (91112424)	4.01752 (91112424)
180.0	3.63833c(91080416)	3.81043c(91080416)	3.95639 (91011716)	3.65553 (91011716)	3.47573 (91110916)
190.0	3.40661c(91091516)	4.70417 (91121608)	5.99130 (91121608)	6.59919 (91121608)	6.77261 (91121608)
200.0	6.30184 (91101016)	7.60759 (91101016)	7.15717 (91101016)	6.05295 (91101016)	5.06967 (91121516)
210.0	6.35425 (91040116)	7.28695 (91101016)	6.57820 (91101016)	5.69734 (91040116)	5.11306 (91040116)
220.0	4.31912 (91021216)	5.64552 (91101816)	5.78450 (91101816)	5.19318 (91101816)	4.63224 (91060816)
230.0	4.84659 (91072116)	5.89888 (91061116)	5.97062 (91061116)	6.16627 (91121924)	6.25654 (91121924)
240.0	5.81346c(91091116)	7.10812 (91111416)	7.16158 (91111416)	6.70673 (91093016)	6.32506 (91093016)
250.0	6.82811 (91061016)	7.22321 (91061016)	6.65185 (91111416)	6.10511 (91111416)	5.72207 (91113008)
260.0	4.64236 (91061016)	5.45110 (91102416)	5.64399 (91102416)	5.21995 (91102416)	4.65147 (91102416)
270.0	4.83462 (91091916)	5.20875 (91091916)	4.95229 (91052216)	5.41567 (91052216)	5.52630 (91052216)
280.0	5.02212 (91111916)	6.70093 (91111916)	7.32070 (91111916)	7.08957 (91111916)	6.53719 (91111916)
290.0	5.94080 (91052816)	6.94189 (91052816)	6.37125 (91052816)	5.29856 (91052816)	4.30817 (91052816)
300.0	7.54934 (91051016)	7.72730 (91051016)	6.69368 (91040716)	5.61854 (91040716)	4.71715 (91040716)
310.0	6.80781 (91052416)	7.23010 (91052416)	6.26324 (91052416)	5.08501 (91052416)	4.09091 (91052416)
320.0	5.02441 (91042916)	5.42811 (91042916)	4.92577 (91042916)	4.25634 (91042916)	3.66531 (91042916)
330.0	4.41105 (91061416)	4.36282 (91050916)	3.86466 (91050916)	3.37836c(91010716)	2.90868c(91010716)
340.0	4.12291c(91072916)	4.64449c(91072916)	4.42051c(91072916)	3.95918c(91072916)	3.50351c(91072916)
350.0	4.97741 (91073016)	6.02377 (91073016)	5.90191 (91073016)	5.29829 (91073016)	4.63469 (91073016)
360.0	5.49841 (91032916)	6.17908c(91122316)	6.48560c(91122316)	6.07181 (91032916)	5.76212 (91032916)

CONC RURAL FLAT DFAULT

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

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	5.94509 (91030616)
20.0	3.91386 (91070316)
30.0	4.35930 (91012816)
40.0	3.93578c(91032624)
50.0	4.37296 (91070216)
60.0	4.83294 (91071116)
70.0	3.85166 (91082116)
80.0	3.66289 (91041916)
90.0	4.65539 (91060416)
100.0	2.32690 (91021508)
110.0	7.99874 (91030416)
120.0	4.84328c(91041824)
130.0	4.76779 (91030424)
140.0	5.47600 (91120408)
150.0	2.73868 (91081716)
160.0	3.89083 (91030924)
170.0	4.27963 (91112424)
180.0	3.25623 (91031108)
190.0	6.65046 (91121608)
200.0	4.92814 (91120508)
210.0	4.66260 (91123124)
220.0	4.23744 (91060816)
230.0	6.10054 (91121924)
240.0	5.83790 (91093016)
250.0	6.36936 (91113008)
260.0	4.09243 (91102416)
270.0	5.39464 (91052216)
280.0	5.88991 (91111916)
290.0	3.51089 (91052816)
300.0	3.99998 (91040716)
310.0	3.39320c(91080108)
320.0	3.41930 (91032908)
330.0	2.49112 (91012916)
340.0	3.62835 (91030208)
350.0	4.07180 (91032924)
360.0	5.37049 (91032916)

CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	500.00	800.00	900.00	1000.00
10.0	0.01752c(91053124)	0.40174c(91081524)	1.78014c(91081524)	1.59032c(91081524)	1.87951c(91030624)
20.0	0.01771c(91070224)	0.30978c(91072324)	1.53003c(91062324)	1.82204c(91062324)	1.99707c(91062324)
30.0	0.01678c(91051424)	0.24747c(91052324)	1.72759c(91042724)	2.19659c(91042724)	2.53385c(91042724)
40.0	0.01726c(91050524)	0.27548c(91042324)	1.17377c(91051724)	1.32849c(91042324)	1.43376c(91042324)
50.0	0.01659c(91060324)	0.36174c(91070224)	3.03513c(91070224)	3.70662c(91070224)	4.11898c(91070224)
60.0	0.01248c(91060324)	0.52656c(91041524)	3.05589c(91070224)	3.71473c(91070224)	4.11369c(91070224)
70.0	0.00767 (91060424)	0.34178c(91062224)	1.85762c(91070924)	2.05151c(91070924)	2.23355c(91053124)
80.0	0.00909c(91061724)	0.43680c(91062224)	2.63171c(91070924)	2.86791c(91070924)	2.93836c(91070924)
90.0	0.00220c(91052924)	0.39086c(91081124)	2.55824c(91070924)	2.76917c(91070924)	2.81985c(91070924)
100.0	0.01061c(91052924)	0.33583c(91042124)	2.04120c(91081224)	2.15828c(91081224)	2.14050c(91081224)
110.0	0.02526c(91052924)	0.72142c(91042124)	2.91446 (91021524)	3.77061 (91021524)	4.39183 (91021524)
120.0	0.02737c(91052924)	0.29749c(91081224)	1.84650 (91021524)	2.38687 (91021524)	2.76806 (91021524)
130.0	0.01340c(91052924)	0.32987c(91060124)	1.38619c(91063024)	1.29126c(91063024)	1.21405c(91041024)
140.0	0.00325c(91021024)	0.38139c(91060124)	1.55684c(91060124)	1.39234c(91060124)	1.18520c(91060124)
150.0	0.00927c(91021024)	0.34368c(91081624)	1.52833c(91060124)	1.41023c(91060124)	1.58733c(91081724)
160.0	0.00850c(91092724)	0.64468c(91081624)	2.02913c(91081624)	1.73711c(91081624)	1.47751 (91031024)
170.0	0.01480c(91062424)	0.72219c(91081624)	2.29990c(91081624)	1.96004c(91081624)	1.59908c(91081624)
180.0	0.01819c(91062424)	0.56636c(91081624)	1.89635c(91081624)	1.62120c(91081624)	1.32027c(91081624)
190.0	0.01021c(91010124)	0.35813c(91081624)	1.31898c(91081624)	1.24355c(91121624)	1.54899c(91121624)
200.0	0.00803c(91090924)	0.26444c(91072624)	1.42486 (91020224)	1.86355 (91020224)	2.15712 (91020224)
210.0	0.01431c(91090924)	0.53697c(91062424)	1.58539 (91040124)	1.91064 (91040124)	2.12112 (91040124)
220.0	0.02157c(91121524)	0.36275c(91092024)	1.34136c(91042624)	1.64705c(91021224)	1.92712c(91021224)
230.0	0.03069c(91062524)	0.42767c(91091224)	1.75201c(91062524)	1.80983c(91072124)	2.01705c(91072124)
240.0	0.03571c(91062524)	0.64574c(91062524)	2.40954c(91062524)	2.23727c(91091124)	2.09173c(91091124)
250.0	0.02658c(91040624)	0.54376c(91062524)	2.24015c(91091124)	2.29928 (91061024)	2.65836 (91061024)
260.0	0.03004c(91040624)	0.59774c(91062424)	2.57445c(91062424)	2.39168c(91062424)	2.13652c(91062424)
270.0	0.02638 (91040724)	0.61561c(91062424)	2.59609c(91062424)	2.37895c(91062424)	2.08886c(91062424)
280.0	0.02560c(91060224)	0.40030c(91062424)	1.70411c(91062424)	1.53430c(91062424)	1.59412c(91041324)
290.0	0.02155c(91062224)	0.33834c(91071824)	1.86322c(91052824)	2.41142c(91052824)	2.80825c(91052824)
300.0	0.02332c(91062224)	0.35358c(91080624)	2.16460c(91051024)	2.60679c(91051024)	2.88432c(91051024)
310.0	0.02245c(91071424)	0.36120c(91082324)	1.92119c(91080624)	2.10785c(91080624)	2.19580c(91080624)
320.0	0.02035c(91081024)	0.33823c(91072624)	1.60411c(91070724)	1.68958c(91080624)	1.82679c(91080624)
330.0	0.01711c(91070824)	0.38767c(91070724)	1.63864c(91070724)	1.46695c(91070724)	1.51368c(91061424)
340.0	0.01687c(91091324)	0.36142c(91042524)	1.35881c(91042524)	1.49199c(91041624)	1.64208c(91041624)
350.0	0.01690c(91071324)	0.35207c(91080224)	1.52853c(91080224)	1.74011c(91042324)	1.95439c(91042324)
360.0	0.02091c(91092624)	0.42535c(91081524)	1.80086 (91032924)	2.29196 (91032924)	2.64760 (91032924)

