Appendix C2
Sample calculation of evaporative loss from fixed roof tanks

The evaporative loss calculation procedures are based on the American Petroleum Institute (API) methodology (API Publication 2519) which is equivalent to the methodology in Ch.7 of [5]. Table C2.1 shows all the assumptions made in the calculation.

Table C2.1 Parameters used in the calculation of evaporative loss

Symbol	Symbol description	Value	Reference (from [5] unless specified)
Q	Annual net throughput (bbl/yr)	5.7264 E+6	-
D	Tank diameter (ft)	142.72	Given
H_S	Tank shell height (ft)	81.04	Given
H_L	Stock liquid height (ft)	71.19	From engineer
S_R	Tank cone roof slope (ft/ft)	0.0625	Typical value, note 2, p.7.1-12
R_S	Tank shell radius	½ D	-
M_v	Stock vapour molecular weight (lb/lb-mole)	130	Table 7.1-2, jet kerosene
P_{VA}	Stock vapour pressure (psi)	0.011	Table 7.1-2, storage temperature assumed to be 70˚F
P_A	Atmospheric pressure (Pa)	1.013×10^5	-
R	Ideal gas constant (psia-ft^3/lb-mol-ºR)	10.731	-
T_{LA}	Daily average liquid surface temp. (ºR)	See below	-
T_{AA}	Daily average ambient temp. (ºR)	533.4	From HKO
T_B	Liquid bulk temp.	See below	-
T_{LX}	Maximum liquid temp.	See below	-
T_{LN}	Minimum liquid temp.	See below	-
A	Paint solar absorptance	0.17	Typical value, table 7.1-6
I	Daily total solar insolation (Btu/ft^2-d)	1273.5	From HKO
ΔT_V	Daily vapour temp. range (ºR)	See below	-
ΔP_V	Daily vapour pressure range (ºR)	See below	-
ΔT_A	Daily ambient temp. range (ºR)	8.64	From HKO
ΔP_B	Breather vent pressure setting range (psia)	See below	-
ΔP_{BP}	Breather vent pressure setting	0.03	Typical value, p. 7.1-17
ΔP_{BV}	Breather vent vacuum setting	-0.03	Typical value, p. 7.1-17
P_{VX}	Vapour pressure at T_{LX}	See below	-
P_{VN}	Vapour pressure at T_{LN}	See below	-
Kp	Product factor	1	Volatile organic liquid
N	Turnovers per year	See below	-
V_{LX}	Tank maximum liquid volume (ft^3)	See below	-
H_{LX}	maximum liquid height (ft)	71.19 = H_L	-

Total Loss

Total Loss, L_T, is the sum of the working loss (L_W) and the standing storage loss (L_S).

$L_T = L_W + L_S$
$= 8188.8 + 311.2 = 8500$ lb/yr $= 0.1223$ g/s

Standing storage loss (L_S)

$L_S = 365 W_V V_V K_E K_S$
$= 365*2.49E-04*181361*0.019*0.9934$
$= 311.2$ lb/yr

Tank vapour space volume V_V,
$V_V = \pi/4\ D^2\ H_{VO}$
$H_{VO} = H_S - H_L + H_{RO}$
$= H_S - H_L + 1/3 S_R R_S$
$= H_S - H_L + 1/3 S_R (1/2D)$
$= 81.04 - 71.19 + 1/3(0.0625)(0.5*142.72)$
$= 11.3367$ ft

Therefore,
$V_V = \pi/4\ (142.72)^2 (11.3367) = 181361$ ft^3

Vapour density W_V
$W_V = M_V\ P_{VA}/(R\ T_{LA})$

$T_{LA} = 0.44\ T_{AA} + 0.56\ T_B + 0.0079\ \alpha I$
$= 0.44\ T_{AA} + 0.56\ (T_{AA} + 6\alpha - 1) + 0.0079\ \alpha I$
$= 0.44\ (9/5*23+32+460) + 0.56\ ((9/5*23+32+460) + 6*0.17 - 1) + 0.0079*0.17*1273.5$
$= 535.12$ ˚R

Therefore,
$W_V = M_V\ P_{VA}/(R\ T_{LA}) = 130*0.011\ /\ (10.731*535.12) = 2.49$ E-04 lb/ ft^3

Vapour space expansion factor K_E
$K_E = \Delta T_V/\ T_{LA} + (\Delta P_V - \Delta P_B)/(P_A - P_{VA})$

$\Delta T_V = 0.72\ \Delta T_A + 0.028\ \alpha I = 0.72*9/5(4.8) + 0.028*0.17*1273.5 = 12.28$ ˚R
$\Delta P_V = P_{VX}$ (at T_{LX})- P_{VN} (at T_{LN}) $\approx 0.015 - 0.011 = 0.004$ psia

Since $T_{LX} = T_{LA} + 0.25\ \Delta T_V = 535.12 + 0.25*12.28 = 538.19$ ˚R $= 78.19$ ˚F
$T_{LN} = T_{LA} - 0.25\ \Delta T_V = 72.05$ ˚F

$\Delta P_B = \Delta P_{BP} - \Delta P_{BV} = 0.03 - (-0.03) = 0.06$ psia

Therefore,
$K_E = \Delta T_V/\ T_{LA} + (\Delta P_V - \Delta P_B)/(P_A - P_{VA}) = 12.28\ /\ 535.12 + (0.004 - 0.06)/(14.7 - 0.011)$
$= 0.019$

Vented vapour space saturation factor K_S
$K_S = (1 + 0.053\ P_{VA}\ H_{VO})^{-1} = (1 + 0.053*0.011*11.3367)^{-1} = 0.9934$

Working Loss (L_W)

$L_W = (0.0010)(M_V)(P_{VA})(Q)(K_N)(K_P)$
$= 0.001*130*0.011*5.7264\ E+6*1*1$
$= 8188.8$ lb/yr

