From: "Moorer, Tom C." <TCMOORER@southernco.com>
To: "Mark Notich" <mdn@nrc.gov>
Date: 6/15/2007 4:30:49 PM
Subject: Emailing: VAtmos.inp, Vchronc.inp, VEarly.inp, VMet.inp, vout.txt, VSite.inp

<<VAtmos.inp>>
<<Vchronc.inp>>
<<VEarly.inp>>
M <<VMet.inp>> ar <<vout.txt>> k: <<VSite.inp>>

Here are the current files that should be used for the MACCS2 runs. It appears that the files used before are old, possibly from draft info provided early last year. I am still investigating on this end. Pls. forward to Van.

I will provide official copy on CD next week.

TCM
The message is ready to be sent with the following file or link attachments:

VAtmos.inp
Vchronc.inp
VEarly.inp
VMet.inp
vout.txt
VSite.inp

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Hearing Identifier: Vogtle_Public
Email Number: 433

Mail Envelope Properties (468CC0A6.HQGWDO01.TWGWPO04.200.2000017.1.9D130.1)

Subject: Emailing: VAtmos.inp, Vchronc.inp, VEarly.inp, VMet.inp, vout.txt, VSite.inp
Creation Date: 6/15/2007 4:30:49 PM
From: "Moorer, Tom C." <TCMOORER@southernco.com>

Created By: TCMOORER@southernco.com

Recipients
"Mark Notich" <mdn@nrc.gov>

Post Office	**Route**
TWGWPO04.HQGWDO01	nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	770	6/15/2007 4:30:49 PM
VAtmos.inp	21096	7/5/2007 9:57:58 AM
Vchronc.inp	13308	7/5/2007 9:57:58 AM
VEarly.inp	13606	7/5/2007 9:57:58 AM
VMet.inp	166621	7/5/2007 9:57:58 AM
vout.txt	458123	7/5/2007 9:57:58 AM
VSite.inp	10389	7/5/2007 9:57:58 AM
Mime.822	958769	7/5/2007 9:57:58 AM

Options
Priority: Standard
Reply Requested: No
Return Notification: None
None

Concealed Subject: No
Security: Standard

```
*******************************************************************************
* FILE NAME:   VATMOS.INP
*
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS - AP1000'
*
*******************************************************************************
* GEOMETRY DATA BLOCK, LOADED BY INPGEO, STORED IN /GEOM/
*
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 10
*
* SPATIAL ENDPOINT DISTANCES IN MILES    [SEE SIT FILE]
*
*         END001   1      2      3      4      5
*         END002  10     20     30     40     50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESPAEND001   1.6093    3.2187    4.8280    6.4374    8.0467
GESPAEND002  16.0935   32.1869   48.2804   64.3739   80.4674
*******************************************************************************
* NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/
*
* Number of pseudo-stable nuclides (used to truncate the decay chains)
*                                                        [1:page 5-7]
ISNUMSTB001      27
*
* List of pseudo-stable nuclides
*                                                        [1:page 5-7]
ISNAMSTB001     I-129    (daughter of Te-129 and Te-129m)
ISNAMSTB002     Xe-131m  (daughter of I-131)
ISNAMSTB003     Xe-133m  (daughter of I-133)
ISNAMSTB004     Xe-135m  (daughter of I-135)
ISNAMSTB005     Cs-135   (daughter of Xe-135 and Xe-135m)
ISNAMSTB006     Sm-147   (daughter of Pm-147)
ISNAMSTB007     U-234    (daughter of Pu-238)
ISNAMSTB008     U-235    (daughter of Pu-239)
ISNAMSTB009     U-236    (daughter of Pu-240)
ISNAMSTB010     U-237    (daughter of Pu-241)
ISNAMSTB011     Np-237   (daughter of Am-241)
ISNAMSTB012     Rb-87    (daughter of Kr-87)
ISNAMSTB013     Ba-137m  (daughter of Cs-137)
ISNAMSTB014     Rb-88    (daughter of Kr-88)
ISNAMSTB015     Y-91m    (daughter of Sr-91)
ISNAMSTB016     Zr-93    (daughter of Y-93)
ISNAMSTB017     Nb-93m   (daughter of Zr-93)
ISNAMSTB018     Nb-95m   (daughter of Zr-95)
ISNAMSTB019     Nb-97    (daughter of Zr-97 and Nb-97m)
ISNAMSTB020     Nb-97m   (daughter of Zr-97)
ISNAMSTB021     Tc-99    (daughter of Mo-99)
ISNAMSTB022     Rh-103m  (daughter of Ru-103)
ISNAMSTB023     Rh-106   (daughter of Ru-106)
ISNAMSTB024     Te-131   (daughter of Te-131m)
ISNAMSTB025     Pr-144   (daughter of Ce-144 and Pr-144m)
ISNAMSTB026     Pr-144m  (daughter of Ce-144)
ISNAMSTB027     Pm-147   (daughter of Nd-147)
*
```

```
* Number of radioactive nuclides to be considered
*
ISNUMISO001 60
*
* NUMBER OF NUCLIDE GROUPS
*
ISMAXGRP001  9
*
* WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
*
*              WETDEP     DRYDEP
*
ISDEPFLA001    .FALSE.   .FALSE.
ISDEPFLA002    .TRUE.    .TRUE.
ISDEPFLA003    .TRUE.    .TRUE.
ISDEPFLA004    .TRUE.    .TRUE.
ISDEPFLA005    .TRUE.    .TRUE.
ISDEPFLA006    .TRUE.    .TRUE.
ISDEPFLA007    .TRUE.    .TRUE.
ISDEPFLA008    .TRUE.    .TRUE.
ISDEPFLA009    .TRUE.    .TRUE.
*
* NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS
*  (SAME AS 1150 EXCEPT LOWER CASE NUCNAM, NO PARENT OR HALFLIFE [1:page 5-7]
*               NUCNAM    IGROUP
*
ISOTPGRP001     Co-58        6
ISOTPGRP002     Co-60        6
ISOTPGRP003     Kr-85        1
ISOTPGRP004     Kr-85m       1
ISOTPGRP005     Kr-87        1
ISOTPGRP006     Kr-88        1
ISOTPGRP007     Rb-86        3
ISOTPGRP008     Sr-89        5
ISOTPGRP009     Sr-90        5
ISOTPGRP010     Sr-91        5
ISOTPGRP011     Sr-92        5
ISOTPGRP012     Y-90         7
ISOTPGRP013     Y-91         7
ISOTPGRP014     Y-92         7
ISOTPGRP015     Y-93         7
ISOTPGRP016     Zr-95        7
ISOTPGRP017     Zr-97        7
ISOTPGRP018     Nb-95        7
ISOTPGRP019     Mo-99        6
ISOTPGRP020     Tc-99m       6
ISOTPGRP021     Ru-103       6
ISOTPGRP022     Ru-105       6
ISOTPGRP023     Ru-106       6
ISOTPGRP024     Rh-105       6
ISOTPGRP025     Sb-127       4
ISOTPGRP026     Sb-129       4
ISOTPGRP027     Te-127       4
ISOTPGRP028     Te-127m      4
ISOTPGRP029     Te-129       4
ISOTPGRP030     Te-129m      4
ISOTPGRP031     Te-131m      4
ISOTPGRP032     Te-132       4
ISOTPGRP033     I-131        2
ISOTPGRP034     I-132        2
```

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ISOTPGRP035     I-133        2
ISOTPGRP036     I-134        2
ISOTPGRP037     I-135        2
ISOTPGRP038     Xe-133       1
ISOTPGRP039     Xe-135       1
ISOTPGRP040     Cs-134       3
ISOTPGRP041     Cs-136       3
ISOTPGRP042     Cs-137       3
ISOTPGRP043     Ba-139       9
ISOTPGRP044     Ba-140       9
ISOTPGRP045     La-140       7
ISOTPGRP046     La-141       7
ISOTPGRP047     La-142       7
ISOTPGRP048     Ce-141       8
ISOTPGRP049     Ce-143       8
ISOTPGRP050     Ce-144       8
ISOTPGRP051     Pr-143       7
ISOTPGRP052     Nd-147       7
ISOTPGRP053     Np-239       8
ISOTPGRP054     Pu-238       8
ISOTPGRP055     Pu-239       8
ISOTPGRP056     Pu-240       8
ISOTPGRP057     Pu-241       8
ISOTPGRP058     Am-241       7
ISOTPGRP059     Cm-242       7
ISOTPGRP060     Cm-244       7
*****************************************************************************
* WET DEPOSITION DATA BLOCK, LOADED BY INPWET, STORED IN /WETCON/
*
* WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
*
WDCWASH1001  9.5E-5   (JON HELTON AFTER JONES, 1986)
*
* WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
*
WDCWASH2001  0.8      (JON HELTON AFTER JONES, 1986)
******************************************************************************
* DRY DEPOSITION DATA BLOCK, LOADED BY INPDRY, STORED IN /DRYCON/
*
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGRP001   3
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*
DDVDEPOS001   0.0     0.01     0.001    (values from URD)
*  First value is for volatile iodine (5% of total; see PSDIST002)
*  Second value is for particulate iodine (95% ; see PSDIST002)
*  Third value is for all other particulates except iodine (see PSDIST 3-9)
*****************************************************************************
* DISPERSION PARAMETER DATA BLOCK, LOADED BY INPDIS, STORED IN /DISPY/, /DISPZ/
*
* # of distances in plume-size tables--which can be used as an alternative to the power-law mode
* (to utilize the power-law model, set NUM_DIST to zero or delete the following data card)
*
NUM_DIST001   0
*
* SIGMA = A * X ** B
*
* Taken from URD
```

```
* P-G CLASS:          A            B            C            D            E            F
DPCYSIGA001         0.3658       0.2751       0.2089       0.1474       0.1046       0.0722
DPCYSIGB001         0.9031       0.9031       0.9031       0.9031       0.9031       0.9031
DPCZSIGA001         2.47E-4      0.078        0.144        0.368        0.2517       0.184
DPCZSIGB001         2.118        1.085        0.911        0.6764       0.6720       0.6546
*
*  LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
*
DPYSCALE001    1.
*
*  LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
*  NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
*  (Z1 / Z0) ** 0.2,   FROM CRAC2 WE HAVE  (10 CM / 3 CM) ** 0.2 = 1.27
*
DPZSCALE001    1.27
***************************************************************************** *
* EXPANSION FACTOR DATA BLOCK, LOADED BY INPEXP, STORED IN /EXPAND/
*
* TIME BASE FOR EXPANSION FACTOR (SECONDS)
*
PMTIMBAS001    180.   (from Westinghouse ATMOS file)
*
* BREAK POINT FOR FORMULA CHANGE (SECONDS)
*
PMBRKPNT001   3600.   (1 HOUR)
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 1
*
PMXPFAC1001      0.2
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 2
*
PMXPFAC2001      0.25
*****************************************************************************
* PLUME RISE DATA BLOCK, LOADED BY INPLRS, STORED IN /PLUMRS/
*
* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT PLUME
* (USED BY FUNCTION CAUGHT)
*
PRSCLCRW001   1.
*
* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLADP001   1.
*
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEFP001   1.
*****************************************************************************
* RELEASE DATA BLOCK, LOADED BY INPREL, STORED IN /ATNAM2/, /MULREL/
********************** RELEASE DATA BLOCK *************
*
*    Vogtle ESP CONTAINMENT BLDG FAÇADE (INCLUDING TURBINE BUILDING)
*              height 65.6 meters width 39.6 meters)
*
* Initial value of sigma-y for each plume
*
SIGYINIT001  9.21     9.21     9.21     9.21 *(initial sigma-y = W/4.3 [1:page 5-22 and URD])
```

```
*
* Initial value of sigma-z for each plume
*
SIGZINIT001  33.    33.    33.    33.  *(initial sigma-z = H/2.15 [1:page5-22])
*
* Building height (meters)
*
WEBUILDH001   65.6     65.6     65.6     65.6   *(Height of Vogtle ESP containment building)
*
* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
* YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
*
RDPSDIST001      0.0    0.0    1.0
RDPSDIST002      0.05   0.95   0.0
RDPSDIST003      0.0    0.0    1.0
RDPSDIST004      0.0    0.0    1.0
RDPSDIST005      0.0    0.0    1.0
RDPSDIST006      0.0    0.0    1.0
RDPSDIST007      0.0    0.0    1.0
RDPSDIST008      0.0    0.0    1.0
RDPSDIST009      0.0    0.0    1.0
*
* AP1000 CORE INVENTORY, END-OF-CYCLE from AP1000 DCD, Rev 12 (in Rev 14)
*
*
*               NUCNAM        CORINV (Bq)
*
RDCORINV001     Co-58         0.0
RDCORINV002     Co-60         0.0
RDCORINV003     Kr-85         3.92E+16
RDCORINV004     Kr-85m        9.73E+17
RDCORINV005     Kr-87         1.88E+18
RDCORINV006     Kr-88         2.64E+18
RDCORINV007     Rb-86         8.47E+15
RDCORINV008     Sr-89         3.57E+18
RDCORINV009     Sr-90         3.07E+17
RDCORINV010     Sr-91         4.44E+18
RDCORINV011     Sr-92         4.77E+18
RDCORINV012     Y-90          3.20E+17
RDCORINV013     Y-91          4.59E+18
RDCORINV014     Y-92          4.81E+18
RDCORINV015     Y-93          5.51E+18
RDCORINV016     Zr-95         6.14E+18
RDCORINV017     Zr-97         6.07E+18
RDCORINV018     Nb-95         6.18E+18
RDCORINV019     Mo-99         6.81E+18
RDCORINV020     Tc-99m        5.96E+18
RDCORINV021     Ru-103        5.37E+18
RDCORINV022     Ru-105        3.64E+18
RDCORINV023     Ru-106        1.76E+18
RDCORINV024     Rh-105        3.33E+18
RDCORINV025     Sb-127        3.81E+17
RDCORINV026     Sb-129        1.15E+18
RDCORINV027     Te-127        3.77E+17
RDCORINV028     Te-127m       4.88E+16
RDCORINV029     Te-129        1.12E+18
RDCORINV030     Te-129m       1.67E+17
RDCORINV031     Te-131m       5.18E+17
RDCORINV032     Te-132        5.11E+18
RDCORINV033     I-131         3.56E+18
```