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 1100.00	1500.00	2000.00	2500.00	3000.00
10.0	2.15062c(91030624)	2.89254c(91030624)	3.21670c(91030624)	3.19980c(91030624)	3.04939c(91030624)
20.0	2.10494c(91062324)	2.12688c(91062324)	2.45645c(91070324)	2.54756c(91070324)	2.47650c(91070324)
30.0	2.80124c(91042724)	3.23540c(91042724)	2.97871c(91042724)	2.50278c(91042724)	2.34696c(91012824)
40.0	1.54225c(91051324)	1.88134c(91051324)	1.88134c(91051324)	1.66741c(91051324)	1.51677c(91031424)
50.0	4.39296c(91070224)	4.54074c(91070224)	3.87213c(91070224)	3.12076c(91070224)	2.50280c(91070224)
60.0	4.36503c(91070224)	4.43561c(91070224)	3.79427c(91070224)	3.14816c(91070224)	2.65354c(91070224)
70.0	2.39728c(91053124)	2.65678c(91082124)	2.62452c(91082124)	2.32923c(91082124)	2.00380c(91082124)
80.0	2.92201c(91070924)	2.56615c(91070924)	2.17761c(91041924)	2.02672c(91041924)	1.81475c(91041924)
90.0	2.78533c(91070924)	2.77969c(91041824)	2.38198c(91041824)	2.15417 (91060524)	2.05028 (91060524)
100.0	2.06861c(91081224)	1.99876c(91041824)	1.76004c(91041824)	1.49966c(91030524)	1.49671c(91030524)
110.0	4.71985 (91021524)	5.35942 (91021524)	5.32975 (91021524)	4.95271 (91021524)	4.49691 (91021524)
120.0	2.96628 (91021524)	3.34906 (91021524)	3.31957 (91021524)	3.07715 (91021524)	2.93729c(91021124)
130.0	1.35594c(91021124)	1.74016c(91021124)	1.90065c(91021124)	2.03607 (91030424)	2.15026 (91030424)
140.0	1.26921 (91020924)	1.85623 (91020924)	2.38298 (91020924)	2.67608 (91020924)	2.82521 (91020924)
150.0	1.74357c(91081724)	2.00368c(91081724)	1.90426c(91081724)	1.67166c(91081724)	1.57365 (91020924)
160.0	1.69394 (91031024)	2.31743 (91031024)	2.63978 (91031024)	2.67288 (91031024)	2.58709 (91031024)
170.0	1.38446 (91031024)	1.93605 (91031024)	2.32257 (91031024)	2.45421 (91031024)	2.44210 (91031024)
180.0	1.43567c(91080424)	1.58715c(91011724)	1.90311 (91110924)	2.04753 (91110924)	2.05829 (91110924)
190.0	1.77927c(91121624)	2.50314c(91121624)	2.98428c(91121624)	3.13668c(91121624)	3.11380c(91121624)
200.0	2.37664 (91020224)	2.80315 (91020224)	2.80840 (91020224)	2.65379 (91020224)	2.47960 (91020224)
210.0	2.24899 (91040124)	2.54767c(91021224)	2.80773 (91021624)	2.87100 (91021624)	2.77387 (91021624)
220.0	2.15014c(91021224)	2.65271c(91021224)	2.73857c(91021224)	2.59199c(91021224)	2.38454c(91021224)
230.0	2.15404c(91072124)	2.41141 (91121924)	2.86215 (91121924)	2.98852 (91121924)	2.94575 (91121924)
240.0	2.09809 (91093024)	2.82194 (91093024)	3.29797 (91093024)	3.47199 (91093024)	3.50310 (91093024)
250.0	2.92565 (91061024)	3.38818 (91061024)	3.25917 (91061024)	3.26417 (91111424)	3.26900 (91111424)
260.0	1.92681c(91062424)	2.06867 (91061024)	2.08566 (91102424)	1.98657 (91102424)	1.82602 (91102424)
270.0	1.98467c(91091924)	2.16296c(91091924)	2.55971 (91052224)	2.87319 (91052224)	3.00549 (91052224)
280.0	1.71269c(91041324)	2.27940 (91111924)	2.56976 (91052124)	2.86705 (91052124)	2.98169 (91052124)
290.0	3.13107c(91052824)	3.69133c(91052824)	3.41471c(91052824)	2.85688c(91052824)	2.51332 (91050824)
300.0	3.06785c(91051024)	3.16801c(91051024)	2.93310c(91041124)	2.80942c(91041124)	2.62210c(91041124)
310.0	2.27197 (91052424)	2.41246 (91052424)	2.09004 (91052424)	1.86027c(91041124)	1.95331c(91030624)
320.0	1.91499c(91080624)	1.98169c(91042924)	1.85701c(91042924)	1.66491c(91042924)	1.49410c(91042924)
330.0	1.60402c(91061424)	1.67334c(91050924)	1.59137c(91012924)	1.43916c(91012924)	1.24735c(91012924)
340.0	1.72932c(91041624)	1.72907c(91072924)	1.64974c(91072924)	1.48195c(91072924)	1.38563 (91030224)
350.0	2.08652c(91042324)	2.38953c(91042324)	2.52166c(91042324)	2.52879c(91042324)	2.47318c(91042324)
360.0	2.86584 (91032924)	3.41022 (91032924)	3.61837 (91032924)	3.55031 (91032924)	3.35769 (91032924)

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

*** NETWORK ID: POL1 ; NETWORK TYPE: GRIDPOLR ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

DIRECTION (DEGREES)	DISTANCE (METERS) 3500.00
10.0	2.84071c(91030624)
20.0	2.34317c(91070324)
30.0	2.17480c(91012824)
40.0	1.49124c(91031424)
50.0	2.03038c(91070224)
60.0	2.28947c(91070224)
70.0	1.71185c(91082124)
80.0	1.60138c(91041924)
90.0	1.94335 (91060524)
100.0	1.44333c(91030524)
110.0	4.04765 (91021524)
120.0	2.78680c(91021124)
130.0	2.15915 (91030424)
140.0	2.85199 (91020924)
150.0	1.55606 (91112424)
160.0	2.44351 (91031024)
170.0	2.34255 (91031024)
180.0	2.01628 (91112524)
190.0	2.98592c(91121624)
200.0	2.30074 (91020224)
210.0	2.60167 (91021624)
220.0	2.16466c(91021224)
230.0	2.81109 (91121924)
240.0	3.42986 (91093024)
250.0	3.23169 (91111424)
260.0	1.75122 (91061124)
270.0	2.99640 (91052224)
280.0	2.95886 (91052124)
290.0	2.38357 (91050824)
300.0	2.41557c(91041124)
310.0	2.05663c(91030624)
320.0	1.34967c(91042924)
330.0	1.10492 (91030124)
340.0	1.50454 (91030224)
350.0	2.36665c(91042324)
360.0	3.10526 (91032924)

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 3-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	16.53788	(91071112) AT	(135558.03, 203354.00) GP	6.	14.11624	(91042715) AT	(135009.00, 203903.03) GP
2.	15.68017	(91071112) AT	(135211.63, 203154.00) GP	7.	13.61020	(91020215) AT	(133745.97, 201194.47) GP
3.	14.62299	(91040712) AT	(132959.97, 203354.00) GP	8.	13.58758	(91040712) AT	(133306.38, 203154.00) GP
4.	14.57378	(91071112) AT	(135125.03, 203104.00) GP	9.	13.23099	(91042115) AT	(135198.69, 202261.98) GP
5.	14.32865	(91071112) AT	(135991.05, 203604.00) GP	10.	13.08031	(91042115) AT	(135292.66, 202227.78) GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	10.25191	(91070216) AT	(135408.06, 203568.19) GP	6.	9.45647	(91070216) AT	(135025.05, 203246.78) GP
2.	10.11408	(91030416) AT	(136138.39, 201919.95) GP	7.	9.34534	(91070216) AT	(135211.63, 203154.00) GP
3.	10.05773	(91070216) AT	(135101.66, 203311.06) GP	8.	9.30545	(91071116) AT	(135558.03, 203354.00) GP
4.	9.64878	(91030416) AT	(136608.23, 201748.95) GP	9.	8.92041	(91070216) AT	(135558.03, 203354.00) GP
5.	9.63443	(91030416) AT	(135668.53, 202090.97) GP	10.	8.90735	(91070216) AT	(135125.03, 203104.00) GP