$Q = 8740000$ x 1000 kg/yr / 12 tanks / 800 kg/m^3 x 264.17 gal/m^3 x 2.381 bbl/ 100 gal
$= 5.7264\ E+6$ bbl/yr

(8740000 ton/yr from this report Table 3.2, adoption of this figure based on the definition of Q in Chapter 7 and methodology in section 7.1.5. of AP-42)

$N = 5.614Q/V_{LX} = 5.614Q / (\pi/4*D^2H_{LX}) = 5.614(5.7264\ E+6) / (\pi/4*(142.72)^2*71.19)$
$= 28.23 < 36$
then $K_N = 1$

1 ISCST3 - (DATED 99155)

ISCST3X PC (32 BIT) VERSION 3.3.1
(C) COPYRIGHT 1991-2000, TRINITY CONSULTANTS

Run Began on 1/22/2007 at 19:11:01

** BREEZE ISC SUITE v3.3.2 - C:\PAFF_Data\odour\FAR_f_r3.DAT

** Trinity Consultants, Dallas, TX

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CO POLLUTID  ODOUR
CO TERRHGTS  ELEV
CO FLAGPOLE  0.01
CO RUNORNOT  RUN
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CO FINISHED

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RE GRIDPOLR GRD2 FLAG  15  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  16  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  17  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  18  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  19  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  20  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  21  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  22  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  23  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  24  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  25  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  26  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  27  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  28  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  29  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  30  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  31  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  32  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  33  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  34  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  35  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 FLAG  36  23.0  23.0  23.0  23.0
RE GRIDPOLR GRD2 END
RE GRIDPOLR GRD3 STA
RE GRIDPOLR GRD3 ORIG  810630  825494
RE GRIDPOLR GRD3 DIST  200  400  600  800
RE GRIDPOLR GRD3 GDIR  36  0  10.00
```

```
RE GRIDPOLR GRD3 ELEV  1  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  2  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  3  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  4  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  5  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  6  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  7  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  8  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  9  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  10  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  11  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  12  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  13  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  14  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  15  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  16  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  17  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  18  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  19  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  20  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  21  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  22  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  23  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  24  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  25  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  26  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  27  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  28  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  29  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  30  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  31  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  32  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  33  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  34  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  35  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 ELEV  36  0.0  0.0  0.0  0.0
RE GRIDPOLR GRD3 FLAG  1  30.0  30.0  30.0  30.0
```

```
RE GRIDPOLR GRD3 FLAG  2  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  3  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  4  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  5  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  6  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  7  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  8  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  9  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  10  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  11  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  12  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  13  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  14  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  15  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  16  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  17  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  18  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  19  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  20  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  21  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  22  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  23  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  24  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  25  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  26  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  27  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  28  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  29  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  30  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  31  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  32  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  33  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  34  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  35  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 FLAG  36  30.0  30.0  30.0  30.0
RE GRIDPOLR GRD3 END
```

```
RE DISCCART  810466.0  825564.0  0  1.5
RE DISCCART  810466.0  825564.0  0  23
RE DISCCART  810466.0  825564.0  0  30
RE DISCCART  810147.0  825660.0  0  1.5
RE DISCCART  810147.0  825660.0  0  23
RE DISCCART  810147.0  825660.0  0  30
RE DISCCART  810506.0  825373.0  0  1.5
RE DISCCART  810506.0  825373.0  0  23
RE DISCCART  810506.0  825373.0  0  30
RE DISCCART  810684.0  825390.0  0  1.5
RE DISCCART  810684.0  825390.0  0  23
RE DISCCART  810684.0  825390.0  0  30
RE DISCCART  810761.0  825489.0  0  1.5
RE DISCCART  810761.0  825489.0  0  23
RE DISCCART  810761.0  825489.0  0  30
RE DISCCART  810767.0  825616.0  0  1.5
RE DISCCART  810767.0  825616.0  0  23
RE DISCCART  810767.0  825616.0  0  30
RE FINISHED

ME STARTING
ME INPUTFIL  C:\PAFF_D~1\ODOUR\MET_F.PRN  FREE
ME ANEMHGHT  10  METERS
ME SURFDATA  12345  1999
ME UAIRDATA  12346  1999
ME STARTEND  1999  01  01  1  1999  01  02  12
ME FINISHED

OU STARTING
OU RECTABLE  1  FIRST
OU POSTFILE  1  ALL  PLOT  C:\PAFF_DATA\ODOUR\FAR_F_R2.PST
OU PLOTFILE  1  ALL  FIRST  C:\PAFF_DATA\ODOUR\FAR_F_R3.PLT
OU FINISHED

** PROJECTN  0 104 7 -177 0 0.9996 500000 0
** OUTFILE  C:\PAFF_D~1\odour\FAR_f_r3.lst
** RAWFILE  C:\PAFF_D~1\odour\FAR_f_r3.RAW
```

** RAWFMT 2

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

1 *** ISCST3 - VERSION 99155 ***     ***  PAFF ODOUR ASSESSMENT                                    ***        01/22/07
                                     ***                                                           ***        19:11:02
                                                                                                             PAGE   1
 **MODELOPTs:
 CONC                        RURAL  ELEV   FLGPOL        GRDRIS              NOCALM

                                      ***     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 User-Specified Options:
            1. Gradual Plume Rise.
            2. Stack-tip Downwash.
            3. Buoyancy-induced Dispersion.
            4. Not Use Calms Processing Routine.
            5. Not Use Missing Data Processing Routine.
            6. Default Wind Profile Exponents.
            7. Default Vertical Potential Temperature Gradients.

 **Model Accepts Receptors on ELEV Terrain.

 **Model Accepts FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:   1-HR

 **This Run Includes:    36 Source(s);      1 Source Group(s); and     450 Receptor(s)

 **The Model Assumes A Pollutant Type of:  ODOUR

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

 **Output Options Selected:
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of Concurrent Values for Postprocessing (POSTFILE Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **Misc. Inputs:  Anem. Hgt. (m) =    10.00 ;    Decay Coef. =       0.0000 ;    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 =     1.3 MB of RAM.

 **Input Runstream File:          C:\PAFF_DATA\ODOUR\FAR_F_R3.DAT
 **Output Print File:             C:\PAFF_DATA\ODOUR\FAR_F_R3.LST
 **Detailed Error/Message File:   C:\PAFF_DATA\ODOUR\FAR_F_R3.ERR
1 *** ISCST3 - VERSION 99155 ***    ***  PAFF ODOUR ASSESSMENT                                    ***        01/22/07
                                    ***                                                           ***        19:11:02
                                                                                                             PAGE   2
 **MODELOPTs:
 CONC                        RURAL  ELEV   FLGPOL        GRDRIS              NOCALM


                                  *** VOLUME SOURCE DATA ***
```