```
RDCORINV034     I-132         5.18E+18
RDCORINV035     I-133         7.36E+18
RDCORINV036     I-134         8.07E+18
RDCORINV037     I-135         6.88E+18
RDCORINV038     Xe-133        7.03E+18
RDCORINV039     Xe-135        1.79E+18
RDCORINV040     Cs-134        7.18E+17
RDCORINV041     Cs-136        2.05E+17
RDCORINV042     Cs-137        4.18E+17
RDCORINV043     Ba-139        6.59E+18
RDCORINV044     Ba-140        6.33E+18
RDCORINV045     La-140        6.73E+18
RDCORINV046     La-141        5.99E+18
RDCORINV047     La-142        5.81E+18
RDCORINV048     Ce-141        6.03E+18
RDCORINV049     Ce-143        5.62E+18
RDCORINV050     Ce-144        4.55E+18
RDCORINV051     Pr-143        5.40E+18
RDCORINV052     Nd-147        2.40E+18
RDCORINV053     Np-239        7.14E+19
RDCORINV054     Pu-238        1.42E+16
RDCORINV055     Pu-239        1.25E+15
RDCORINV056     Pu-240        1.83E+15
RDCORINV057     Pu-241        4.11E+17
RDCORINV058     Am-241        4.63E+14
RDCORINV059     Cm-242        1.09E+17
RDCORINV060     Cm-244        1.346E+16
*

*
RDCORSCA001   1.000
*
RDAPLFRC001   PARENT      (apply rel fracs the same as prior versions)
*
*******************************************************************************
* OUTPUT CONTROL DATA BLOCK, LOADED BY INPOPT, STORED IN /STOPME/, /ATMOPT/
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
OCENDAT1001  .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
*
OCIDEBUG001  0
*
* NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS
*
*OCNUCOUT001  Cs-137
*
*              NUM0               NO TABLES OUTPUT=0
TYPE0NUMBER      0
*
*              INDREL   INDRAD
*TYPE0OUT001      1        4
*TYPE0OUT002      1       10         XCCDF
*******************************************************************************
* METEOROLOGICAL SAMPLING DATA BLOCK
*
* METEOROLOGICAL SAMPLING OPTION CODE:
*
* METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
*          2, WEATHER CATEGORY BIN SAMPLING,
```

```
*          3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
*          4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
*          5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
*
M1METCOD001  2
*
* LAST SPATIAL INTERVAL FOR MEASURED WEATHER
*
M2LIMSPA001  10                        (ADJUSTED FOR RADIAL INTVL)
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001  1500.  (METERS; used by Westinghouse)
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4      (D-STABILITY; Westinghouse used 6 for F class)
*
* BOUNDARY WEATHER RAIN RATE
*
M2BNDRAN001  0.     (MM/HR)
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWND001  2.0     (M/S; used by Westinghouse)
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
*
M4NRNINT001    5
*                                          nureg 4551 [4:page a-9]
* ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
*
* NOTE:   THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
* SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED).
*
M4RNDSTS001  3.22  8.05  16.09  48.28  80.47  KM
*
* NUMBER OF RAIN INTENSITIY BREAKPOINTS
*
M4NRINTN001   3
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RNRATE001   2.  4.  6.
*
* NUMBER OF SAMPLES PER BIN
*
M4NSMPLS001  4  (THIS NUMBER SHOULD BE SET TO AT LEAST 4 WHEN METCOD=2)
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR
*
M4IRSEED001   79
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 1 OF 6
*
RDATNAM2001 'CFI'
RDOALARM001 2924. * value provided by Westinghouse for all source terms; no evacuation
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
RDREFTIM001 0.0 0.5 0.5 0.5 *Table 49-2 values
```

```
RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
RDPLHITE001 30. 30. 30. 30.  *Release height of each plume (meters above grade)
RDPLUDUR001 29666. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 2924. 32590. 86420. 172800. *start at Table 49-2 values
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 5.40E-1 3.19E-3 3.18E-3 4.18E-4 2.11E-2 9.11E-3 3.53E-3 2.64E-5 1.62E-2
RDRELFRC002 2.58E-1 1.35E-4 1.35E-4 1.67E-5 6.50E-4 1.68E-4 4.53E-3 1.68E-5 3.40E-4
RDRELFRC003 8.40E-2 0.00E0 0.00E0 4.47E-6 0.00E0 0.00E0 6.00E-3 2.17E-5 0.00E0
RDRELFRC004 3.83E-2 0.00E0 0.00E0 1.57E-6 0.00E0 0.00E0 5.22E-3 1.89E-5 0.00E0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 2 OF 6
*
RDATNAM2001 'CFE'
RDOALARM001 3004.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
RDREFTIM001 0.0 0.0 0.5 0.5 *Table 49-2 values
RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
RDPLUDUR001 16806. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 3004. 19810. 89970. 176300. *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 4.16E-1 5.53E-2 5.37E-2 1.23E-3 3.14E-3 1.16E-2 5.57E-5 9.54E-7 4.63E-3
RDRELFRC002 4.05E-1 1.26E-3 1.21E-3 1.61E-4 3.43E-4 2.58E-3 9.66E-6 4.56E-8 6.45E-4
RDRELFRC003 1.08E-1 0.00E0 0.00E0 0.00E0    0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 3.43E-2 0.00E0 0.00E0 6.04E-7   0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 3 OF 6
*
RDATNAM2001 'IC'
RDOALARM001 4378.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
RDREFTIM001 0.5 0.0 0.5 0.5 *decayed the travel time of the middle of the segment
RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
RDPLUDUR001 36000. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 4378. 84810. 134400. 177600. *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 9.83E-4 1.20E-5 1.15E-5 8.04E-7 1.07E-5 1.31E-5 1.35E-6 5.85E-9 1.20E-5
RDRELFRC002 4.93E-4 0.00E0 0.00E0 4.83E-9 0.00E0 0.00E0 6.00E-9 3.20E-11 0.00E0
RDRELFRC003 3.94E-4 0.00E0 0.00E0 1.21E-9 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 7.72E-4 0.00E0 0.00E0 6.04E-10 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 4 OF 6
*
RDATNAM2001 'BP'
RDOALARM001 31890.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
RDREFTIM001 0.5 0.0 0.0 0.5 *decayed the travel time of the middle of the segment
RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
RDPLUDUR001 14550. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 31890. 46440. 86490. 172800. *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 1.00E0 1.69E-1 1.62E-1 6.27E-3 3.57E-3 4.48E-2 1.30E-4 3.19E-6 8.93E-3
```

```
RDRELFRC002 0.00E0 4.64E-2 3.38E-2 3.12E-3 0.00E0 0.00E0 0.00E0 0.00E0 2.00E-6
RDRELFRC003 0.00E0 2.31E-1 6.60E-2 5.32E-3 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 0.00E0 2.80E-3 9.96E-3 1.57E-3 0.00E0 0.00E0 0.00E0 1.00E-6 0.00E0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 5 OF 6
*
RDATNAM2001 'CI'
RDOALARM001 101.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 1 *first plume segment carries greatest risk
RDREFTIM001 0.5 0.5 0.5 0.5 *decayed the travel time of the middle of the segment
RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
RDPLUDUR001 36000. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 101. 50020. 136400. 211700. *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 5.73E-1 4.56E-2 2.10E-2 1.64E-3 2.03E-2 4.04E-2 2.39E-4 2.97E-6 3.16E-2
RDRELFRC002 1.13E-1 0.00E0 0.00E0 1.15E-5 0.00E0 0.00E0 1.00E-7 0.00E0 0.00E0
RDRELFRC003 5.66E-2 0.0E0 0.00E0 8.10E-5 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
RDRELFRC004 2.74E-2 0.0E0 0.00E0 1.27E-5 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 6 OF 6
*
RDATNAM2001 'CFL'
RDOALARM001 2922.
RDNUMREL001 4 *four plume segments
RDMAXRIS001 2 second plume segment carries greatest risk per West. files
RDREFTIM001 0.5 0.5 0.5 0.5 *decayed the travel time of the middle of the segment
RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
RDPLUDUR001 23438. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
RDPDELAY001 2922. 26360. 108000. 194400. *start at Table 49-2 seconds after scram
* XE/KR I CS TE(SB) SR RU(MO) LA CE BA
RDRELFRC001 3.36E-4 1.20E-5 1.15E-5 1.00E-6 1.57E-5 1.68E-5 9.96E-7 7.41E-9 1.61E-5
RDRELFRC002 1.19E-3 5.00E-8 3.23E-8 1.75E-8 1.04E-6 2.90E-7 1.07E-5 4.05E-8 6.60E-7
RDRELFRC003 9.79E-1 2.13E-5 1.16E-5 2.47E-5 2.39E-3 1.26E-3 9.75E-2 3.68E-4 2.25E-3
RDRELFRC004 0.00E0 0.00E0 2.56E-7 1.20E-5 4.42E-4 1.55E-4 4.39E-2 1.66E-4 3.46E-4
.
```

```
*******************************************************************************
*******************************************************************************
* FILE NAME Vchronc.inp
*
* DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
CHCHNAME001  'SNC AP1000 CHRONC FILE'
*******************************************************************************
* EMERGENCY RESPONSE COST DATA BLOCK
*
* DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)
* ESCALATED FROM $27/DAY IN 1986 TO
*   ESCALATED FROM $27/DAY IN 1986 TO 49.64 in 2006 {FACTOR OF 1.8385036} FROM
*   WWW.BLS.GOV/CPI/HOME.HTM, INFLATION CALCULATOR
CHEVACST001  49.64   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
*
* DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)
*   ESCALATED '86 TO '06, FACTOR = 1.8385036
CHRELCST001  49.64   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
*******************************************************************************
* LONG TERM PROTECTIVE ACTION DATA BLOCK
*
* Duration of the intermediate phase period--at version 1.11c TMIPND is no
* longer processed.  The new input variable DUR_INTPHAS is the period's
* duration, not the time after plume arrival at which the period ends.
*
DUR_INTPHAS   0.0    (in seconds)   (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
CHTMPACT001   1.58E8             (5 YEARS)
*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv)
*
CHDSCRTI001   1.0E5              (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv)
*
CHDSCRLT001    0.04
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
CHCRTOCR001 'L-EDEWBODY'
*
* Long Term Exposure Period    Previously permanently set to:
*    one million years = 3.15 E13 seconds
*    MACCS2 allowable range is 3.15E7 to 1.E10
*
CHEXPTIM001    1.E10
*******************************************************************************
* DECONTAMINATION PLAN DATA BLOCK
*
* NUMBER OF LEVELS OF DECONTAMINATION
*
CHLVLDEC001  2
*
* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*  (SECONDS)
*
```

```
CHTIMDEC001   5.184E6  1.0368E7    (60, 120 DAYS)
*
* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*
CHDSRFCT001   3.      15.
*
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
*  FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
*CHCDFRM0001   562.5   1250. ESCALATED '86 TO '06
*        FACTOR = 1.8385036
CHCDFRM0001    1034.16  2298.13
*
* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
*  FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
*CHCDNFRM001   3000.   8000.  ESCALATED '86 TO '06
*        FACTOR = 1.8385036
CHCDNFRM001  5515.51  14708.03
*
* FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
*  FOR THE VARIOUS DECONTAMINATION LEVELS
*
CHFRFDL0001  .3      .35
*
* FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
*  FOR THE VARIOUS DECONTAMINATION LEVELS
*
CHFRNFDL001  .7      .5
*
* FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
*  FOR THE VARIOUS DECONTAMINATION LEVELS
*
CHTFWKF0001  .10     .33
*
* FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS
*  FOR THE VARIOUS DECONTAMINATION LEVELS
*
CHTFWKNF001  .33     .33
*
* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
*
*CHDLBCST001   35000.  ESCALATED '86 TO '06
*        FACTOR = 1.8385036
CHDLBCST001    64347.63
*******************************************************************************
* INTERDICTION COST DATA BLOCK
*
* DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
*
CHDPRATE001    .20   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
*
* INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER YEAR)
* THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION
*
CHDSRATE001    .12   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
*
* POPULATION RELOCATION COST (DOLLARS/PERSON):
*  ALTERNATIVE HOUSING, MOVING COSTS, AND LOST INCOME FOR PEOPLE IN
*  AREAS WHICH REQUIRE DECONTAMINATION, INTERDICTION, OR CONDEMNATION
```