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

CONC RURAL FLAT DFAULT

*** THE MAXIMUM 10 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): FLARESTK,

** CONC OF SO2 IN MICROGRAMS/M**3 **

RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE	RANK	CONC	(YYMMDDHH) AT	RECEPTOR (XR,YR) OF TYPE
1.	5.35942	(91021524) AT	(135668.53, 202090.97) GP	6.	4.49691	(91021524) AT	(137078.08, 201577.94) GP
2.	5.32975	(91021524) AT	(136138.39, 201919.95) GP	7.	4.43561c	(91070224) AT	(135558.03, 203354.00) GP
3.	4.95271	(91021524) AT	(136608.23, 201748.95) GP	8.	4.39296c	(91070224) AT	(135101.66, 203311.06) GP
4.	4.71985	(91021524) AT	(135292.66, 202227.78) GP	9.	4.39183	(91021524) AT	(135198.69, 202261.98) GP
5.	4.54074c	(91070224) AT	(135408.06, 203568.19) GP	10.	4.36503c	(91070224) AT	(135211.63, 203154.00) GP

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	0.42512 AT (131909.77, 201748.95, 0.00, 0.00) GP POL1
	2ND HIGHEST VALUE IS	0.42355 AT (131660.92, 201104.00, 0.00, 0.00) GP POL1
	3RD HIGHEST VALUE IS	0.42225 AT (132093.94, 201354.00, 0.00, 0.00) GP POL1
	4TH HIGHEST VALUE IS	0.42219 AT (131439.92, 201577.94, 0.00, 0.00) GP POL1
	5TH HIGHEST VALUE IS	0.41626 AT (132379.61, 201919.95, 0.00, 0.00) GP POL1
	6TH HIGHEST VALUE IS	0.41581 AT (131227.91, 200854.00, 0.00, 0.00) GP POL1
	7TH HIGHEST VALUE IS	0.41168 AT (130970.08, 201406.92, 0.00, 0.00) GP POL1
	8TH HIGHEST VALUE IS	0.40931 AT (132526.95, 201604.00, 0.00, 0.00) GP POL1
	9TH HIGHEST VALUE IS	0.39899 AT (131960.86, 200675.64, 0.00, 0.00) GP POL1
	10TH HIGHEST VALUE IS	0.39516 AT (132343.89, 200997.03, 0.00, 0.00) GP POL1

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

CONC RURAL FLAT DFAULT

*** THE SUMMARY OF HIGHEST 3-HR RESULTS ***

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	16.53788	ON 91071112: AT (135558.03, 203354.00, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	10.25191	ON 91070216: AT (135408.06, 203568.19, 0.00, 0.00)	GP	POL1

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

CONC RURAL FLAT DFAULT

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

** CONC OF SO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	5.35942	ON 91021524: AT (135668.53, 202090.97, 0.00, 0.00)	GP	POL1

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

**MODELOPTs:
CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 1522 Informational Message(s)

A Total of 1522 Calm Hours Identified

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

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

****
*** ISCST3 Finishes Successfully ***
****

ATTACHMENT 2

STACK PARAMETER CALCULATIONS

From: Kahn, Joseph <Joseph.Kahn@dep.state.fl.us>
To: bruno@grovescientific.com <bruno@grovescientific.com>
Cc: Meng, Alex <Alex.Meng@dep.state.fl.us>
Date: Tuesday, February 06, 2001 5:34 PM
Subject: Naples LF Flare Effective Stack Height

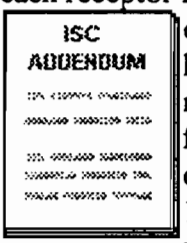
Bruno,

To confirm our second telephone conversation of this afternoon, the Department will accept an alternative modeling technique to determine an effective stack height and/or effective diameter for use in the ISC model for purposes of performing the ambient impact analysis for SO2. There are three techniques from different states that have been documented. Please refer to the following web site, select "Notes" under User Support, and use one of the techniques described in the notes for flares: www.beeline-software.com/. These all seem to be similar to the approach used in your initial analysis, but these methods have been approved by other states for use in the ISC model. They appear to be consistent with the technique used in the SCREEN models for flares. Please include in your resubmittal a description of which method best fits your situation along with your calculations. Please call me or Alex if you have any questions.

-Joe

2. Enter PM10 as the pollutant name (Source Option)
3. Select a 5-year met file, all 5 years must be in a single file (Met Data Options)
4. Select 4-highest table (Output Options)

Discussion of the PM_{10} Methods. Most importantly -- CHECK WITH YOUR AGENCY -- as to which method you should use. The Pre-1997 method for 24-hour average is to calculate the 6th highest 24-hour concentration at each receptor for the entire five year met set. The highest of these 6th-highest concentrations is the design concentration. Whereas, the Post-1997 method for 24-hour average is to calculate the 4th highest 24-hour concentration at each receptor for each of the five years and then average these values at each receptor. The receptor with the highest of these averages is the design value. The "annual" average for the Pre- and Post-1997 methods are very similar. The Pre-1997 method is to average the concentrations at each receptor for all of the hours for the entire 5-year period, whereas for the Post-1997 method, the concentrations at each receptor are averaged for each year and then these five, 1-year averages are averaged. The two methods would be identical if each year had the same number of hours,.but each year contains a different number of non-calm hours (only non-calm hours are used). Theses methods are described in the June 1999 ISC User's Guide Addendum. Right click on the graphic and select "Save Target As..." to download the Addendum.



Pitched Roofs (downwash) [Top]

Pitched roofs. Pitched roofs or non-flat roofs (shed, gable, hip) terminate at a point or a line rather than being a flat plain. A conservative approach is to assume that the entire pitched roof is at the peak of the pitched roof. An acceptable alternative is to assume a building height ½ the distance up the pitched roof and the corresponding horizontal dimensions below that 'roof' (i.e., one horizontal dimension would also be halved). (ref. Ohio EPA) (BEE-Line Comment: Our experience is hat most agencies require that the conservative approach as stated above be used. Tell us your experience.)