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
T1	0	0.40700E-01	810492.0	825460.6	-1.7	23.00	0.06	11.50	
T2	0	0.40700E-01	810509.3	825448.5	-1.7	23.00	0.06	11.50	
T3	0	0.40700E-01	810525.8	825436.2	-1.7	23.00	0.06	11.50	
T4	0	0.40700E-01	810535.7	825505.3	-1.7	23.00	0.06	11.50	
T5	0	0.40700E-01	810546.2	825495.4	-1.7	23.00	0.06	11.50	
T6	0	0.40700E-01	810560.3	825478.0	-1.7	23.00	0.06	11.50	
T7	0	0.40700E-01	810580.5	825565.9	-1.7	23.00	0.06	11.50	
T8	0	0.40700E-01	810593.6	825553.8	-1.7	23.00	0.06	11.50	
T9	0	0.40700E-01	810607.3	825539.2	-1.7	23.00	0.06	11.50	
T10	0	0.40700E-01	810620.4	825601.0	-1.7	23.00	0.06	11.50	
T11	0	0.40700E-01	810636.1	825589.7	-1.7	23.00	0.06	11.50	
T12	0	0.40700E-01	810650.6	825576.8	-1.7	23.00	0.06	11.50	
T13	0	0.40700E-01	810556.6	825450.8	-1.7	23.00	0.06	11.50	
T14	0	0.40700E-01	810570.1	825440.1	-1.7	23.00	0.06	11.50	
T15	0	0.40700E-01	810584.0	825424.4	-1.7	23.00	0.06	11.50	
T16	0	0.40700E-01	810592.1	825496.6	-1.7	23.00	0.06	11.50	
T17	0	0.40700E-01	810604.2	825482.4	-1.7	23.00	0.06	11.50	
T18	0	0.40700E-01	810619.9	825467.9	-1.7	23.00	0.06	11.50	
T19	0	0.40700E-01	810639.8	825549.7	-1.7	23.00	0.06	11.50	
T20	0	0.40700E-01	810651.2	825536.8	-1.7	23.00	0.06	11.50	
T21	0	0.40700E-01	810667.1	825522.5	-1.7	23.00	0.06	11.50	
T22	0	0.40700E-01	810681.3	825592.0	-1.7	23.00	0.06	11.50	
T23	0	0.40700E-01	810696.2	825576.5	-1.7	23.00	0.06	11.50	
T24	0	0.40700E-01	810708.3	825564.0	-1.7	23.00	0.06	11.50	
T25	0	0.40700E-01	810596.9	825407.1	-1.7	23.00	0.06	11.50	
T26	0	0.40700E-01	810613.4	825393.0	-1.7	23.00	0.06	11.50	
T27	0	0.40700E-01	810627.1	825382.7	-1.7	23.00	0.06	11.50	
T28	0	0.40700E-01	810635.8	825454.2	-1.7	23.00	0.06	11.50	
T29	0	0.40700E-01	810647.3	825445.7	-1.7	23.00	0.06	11.50	
T30	0	0.40700E-01	810664.2	825429.4	-1.7	23.00	0.06	11.50	
T31	0	0.40700E-01	810679.4	825510.2	-1.7	23.00	0.06	11.50	
T32	0	0.40700E-01	810694.5	825499.5	-1.7	23.00	0.06	11.50	
T33	0	0.40700E-01	810705.8	825485.8	-1.7	23.00	0.06	11.50	
T34	0	0.40700E-01	810716.7	825548.7	-1.7	23.00	0.06	11.50	
T35	0	0.40700E-01	810734.1	825539.6	-1.7	23.00	0.06	11.50	
T36	0	0.40700E-01	810747.6	825524.7	-1.7	23.00	0.06	11.50	

**MODELOPTS:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL T1 , T2 , T3 , T4 , T5 , T6 , T7 , T8 , T9 , T10 , T11 , T12 ,
T13 , T14 , T15 , T16 , T17 , T18 , T19 , T20 , T21 , T22 , T23 , T24 ,
T25 , T26 , T27 , T28 , T29 , T30 , T31 , T32 , T33 , T34 , T35 , T36 ,

**MODELOPTS:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: GRD1 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 810630.00 ; Y-ORIG = 825494.00 (METERS)

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

200.0, 400.0, 600.0, 800.0,

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

360.0, 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,

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**MODELOPTs: PAGE 5
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** NETWORK ID: GRD1 ; NETWORK TYPE: GRIDPOLR ***