```
*
*CHPOPCST001   5000.  ESCALATED '86 TO '06
*        FACTOR = 1.8385036
CHPOPCST001    9192.52
*******************************************************************************
* GROUNDSHINE WEATHERING DEFINITION DATA BLOCK
*
* NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
*
CHNGWTRM001   2
*
* GROUNDSHINE WEATHERING COEFFICIENTS
*
CHGWCOEF001   0.5    0.5            (JON HELTON)
*
* HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
*
CHTGWHLF001   1.6E7  2.8E9          (JON HELTON)
*******************************************************************************
* RESUSPENSION WEATHERING DEFINITION DATA BLOCK
*
* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
*
CHNRWTRM001    3
*
* RESUSPENSION CONCENTRATION COEFFICIENTS   (/ METER)
*  RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
*
CHRWCOEF001  1.0E-5   1.0E-7   1.0E-9  (VALUES HERE SELECTED BY JON HELTON)
*
* HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
*
CHTRWHLF001  1.6E7    1.6E8    1.6E9   (6 MONTHS, 5 YEARS, 50 YEARS)
*******************************************************************************
* SITE REGION DESCRIPTION DATA BLOCK
*
* FRACTION OF AREA THAT IS LAND IN THE REGION
*
CHFRACLD001   0.95   (ROUGH GUESS VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
*
CHFRCFRM001   0.382  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
*  (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN FARMS)
*
CHFRMPRD001   371.0  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
*  (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
*
CHDPFRCT001   0.198  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* VALUE OF FARM WEALTH (DOLLARS/HECTARE)
*  (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
*
*CHVALWF0001   2541.  ESCALATED '03 TO '06
*       FACTOR = 1.0951087
CHVALWF0001   2782.67  * FARM SIZE/AREA WEIGHTED AVERAGE FOR GA/SC
```

```
*                       COUNTIES WITHIN 50 MILE RADIUS TAKING SRS INTO ACCOUNT
*
* FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
CHFRFIM0001   0.25  * SURRY
*
* NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION (DOLLARS/PERSON)
*  THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
*  LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
*
*CHVALWNF001  107602.  ESCALATED 2003 TO 2006
*        FACTOR = 1.0951087
CHVALWNF001  117836.  * POPULATION/AREA WEIGHTED AVERAGE FOR GA/SC
*                       COUNTIES WITHIN 50 MILE RADIUS
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
CHFRNFIM001   0.8
******************************************************************************
CHFDPATH001 'NEW'
*
* name of the COMIDA2 binary output file
*
BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'   (binary data file of 1/04)
*
* Dose limits triggering first year crop disposal of the separate
* milk and non-milk components of the diet, corresponding in purpose,
* more or less, to the MACCS 1.5 input variables PSCMLK and PSCOTH
*
* For NUREG-1150 calculations, the maximum allowable ground concentrations for
* production of milk and non-milk crops contaminated by an accident occurring
* in the growing season were derived based on an assumed maximum allowable
* dose of 5 rem effective or 15 rem thyroid, per the 1982 FDA guidance that's
* reprinted in the 1992 EPA PAG Manual.  For purposes of comparison against
* the prior results, it is being assumed, for simplicity, that milk and
* non-milk crops contribute equally to the first year dose.  Thus, the 5 rem
* effective dose limit used in NUREG-1150 is equally split between milk and
* non-milk crops, with 2.5 rem allowed for each.  Similarly, the 15 rem
* thyroid limit is split into 7.5 and 7.5 rem for the milk and non-milk
* portions of the diet.
*
* SUPPORTING DOCUMENT FOR GUIDANCE LEVELS FOR RADIONUCLIDES IN DOMESTIC AND
* DOMESTIC FOODS, July, 2004, FDA (www.cfsan.fda.gov/~dms/nucleve2.html, see
* especially Section II) revises limits from 5/15 rem (effective/thyroid) to
* 0.5/5 rem.  The latter is incorporated below.
*
*             effective     thyroid  (doses in sieverts)
DOSEMILK001    0.0025         0.025
DOSEOTHR001    0.0025         0.025
*
* Annual dose limits for the subsequent year's (i.e., after the first year)
* interdiction of BOTH the milk and non-milk (combined) components of the diet
*
* Note: the long-term food critera, GCMAXR, used for NUREG-1150 wre based on
* an ingestion dose integrated from zero to infinity.  It is not possible to
* translate those parameter values into corresponding annual dose limits, as is
* required by the COMIDA2-based food model.  The "total" dose limits used in
* NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, are used
* here as annual dose limits for interdiction of food production in years the
* years subsequent to the accident.
```

```
*
*             effective     thyroid  (doses in sieverts)
DOSELONG001    0.005          0.015
*
*******************************************************************************
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
CHNUMWPI001    4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
*  FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*                        INITIAL     ANNUAL    INGESTION FACTOR
*             WATER      WASHOFF     WASHOFF    ((Bq INGESTED)/
*            NUCLIDE     FRACTION     RATE       (Bq IN WATER))
*
*             NAMWPI      WSHFRI      WSHRTA         WINGF
CHWTRISO001   Sr-89        0.01       0.004          5.0E-6
CHWTRISO002   Sr-90        0.01       0.004          5.0E-6
CHWTRISO003   Cs-134       0.005      0.001          5.0E-6
CHWTRISO004   Cs-137       0.005      0.001          5.0E-6
*******************************************************************************
* SPECIAL OPTIONS DATA BLOCK
*
* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
*          KSWDSC
*
CHKSWTCH001   0
*******************************************************************************
* DEFINE THE TYPE 9 RESULTS
*
* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
TYPE9NUMBER   2      (UP TO 10 ALLOWED)
*
*              ORGNAM        INNER      OUTER
*
TYPE9OUT001   'L-EDEWBODY'       1          6     (0-10 MILES)
TYPE9OUT002   'L-EDEWBODY'       1         10     (0-50 MILES)
*******************************************************************************
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
TYP10NUMBER   1      (UP TO 10 ALLOWED)
*
*              INNER      OUTER
*
TYP10OUT001      1          10   (0-50 MILES)
*******************************************************************************
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
```

```
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
TYP11FLAG11  .FALSE.
*******************************************************************************
* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
*
TYP12NUMBER   1      (UP TO 10 ALLOWED)
*
*              INNER      OUTER
*
TYP12OUT001      1          10   (0-50 MILES)
*******************************************************************************
* Maximal annual food ingestion dose to an individual, requested by IXOT13
*
* This result is calculated after accounting for temporary or
* permanent interdiction.  It is only available for the "new" food model.
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
*
TYP13NUMBER   0  (UP TO 10 ALLOWED)
*
* IRAD13 is the radial spatial interval at which results are requested
*
* ORGN13 is the name of the organ for which results are requested
*  (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')
*
*          IRAD13   ORGN13
*
*TYP13OUT001   2    EFFECTIVE
*TYP13OUT002   4    EFFECTIVE
*TYP13OUT003   6    EFFECTIVE
*TYP13OUT004   9    EFFECTIVE
.
```

```
*****************************************************************************
* FILE NAME:  VEARLY.INP
*
* DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
MIEANAM1001  'SNC AP1000 EARLY FILE - 95% Evacuation'
DCF_FILE001 'C:\MACCS2\DOSDATA.INP' (DCF file of MACCS 1.5.11.1)
*
*             ORGNAM         ORGFLG
*
MIORGDEF001  'A-SKIN'        .TRUE.
MIORGDEF002  'A-RED MARR'    .TRUE.
MIORGDEF003  'A-LUNGS'       .TRUE.
MIORGDEF004  'A-THYROIDH'    .TRUE.
MIORGDEF005  'A-STOMACH'     .TRUE.
MIORGDEF006  'A-LOWER LI'    .FALSE.  (does not contribute to early fatalities)
MIORGDEF007  'L-EDEWBODY'    .TRUE.
MIORGDEF008  'L-RED MARR'    .TRUE.
MIORGDEF009  'L-BONE SUR'    .TRUE.
MIORGDEF010  'L-BREAST'      .TRUE.
MIORGDEF011  'L-LUNGS'       .TRUE.
MIORGDEF012  'L-THYROID'     .TRUE.
MIORGDEF013  'L-LOWER LI'    .TRUE.
MIORGDEF014  'L-BLAD WAL'    .TRUE.
MIORGDEF015  'L-LIVER'       .FALSE.
MIORGDEF016  'L-THYROIDH'    .TRUE.
*
* FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
*
MIENDAT2001  .FALSE.    (SET THIS VALUE TO .TRUE. TO SKIP CHRONC)
*
* DISPERSION MODEL OPTION CODE:  1  *  STRAIGHT LINE
*                                2  *  WIND-SHIFT WITH ROTATION
*                                3  *  WIND-SHIFT WITHOUT ROTATION
*
MIIPLUME001  1 * URD used 1
*
* NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
*
MINUMFIN001  7    (3, 5 OR 7 ALLOWED)
*
* LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO
*
MIIPRINT001  0
*
* LOGICAL FLAG SIGNIFYING THAT THE BREAKDOWN OF RISK BY WEATHER CATEGORY
* BIN ARE TO BE PRESENTED TO SHOW THEIR RELATIVE CONTRIBUTION TO THE MEAN
*
*             RISBIN
*
MIRISCAT001   .FALSE.
*
* FLAG INDICATING IF WIND-ROSES FROM ATMOS ARE TO BE OVERRIDDEN
*
MIOVRRID001  .FALSE.  (USE THE WIND ROSE CALCULATED FOR EACH WEATHER BIN)
*****************************************************************************
* POPULATION DISTRIBUTION DATA BLOCK, LOADED BY INPOPU, STORED IN /POPDAT/
*
PDPOPFLG001  FILE
*
```

```
*****************************************************************************
* SHIELDING AND EXPOSURE FACTORS, LOADED BY INDFAC, STORED IN /EADFAC/
*
* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
* ONE FOR EACH TYPE OF ACTIVTY:
*
* ACTIVITY TYPE:
*     1 - EVACUEES WHILE MOVING
*     2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
*     3 - SHELTERED ACTIVITY
*
* CLOUD SHIELDING FACTOR
*
*    SITE        GG   PB   SEQ  SUR  ZION
*    SHELTERING  0.7  0.5  0.65 0.6  0.5
*
*            EVACUEES  NORMAL  SHELTER
*
SECSFACT001      0.75     0.75     0.75   *  use URD values
*
* PROTECTION FACTOR FOR INHALATION
*
SEPROTIN001      0.4     0.4      0.4  * URD Values*
*
* BREATHING RATE (CUBIC METERS PER SECOND)
*
SEBRRATE001  3.3E-4  3.3E-4  3.3E-4 *URD values
*
* SKIN PROTECTION FACTOR
*
SESKPFAC001  1.0      0.41     0.33    * VALUES FOR NORMAL ACTIVITY AND
*                                         SHELTERING SELECTED BY NRC STAFF
*
* GROUND SHIELDING FACTOR
*
*    SITE        GG   PB   SEQ  SUR  ZION
*    SHELTERING  0.25 0.1  0.2  0.2  0.1
*
SEGSHFAC001      0.33    0.33    0.33   * URD values
*
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (/METER)
*
*   RESCON = 1.E-4 IS APPROPRIATE FOR MECHANICAL RESUSPENSION BY VEHICLES.
*   RESHAF = 2.11 DAYS CAUSES 1.E-4 TO DECAY IN ONE WEEK TO 1.E-5, THE VALUE
*   OF RESCON USED IN THE FIRST TERM OF THE LONG-TERM RESUSPENSION EQUATION
*   USED IN CHRONC.
*
SERESCON001   1.E-4     (RESUSPENSION IS TURNED ON)
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
*
SERESHAF001   1.82E5    (2.11 DAYS)
*****************************************************************************
* EVACUATION ZONE DATA BLOCK, LOADED BY EVNETW, STORED IN /NETWOR/, /EOPTIO/
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
EZEANAM2001  '95% EVACUATION WITHIN 10 MILES- 24-HOUR RELOCATION'
*
```

```
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* YOU MUST SUPPLY A VALUE OF 'TIME' OR 'PEOPLE'
*
EZWTNAME001  'PEOPLE'
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
*
EZWTFRAC001  0.95 *95% of people evacuated
*
* LAST RING IN THE MOVEMENT ZONE
*
EZLASMOV001     6    (10 miles)
*
*  Flag defining the time at which evacuees "enter" the destination element
*
TRAVELPOINT   'CENTERPOINT' (new option implemented at MACCS2 v. 1.11f)
*TRAVELPOINT   'BOUNDARY'    (Westinghouse used BOUNDARY)
*
* RADIAL EVACUATION SPEED (M/S) = speed to exit EPZ, 30 min after alarm
*
EZESPEED001   2.20 2.20 2.20 *(based on 125-42 min for all zones to clear EPZ,
*                              in 2010, extrapolated for 2040 population)
EZEVATYP001     'RADIAL'
EZDURBEG001    86400.0
EZDURMID001    0.0
EZREFPNT001     'ALARM'
EZNUMEVA001       6
EZDLTSHL001  2520. 2520. 2520. 2520. 2520. 2520. (42 MINUTES DELAY, 95% MOBILIZATION)
EZDLTEVA001     0.    0.    0.    0.    0.    0.