Rain Caps and Horizontal Releases [Top]

Rain Caps and Horizontal Releases. (ref. Ohio EPA) U.S. EPA has provided a specific solution to address hot stack plumes that are interrupted by a rain cap or which are released horizontally. While it would be conservative to simply reduce the velocity, the source would lose the effect of the buoyancy that the volume of hot gas would normally have. The Ohio EPA recommended adjustment provides for retention of the buoyancy while addressing the impediment to the vertical momentum of the release. The procedure is as follows:

1) The stack exit velocity (V_s) is set equal to 0.001 m/s (V_s')

2) Stack diameter (d_s) is adjusted using the equation

$$d_s' = 31.6 * d_s * (V_s)^{0.5}$$ BEE-Line Comment: $(1/0.001)^{½} = 31.6$

3) Use V_s' and d_s' in the model

Flares [Top]

Flares (Ohio EPA). For screening purposes, the flare option in SCREEN2 or TSCREEN is acceptable. For refined modeling, it is necessary to compute equivalent emission parameters, i.e. adjusted values of temperature and stack height and diameter. Several methods appear in the literature, none of which seems to be universally accepted. Ohio

EPA/DAPC has used the following procedure, which is believed to be consistent with SCREEN2:

1) compute the adjustment to stack height as a function of heat release Q in MMBtu/hr:

$$H_{equiv.} = H_{actual} + 0.944(Q)^{0.478}$$

where H has units of meters;

2) assume temperature of 1273 deg. K;

3) assume exit velocity of 20 meters/sec;

4) assume the following buoyant flux:

$$F_b = 1.162(Q)$$

5) back-calculate the stack diameter that corresponds to the above assumed parameters. Recall the definition of buoyant flux:

$$F_b = 3.12(V)(T_{stack} - T_{ambient})/T_{stack}$$

where V is volumetric flow rate, actual m^3/sec. Substituting for F_b and solving for the equivalent stack diameter $d_{equiv.}$,

$$d_{equiv.} = 0.1755(Q)^{0.5}$$

This method pertains to the "typical" flare, and will be more or less accurate depending on various parameters of the flare in question, such as heat content and molecular weight of the fuel, velocity of the uncombusted fuel/air mixture, presence of steam for soot control, etc. Hence, this method may not be applicable to every situation, and the applicant may submit his own properly documented method.

Flares (LA DEQ). Flares are a special type of source, but are modeled as a point source. Use the following steps for deriving the stack parameters for modeling a flare:

STEP 1:Calculate the total heat release (H) of the flared gas based on the gas heat content and the gas consumption rate.

STEP 2:Assume that 45% of H is released as sensible heat (Q_H)

$$Q_H(cal/sec) = 0.45 \times H(cal/sec)$$

STEP 3:Calculate the effective stack diameter using the following formula

$$d_s\,(m) = 9.88 \times 10^{-4} \times [Q_H]^{1/2}$$

STEP 4:Final stack parameters for model input are as follows

h_g = height of flare stack

d_g = (calculated in STEP 3)

v_g = 20 m/sec

T_g = 1273 ^oK

Flares (TNRCC). Flares are a special type of elevated source that may be modeled as a point source. The technique to calculate buoyancy flux for flares generally follows the technique described in the *SCREEN3 Model User's Guide* (EPA, 1995b). Use the following parameters:

- effective stack exit velocity = 20 meters per second;
- effective stack exit temperature = 1273 Kelvin;

- actual height of the flare tip; and
- effective stack exit diameter.

The effective stack diameter (D) in meters is calculated using the following equations:

$$D = \sqrt{(10^{-6} q_n)}$$ and

$$q_n = q(1 - 0.048\sqrt{MW})$$

where
q = gross heat release in cal/sec;
q_n = net heat release in cal/sec; and
MW = weighted (by volume) average molecular weight of the compound being flared.

Note that enclosed vapor combustion units should not be modeled with the preceding parameters but instead with stack parameters that reflect the physical characteristics of the unit.

Haul Roads [Top]

Haul Roads (TNRCC). If road emissions must be modeled, the emissions can be represented as volume sources, as suggested in the ISC User's Guide (EPA, 1995d). A procedure to develop model input parameters follows. The applicant can use other procedures on a case-by-case basis but must demonstrate that those procedures would be appropriate.

Volume Source Characterization: Follow the eight steps described in the following paragraphs.

Volume Step 1: Determine the adjusted width of the road. The adjusted width is the actual width of the road plus 6 meters. The additional width represents turbulence caused by the vehicle as it moves along the road. This width will represent a side of the base of the volume.

Volume Step 2: Determine the number of volume sources, N. Divide the length of the road by the adjusted width. The result is the maximum number of volume sources that could be used to represent the road.

Volume Step 3: Determine the height of the volume. The height will be equal to twice the height of the vehicle generating the emissions—round to the nearest meter.

Volume Step 4: Determine the initial horizontal sigma for each volume.

- If the road is represented by a single volume, divide the adjusted width by 4.3.
- If the road is represented by adjacent volumes, divide the adjusted width by 2.15.
- If the road is represented by alternating volumes, divide twice the adjusted width—measured from the center point of the first volume to the center point of the next represented volume—by 2.15. Start with the volume nearest to the property line. This representation is often used for long roads.

Volume Step 5: Determine the initial vertical sigma. Divide the height of the volume determined in Step 3 by 2.15.

Volume Step 6: Determine the release point. Divide the height of the volume by two. This point is in the center of the volume.