* ELEVATION HEIGHTS IN METERS *

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	0.00
30.00	0.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	0.00
50.00	0.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	0.00
70.00	0.00	0.00	0.00	0.00
80.00	0.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	0.00	0.00
130.00	0.00	0.00	0.00	0.00
140.00	0.00	0.00	0.00	0.00
150.00	0.00	0.00	0.00	0.00
160.00	0.00	0.00	0.00	0.00
170.00	0.00	0.00	0.00	0.00
180.00	0.00	0.00	0.00	0.00
190.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00
210.00	0.00	0.00	0.00	0.00
220.00	0.00	0.00	0.00	0.00
230.00	0.00	0.00	0.00	0.00
240.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	0.00	0.00
260.00	0.00	0.00	0.00	0.00
270.00	0.00	0.00	0.00	0.00
280.00	0.00	0.00	0.00	0.00
290.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	0.00	0.00
310.00	0.00	0.00	0.00	0.00
320.00	0.00	0.00	0.00	0.00
330.00	0.00	0.00	0.00	0.00
340.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	0.00	0.00

1 *** ISCST3 - VERSION 99155 *** *** PAFF ODOUR ASSESSMENT *** 01/22/07
*** *** 19:11:02
**MODELOPTs: PAGE 6
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** NETWORK ID: GRD1 ; NETWORK TYPE: GRIDPOLR ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

DIRECTION | DISTANCE (METERS)

(DEGREES)	200.00	400.00	600.00	800.00
360.00	1.50	1.50	1.50	1.50
10.00	1.50	1.50	1.50	1.50
20.00	1.50	1.50	1.50	1.50
30.00	1.50	1.50	1.50	1.50
40.00	1.50	1.50	1.50	1.50
50.00	1.50	1.50	1.50	1.50
60.00	1.50	1.50	1.50	1.50
70.00	1.50	1.50	1.50	1.50
80.00	1.50	1.50	1.50	1.50
90.00	1.50	1.50	1.50	1.50
100.00	1.50	1.50	1.50	1.50
110.00	1.50	1.50	1.50	1.50
120.00	1.50	1.50	1.50	1.50
130.00	1.50	1.50	1.50	1.50
140.00	1.50	1.50	1.50	1.50
150.00	1.50	1.50	1.50	1.50
160.00	1.50	1.50	1.50	1.50
170.00	1.50	1.50	1.50	1.50
180.00	1.50	1.50	1.50	1.50
190.00	1.50	1.50	1.50	1.50
200.00	1.50	1.50	1.50	1.50
210.00	1.50	1.50	1.50	1.50
220.00	1.50	1.50	1.50	1.50
230.00	1.50	1.50	1.50	1.50
240.00	1.50	1.50	1.50	1.50
250.00	1.50	1.50	1.50	1.50
260.00	1.50	1.50	1.50	1.50
270.00	1.50	1.50	1.50	1.50
280.00	1.50	1.50	1.50	1.50
290.00	1.50	1.50	1.50	1.50
300.00	1.50	1.50	1.50	1.50
310.00	1.50	1.50	1.50	1.50
320.00	1.50	1.50	1.50	1.50
330.00	1.50	1.50	1.50	1.50
340.00	1.50	1.50	1.50	1.50
350.00	1.50	1.50	1.50	1.50

**MODELOPTs:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: GRD2 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 810630.00 ; Y-ORIG = 825494.00 (METERS)

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

200.0, 400.0, 600.0, 800.0,

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

360.0, 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,

**MODELOPTs:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** NETWORK ID: GRD2 ; NETWORK TYPE: GRIDPOLR ***

* ELEVATION HEIGHTS IN METERS *

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	0.00
30.00	0.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	0.00
50.00	0.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	0.00
70.00	0.00	0.00	0.00	0.00
80.00	0.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	0.00	0.00
130.00	0.00	0.00	0.00	0.00
140.00	0.00	0.00	0.00	0.00
150.00	0.00	0.00	0.00	0.00
160.00	0.00	0.00	0.00	0.00
170.00	0.00	0.00	0.00	0.00
180.00	0.00	0.00	0.00	0.00
190.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00
210.00	0.00	0.00	0.00	0.00
220.00	0.00	0.00	0.00	0.00
230.00	0.00	0.00	0.00	0.00
240.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	0.00	0.00
260.00	0.00	0.00	0.00	0.00
270.00	0.00	0.00	0.00	0.00
280.00	0.00	0.00	0.00	0.00
290.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	0.00	0.00
310.00	0.00	0.00	0.00	0.00
320.00	0.00	0.00	0.00	0.00
330.00	0.00	0.00	0.00	0.00
340.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	0.00	0.00

**MODELOPTs:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** NETWORK ID: GRD2 ; NETWORK TYPE: GRIDPOLR ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.00	23.00	23.00	23.00	23.00
10.00	23.00	23.00	23.00	23.00
20.00	23.00	23.00	23.00	23.00
30.00	23.00	23.00	23.00	23.00
40.00	23.00	23.00	23.00	23.00
50.00	23.00	23.00	23.00	23.00
60.00	23.00	23.00	23.00	23.00
70.00	23.00	23.00	23.00	23.00
80.00	23.00	23.00	23.00	23.00
90.00	23.00	23.00	23.00	23.00
100.00	23.00	23.00	23.00	23.00
110.00	23.00	23.00	23.00	23.00
120.00	23.00	23.00	23.00	23.00
130.00	23.00	23.00	23.00	23.00
140.00	23.00	23.00	23.00	23.00
150.00	23.00	23.00	23.00	23.00
160.00	23.00	23.00	23.00	23.00
170.00	23.00	23.00	23.00	23.00