**********************************************************************
* SHELTER AND RELOCATION ZONE DATA BLOCK, LOADED BY INPEMR,
*                                         STORED IN /INPSRZ/, /RELOCA/
*
* DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)
*
SRENDEMP001  86400.   (ONE DAY)
*
* CRITICAL ORGAN FOR RELOCATION DECISIONS
*
SRCRIORG001 'L-EDEWBODY'
*
* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
*
SRTIMHOT001  86400.    (ONE DAY)
*
* NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
*
SRTIMNRM001  86400.    (ONE DAY)
*
* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
*
SRDOSHOT001  10.    (1000 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
*
* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
*
SRDOSNRM001  10.   (1000 REM DOSE TO WHOLE BODY IN 1 DAY TRIGGERS RELOCATION)
*****************************************************************************
* EARLY FATALITY MODEL PARAMETERS, LOADED BY INEFAT, STORED IN /EFATAL/
*
```

```
* NUMBER OF EARLY FATALITY EFFECTS
*
EFNUMEFA001   2
*
*            ORGNAM       EFFACA   EFFACB   EFFTHR
*
EFATAGRP001 'A-RED MARR'      3.8      5.0    1.5
EFATAGRP002 'A-LUNGS'        10.0      7.0    5.0
*******************************************************************************
* EARLY INJURY MODEL PARAMETERS, LOADED BY INEINJ, STORED IN /EINJUR/
*
* NUMBER OF EARLY INJURY EFFECTS
*
EINUMEIN001  0
*
*            EINAME           ORGNAM   EISUSC EITHRE EIFACA EIFACB
*
*EINJUGRP001 'PRODROMAL VOMIT' 'A-STOMACH'  1.     .5     2.     3.
*EINJUGRP002 'DIARRHEA'        'A-STOMACH'  1.     1.     3.     2.5
*EINJUGRP003 'PNEUMONITIS'     'A-LUNGS'    1.     5.    10.     7.
*EINJUGRP004 'SKIN ERYTHEMA'   'A-SKIN'     1.     3.     6.     5.
*EINJUGRP005 'TRANSEPIDERMAL'  'A-SKIN'     1.    10.    20.     5.
*EINJUGRP006 'THYROIDITIS'     'A-THYROIDH' 1.    40.   240.     2.
*EINJUGRP007 'HYPOTHYROIDISM'  'A-THYROIDH' 1.     2.    60.     1.3
*******************************************************************************
* ACUTE EXPOSURE CANCER PARAMETERS, LOADED BY INACAN STORED IN /ACANCR/.
*
* NUMBER OF ACUTE EXPOSURE CANCER EFFECTS
*
LCNUMACA001   1
*
* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
*
LCDDTHRE001   0.2  (LOWEST DOSE FOR WHICH DDREFA WILL BE APPLIED)
*
* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (Sv)
*
LCACTHRE001   0.0  (LINEAR-QUADRATIC MODEL IS NOT BEING USED)
*
*            ACNAME     ORGNAM  ACSUSC DOSEFA DOSEFB CFRISK   CIRISK  DDREFA
*
LCANCERS001 'OTHER'    'L-EDEWBODY'  1.0   1.0   0.0   2.76E-2   0.0     2.0
*******************************************************************************
* RESULT 1 OPTIONS BLOCK, LOADED BY INOUT1, STORED IN /INOUT1/
* TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH, EARLY INJURY)
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE1NUMBER    5
*
TYPE1OUT001    'CAN FAT/TOTAL'                1  10       (0 to 50 miles)
TYPE1OUT002    'CAN FAT/TOTAL'                1   6       (0 to 10 miles)
TYPE1OUT003    'ERL FAT/TOTAL'                1  10       (0 to 50 miles)
TYPE1OUT004    'ERL FAT/TOTAL'                1   2       (0 to  2 miles)
TYPE1OUT005    'ERL FAT/TOTAL'                1   1       (0 to  1 miles)
*******************************************************************************
* RESULT 2 OPTIONS BLOCK, LOADED BY INOUT2, STORED IN /INOUT2/
* FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED.
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
```

```
*
TYPE2NUMBER  0
*
*            FATALITY RISK THRESHOLD
*
*TYPE2OUT001  0.
*****************************************************************************
* RESULT 3 OPTIONS BLOCK, LOADED BY INOUT3, STORED IN /INOUT3/
* NUMBER OF PEOPLE WHOSE DOSE TO A GIVEN ORGAN EXCEEDS A GIVEN THRESHOLD.
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE3NUMBER  0
*
*               ORGAN NAME   DOSE THRESHOLD (Sv)
*
*TYPE3OUT001    'A-RED MARR'        1.5
*TYPE3OUT002    'A-LUNGS'           5.0
*TYPE3OUT003    'L-EDEWBODY'        0.05
*****************************************************************************
* RESULT 4 OPTIONS BLOCK, LOADED BY INOUT4, STORED IN /INOUT4/
* 360 DEGREE AVERAGE RISK OF A GIVEN EFFECT AT A GIVEN DISTANCE.
*
* POSSIBLE TYPES OF EFFECTS ARE:
*
*   'ERL FAT/TOTAL'
*   'ERL INJ/INJURY NAME'
*   'CAN FAT/CANCER NAME'
*   'CAN FAT/TOTAL'
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE4NUMBER  0
*
*            RADIAL INDEX   TYPE OF EFFECT
*
*TYPE4OUT001       1         'ERL FAT/TOTAL'
*TYPE4OUT002       2         'ERL FAT/TOTAL'
*TYPE4OUT003       3         'ERL FAT/TOTAL'
*TYPE4OUT004       5         'ERL FAT/TOTAL'
*TYPE4OUT005       6         'ERL FAT/TOTAL'
*****************************************************************************
* RESULT 5 OPTIONS BLOCK, LOADED BY INOUT5, STORED IN /INOUT5/
*
* TOTAL POPULATION DOSE TO A GIVEN ORGAN BETWEEN TWO DISTANCES.
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE5NUMBER     2
*
*             ORGAN      I1DIS5     I2DIS5
*
TYPE5OUT001 'L-EDEWBODY'      1          6          (0-10 MILES)
TYPE5OUT002 'L-EDEWBODY'      1         10          (0-50 MILES)
*****************************************************************************
* RESULT 6 OPTIONS BLOCK, LOADED BY INOUT6, STORED IN /INOUT6/
*
* CENTERLINE DOSE TO AN ORGAN VS DIST BY PATHWAY, PATHWAY NAMES ARE AS FOLLOWS:
*
*  PATHWAY NAME:
```

```
*    'CLD'     - CLOUDSHINE
*    'GRD'     - GROUNDSHINE
*    'INH ACU' - "ACUTE DOSE EQUIVALENT" FROM DIRECT INHALATION OF THE CLOUD
*    'INH LIF' - "LIFETIME DOSE COMMITMENT" FROM DIRECT INHALATION OF THE CLOUD
*    'RES ACU' - "ACUTE DOSE EQUIVALENT" FROM RESUSPENSION INHALATION
*    'RES LIF' - "LIFETIME DOSE COMMITMENT" FROM RESUSPENSION INHALATION
*    'TOT ACU' - "ACUTE DOSE EQUIVALENT" FROM ALL PATHWAYS
*    'TOT LIF' - "LIFETIME DOSE COMMITMENT" FROM ALL PATHWAYS
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE6NUMBER     0
*
*             ORGNAM        PATHNM      I1DIS6   I2DIS6
*
*TYPE6OUT001  'A-RED MARR'    'TOT ACU'      1       19     (0-50 MILES)
*TYPE6OUT002  'A-LUNGS'       'TOT ACU'      1       19     (0-50 MILES)
*TYPE6OUT003  'L-EDEWBODY'    'TOT LIF'      1       26     (0-1000 MILES)
*******************************************************************************
* RESULT 7 OPTIONS BLOCK, LOADED BY INOUT7, STORED IN /INOUT7/
*
* CENTERLINE RISK OF A GIVEN EFFECT VS DISTANCE
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE7NUMBER   0
*
*                    NAME           I1DIS7       I2DIS7
*
*TYPE7OUT001     'ERL FAT/TOTAL'        1          10       (0-50 MILES)
*TYPE7OUT002     'CAN FAT/TOTAL'        1          10       (0-50 MILES)
*******************************************************************************
* RESULT 8 OPTIONS BLOCK, LOADED BY INOUT8, STORED IN /INOUT8/
*
* POPULATION WEIGHTED FATALITY RISK BETWEEN 2 DISTANCES
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE8NUMBER   6
*
*                NAME       I1DIS8  I2DIS8
*
TYPE8OUT001 'ERL FAT/TOTAL'   1      10     NOCCDF  (0-50 MILES)
TYPE8OUT002 'ERL FAT/TOTAL'   1       2     NOCCDF  (0- 2 MILES)
TYPE8OUT003 'ERL FAT/TOTAL'   1       1     NOCCDF  (0- 1 MILES)
TYPE8OUT004 'ERL FAT/TOTAL'   3       3     NOCCDF  (2- 3 MILES)
TYPE8OUT005 'CAN FAT/TOTAL'   1      10     NOCCDF  (0-50 MILES)
TYPE8OUT006 'CAN FAT/TOTAL'   1       6     NOCCDF  (0-10 MILES)
*******************************************************************************
* RESULT A OPTIONS BLOCK, LOADED BY INOUTA, STORED IN /INOUTA/
*
* peak dose to a given organ
*
*            NUMA
TYPEANUMBER   1
*
*              ORGNAM    I1DISA  I2DISA
TYPEAOUT001 'L-EDEWBODY'  1       1    CCDF
*
             NUMB
```

```
TYPEBNUMBER   0
.
*****************************************************************************
* EMERGENCY RESPONSE SCENARIO NUMBER 2
*****************************************************************************
* EVACUATION ZONE DATA BLOCK, LOADED BY EVNETW, STORED IN /NETWOR/, /EOPTIO/
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
EZEANAM2001  'NO EVACUATION'
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
*
EZWTFRAC001  0.05 *5% of people relocated but not evacuated
*
* LAST RING IN THE MOVEMENT ZONE
*
EZLASMOV001     0   (A ZERO TURNS OFF THE EVACUATION MODEL)
.
```