COMPARISON OF VARIOUS METHODS FOR CALCULATING STACK PARAMETERS 020701
BASED ON INFORMATION AT WEB SITE WWW.BEELINE-SOFTWARE.COM

OHIO EPA METHOD

HEAT RELEASE, MMBTU/HR		
TOTAL FLOW=	3000	SCFM
METHANE=	38	%
METHANE FLOW=	1140	SCFM
METHANE LHV=	1000	BTU/SCF
TOTAL HEAT RELEASE=	68.4	MMBTU/HR
STACK HEIGHT		
ACTUAL STACK HEIGHT=	22.02	M (NOTE BASE IS 4 FT ABOVE GROUND LEVEL)
EQUIVALENT STACK HT.=	**29.13**	**M (NOTE THAT UNITS ARE MIXED IN GIVEN EQUATION)**
TEMPERATURE=	**1273**	**K**
EXIT VELOCITY=	**20**	**M/SEC**
BOUYANT FLUX=	79.48	UNITS NOT DEFINED
STACK DIAMETER=	**1.45**	**M (ASSUMED)**

LA DEQ METHOD

SENSIBLE HEAT RELEASE=	2154600	CAL/SEC
EFFECTIVE STACK DIAMETER=	**1.45**	**M**
STACK HEIGHT=	**22.02**	**M**
EXIT VELOCITY=	**20**	**M/SEC**
TEMPERATURE=	**1273**	**K**

TNRCC METHOD

EXIT VELOCITY=	**20**	**M/SEC**
TEMPERATURE=	**1273**	**K**
EFFECTIVE STACK DIAMETER		
AVERAGE MOLE WEIGHT=	27.59	ASSUME BALANCE GAS IS MIX OF SATURATED WATER VAPOR AND N2
NET HEAT RELEASE=	3580866	CAL/SEC
EFFECTIVE STACK DIA=	**1.89**	**M**
STACK HEIGHT=	**22.02**	**M**

02/07/01
12:56:09

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

NAPLES LANDFILL 020701 OHIO EPA METHOD FOR CALCULATING STACK VARIABLES

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	13.5000
STACK HEIGHT (M)	=	29.1300
STK INSIDE DIAM (M)	=	1.4500
STK EXIT VELOCITY (M/S)	=	20.0000
STK GAS EXIT TEMP (K)	=	1273.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	.0000
MIN HORIZ BLDG DIM (M)	=	.0000
MAX HORIZ BLDG DIM (M)	=	.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 79.360 M**4/S**3; MOM. FLUX = 48.392 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.1	525.7	524.67	2.72	2.70	NO
100.	.2800E-01	5	1.0	1.5	10000.0	141.88	29.75	29.33	NO
200.	.2292	5	1.0	1.5	10000.0	141.88	34.25	32.81	NO
300.	.9709	3	10.0	11.1	3200.0	77.12	35.19	21.81	NO
400.	8.006	1	3.0	3.2	960.0	194.31	98.40	78.44	NO
500.	21.85	1	3.0	3.2	960.0	194.31	119.34	111.43	NO
600.	28.43	1	3.0	3.2	960.0	194.31	139.73	159.89	NO
700.	27.40	3	10.0	11.1	3200.0	77.12	75.74	46.20	NO
800.	28.80	3	10.0	11.1	3200.0	77.12	85.25	51.70	NO
900.	34.78	1	1.0	1.1	525.7	524.67	237.10	389.76	NO
1000.	36.36	1	1.0	1.1	525.7	524.67	252.20	475.42	NO
1100.	35.33	1	1.0	1.1	525.7	524.67	267.53	573.06	NO
1200.	33.57	1	1.0	1.1	525.7	524.67	283.02	682.43	NO
1300.	31.83	1	1.0	1.1	525.7	524.67	298.63	803.41	NO
1400.	30.24	1	1.0	1.1	525.7	524.67	314.32	935.91	NO
1500.	28.80	1	1.0	1.1	525.7	524.67	330.06	1079.92	NO
1600.	27.49	1	1.0	1.1	525.7	524.67	345.83	1235.45	NO
1700.	26.29	1	1.0	1.1	525.7	524.67	361.61	1402.51	NO
1800.	25.19	1	1.0	1.1	525.7	524.67	377.39	1581.14	NO
1900.	24.18	1	1.0	1.1	525.7	524.67	393.16	1771.39	NO
2000.	23.25	1	1.0	1.1	525.7	524.67	408.91	1973.30	NO
2100.	22.39	1	1.0	1.1	525.7	524.67	424.63	2186.92	NO

2200.	21.59	1	1.0	1.1	525.7	524.67	440.33	2412.31	NO
2300.	20.85	1	1.0	1.1	525.7	524.67	455.98	2649.52	NO
2400.	20.16	1	1.0	1.1	525.7	524.67	471.60	2898.59	NO
2500.	19.51	1	1.0	1.1	525.7	524.67	487.18	3159.57	NO
2600.	18.91	1	1.0	1.1	525.7	524.67	502.71	3432.53	NO
2700.	18.79	2	1.0	1.1	525.7	524.67	398.82	354.49	NO
2800.	18.98	2	1.0	1.1	525.7	524.67	410.23	366.66	NO
2900.	19.08	2	1.0	1.1	525.7	524.67	421.63	378.94	NO
3000.	19.10	2	1.0	1.1	525.7	524.67	433.02	391.32	NO
3500.	18.44	2	1.0	1.1	525.7	524.67	489.74	454.64	NO
4000.	17.13	2	1.0	1.1	525.7	524.67	545.99	519.85	NO
4500.	17.08	5	1.0	1.5	10000.0	141.88	201.67	61.87	NO
5000.	18.27	5	1.0	1.5	10000.0	141.88	221.22	64.35	NO
5500.	19.22	5	1.0	1.5	10000.0	141.88	240.58	66.75	NO
6000.	19.97	5	1.0	1.5	10000.0	141.88	259.78	69.06	NO
6500.	20.53	5	1.0	1.5	10000.0	141.88	278.81	71.30	NO
7000.	20.94	5	1.0	1.5	10000.0	141.88	297.69	73.47	NO
7500.	21.22	5	1.0	1.5	10000.0	141.88	316.42	75.58	NO
8000.	21.40	5	1.0	1.5	10000.0	141.88	335.02	77.64	NO
8500.	21.48	5	1.0	1.5	10000.0	141.88	353.49	79.64	NO
9000.	21.49	5	1.0	1.5	10000.0	141.88	371.84	81.60	NO
9500.	21.43	5	1.0	1.5	10000.0	141.88	390.07	83.51	NO
10000.	21.32	5	1.0	1.5	10000.0	141.88	408.20	85.38	NO
15000.	18.65	5	1.0	1.5	10000.0	141.88	584.28	100.84	NO
20000.	15.87	5	1.0	1.5	10000.0	141.88	753.01	113.95	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