180.00	23.00	23.00	23.00	23.00
190.00	23.00	23.00	23.00	23.00
200.00	23.00	23.00	23.00	23.00
210.00	23.00	23.00	23.00	23.00
220.00	23.00	23.00	23.00	23.00
230.00	23.00	23.00	23.00	23.00
240.00	23.00	23.00	23.00	23.00
250.00	23.00	23.00	23.00	23.00
260.00	23.00	23.00	23.00	23.00
270.00	23.00	23.00	23.00	23.00
280.00	23.00	23.00	23.00	23.00
290.00	23.00	23.00	23.00	23.00
300.00	23.00	23.00	23.00	23.00
310.00	23.00	23.00	23.00	23.00
320.00	23.00	23.00	23.00	23.00
330.00	23.00	23.00	23.00	23.00
340.00	23.00	23.00	23.00	23.00
350.00	23.00	23.00	23.00	23.00

CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: GRD3 ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = 810630.00 ; Y-ORIG = 825494.00 (METERS)

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

200.0, 400.0, 600.0, 800.0,

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

360.0, 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,

CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** NETWORK ID: GRD3 ; NETWORK TYPE: GRIDPOLR ***

* ELEVATION HEIGHTS IN METERS *

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	0.00	0.00
20.00	0.00	0.00	0.00	0.00
30.00	0.00	0.00	0.00	0.00
40.00	0.00	0.00	0.00	0.00
50.00	0.00	0.00	0.00	0.00
60.00	0.00	0.00	0.00	0.00
70.00	0.00	0.00	0.00	0.00
80.00	0.00	0.00	0.00	0.00
90.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	0.00	0.00
110.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	0.00	0.00
130.00	0.00	0.00	0.00	0.00
140.00	0.00	0.00	0.00	0.00
150.00	0.00	0.00	0.00	0.00

160.00	0.00	0.00	0.00	0.00
170.00	0.00	0.00	0.00	0.00
180.00	0.00	0.00	0.00	0.00
190.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	0.00	0.00
210.00	0.00	0.00	0.00	0.00
220.00	0.00	0.00	0.00	0.00
230.00	0.00	0.00	0.00	0.00
240.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	0.00	0.00
260.00	0.00	0.00	0.00	0.00
270.00	0.00	0.00	0.00	0.00
280.00	0.00	0.00	0.00	0.00
290.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	0.00	0.00
310.00	0.00	0.00	0.00	0.00
320.00	0.00	0.00	0.00	0.00
330.00	0.00	0.00	0.00	0.00
340.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	0.00	0.00

*** NETWORK ID: GRD3 ; NETWORK TYPE: GRIDPOLR ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.00	30.00	30.00	30.00	30.00
10.00	30.00	30.00	30.00	30.00
20.00	30.00	30.00	30.00	30.00
30.00	30.00	30.00	30.00	30.00
40.00	30.00	30.00	30.00	30.00
50.00	30.00	30.00	30.00	30.00
60.00	30.00	30.00	30.00	30.00
70.00	30.00	30.00	30.00	30.00
80.00	30.00	30.00	30.00	30.00
90.00	30.00	30.00	30.00	30.00
100.00	30.00	30.00	30.00	30.00
110.00	30.00	30.00	30.00	30.00
120.00	30.00	30.00	30.00	30.00
130.00	30.00	30.00	30.00	30.00
140.00	30.00	30.00	30.00	30.00
150.00	30.00	30.00	30.00	30.00
160.00	30.00	30.00	30.00	30.00
170.00	30.00	30.00	30.00	30.00
180.00	30.00	30.00	30.00	30.00
190.00	30.00	30.00	30.00	30.00
200.00	30.00	30.00	30.00	30.00
210.00	30.00	30.00	30.00	30.00
220.00	30.00	30.00	30.00	30.00
230.00	30.00	30.00	30.00	30.00
240.00	30.00	30.00	30.00	30.00
250.00	30.00	30.00	30.00	30.00
260.00	30.00	30.00	30.00	30.00
270.00	30.00	30.00	30.00	30.00
280.00	30.00	30.00	30.00	30.00
290.00	30.00	30.00	30.00	30.00
300.00	30.00	30.00	30.00	30.00
310.00	30.00	30.00	30.00	30.00
320.00	30.00	30.00	30.00	30.00
330.00	30.00	30.00	30.00	30.00
340.00	30.00	30.00	30.00	30.00
350.00	30.00	30.00	30.00	30.00

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 CONC                         RURAL  ELEV   FLGPOL        GRDRIS               NOCALM


                                              *** DISCRETE CARTESIAN RECEPTORS ***
                                               (X-COORD, Y-COORD, ZELEV, ZFLAG)
                                                          (METERS)

     ( 810466.0,  825564.0,        0.0,        1.5);          ( 810466.0,  825564.0,        0.0,       23.0);
     ( 810466.0,  825564.0,        0.0,       30.0);          ( 810147.0,  825660.0,        0.0,        1.5);
     ( 810147.0,  825660.0,        0.0,       23.0);          ( 810147.0,  825660.0,        0.0,       30.0);
     ( 810506.0,  825373.0,        0.0,        1.5);          ( 810506.0,  825373.0,        0.0,       23.0);
     ( 810506.0,  825373.0,        0.0,       30.0);          ( 810684.0,  825390.0,        0.0,        1.5);
     ( 810684.0,  825390.0,        0.0,       23.0);          ( 810684.0,  825390.0,        0.0,       30.0);
     ( 810761.0,  825489.0,        0.0,        1.5);          ( 810761.0,  825489.0,        0.0,       23.0);
     ( 810761.0,  825489.0,        0.0,       30.0);          ( 810767.0,  825616.0,        0.0,        1.5);
     ( 810767.0,  825616.0,        0.0,       23.0);          ( 810767.0,  825616.0,        0.0,       30.0);
1 *** ISCST3 - VERSION 99155 ***     ***  PAFF ODOUR ASSESSMENT                                             ***       01/22/07
                                     ***                                                                    ***       19:11:02
 **MODELOPTs:                                                                                                         PAGE  14
 CONC                         RURAL  ELEV   FLGPOL        GRDRIS               NOCALM


                                             *** 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

                         METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 1999   1  1  1
                                                         AND END DATE: 1999   1  2 12