```
DAY HR DR SPS RN (Julian Date, Hour, Direction, Speed, Stability, Precipitation)
BLANK LINE
  1  1  6 147  0
  1  2  5 137  0
  1  3  3 177  0
  1  4  4 157  0
  1  5  3 167  0
  1  6  6 177  0
  1  7  6 127  0
  1  8  8  87  0
  1  9  8 205  0
  1 10  9 234  0
  1 11 12 173  0
  1 12 14 174  0
  1 13 11 132  0
  1 14 13 251  0
  1 15 13 213  0
  1 16 14 214  0
  1 17 12 185  0
  1 18 12 216  0
  1 19 12 256  0
  1 20 12 276  0
  1 21 12 285  0
  1 22 12 315  0
  1 23 13 385  0
  1 24 13 335  0
  2  1 12 385  0
  2  2 12 355  0
  2  3 12 464  0
  2  4 12 494  0
  2  5 12 494  0
  2  6 12 524  0
  2  7 12 494  0
  2  8 12 474  0
  2  9 12 454  0
  2 10 12 464  0
  2 11 12 454  0
  2 12 12 424  2
  2 13 12 534  0
  2 14 12 424  1
  2 15 13 304  1
  2 16 12 374  1
  2 17 12 344  1
  2 18 13 335  0
  2 19 13 325  0
  2 20 13 265 17
  2 21 14 265  0
  2 22 15 246  3
  2 23  3 326 55
  2 24  8  94 13
  3  1  7 295  4
  3  2  7 285  0
  3  3  7 254  0
  3  4  6 214  0
  3  5  6 294  0
  3  6  5 214  0
  3  7  5 304  0
  3  8  4 284  0
  3  9  4 384  0
  3 10  5 424  0
```

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3 11  5 513  0
3 12  5 423  0
3 13  4 481  0
3 14  4 471  0
3 15  4 442  0
3 16  5 384  0
3 17  4 304  0
3 18  5 175  0
3 19  5 255  0
3 20  5 255  0
3 21  5 265  0
3 22  5 285  0
3 23  6 275  0
3 24  5 345  0
4  1  6 325  0
4  2  5 255  0
4  3  5 265  0
4  4  5 325  0
4  5  5 215  0
4  6  5 225  0
4  7  6 315  0
4  8  6 314  0
4  9  7 494  0
4 10  7 413  0
4 11  7 361  0
4 12  6 401  0
4 13  5 401  0
4 14  5 371  0
4 15  6 342  0
4 16  7 344  0
4 17  6 284  0
4 18  6 205  0
4 19  6 225  0
4 20  5 155  0
4 21  4 165  0
4 22  5 205  0
4 23  5 155  0
4 24  5 175  0
5  1  5 155  0
5  2  5 155  0
5  3  6 265  0
5  4  5 225  0
5  5  5 175  0
5  6  5 215  0
5  7  6 195  0
5  8  6 204  0
5  9  6 254  0
5 10  8 294  0
5 11  8 174  0
5 12  8 173  0
5 13  4 211  0
5 14  6 282  0
5 15  6 223  0
5 16  7 234  0
5 17  6 174  0
5 18  4 145  0
5 19  4 126  0
5 20  3 137  0
5 21  4  57  0
5 22  4 117  0
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5 23  3 107  0
5 24  3 107  0
6  1  4 147  0
6  2  1  87  0
6  3  3 137  0
6  4  7  57  0
6  5  4  77  0
6  6  5 147  0
6  7  3 107  0
6  8  2  87  0
6  9  3  77  0
6 10  5 155  0
6 11  2 174  0
6 12  2 231  0
6 13  2 293  0
6 14  2 342  0
6 15  1 322  0
6 16  1 213  0
6 17  1 154  0
6 18  2 116  0
6 19 13  76  0
6 20  1  87  0
6 21  1 137  0
6 22  1 217  0
6 23  1 217  0
6 24  1 146  0
7  1  1  86  0
7  2  5  56  0
7  3  1 176  0
7  4  6  56  0
7  5 16  76  0
7  6  2  86  0
7  7  1  86  0
7  8  2 186  0
7  9  5 174  0
7 10  3 264  0
7 11  3 313  0
7 12  3 274  0
7 13  4 244  0
7 14  3 244  0
7 15  3 214  0
7 16  2 254  0
7 17  4  84  0
7 18  2 196  0
7 19  2 126  0
7 20 16 197  0
7 21 16  97  0
7 22  1 187  0
7 23 16 317  0
7 24 16 176  0
8  1  1 215  0
8  2 15 147  0
8  3 14 227  0
8  4  1 146  0
8  5 13  97  0
8  6 16  87  0
8  7 10  97  0
8  8  9  67  0
8  9 11 116  0
8 10 16  54  0
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 8 11 15  74  0
 8 12 15 153  0
 8 13 15 222  0
 8 14 16 294  0
 8 15 16 324  0
 8 16  1 374  0
 8 17  1 195  0
 8 18 16 166  0
 8 19 15 206  0
 8 20 16 146  0
 8 21 15 286  0
 8 22 16 176  0
 8 23 16 216  0
 8 24 16 176  0
 9  1  1 147  0
 9  2  1 227  0
 9  3 16 256  0
 9  4  1 176  0
 9  5  2 206  0
 9  6  2 266  0
 9  7  3 335  0
 9  8  2 305  0
 9  9  1 245  0
 9 10  3 224  1
 9 11  5 215  3
 9 12  5 245  1
 9 13  5 184  0
 9 14  1 255  2
 9 15  1 245  2
 9 16  3 214  0
 9 17  6 155  0
 9 18  4 245  0
 9 19  6 305  0
 9 20  6 355  0
 9 21  6 295  0
 9 22  6 344  0
 9 23  6 295  0
 9 24  6 225  0
10  1  6 245  0
10  2  7 305  0
10  3  7 255  0
10  4  8 375  0
10  5  8 345  0
10  6  9 345  0
10  7  9 345  0
10  8 10 254  0
10  9 10 354  0
10 10 10 503  0
10 11 10 352  0
10 12  9 282  0
10 13  8 372  0
10 14  8 342  0
10 15  8 302  0
10 16  8 224  0
10 17  7 174  0
10 18  6 115  0
10 19  4 146  0
10 20  3 126  0
10 21  4 167  0
10 22  3 177  0
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10 23  3 186  0
10 24  3 187  0
11  1  3 146  0
11  2  4 136  0
11  3  4 156  0
11  4  4  86  0
11  5  5 116  0
11  6  5 176  0
11  7  5 116  0
11  8  5  95  0
11  9  6 214  0
11 10  6 214  0
11 11  7 184  0
11 12  7 213  0
11 13  6 252  0
11 14  5 273  0
11 15  4 253  0
11 16  3 224  0
11 17  3 174  0
11 18  2 176  0
11 19  1 176  0
11 20  1 217  0
11 21  1 167  0
11 22  1 137  0
11 23  3 147  0
11 24  3 137  0
12  1  4 167  0
12  2  2 177  0
12  3  3 177  0
12  4  4 167  0
12  5  3 167  0
12  6 16  77  0
12  7  2 227  0
12  8  2 207  0
12  9  3 206  0
12 10  3 204  0
12 11  4 293  0
12 12  4 353  0
12 13  4 351  0
12 14  3 383  0
12 15  3 383  0
12 16  2 344  0
12 17  2 225  0
12 18  1 166  0
12 19  1 167  0
12 20 16 157  0
12 21 15 137  0
12 22 16 226  0
12 23 15 156  0
12 24 15 176  0
13  1 16 147  0
13  2 12  77  0
13  3  9  76  0
13  4 11  37  0
13  5  6  47  0
13  6 15 117  0
13  7 12  87  0
13  8 15 177  0
13  9 16 137  0
13 10 16 204  0
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13 11  1 313  0
13 12  1 383  0
13 13  2 473  0
13 14  3 453  0
13 15  2 422  0
13 16  1 374  0
13 17  1 235  0
13 18 16 156  0
13 19 16 156  0
13 20 16 176  0
13 21 16 196  0
13 22 16 186  0
13 23 16 206  0
13 24 16 176  0
14  1 16 106  0
14  2 16 216  0
14  3  2 176  0
14  4  1 166  0
14  5  2 136  0
14  6  4 155  0
14  7  2 135  0
14  8  1 105  0
14  9  7  85  0
14 10 15  64  0
14 11  4 134  0
14 12  4 263  0
14 13  1 224  0
14 14 16 224  0
14 15  1 234  0
14 16  1 234  0
14 17 16 165  0
14 18 16 215  0
14 19 16 155  0
14 20 15 285  0
14 21  2 305 28
14 22 16  45 15
14 23 16  95  3
14 24 16 175  1
15  1  1 185  0
15  2  3 165 13
15  3  4 275 36
15  4  3 195  2
15  5  4 205  0
15  6  6 305  0
15  7  5 175  0
15  8  6 165  0
15  9  7 314  0
15 10  7 394  0
15 11  8 412  0
15 12  8 412  0
15 13  8 361  0
15 14  8 412  0
15 15  8 314  0
15 16  8 174  0
15 17  8 265  0
15 18  9 145  0
15 19  4  87  0
15 20  5 147  0
15 21  5 207  0
15 22 14  87  0
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15 23  2  87  0
15 24  2  47  0
16  1 11  47  0
16  2  3  77  0
16  3 16  47  0
16  4 12  87  0
16  5  7 107  0
16  6  8  67  0
16  7  4  47  0
16  8  5  57  0
16  9 16  47  0
16 10 15 274  0
16 11 15 334  0
16 12 15 334  0
16 13  1 252  0
16 14  2 202  0
16 15  1 204  0
16 16  1 234  0
16 17  1 154  0
16 18  1 176  0
16 19  1  87  0
16 20  6  37  0
16 21 14 147  0
16 22 15 167  0
16 23 16 117  0
16 24 11  47  0
17  1 13 147  0
17  2 11  87  0
17  3  9 177  0
17  4  6 107  0
17  5 13 157  0
17  6  5  57  0
17  7 11 107  0
17  8 13  87  0
17  9 14 147  0
17 10 12 185  0
17 11 13 224  0
17 12 13 235  0
17 13 14 265  0
17 14 14 281  0
17 15 15 494  0
17 16 15 146  1
17 17 15 325  1
17 18 15 305  0
17 19 15 295  0
17 20 15 295  2
17 21 16 205  0
17 22 16 255  0
17 23  1 185  0
17 24  1 195  0
18  1  1 315  1
18  2  2 305  0
18  3  3 345  0
18  4  2 395  0
18  5  2 315  0
18  6  2 305  0
18  7  1 275 51
18  8  1 175 24
18  9  3 175  5
18 10  2 415  0
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18 11  2 455  0
18 12  3 465  0
18 13  4 414  0
18 14  3 514  0
18 15  4 464  0
18 16  4 514  0
18 17  5 315  0
18 18  5 215  0
18 19  5 156  0
18 20  5 146  0
18 21  5 137  0
18 22  6 177  0
18 23  6 177  0
18 24  6 177  0
19  1  6 166  0
19  2  6 136  0
19  3  6 196  0
19  4  7 276  0
19  5  7 306  0
19  6  6 176  0
19  7  6 136  0
19  8  7 166  0
19  9  7 254  0
19 10  8 293  0
19 11  7 313  0
19 12  7 204  0
19 13  7 234  0
19 14 12 134  0
19 15 16 164  0
19 16  2 184  0
19 17  2 114  0
19 18  2 146  0
19 19  2 157  0
19 20  2 177  0
19 21  3 167  0
19 22  2 147  0
19 23  2 147  0
19 24 16 147  0
20  1  1 157  0
20  2  2 137  0
20  3  1  97  0
20  4 16 137  0
20  5  2  87  0
20  6 11  87  0
20  7  9  57  0
20  8 16  97  0
20  9 16 116  0
20 10  2 204  0
20 11  1 204  0
20 12  1 244  0
20 13  2 383  0
20 14  3 324  0
20 15  3 213  0
20 16  3 384  0
20 17  3 134  0
20 18  3 105  0
20 19  1  86  0
20 20 16 147  0
20 21 16 117  0
20 22  1 107  0
```

```
20 23  1 117  0
20 24  1 156  0
21  1 16 166  0
21  2  1 176  0
21  3  1 136  0
21  4  1 126  0
21  5  1 156  0
21  6  2 195  0
21  7  2 175  0
21  8  2 285  0
21  9  2 174  0
21 10  4 234  0
21 11  3 422  0
21 12  3 423  0
21 13  3 303  0
21 14  2 303  0
21 15  2 333  0
21 16  3 254  0
21 17  1 154  0
21 18 16 146  0
21 19 16 216  0
21 20 16 216  0
21 21 16 206  0
21 22 16 235  0
21 23 16 225  0
21 24 16 285  0
22  1 15 235  0
22  2 14 225  0
22  3 15 215  0
22  4 15 235  0
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41 16 13 163  0
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68 10 10 214 14
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303  8 12 215  0
303  9 11 264  0
303 10 11 303  0
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304  4 10 175  0
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357 11 16 154  0
357 12  7 124  0
357 13  6 244  0
357 14  7 264  0
357 15  7 374  0
357 16  7 214  0
357 17  6 145  0
357 18  4 105  0
357 19  4 107  0
357 20  4 137  0
357 21  6 266  0
357 22  6 285  0
357 23  4 166  0
357 24  4 176  0
358  1  5 215  0
358  2  5 205  0
358  3  4 136  0
358  4  4 157  0
358  5  4 147  0
358  6  3 196  0
358  7  4 176  0
358  8  4 196  0
358  9  4 214  0
358 10  4 323  0
```