995.	36.37	1	1.0	1.1	525.7	524.67	251.59	471.76	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SCREEN DISCRETE DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
30500.	12.79	6	1.0	1.8	10000.0	116.26	726.46	73.49	NO
36000.	11.71	6	1.0	1.8	10000.0	116.26	839.74	76.53	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

SIMPLE TERRAIN 36.37 995. 0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

NAPLES LANDFILL 020701 LA DEQ METHOD FOR CALCULATING STACK VARIABLES

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	13.5000
STACK HEIGHT (M)	=	22.0200
STK INSIDE DIAM (M)	=	1.4500
STK EXIT VELOCITY (M/S)	=	20.0000
STK GAS EXIT TEMP (K)	=	1273.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	.0000
MIN HORIZ BLDG DIM (M)	=	.0000
MAX HORIZ BLDG DIM (M)	=	.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 79.360 M**4/S**3; MOM. FLUX = 48.392 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.1	528.4	527.36	2.76	2.74	NO
100.	.3485	6	1.0	1.5	10000.0	113.73	26.52	26.31	NO
200.	.6355	5	1.0	1.3	10000.0	138.51	35.25	33.86	NO
300.	2.536	3	10.0	10.8	3200.0	71.37	35.24	21.89	NO
400.	12.57	3	10.0	10.8	3200.0	71.37	45.72	28.22	NO
500.	23.96	3	10.0	10.8	3200.0	71.37	55.95	34.39	NO
600.	31.35	3	10.0	10.8	3200.0	71.37	65.98	40.44	NO
700.	34.50	3	10.0	10.8	3200.0	71.37	75.81	46.32	NO
800.	34.78	3	10.0	10.8	3200.0	71.37	85.32	51.81	NO
900.	35.23	4	20.0	22.5	6400.0	43.97	62.25	30.24	NO
1000.	36.63	1	1.0	1.1	528.4	527.36	253.78	476.26	NO
1100.	35.64	1	1.0	1.1	528.4	527.36	269.02	573.76	NO
1200.	33.89	1	1.0	1.1	528.4	527.36	284.43	683.02	NO
1300.	32.15	1	1.0	1.1	528.4	527.36	299.97	803.91	NO
1400.	30.56	1	1.0	1.1	528.4	527.36	315.59	936.34	NO
1500.	29.12	1	1.0	1.1	528.4	527.36	331.27	1080.29	NO
1600.	27.80	1	1.0	1.1	528.4	527.36	346.99	1235.77	NO
1700.	26.59	1	1.0	1.1	528.4	527.36	362.72	1402.79	NO
1800.	25.49	1	1.0	1.1	528.4	527.36	378.45	1581.39	NO
1900.	24.47	1	1.0	1.1	528.4	527.36	394.18	1771.62	NO
2000.	23.53	1	1.0	1.1	528.4	527.36	409.89	1973.50	NO

2100.	22.85	4	10.0	11.3	3200.0	69.46	134.41	53.50	NO
2200.	22.31	4	10.0	11.3	3200.0	69.46	140.14	55.02	NO
2300.	21.76	4	10.0	11.3	3200.0	69.46	145.84	56.52	NO
2400.	21.20	4	10.0	11.3	3200.0	69.46	151.52	58.01	NO
2500.	20.65	4	10.0	11.3	3200.0	69.46	157.18	59.47	NO
2600.	20.09	4	10.0	11.3	3200.0	69.46	162.81	60.91	NO
2700.	19.55	4	8.0	9.0	2560.0	81.32	168.73	63.16	NO
2800.	19.18	4	8.0	9.0	2560.0	81.32	174.31	64.55	NO
2900.	19.27	2	1.0	1.1	528.4	527.36	422.58	379.99	NO
3000.	19.30	2	1.0	1.1	528.4	527.36	433.94	392.35	NO
3500.	18.75	5	1.5	2.0	10000.0	123.78	161.40	54.51	NO
4000.	20.71	5	1.5	2.0	10000.0	123.78	181.40	57.64	NO
4500.	22.08	5	1.0	1.3	10000.0	138.51	201.85	62.43	NO
5000.	23.26	5	1.0	1.3	10000.0	138.51	221.38	64.89	NO
5500.	24.16	5	1.0	1.3	10000.0	138.51	240.73	67.27	NO
6000.	24.84	5	1.0	1.3	10000.0	138.51	259.91	69.56	NO
6500.	25.31	5	1.0	1.3	10000.0	138.51	278.93	71.79	NO
7000.	25.61	5	1.0	1.3	10000.0	138.51	297.80	73.95	NO
7500.	25.78	5	1.0	1.3	10000.0	138.51	316.53	76.04	NO
8000.	25.84	5	1.0	1.3	10000.0	138.51	335.12	78.09	NO
8500.	25.80	5	1.0	1.3	10000.0	138.51	353.59	80.08	NO
9000.	25.68	5	1.0	1.3	10000.0	138.51	371.93	82.03	NO
9500.	25.51	5	1.0	1.3	10000.0	138.51	390.16	83.93	NO
10000.	25.28	5	1.0	1.3	10000.0	138.51	408.28	85.79	NO
15000.	21.60	5	1.0	1.3	10000.0	138.51	584.34	101.19	NO
20000.	18.90	6	1.0	1.5	10000.0	113.73	501.63	65.74	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

998.	36.63	1	1.0	1.1	528.4	527.36	253.63	475.35	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SCREEN DISCRETE DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
30500.	15.88	6	1.0	1.5	10000.0	113.73	726.50	73.95	NO
36000.	14.45	6	1.0	1.5	10000.0	113.73	839.78	76.96	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

SIMPLE TERRAIN	36.63	998.	0.