                    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
1 *** ISCST3 - VERSION 99155 ***     ***  PAFF ODOUR ASSESSMENT                                             ***       01/22/07
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**MODELOPTs:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

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

FILE: C:\PAFF_D~1\ODOUR\MET_F.PRN
FORMAT: FREE
SURFACE STATION NO.: 12345 UPPER AIR STATION NO.: 12346
NAME: UNKNOWN NAME: UNKNOWN
YEAR: 1999 YEAR: 1999

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)
99	01	01	01	10.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	02	20.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	03	30.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	04	40.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	05	50.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	06	60.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	07	70.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	08	80.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	09	90.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	10	100.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	11	110.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	12	120.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	13	130.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	14	140.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	15	150.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	16	160.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	17	170.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	18	180.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	19	190.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	20	200.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	21	210.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	22	220.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	23	230.0	1.00	298.0	6	500.0	500.0	0.0000	0.0	0.0000	0	0.00
99	01	01	24	240.0	1.00	298.0	6	500.0	500.0	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 ELEV FLGPOL GRDRIS NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): T1 , T2 , T3 , T4 , T5 , T6 , T7 ,
T8 , T9 , T10 , T11 , T12 , T13 , T14 , T15 , T16 , T17 , T18 , T19 ,
T20 , T21 , T22 , T23 , T24 , T25 , T26 , T27 , T28 , T29 , T30 , . . . ,

*** NETWORK ID: GRD1 ; NETWORK TYPE: GRIDPOLR ***

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

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.0	97.76097 (99010209)	106.78336 (99010212)	112.46561 (99010212)	112.37363 (99010212)
10.0	102.07915 (99010101)	112.68395 (99010101)	115.88512 (99010101)	116.81676 (99010101)
20.0	98.06953 (99010101)	104.93044 (99010102)	114.21127 (99010102)	118.09464 (99010102)
30.0	113.88924 (99010104)	103.63944 (99010103)	114.63011 (99010103)	119.83638 (99010103)
40.0	117.33009 (99010103)	103.71176 (99010104)	116.60390 (99010104)	122.83931 (99010104)
50.0	103.94810 (99010105)	113.30407 (99010105)	123.56399 (99010105)	128.40555 (99010105)
60.0	114.07542 (99010106)	128.31297 (99010106)	134.19751 (99010106)	135.30544 (99010106)
70.0	107.99329 (99010107)	136.30365 (99010107)	138.96426 (99010107)	136.10016 (99010107)
80.0	96.95206 (99010108)	118.25048 (99010108)	123.08569 (99010108)	123.10806 (99010108)

90.0	89.08736 (99010108)	96.08557 (99010109)	98.94337 (99010109)	102.75260 (99010109)
100.0	148.01193 (99010113)	86.01459 (99010111)	79.32435 (99010110)	85.52462 (99010110)
110.0	142.94000 (99010112)	85.81713 (99010110)	77.96658 (99010112)	73.23059 (99010111)
120.0	106.55688 (99010111)	75.29317 (99010111)	78.73460 (99010113)	66.86327 (99010112)
130.0	136.24171 (99010112)	69.18737 (99010114)	73.24606 (99010112)	67.73150 (99010113)
140.0	80.27248 (99010111)	73.58981 (99010113)	70.20111 (99010113)	73.94492 (99010114)
150.0	122.22798 (99010112)	105.69482 (99010114)	81.00729 (99010115)	81.91098 (99010115)
160.0	92.32824 (99010114)	113.42267 (99010115)	88.18410 (99010116)	90.42872 (99010116)
170.0	132.14357 (99010115)	89.52739 (99010116)	97.56255 (99010117)	101.33031 (99010117)
180.0	106.38267 (99010117)	108.36282 (99010118)	112.67667 (99010118)	112.88130 (99010118)
190.0	123.88708 (99010120)	111.32863 (99010119)	117.90891 (99010119)	118.73817 (99010119)
200.0	121.59411 (99010121)	105.23315 (99010120)	115.00021 (99010120)	119.00964 (99010120)
210.0	103.45548 (99010122)	104.14331 (99010121)	113.83799 (99010121)	118.76992 (99010121)
220.0	86.10814 (99010121)	104.18038 (99010122)	115.24430 (99010122)	120.88741 (99010122)
230.0	103.26625 (99010122)	110.93266 (99010123)	122.45176 (99010123)	127.15883 (99010123)
240.0	151.29846 (99010124)	131.94508 (99010124)	135.70866 (99010124)	135.92128 (99010124)
250.0	134.20857 (99010201)	134.70152 (99010201)	140.11909 (99010201)	137.95644 (99010201)
260.0	95.87582 (99010202)	116.14754 (99010202)	122.73315 (99010202)	124.16966 (99010202)
270.0	164.17967 (99010206)	98.72856 (99010203)	99.71658 (99010203)	103.04195 (99010203)
280.0	96.80815 (99010205)	93.49262 (99010203)	81.14365 (99010204)	86.08498 (99010204)
290.0	125.91234 (99010206)	92.41227 (99010204)	75.72384 (99010206)	72.82544 (99010205)
300.0	117.26544 (99010208)	76.50793 (99010205)	71.29123 (99010207)	65.97964 (99010206)
310.0	145.86046 (99010206)	105.70553 (99010208)	75.61942 (99010206)	67.62442 (99010207)
320.0	91.14764 (99010205)	109.70273 (99010209)	73.43130 (99010207)	74.49833 (99010208)
330.0	101.60745 (99010209)	89.69881 (99010210)	80.51772 (99010209)	81.87795 (99010209)
340.0	113.55778 (99010211)	73.46559 (99010210)	84.10991 (99010210)	90.09093 (99010210)
350.0	115.96352 (99010208)	80.82680 (99010211)	96.76453 (99010211)	101.74338 (99010211)