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358 11  4 423  0
358 12  6 523  0
358 13  5 362  0
358 14  5 432  0
358 15  5 394  0
358 16  6 334  0
358 17  7 315  0
358 18  7 485  0
358 19  7 405  0
358 20  7 305  0
358 21  7 305  0
358 22  7 305  0
358 23  7 255  0
358 24  8 315  0
359  1 11 125  0
359  2 11 135  0
359  3 11 255  0
359  4 10 275  0
359  5 10 295  0
359  6 10 215  0
359  7 10 235  0
359  8 10 304  0
359  9 11 463  0
359 10 10 372  0
359 11  9 362  0
359 12  9 293  0
359 13  9 361  0
359 14  8 382  0
359 15  8 393  0
359 16  8 294  0
359 17  9 214  0
359 18  8 135  0
359 19  6 116  0
359 20  5 107  0
359 21  5  97  0
359 22  2  97  0
359 23  1  67  0
359 24  3 107  0
360  1  2 147  0
360  2  2 167  0
360  3  2 167  0
360  4  3 167  0
360  5  3 147  0
360  6  3 216  0
360  7  3 305  0
360  8  3 255  0
360  9  3 344  0
360 10  4 454  0
360 11  4 393  0
360 12  4 433  0
360 13  3 534  0
360 14  4 353  0
360 15  3 573  0
360 16  4 434  0
360 17  3 345  0
360 18  3 305  0
360 19  3 355  0
360 20  3 435  0
360 21  4 385  0
360 22  4 265  0
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360 23  3 245  0
360 24  3 215  0
361  1  4 206  0
361  2  3 176  0
361  3  4 147  0
361  4  4 137  0
361  5  4 147  0
361  6  4 136  0
361  7  4 127  0
361  8  4 116  0
361  9  6 204  0
361 10  6 284  0
361 11  5 214  0
361 12  5 244  0
361 13  5 273  0
361 14  4 273  0
361 15  3 293  0
361 16  4 314  0
361 17  3 225  0
361 18  3 186  0
361 19  3 186  0
361 20  4 186  0
361 21  4 107  0
361 22  4 147  0
361 23  3 167  0
361 24  5  97  0
362  1  4 137  0
362  2  5 126  0
362  3  4 157  0
362  4  5 177  0
362  5  4 127  0
362  6  4 177  0
362  7  3 167  0
362  8  5 187  0
362  9  4 135  0
362 10  4 184  0
362 11  5 234  0
362 12  4 333  0
362 13  5 352  0
362 14  4 452  0
362 15  4 523  0
362 16  4 464  0
362 17  3 385  0
362 18  4 255  0
362 19  4 205  0
362 20  3 225  0
362 21  4 305  0
362 22  5 305  0
362 23  4 335  0
362 24  5 275  0
363  1  4 325  0
363  2  4 245  0
363  3  5 205  0
363  4  5 156  0
363  5  4 126  0
363  6  5 126  0
363  7  3 176  0
363  8  5 136  0
363  9  6 174  0
363 10  8 184  0
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363 11  8 244  0
363 12  9 204  0
363 13  4 193  0
363 14  5 182  0
363 15  5 164  0
363 16  3 224  0
363 17  2 155  0
363 18  2 176  0
363 19  2 127  0
363 20  1 147  0
363 21  1 157  0
363 22 16 147  0
363 23 15 297  0
363 24  1 146  0
364  1  1 227  0
364  2  1 127  0
364  3  2 187  0
364  4  2 167  0
364  5  3 127  0
364  6  5  97  0
364  7  3 177  0
364  8  3 187  0
364  9  3 166  0
364 10  2 244  0
364 11  2 263  0
364 12  3 312  0
364 13  4 353  0
364 14  3 382  0
364 15  3 313  0
364 16  2 374  0
364 17  2 195  0
364 18  2 186  0
364 19  2 217  0
364 20  2 177  0
364 21  2 177  0
364 22  2 177  0
364 23  1 166  0
364 24  2 127  0
365  1  2 136  0
365  2  2  97  0
365  3  3 136  0
365  4  3 146  0
365  5  3 166  0
365  6  3 196  0
365  7  3 215  0
365  8  3 245  0
365  9  3 225  0
365 10  3 204  0
365 11  4 164  0
365 12  4 264  0
365 13  4  94  0
365 14  3 144  0
365 15  3 244  0
365 16  3 214  0
365 17  2 145  0
365 18 16 105  0
365 19  2 176  0
365 20  2 136  0
365 21 12  67  0
365 22 11  47  0
```

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 365 23 13  87  0
 365 24 13  87  0
        4.        4.        4.        4.       15.       15.       15.       15.
```

```
MACCS2 01-JUN-07  10:36:24   VERSION 1.13.1:  last revised 1/8/04, K. McFadden
P1:  ATMOS USER INPUT (UNIT 24) = V.ATM
P2:  EARLY USER INPUT (UNIT 25) = V.ERL
P3: CHRONC USER INPUT (UNIT 26) = V.CHR
P4:  METEOROLOGY DATA (UNIT 28) = V.MET
P5:   SITE DATA INPUT (UNIT 29) = V.SIT
P6:       LIST OUTPUT (UNIT 06) = V.OUT



USER INPUT IS READ FROM UNIT 24
RECORD IDENTIFIER FIELDS  11 CHARACTERS LONG ARE EXPECTED.
THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS
1000.

RECORD
NUMBER                              RECORD

     ********************************************************************************
     * FILE NAME:   VATMOS.INP
     *
     * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
     *
   1  RIATNAM1001 'ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000'
     *
     ********************************************************************************
     * GEOMETRY DATA BLOCK, LOADED BY INPGEO, STORED IN /GEOM/
     *
     * NUMBER OF RADIAL SPATIAL ELEMENTS
     *
   2  GENUMRAD001 10
     *
     * SPATIAL ENDPOINT DISTANCES IN MILES    [SEE SIT FILE]
     *
     *        END001   1      2      3      4      5
     *        END002  10     20     30     40     50
     *
     * SPATIAL ENDPOINT DISTANCES IN KILOMETERS
     *
   3  GESPAEND001   1.6093    3.2187    4.8280    6.4374    8.0467
   4  GESPAEND002  16.0935   32.1869   48.2804   64.3739   80.4674
     ********************************************************************************
     * NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/
     *
     * Number of pseudo-stable nuclides (used to truncate the decay chains)
     *                                        [1:page 5-7]
   5  ISNUMSTB001      27
     *
     * List of pseudo-stable nuclides
     *                                        [1:page 5-7]
   6  ISNAMSTB001     I-129    (daughter of Te-129 and Te-129m)
   7  ISNAMSTB002     Xe-131m  (daughter of I-131)
   8  ISNAMSTB003     Xe-133m  (daughter of I-133)
   9  ISNAMSTB004     Xe-135m  (daughter of I-135)
  10  ISNAMSTB005     Cs-135   (daughter of Xe-135 and Xe-135m)
```

```
11  ISNAMSTB006     Sm-147   (daughter of Pm-147)
12  ISNAMSTB007     U-234    (daughter of Pu-238)
13  ISNAMSTB008     U-235    (daughter of Pu-239)
14  ISNAMSTB009     U-236    (daughter of Pu-240)
15  ISNAMSTB010     U-237    (daughter of Pu-241)
16  ISNAMSTB011     Np-237   (daughter of Am-241)
17  ISNAMSTB012     Rb-87    (daughter of Kr-87)
18  ISNAMSTB013     Ba-137m  (daughter of Cs-137)
19  ISNAMSTB014     Rb-88    (daughter of Kr-88)
20  ISNAMSTB015     Y-91m    (daughter of Sr-91)
21  ISNAMSTB016     Zr-93    (daughter of Y-93)
22  ISNAMSTB017     Nb-93m   (daughter of Zr-93)
23  ISNAMSTB018     Nb-95m   (daughter of Zr-95)
24  ISNAMSTB019     Nb-97    (daughter of Zr-97 and Nb-97m)
25  ISNAMSTB020     Nb-97m   (daughter of Zr-97)
26  ISNAMSTB021     Tc-99    (daughter of Mo-99)
27  ISNAMSTB022     Rh-103m  (daughter of Ru-103)
28  ISNAMSTB023     Rh-106   (daughter of Ru-106)
29  ISNAMSTB024     Te-131   (daughter of Te-131m)
30  ISNAMSTB025     Pr-144   (daughter of Ce-144 and Pr-144m)
31  ISNAMSTB026     Pr-144m  (daughter of Ce-144)
32  ISNAMSTB027     Pm-147   (daughter of Nd-147)
    *
    * Number of radioactive nuclides to be considered
    *
33  ISNUMISO001 60
    *
    * NUMBER OF NUCLIDE GROUPS
    *
34  ISMAXGRP001  9
    *
    * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
    *
    *            WETDEP     DRYDEP
    *
35  ISDEPFLA001    .FALSE.   .FALSE.
36  ISDEPFLA002    .TRUE.    .TRUE.
37  ISDEPFLA003    .TRUE.    .TRUE.
38  ISDEPFLA004    .TRUE.    .TRUE.
39  ISDEPFLA005    .TRUE.    .TRUE.
40  ISDEPFLA006    .TRUE.    .TRUE.
41  ISDEPFLA007    .TRUE.    .TRUE.
42  ISDEPFLA008    .TRUE.    .TRUE.
43  ISDEPFLA009    .TRUE.    .TRUE.
    *
    * NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS
    *  (SAME AS 1150 EXCEPT LOWER CASE NUCNAM, NO PARENT OR HALFLIFE [1:page 5-7]
    *            NUCNAM    IGROUP
    *
44  ISOTPGRP001     Co-58       6
45  ISOTPGRP002     Co-60       6
46  ISOTPGRP003     Kr-85       1
47  ISOTPGRP004     Kr-85m      1
48  ISOTPGRP005     Kr-87       1
49  ISOTPGRP006     Kr-88       1
50  ISOTPGRP007     Rb-86       3
```

```
 51  ISOTPGRP008     Sr-89       5
 52  ISOTPGRP009     Sr-90       5
 53  ISOTPGRP010     Sr-91       5
 54  ISOTPGRP011     Sr-92       5
 55  ISOTPGRP012     Y-90        7
 56  ISOTPGRP013     Y-91        7
 57  ISOTPGRP014     Y-92        7
 58  ISOTPGRP015     Y-93        7
 59  ISOTPGRP016     Zr-95       7
 60  ISOTPGRP017     Zr-97       7
 61  ISOTPGRP018     Nb-95       7
 62  ISOTPGRP019     Mo-99       6
 63  ISOTPGRP020     Tc-99m      6
 64  ISOTPGRP021     Ru-103      6
 65  ISOTPGRP022     Ru-105      6
 66  ISOTPGRP023     Ru-106      6
 67  ISOTPGRP024     Rh-105      6
 68  ISOTPGRP025     Sb-127      4
 69  ISOTPGRP026     Sb-129      4
 70  ISOTPGRP027     Te-127      4
 71  ISOTPGRP028     Te-127m     4
 72  ISOTPGRP029     Te-129      4
 73  ISOTPGRP030     Te-129m     4
 74  ISOTPGRP031     Te-131m     4
 75  ISOTPGRP032     Te-132      4
 76  ISOTPGRP033     I-131       2
 77  ISOTPGRP034     I-132       2
 78  ISOTPGRP035     I-133       2
 79  ISOTPGRP036     I-134       2
 80  ISOTPGRP037     I-135       2
 81  ISOTPGRP038     Xe-133      1
 82  ISOTPGRP039     Xe-135      1
 83  ISOTPGRP040     Cs-134      3
 84  ISOTPGRP041     Cs-136      3
 85  ISOTPGRP042     Cs-137      3
 86  ISOTPGRP043     Ba-139      9
 87  ISOTPGRP044     Ba-140      9
 88  ISOTPGRP045     La-140      7
 89  ISOTPGRP046     La-141      7
 90  ISOTPGRP047     La-142      7
 91  ISOTPGRP048     Ce-141      8
 92  ISOTPGRP049     Ce-143      8
 93  ISOTPGRP050     Ce-144      8
 94  ISOTPGRP051     Pr-143      7
 95  ISOTPGRP052     Nd-147      7
 96  ISOTPGRP053     Np-239      8
 97  ISOTPGRP054     Pu-238      8
 98  ISOTPGRP055     Pu-239      8
 99  ISOTPGRP056     Pu-240      8
100  ISOTPGRP057     Pu-241      8
101  ISOTPGRP058     Am-241      7
102  ISOTPGRP059     Cm-242      7
103  ISOTPGRP060     Cm-244      7
   ******************************************************************************
   * WET DEPOSITION DATA BLOCK, LOADED BY INPWET, STORED IN /WETCON/
   *
```

```
   * WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
   *
104  WDCWASH1001  9.5E-5   (JON HELTON AFTER JONES, 1986)
   *
   * WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
   *
105  WDCWASH2001  0.8      (JON HELTON AFTER JONES, 1986)
   ********************************************************************************
   * DRY DEPOSITION DATA BLOCK, LOADED BY INPDRY, STORED IN /DRYCON/
   *
   * NUMBER OF PARTICLE SIZE GROUPS
   *
106  DDNPSGRP001   3
   *
   * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
   *
107  DDVDEPOS001   0.0     0.01     0.001    (values from URD)
   *  First value is for volatile iodine (5% of total; see PSDIST002)
   *  Second value is for particulate iodine (95% ; see PSDIST002)
   *  Third value is for all other particulates except iodine (see PSDIST 3-9)
   ********************************************************************************
   * DISPERSION PARAMETER DATA BLOCK, LOADED BY INPDIS, STORED IN /DISPY/, /DISPZ/
   *
   * # of distances in plume-size tables--which can be used as an alternative to the power-law model:
   * (to utilize the power-law model, set NUM_DIST to zero or delete the following data card)
   *
108  NUM_DIST001   0
   *
   * SIGMA = A * X ** B
   *
   * Taken from URD
   * P-G CLASS:          A          B          C          D          E          F
109  DPCYSIGA001        0.3658     0.2751     0.2089     0.1474     0.1046     0.0722
110  DPCYSIGB001        0.9031     0.9031     0.9031     0.9031     0.9031     0.9031
111  DPCZSIGA001        2.47E-4    0.078      0.144      0.368      0.2517     0.184
112  DPCZSIGB001        2.118      1.085      0.911      0.6764     0.6720     0.6546
   *
   *  LINEAR SCALING FACTOR FOR SIGMA-Y FUNCTION, NORMALLY 1
   *
113  DPYSCALE001    1.
   *
   *  LINEAR SCALING FACTOR FOR SIGMA-Z FUNCTION,
   *  NORMALLY USED FOR SURFACE ROUGHNESS LENGTH CORRECTION.
   *  (Z1 / Z0) ** 0.2,   FROM CRAC2 WE HAVE  (10 CM / 3 CM) ** 0.2 = 1.27
   *
114  DPZSCALE001    1.27
   ******************************************************************************** *
   * EXPANSION FACTOR DATA BLOCK, LOADED BY INPEXP, STORED IN /EXPAND/
   *
   * TIME BASE FOR EXPANSION FACTOR (SECONDS)
   *
115  PMTIMBAS001    180.   (from Westinghouse ATMOS file)
   *
   * BREAK POINT FOR FORMULA CHANGE (SECONDS)
   *
116  PMBRKPNT001   3600.   (1 HOUR)
```

```
    *
    * EXPONENTIAL EXPANSION FACTOR NUMBER 1
    *
117  PMXPFAC1001      0.2
    *
    * EXPONENTIAL EXPANSION FACTOR NUMBER 2
    *
118  PMXPFAC2001      0.25
    ********************************************************************************
    * PLUME RISE DATA BLOCK, LOADED BY INPLRS, STORED IN /PLUMRS/
    *
    * SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A BOUYANT
PLUME
    * (USED BY FUNCTION CAUGHT)
    *
119  PRSCLCRW001   1.
    *
    * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
    * (USED BY FUNCTION PLMRIS)
    *
120  PRSCLADP001   1.
    *
    * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
    * (USED BY FUNCTION PLMRIS)
    *
121  PRSCLEFP001   1.
    ********************************************************************************
    * RELEASE DATA BLOCK, LOADED BY INPREL, STORED IN /ATNAM2/, /MULREL/
    ********************** RELEASE DATA BLOCK *************
    *
    *    Vogtle ESP CONTAINMENT BLDG FAÇADE (INCLUDING TURBINE BUILDING)
    *            height 65.6 meters width 39.6 meters)
    *
    * Initial value of sigma-y for each plume
    *
122  SIGYINIT001  9.21     9.21     9.21     9.21 *(initial sigma-y = W/4.3 [1:page 5-22 and URD])
    *
    * Initial value of sigma-z for each plume
    *
123  SIGZINIT001  33.    33.    33.    33.  *(initial sigma-z = H/2.15 [1:page5-22])
    *
    * Building height (meters)
    *
124  WEBUILDH001   65.6     65.6     65.6     65.6   *(Height of Vogtle ESP containment building)
    *
    * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
    * YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
    *
125  RDPSDIST001      0.0    0.0    1.0
126  RDPSDIST002      0.05   0.95   0.0
127  RDPSDIST003      0.0    0.0    1.0
128  RDPSDIST004      0.0    0.0    1.0
129  RDPSDIST005      0.0    0.0    1.0
130  RDPSDIST006      0.0    0.0    1.0
131  RDPSDIST007      0.0    0.0    1.0
132  RDPSDIST008      0.0    0.0    1.0
```