****
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****

02/07/01
15:15:23

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

NAPLES LANDFILL 020701 TNRCC METHOD FOR CALCULATING STACK VARIABLES

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	13.5000
STACK HEIGHT (M)	=	22.0200
STK INSIDE DIAM (M)	=	1.8900
STK EXIT VELOCITY (M/S)	=	20.0000
STK GAS EXIT TEMP (K)	=	1273.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	.0000
MIN HORIZ BLDG DIM (M)	=	.0000
MAX HORIZ BLDG DIM (M)	=	.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 134.831 M**4/S**3; MOM. FLUX = 82.217 M**4/S**2.

*** FULL METEOROLOGY ***

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*** SCREEN AUTOMATED DISTANCES ***
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*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
1.	.0000	1	1.0	1.1	717.6	716.56	3.28	3.26	NO
100.	.4290	6	1.0	1.5	10000.0	131.45	31.53	31.35	NO
200.	.6434	5	1.0	1.3	10000.0	161.02	41.38	40.20	NO
300.	.7291	5	1.0	1.3	10000.0	161.02	43.16	40.66	NO
400.	2.401	3	10.0	10.8	3200.0	89.85	46.17	28.94	NO
500.	8.356	1	3.0	3.2	960.0	253.53	122.26	114.55	NO
600.	17.31	1	3.0	3.2	960.0	253.53	142.91	162.68	NO
700.	19.48	1	3.0	3.2	960.0	253.53	163.08	221.15	NO
800.	24.00	1	1.5	1.6	486.0	485.05	213.58	310.37	NO
900.	27.51	1	1.5	1.6	486.0	485.05	231.67	386.48	NO
1000.	27.76	1	1.5	1.6	486.0	485.05	247.10	472.74	NO
1100.	26.55	1	1.5	1.6	486.0	485.05	262.73	570.84	NO
1200.	25.10	1	1.5	1.6	486.0	485.05	278.49	680.57	NO
1300.	23.75	1	1.5	1.6	486.0	485.05	294.34	801.82	NO
1400.	22.53	1	1.5	1.6	486.0	485.05	310.25	934.55	NO
1500.	21.43	1	1.5	1.6	486.0	485.05	326.18	1078.74	NO
1600.	20.48	4	20.0	22.5	6400.0	52.31	104.91	44.43	NO
1700.	19.63	4	20.0	22.5	6400.0	52.31	110.80	46.12	NO
1800.	18.81	4	20.0	22.5	6400.0	52.31	116.66	47.78	NO
1900.	18.16	4	15.0	16.9	4800.0	64.30	122.76	50.09	NO
2000.	17.67	4	15.0	16.9	4800.0	64.30	128.54	51.67	NO
2100.	17.16	4	15.0	16.9	4800.0	64.30	134.30	53.22	NO

2200.	16.66	4	15.0	16.9	4800.0	64.30	140.03	54.75	NO
2300.	16.15	4	15.0	16.9	4800.0	64.30	145.74	56.26	NO
2400.	15.66	4	15.0	16.9	4800.0	64.30	151.42	57.75	NO
2500.	15.17	4	15.0	16.9	4800.0	64.30	157.08	59.22	NO
2600.	14.89	2	1.5	1.6	486.0	485.05	384.10	338.71	NO
2700.	14.97	2	1.5	1.6	486.0	485.05	395.61	350.88	NO
2800.	14.99	2	1.5	1.6	486.0	485.05	407.11	363.17	NO
2900.	14.94	2	1.5	1.6	486.0	485.05	418.60	375.57	NO
3000.	14.85	2	1.5	1.6	486.0	485.05	430.07	388.06	NO
3500.	13.95	2	1.5	1.6	486.0	485.05	487.13	451.83	NO
4000.	12.76	2	1.5	1.6	486.0	485.05	543.66	517.40	NO
4500.	12.99	5	2.0	2.6	10000.0	132.35	201.56	61.51	NO
5000.	13.71	5	1.5	2.0	10000.0	143.45	221.59	65.63	NO
5500.	14.32	5	1.5	2.0	10000.0	143.45	240.93	67.98	NO
6000.	14.92	5	1.0	1.3	10000.0	161.02	260.81	72.86	NO
6500.	15.49	5	1.0	1.3	10000.0	161.02	279.77	74.99	NO
7000.	15.96	5	1.0	1.3	10000.0	161.02	298.59	77.05	NO
7500.	16.34	5	1.0	1.3	10000.0	161.02	317.27	79.07	NO
8000.	16.64	5	1.0	1.3	10000.0	161.02	335.82	81.04	NO
8500.	16.86	5	1.0	1.3	10000.0	161.02	354.25	82.96	NO
9000.	17.03	5	1.0	1.3	10000.0	161.02	372.57	84.84	NO
9500.	17.14	5	1.0	1.3	10000.0	161.02	390.76	86.68	NO
10000.	17.21	5	1.0	1.3	10000.0	161.02	408.86	88.48	NO
15000.	16.06	5	1.0	1.3	10000.0	161.02	584.74	103.48	NO
20000.	14.27	5	1.0	1.3	10000.0	161.02	753.37	116.29	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

957.	27.94	1	1.5	1.6	486.0	485.05	240.59	435.05	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

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*** SCREEN DISCRETE DISTANCES ***
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*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
30500.	11.26	6	1.0	1.5	10000.0	131.45	726.70	75.89	NO
36000.	10.47	6	1.0	1.5	10000.0	131.45	839.95	78.83	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

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*** SUMMARY OF SCREEN MODEL RESULTS ***
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CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

SIMPLE TERRAIN 27.94 957. 0.

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** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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