**MODELOPTs:
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): T1 , T2 , T3 , T4 , T5 , T6 , T7 ,
T8 , T9 , T10 , T11 , T12 , T13 , T14 , T15 , T16 , T17 , T18 , T19 ,
T20 , T21 , T22 , T23 , T24 , T25 , T26 , T27 , T28 , T29 , T30 , . . . ,

*** NETWORK ID: GRD2 ; NETWORK TYPE: GRIDPOLR ***

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

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.0	183.99799 (99010209)	143.69542 (99010212)	128.53731 (99010212)	115.57777 (99010212)
10.0	177.03436 (99010101)	150.71942 (99010101)	132.05276 (99010101)	120.03364 (99010101)
20.0	182.88066 (99010101)	140.38478 (99010102)	130.28841 (99010102)	121.41998 (99010102)
30.0	203.36868 (99010102)	139.96030 (99010103)	131.27783 (99010103)	123.39932 (99010103)
40.0	210.14688 (99010103)	140.13106 (99010104)	133.61139 (99010104)	126.52290 (99010104)
50.0	185.58302 (99010105)	152.37466 (99010105)	141.17688 (99010105)	132.06487 (99010105)
60.0	199.21970 (99010105)	171.02237 (99010106)	152.73808 (99010106)	138.89604 (99010106)
70.0	188.52701 (99010106)	181.32506 (99010107)	157.88614 (99010107)	139.49934 (99010107)
80.0	161.03972 (99010108)	156.52287 (99010108)	139.41257 (99010108)	125.95627 (99010108)
90.0	155.76163 (99010112)	129.46249 (99010110)	111.71993 (99010109)	104.95341 (99010109)
100.0	283.77921 (99010113)	119.04404 (99010111)	89.55723 (99010110)	87.30805 (99010110)
110.0	251.18958 (99010112)	109.38022 (99010110)	89.95261 (99010112)	74.74540 (99010111)
120.0	179.43925 (99010111)	96.21291 (99010111)	90.50266 (99010113)	68.22484 (99010112)
130.0	236.45984 (99010112)	90.18311 (99010114)	82.61510 (99010112)	69.10482 (99010113)
140.0	143.29501 (99010111)	97.19907 (99010113)	79.63235 (99010113)	75.46896 (99010114)
150.0	216.09668 (99010112)	142.96198 (99010114)	91.62259 (99010115)	83.62910 (99010115)
160.0	161.13315 (99010114)	155.25188 (99010115)	99.72798 (99010116)	92.35583 (99010116)
170.0	240.58556 (99010115)	122.27438 (99010116)	110.39348 (99010117)	103.64889 (99010117)
180.0	190.62230 (99010117)	145.01259 (99010118)	128.22009 (99010118)	115.74616 (99010118)
190.0	223.42157 (99010120)	149.04196 (99010119)	134.36240 (99010119)	121.82753 (99010119)
200.0	215.16469 (99010121)	139.87224 (99010120)	130.57016 (99010120)	121.91750 (99010120)
210.0	178.35587 (99010122)	137.61250 (99010121)	128.76852 (99010121)	121.44190 (99010121)
220.0	146.55952 (99010121)	137.21286 (99010122)	130.17569 (99010122)	123.55123 (99010122)
230.0	177.54280 (99010122)	146.69177 (99010123)	138.81090 (99010123)	130.24074 (99010123)
240.0	278.30679 (99010124)	177.81369 (99010124)	155.07841 (99010124)	139.79755 (99010124)
250.0	245.52852 (99010201)	182.53506 (99010201)	161.11383 (99010201)	142.40012 (99010201)
260.0	192.96689 (99010203)	156.89513 (99010202)	140.97607 (99010202)	128.17493 (99010202)
270.0	326.27747 (99010206)	137.13116 (99010204)	114.17895 (99010203)	106.14294 (99010203)

280.0	170.63890 (99010205)	122.51527 (99010203)	93.03928 (99010204)	88.61052 (99010204)
290.0	224.32635 (99010206)	120.75960 (99010204)	88.20845 (99010206)	74.87918 (99010205)
300.0	210.35713 (99010208)	100.39887 (99010207)	82.25796 (99010207)	67.78068 (99010206)
310.0	259.03397 (99010206)	141.62738 (99010208)	85.62331 (99010206)	69.53741 (99010207)
320.0	163.50432 (99010205)	145.08812 (99010209)	83.36359 (99010207)	76.70546 (99010208)
330.0	183.22826 (99010209)	117.51963 (99010210)	92.23595 (99010209)	84.30701 (99010209)
340.0	197.99747 (99010211)	97.49377 (99010210)	95.98923 (99010210)	92.71626 (99010210)
350.0	210.34612 (99010208)	108.04229 (99010211)	110.57515 (99010211)	104.70439 (99010211)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): T1 , T2 , T3 , T4 , T5 , T6 , T7 ,
T8 , T9 , T10 , T11 , T12 , T13 , T14 , T15 , T16 , T17 , T18 , T19 ,
T20 , T21 , T22 , T23 , T24 , T25 , T26 , T27 , T28 , T29 , T30 , . . . ,