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133  RDPSDIST009     0.0    0.0    1.0
   *
   * AP1000 CORE INVENTORY, END-OF-CYCLE from AP1000 DCD, Rev 12 (in Rev 14)
   *
   *
   *            NUCNAM       CORINV (Bq)
   *
134  RDCORINV001    Co-58        0.0
135  RDCORINV002    Co-60        0.0
136  RDCORINV003    Kr-85        3.92E+16
137  RDCORINV004    Kr-85m       9.73E+17
138  RDCORINV005    Kr-87        1.88E+18
139  RDCORINV006    Kr-88        2.64E+18
140  RDCORINV007    Rb-86        8.47E+15
141  RDCORINV008    Sr-89        3.57E+18
142  RDCORINV009    Sr-90        3.07E+17
143  RDCORINV010    Sr-91        4.44E+18
144  RDCORINV011    Sr-92        4.77E+18
145  RDCORINV012    Y-90         3.20E+17
146  RDCORINV013    Y-91         4.59E+18
147  RDCORINV014    Y-92         4.81E+18
148  RDCORINV015    Y-93         5.51E+18
149  RDCORINV016    Zr-95        6.14E+18
150  RDCORINV017    Zr-97        6.07E+18
151  RDCORINV018    Nb-95        6.18E+18
152  RDCORINV019    Mo-99        6.81E+18
153  RDCORINV020    Tc-99m       5.96E+18
154  RDCORINV021    Ru-103       5.37E+18
155  RDCORINV022    Ru-105       3.64E+18
156  RDCORINV023    Ru-106       1.76E+18
157  RDCORINV024    Rh-105       3.33E+18
158  RDCORINV025    Sb-127       3.81E+17
159  RDCORINV026    Sb-129       1.15E+18
160  RDCORINV027    Te-127       3.77E+17
161  RDCORINV028    Te-127m      4.88E+16
162  RDCORINV029    Te-129       1.12E+18
163  RDCORINV030    Te-129m      1.67E+17
164  RDCORINV031    Te-131m      5.18E+17
165  RDCORINV032    Te-132       5.11E+18
166  RDCORINV033    I-131        3.56E+18
167  RDCORINV034    I-132        5.18E+18
168  RDCORINV035    I-133        7.36E+18
169  RDCORINV036    I-134        8.07E+18
170  RDCORINV037    I-135        6.88E+18
171  RDCORINV038    Xe-133       7.03E+18
172  RDCORINV039    Xe-135       1.79E+18
173  RDCORINV040    Cs-134       7.18E+17
174  RDCORINV041    Cs-136       2.05E+17
175  RDCORINV042    Cs-137       4.18E+17
176  RDCORINV043    Ba-139       6.59E+18
177  RDCORINV044    Ba-140       6.33E+18
178  RDCORINV045    La-140       6.73E+18
179  RDCORINV046    La-141       5.99E+18
180  RDCORINV047    La-142       5.81E+18
181  RDCORINV048    Ce-141       6.03E+18
182  RDCORINV049    Ce-143       5.62E+18
```

```
183  RDCORINV050     Ce-144        4.55E+18
184  RDCORINV051     Pr-143        5.40E+18
185  RDCORINV052     Nd-147        2.40E+18
186  RDCORINV053     Np-239        7.14E+19
187  RDCORINV054     Pu-238        1.42E+16
188  RDCORINV055     Pu-239        1.25E+15
189  RDCORINV056     Pu-240        1.83E+15
190  RDCORINV057     Pu-241        4.11E+17
191  RDCORINV058     Am-241        4.63E+14
192  RDCORINV059     Cm-242        1.09E+17
193  RDCORINV060     Cm-244        1.346E+16
   *


   *
194  RDCORSCA001   1.000
   *
195  RDAPLFRC001   PARENT      (apply rel fracs the same as prior versions)
   *
   ********************************************************************************
   * OUTPUT CONTROL DATA BLOCK, LOADED BY INPOPT, STORED IN /STOPME/, /ATMOPT/
   *
   * FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
   *
196  OCENDAT1001  .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)
   *
197  OCIDEBUG001  0
   *
   * NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS
   *
   *OCNUCOUT001  Cs-137
   *
   *            NUM0              NO TABLES OUTPUT=0
198  TYPE0NUMBER      0
   *
   *            INDREL   INDRAD
   *TYPE0OUT001      1        4
   *TYPE0OUT002      1       10        XCCDF
   ********************************************************************************
   * METEOROLOGICAL SAMPLING DATA BLOCK
   *
   * METEOROLOGICAL SAMPLING OPTION CODE:
   *
   * METCOD = 1, USER SPECIFIED DAY AND HOUR IN THE YEAR (FROM MET FILE),
   *         2, WEATHER CATEGORY BIN SAMPLING,
   *         3, 120 HOURS OF WEATHER SPECIFIED ON THE ATMOS USER INPUT FILE,
   *         4, CONSTANT MET (BOUNDARY WEATHER USED FROM THE START),
   *         5, STRATIFIED RANDOM SAMPLES FOR EACH DAY OF THE YEAR.
   *
199  M1METCOD001  2
   *
   * LAST SPATIAL INTERVAL FOR MEASURED WEATHER
   *
200  M2LIMSPA001  10                    (ADJUSTED FOR RADIAL INTVL)
   *
   * BOUNDARY WEATHER MIXING LAYER HEIGHT
   *
```

```
201  M2BNDMXH001  1500.  (METERS; used by Westinghouse)
   *
   * BOUNDARY WEATHER STABILITY CLASS INDEX
   *
202  M2IBDSTB001  4      (D-STABILITY; Westinghouse used 6 for F class)
   *
   * BOUNDARY WEATHER RAIN RATE
   *
203  M2BNDRAN001  0.     (MM/HR)
   *
   * BOUNDARY WEATHER WIND SPEED
   *
204  M2BNDWND001  2.0     (M/S; used by Westinghouse)
   *
   * NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
   *
205  M4NRNINT001    5
   *                                nureg 4551 [4:page a-9]
   * ENDPOINTS OF THE RAIN DISTANCE INTERVALS (KILOMETERS)
   *
   * NOTE:   THESE MUST BE CHOSEN TO MATCH THE SPATIAL ENDPOINT DISTANCES
   * SPECIFIED FOR ARRAY SPAEND (10 % ERROR IS ALLOWED).
   *
206  M4RNDSTS001  3.22  8.05  16.09  48.28  80.47  KM
   *
   * NUMBER OF RAIN INTENSITIY BREAKPOINTS
   *
207  M4NRINTN001   3
   *
   * RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
   *
208  M4RNRATE001   2.  4.  6.
   *
   * NUMBER OF SAMPLES PER BIN
   *
209  M4NSMPLS001  4  (THIS NUMBER SHOULD BE SET TO AT LEAST 4 WHEN METCOD=2)
   *
   * INITIAL SEED FOR RANDOM NUMBER GENERATOR
   *
210  M4IRSEED001   79
   ********************** RELEASE DATA BLOCK *************
   * SOURCE TERM NUMBER 1 OF 6
   *
211  RDATNAM2001 'CFI'
212  RDOALARM001 2924. * value provided by Westinghouse for all source terms; no evacuation
213  RDNUMREL001 4 *four plume segments
214  RDMAXRIS001 1 *first plume segment carries greatest risk
215  RDREFTIM001 0.0 0.5 0.5 0.5 *Table 49-2 values
216  RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
217  RDPLHITE001 30. 30. 30. 30.  *Release height of each plume (meters above grade)
218  RDPLUDUR001 29666. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
219  RDPDELAY001 2924. 32590. 86420. 172800. *start at Table 49-2 values
   * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
220  RDRELFRC001 5.40E-1 3.19E-3 3.18E-3 4.18E-4 2.11E-2 9.11E-3 3.53E-3 2.64E-5 1.62E-2
221  RDRELFRC002 2.58E-1 1.35E-4 1.35E-4 1.67E-5 6.50E-4 1.68E-4 4.53E-3 1.68E-5 3.40E-4
222  RDRELFRC003 8.40E-2 0.00E0 0.00E0 4.47E-6 0.00E0 0.00E0 6.00E-3 2.17E-5 0.00E0
```

```
  223  RDRELFRC004 3.83E-2 0.00E0 0.00E0 1.57E-6 0.00E0 0.00E0 5.22E-3 1.89E-5 0.00E0
       .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********


USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                        =  430
NUMBER OF BLANK OR COMMENT RECORDS READ        =  206
NUMBER OF TERMINATOR RECORDS                   =    1
NUMBER OF RECORDS PROCESSED                    =  223
    NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
    NUMBER OF PROCESSED RECORDS SORTED         =  223
*****************************************************************************************************



Decay Chain #  Ba-139

Decay Chain #  Ba-140   La-140
Fraction of Ba-140  going to La-140  in this chain = 1.000000

Decay Chain #  Ce-143   Pr-143
Fraction of Ce-143  going to Pr-143  in this chain = 1.000000

Decay Chain #  Ce-144

Decay Chain #  Cm-242   Pu-238
Fraction of Cm-242  going to Pu-238  in this chain = 1.000000

Decay Chain #  Cm-244   Pu-240
Fraction of Cm-244  going to Pu-240  in this chain = 1.000000

Decay Chain #  Co-58

Decay Chain #  Co-60

Decay Chain #  Cs-134

Decay Chain #  Cs-136

Decay Chain #  Cs-137

Decay Chain #  I-133    Xe-133
Fraction of I-133   going to Xe-133  in this chain = 0.971000

Decay Chain #  I-134

Decay Chain #  I-135    Xe-135
Fraction of I-135   going to Xe-135  in this chain = 0.846000

Decay Chain #  Kr-85m   Kr-85
Fraction of Kr-85m  going to Kr-85   in this chain = 0.211000