*** NETWORK ID: GRD3 ; NETWORK TYPE: GRIDPOLR ***

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

DIRECTION (DEGREES)	DISTANCE (METERS) 200.00	400.00	600.00	800.00
360.0	147.95381 (99010209)	121.32557 (99010212)	110.72795 (99010212)	100.57146 (99010212)
10.0	144.00758 (99010101)	127.36815 (99010101)	113.79343 (99010101)	104.45662 (99010101)
20.0	147.09241 (99010101)	118.63543 (99010102)	112.26064 (99010102)	105.65789 (99010102)
30.0	164.46924 (99010102)	118.12270 (99010103)	113.06496 (99010103)	107.36669 (99010103)
40.0	170.06810 (99010103)	118.25978 (99010104)	115.06732 (99010104)	110.08158 (99010104)
50.0	150.25676 (99010105)	128.66711 (99010105)	121.61706 (99010105)	114.91531 (99010105)
60.0	160.66628 (99010105)	144.56996 (99010106)	131.62344 (99010106)	120.87554 (99010106)
70.0	151.69656 (99010106)	153.30048 (99010107)	136.07939 (99010107)	121.41389 (99010107)
80.0	131.87767 (99010108)	132.43634 (99010108)	120.20229 (99010108)	109.64423 (99010108)
90.0	125.56588 (99010112)	108.93713 (99010110)	96.36757 (99010109)	91.37737 (99010109)
100.0	227.48718 (99010113)	100.15968 (99010111)	77.25574 (99010110)	76.02055 (99010110)
110.0	204.02457 (99010112)	93.03883 (99010110)	77.42640 (99010112)	65.08441 (99010111)
120.0	146.73669 (99010111)	81.81879 (99010111)	77.93217 (99010113)	59.40897 (99010112)
130.0	192.44363 (99010112)	76.49473 (99010114)	71.27798 (99010112)	60.17564 (99010113)
140.0	116.13096 (99010111)	82.30711 (99010113)	68.66463 (99010113)	65.71513 (99010114)
150.0	175.31050 (99010112)	120.66646 (99010114)	79.02505 (99010115)	72.81782 (99010115)
160.0	130.98692 (99010114)	130.83363 (99010115)	86.01614 (99010116)	80.41319 (99010116)
170.0	194.34711 (99010115)	103.08480 (99010116)	95.20501 (99010117)	90.23270 (99010117)
180.0	154.27051 (99010117)	122.52718 (99010118)	110.50491 (99010118)	100.74223 (99010118)
190.0	180.57336 (99010120)	125.92838 (99010119)	115.78074 (99010119)	106.02947 (99010119)
200.0	174.44852 (99010121)	118.30150 (99010120)	112.55907 (99010120)	106.12159 (99010120)
210.0	145.22054 (99010122)	116.48197 (99010121)	111.05100 (99010121)	105.72412 (99010121)
220.0	119.61185 (99010121)	116.19508 (99010122)	112.28121 (99010122)	107.56403 (99010122)
230.0	144.63409 (99010122)	124.15227 (99010123)	119.68043 (99010123)	113.36648 (99010123)
240.0	224.20186 (99010124)	150.08720 (99010124)	133.58269 (99010124)	121.64079 (99010124)
250.0	197.85333 (99010201)	153.94031 (99010201)	138.68173 (99010201)	123.86693 (99010201)
260.0	152.98001 (99010203)	132.38997 (99010202)	121.36722 (99010202)	111.49471 (99010202)
270.0	259.88373 (99010206)	114.90756 (99010204)	98.34351 (99010203)	92.35022 (99010203)
280.0	138.55936 (99010205)	103.84264 (99010203)	80.12806 (99010204)	77.10345 (99010204)
290.0	181.78308 (99010206)	102.38594 (99010204)	75.83972 (99010206)	65.16271 (99010205)
300.0	170.29988 (99010208)	84.78147 (99010207)	70.79974 (99010207)	58.99048 (99010206)
310.0	210.03300 (99010206)	119.69335 (99010208)	73.84737 (99010206)	60.51458 (99010207)
320.0	132.41859 (99010205)	122.83070 (99010209)	71.88007 (99010207)	66.74481 (99010208)
330.0	148.20302 (99010209)	99.62192 (99010210)	79.44683 (99010209)	73.35824 (99010209)
340.0	160.93869 (99010211)	82.49447 (99010210)	82.71140 (99010210)	80.67744 (99010210)
350.0	170.09819 (99010208)	91.31488 (99010211)	95.26022 (99010211)	91.10711 (99010211)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): T1 , T2 , T3 , T4 , T5 , T6 , T7 ,
T8 , T9 , T10 , T11 , T12 , T13 , T14 , T15 , T16 , T17 , T18 , T19 ,
T20 , T21 , T22 , T23 , T24 , T25 , T26 , T27 , T28 , T29 , T30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
810466.00	825564.00	132.21835	(99010208)	810466.00	825564.00	231.82585	(99010208)
810466.00	825564.00	188.44757	(99010208)	810147.00	825660.00	92.12862	(99010206)
810147.00	825660.00	114.85372	(99010206)	810147.00	825660.00	97.96588	(99010206)
810506.00	825373.00	85.34068	(99010121)	810506.00	825373.00	155.61198	(99010121)
810506.00	825373.00	125.62286	(99010121)	810684.00	825390.00	116.04357	(99010114)
810684.00	825390.00	235.61768	(99010114)	810684.00	825390.00	187.19920	(99010114)
810761.00	825489.00	100.63313	(99010111)	810761.00	825489.00	197.01860	(99010116)
810761.00	825489.00	155.59068	(99010111)	810767.00	825616.00	115.39433	(99010106)
810767.00	825616.00	212.34937	(99010106)	810767.00	825616.00	171.00555	(99010106)

1 *** ISCST3 - VERSION 99155 *** *** PAFF ODOUR ASSESSMENT *** 01/22/07
*** *** 19:11:02
**MODELOPTs: PAGE 20
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

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

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

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	326.27747	ON 99010206: AT (810430.00, 825494.00, 0.00, 23.00)	GP	GRD2

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

1 *** ISCST3 - VERSION 99155 *** *** PAFF ODOUR ASSESSMENT *** 01/22/07
*** *** 19:11:02
**MODELOPTs: PAGE 21
CONC RURAL ELEV FLGPOL GRDRIS NOCALM

*** 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 0 Informational Message(s)

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

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

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