Decay Chain #  Kr-87
```

Decay Chain # Kr-88

Decay Chain # La-141 Ce-141
Fraction of La-141 going to Ce-141 in this chain = 1.000000

Decay Chain # La-142

Decay Chain # Mo-99 Tc-99m
Fraction of Mo-99 going to Tc-99m in this chain = 0.876000

Decay Chain # Nd-147

Decay Chain # Np-239 Pu-239
Fraction of Np-239 going to Pu-239 in this chain = 1.000000

Decay Chain # Pu-241 Am-241
Fraction of Pu-241 going to Am-241 in this chain = 1.000000

Decay Chain # Rb-86

Decay Chain # Ru-103

Decay Chain # Ru-105 Rh-105
Fraction of Ru-105 going to Rh-105 in this chain = 1.000000

Decay Chain # Ru-106

Decay Chain # Sb-127 Te-127
Fraction of Sb-127 going to Te-127 in this chain = 0.824000

Decay Chain # Sb-127 Te-127m Te-127
Fraction of Sb-127 going to Te-127m in this chain = 0.176000
Fraction of Sb-127 going to Te-127 in this chain = 0.171776
Fraction of Te-127m going to Te-127 in this chain = 0.976000

Decay Chain # Sb-129 Te-129
Fraction of Sb-129 going to Te-129 in this chain = 0.775000

Decay Chain # Sb-129 Te-129m Te-129
Fraction of Sb-129 going to Te-129m in this chain = 0.225000
Fraction of Sb-129 going to Te-129 in this chain = 0.146250
Fraction of Te-129m going to Te-129 in this chain = 0.650000

Decay Chain # Sr-89

Decay Chain # Sr-90 Y-90
Fraction of Sr-90 going to Y-90 in this chain = 1.000000

Decay Chain # Sr-91 Y-91
Fraction of Sr-91 going to Y-91 in this chain = 0.422000

Decay Chain # Sr-92 Y-92
Fraction of Sr-92 going to Y-92 in this chain = 1.000000

Decay Chain # Te-131m I-131
Fraction of Te-131m going to I-131 in this chain = 0.778000

Decay Chain # Te-132 I-132
Fraction of Te-132 going to I-132 in this chain = 1.000000

Decay Chain # Y-93

Decay Chain # Zr-95 Nb-95
Fraction of Zr-95 going to Nb-95 in this chain = 0.993000

Decay Chain # Zr-97

RELEASED INVENTORY OF ALL PLUMES

Kr-85	2.12E+16	1.01E+16	3.29E+15	1.50E+15
Kr-85m	4.63E+17	2.85E+16	9.19E+14	1.02E+13
Kr-87	6.52E+17	2.29E+14	2.15E+10	2.05E+04
Kr-88	1.17E+18	2.21E+16	1.87E+14	2.44E+11
Rb-86	2.69E+13	1.12E+12	0.00E+00	0.00E+00
Sr-89	7.53E+16	2.30E+15	0.00E+00	0.00E+00
Sr-90	6.48E+15	2.00E+14	0.00E+00	0.00E+00
Sr-91	8.83E+16	1.04E+15	0.00E+00	0.00E+00
Sr-92	8.18E+16	8.52E+13	0.00E+00	0.00E+00
Y-90	1.18E+15	1.27E+15	1.40E+15	9.41E+14
Y-91	1.62E+16	2.07E+16	2.71E+16	2.33E+16
Y-92	2.78E+16	1.76E+15	9.86E+13	7.81E+11
Y-93	1.84E+16	9.51E+15	4.52E+15	7.57E+14
Zr-95	2.17E+16	2.76E+16	3.64E+16	3.13E+16
Zr-97	2.07E+16	1.55E+16	1.11E+16	3.60E+15
Nb-95	2.18E+16	2.80E+16	3.71E+16	3.22E+16
Mo-99	6.15E+16	9.87E+14	0.00E+00	0.00E+00
Tc-99m	5.43E+16	9.31E+14	0.00E+00	0.00E+00
Ru-103	4.89E+16	8.93E+14	0.00E+00	0.00E+00
Ru-105	2.92E+16	6.82E+13	0.00E+00	0.00E+00
Ru-106	1.60E+16	2.95E+14	0.00E+00	0.00E+00
Rh-105	3.03E+16	4.82E+14	0.00E+00	0.00E+00
Sb-127	1.58E+14	5.73E+12	1.37E+12	4.02E+11
Sb-129	4.22E+14	2.01E+12	4.90E+10	3.66E+08
Te-127	1.57E+14	5.93E+12	1.46E+12	4.43E+11
Te-127m	2.04E+13	8.16E+11	2.19E+11	7.68E+10
Te-129	4.39E+14	3.94E+12	5.30E+11	1.65E+11
Te-129m	6.98E+13	2.78E+12	7.34E+11	2.53E+11
Te-131m	2.12E+14	6.25E+12	1.18E+12	2.39E+11
Te-132	2.12E+15	7.53E+13	1.77E+13	5.02E+12
I-131	1.13E+16	4.57E+14	1.29E+11	6.21E+10
I-132	1.34E+16	8.65E+13	1.82E+13	5.17E+12
I-133	2.29E+16	6.22E+14	0.00E+00	0.00E+00
I-134	1.35E+16	1.63E+10	0.00E+00	0.00E+00
I-135	2.02E+16	2.13E+14	0.00E+00	0.00E+00
Xe-133	3.78E+18	1.68E+18	5.03E+17	2.01E+17
Xe-135	9.10E+17	1.58E+17	1.65E+16	1.20E+15
Cs-134	2.28E+15	9.69E+13	0.00E+00	0.00E+00
Cs-136	6.51E+14	2.68E+13	0.00E+00	0.00E+00
Cs-137	1.33E+15	5.64E+13	0.00E+00	0.00E+00
Ba-139	7.10E+16	1.91E+12	0.00E+00	0.00E+00
Ba-140	1.02E+17	2.08E+15	0.00E+00	0.00E+00
La-140	2.48E+16	2.44E+16	2.45E+16	1.41E+16

La-141	1.83E+16	2.28E+15	2.16E+14	2.73E+12
La-142	1.42E+16	4.75E+13	7.56E+10	1.36E+06
Ce-141	1.73E+14	2.24E+14	3.04E+14	2.60E+14
Ce-143	1.46E+14	7.03E+13	6.63E+13	3.49E+13
Ce-144	1.20E+14	7.63E+13	9.84E+13	8.55E+13
Pr-143	1.90E+16	2.37E+16	3.05E+16	2.52E+16
Nd-147	8.45E+15	1.05E+16	1.33E+16	1.09E+16
Np-239	1.87E+15	1.01E+15	1.09E+15	7.04E+14
Pu-238	3.75E+11	2.45E+11	3.25E+11	2.95E+11
Pu-239	3.30E+10	2.11E+10	2.72E+10	2.38E+10
Pu-240	4.83E+10	3.08E+10	3.97E+10	3.46E+10
Pu-241	1.09E+13	6.90E+12	8.92E+12	7.77E+12
Am-241	1.63E+12	2.10E+12	2.78E+12	2.42E+12
Cm-242	3.85E+14	4.93E+14	6.51E+14	5.64E+14
Cm-244	4.75E+13	6.10E+13	8.07E+13	7.02E+13

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:
DAY HR DR SPS RN (Julian Date, Hour, Direction, Speed, Stability, Precipitation
BLANK LINE
METEOROLOGICAL DATA FILE CONTAINS 463 HOURS OF OBSERVED RAIN DATA.
ACCUMULATED RAIN MEASUREMENTS TOTALED 32.74 INCHES FOR THE YEAR.
CONSTANT LID HEIGHTS (M) FOR 4 SEASONS = 1500 1500 1500 1500
NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S
NUMTRI= 139

* * * * METEOROLOGICAL BIN SUMMARY * * * *

BIN PRIORITIES
RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80
RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0
S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V
STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

WIND DIRECTION

METBIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
1 B 3	0.060	0.069	0.091	0.077	0.077	0.044	0.019	0.042	0.044	0.054	0.054	0.104	0.094	0.083	0.044	0.046	481	5.4909
2 B 4	0.022	0.053	0.068	0.122	0.112	0.070	0.048	0.073	0.070	0.036	0.057	0.082	0.091	0.031	0.043	0.022	645	7.3630
3 D 1	0.022	0.065	0.043	0.087	0.087	0.065	0.065	0.000	0.022	0.065	0.130	0.043	0.043	0.065	0.087	0.109	46	0.5251
4 D 2	0.046	0.052	0.058	0.074	0.058	0.066	0.062	0.064	0.104	0.072	0.060	0.088	0.068	0.044	0.038	0.042	498	5.6849
5 D 3	0.048	0.055	0.076	0.076	0.069	0.056	0.066	0.069	0.121	0.089	0.073	0.056	0.057	0.027	0.026	0.036	768	8.7671
6 D 4	0.025	0.062	0.089	0.082	0.088	0.046	0.042	0.083	0.094	0.058	0.097	0.078	0.046	0.029	0.051	0.031	650	7.4201
7 D 5	0.013	0.079	0.118	0.053	0.132	0.145	0.066	0.039	0.105	0.118	0.026	0.039	0.000	0.000	0.039	0.026	76	0.8676

8 D 6 0.000 0.000 0.250 0.000 0.250 0.000 0.000 0.000 0.000 0.000 0.000 0.250 0.000 0.000 0.250 0.000 4 0.0457
9 E 1 0.124 0.046 0.046 0.065 0.092 0.046 0.046 0.033 0.072 0.052 0.026 0.065 0.065 0.059 0.052 0.111 153 1.7466
10 E 2 0.081 0.072 0.091 0.078 0.074 0.038 0.044 0.029 0.047 0.050 0.072 0.055 0.062 0.065 0.056 0.084 678 7.7397
11 E 3 0.067 0.060 0.092 0.069 0.081 0.050 0.031 0.048 0.041 0.069 0.063 0.062 0.050 0.053 0.085 0.079 682 7.7854
12 E 4 0.019 0.047 0.099 0.030 0.068 0.068 0.058 0.088 0.079 0.118 0.082 0.047 0.025 0.019 0.123 0.030 365 4.1667
13 F 1 0.056 0.056 0.074 0.074 0.071 0.063 0.051 0.036 0.061 0.036 0.081 0.068 0.086 0.077 0.048 0.063 607 6.9292
14 F 2 0.057 0.093 0.121 0.127 0.085 0.060 0.031 0.041 0.044 0.028 0.039 0.064 0.062 0.058 0.039 0.051 1351 15.4224
15 F 3 0.068 0.093 0.084 0.037 0.031 0.031 0.031 0.068 0.080 0.046 0.121 0.105 0.068 0.043 0.040 0.053 323 3.6872
16 F 4 0.000 0.097 0.065 0.065 0.032 0.000 0.032 0.161 0.065 0.097 0.194 0.000 0.032 0.000 0.000 0.161 31 0.3539
17 R1 3 0.080 0.111 0.057 0.043 0.037 0.006 0.034 0.034 0.088 0.063 0.071 0.114 0.051 0.068 0.097 0.048 352 4.0183
18 R1 8 0.102 0.119 0.017 0.051 0.051 0.017 0.051 0.085 0.017 0.017 0.034 0.051 0.153 0.119 0.068 0.051 59 0.6735
19 R1 16 0.092 0.101 0.025 0.034 0.034 0.017 0.084 0.034 0.067 0.084 0.059 0.076 0.067 0.067 0.067 0.092 119 1.3584
20 R1 48 0.097 0.073 0.063 0.031 0.010 0.014 0.024 0.045 0.094 0.087 0.087 0.076 0.101 0.056 0.069 0.073 288 3.2877
21 R1 80 0.063 0.095 0.100 0.036 0.023 0.018 0.000 0.009 0.050 0.072 0.113 0.109 0.086 0.086 0.068 0.072 221 2.5228
22 R2 3 0.045 0.000 0.045 0.061 0.015 0.030 0.045 0.061 0.152 0.045 0.091 0.121 0.061 0.045 0.076 0.106 66 0.7534
23 R2 8 0.333 0.333 0.000 0.000 0.333 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 3 0.0342
24 R2 16 0.105 0.158 0.000 0.000 0.105 0.105 0.000 0.000 0.105 0.053 0.053 0.211 0.000 0.000 0.053 0.053 19 0.2169
25 R2 48 0.091 0.073 0.127 0.109 0.109 0.055 0.073 0.000 0.109 0.018 0.018 0.073 0.036 0.073 0.018 0.018 55 0.6279
26 R2 80 0.059 0.118 0.176 0.078 0.078 0.039 0.039 0.020 0.078 0.059 0.000 0.039 0.059 0.039 0.059 0.059 51 0.5822
27 R3 3 0.000 0.000 0.000 0.063 0.063 0.000 0.000 0.125 0.188 0.063 0.063 0.125 0.125 0.000 0.188 0.000 16 0.1826
29 R3 16 0.000 0.200 0.000 0.200 0.000 0.000 0.000 0.000 0.000 0.200 0.000 0.000 0.200 0.000 0.000 0.200 5 0.0571
30 R3 48 0.000 0.000 0.222 0.333 0.111 0.000 0.000 0.000 0.000 0.000 0.000 0.111 0.111 0.000 0.000 0.111 9 0.1027
31 R3 80 0.111 0.000 0.444 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.222 0.111 0.000 0.000 0.000 0.111 9 0.1027
32 R4 3 0.100 0.075 0.025 0.025 0.025 0.050 0.000 0.150 0.100 0.075 0.125 0.075 0.000 0.025 0.100 0.050 40 0.4566
33 R4 8 0.000 0.200 0.000 0.000 0.000 0.200 0.200 0.000 0.000 0.200 0.000 0.200 0.000 0.000 0.000 0.000 5 0.0571
34 R4 16 0.000 0.111 0.000 0.000 0.111 0.000 0.000 0.111 0.000 0.000 0.111 0.000 0.222 0.000 0.111 0.222 9 0.1027
35 R4 48 0.135 0.081 0.054 0.108 0.054 0.000 0.027 0.054 0.000 0.000 0.054 0.108 0.108 0.027 0.054 0.135 37 0.4224
36 R4 80 0.103 0.128 0.000 0.077 0.077 0.000 0.026 0.051 0.051 0.026 0.000 0.000 0.077 0.077 0.128 0.179 39 0.4452

37 ALL 0.057 0.071 0.085 0.079 0.072 0.049 0.042 0.052 0.070 0.057 0.068 0.073 0.065 0.051 0.055 0.055 8760

* * * * METEOROLOGICAL BIN SUMMARY * * * *

BIN PRIORITIES

RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX

INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 8 16 48 80

RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY BREAKPOINTS ARE 2.0 4.0 6.0

S V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED INTERVAL V

STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F

WIND SPEED INTERVALS ARE IN METERS PER SECOND (M/S), 1 (0-1), 2 (1-2), 3 (2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

WIND DIRECTION

METBIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
1 B 3	29	33	44	37	37	21	9	20	21	26	26	50	45	40	21	22	481	5.4909
2 B 4	14	34	44	79	72	45	31	47	45	23	37	53	59	20	28	14	645	7.3630
3 D 1	1	3	2	4	4	3	3	0	1	3	6	2	2	3	4	5	46	0.5251
4 D 2	23	26	29	37	29	33	31	32	52	36	30	44	34	22	19	21	498	5.6849
5 D 3	37	42	58	58	53	43	51	53	93	68	56	43	44	21	20	28	768	8.7671
6 D 4	16	40	58	53	57	30	27	54	61	38	63	51	30	19	33	20	650	7.4201
7 D 5	1	6	9	4	10	11	5	3	8	9	2	3	0	0	3	2	76	0.8676
8 D 6	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	4	0.0457
9 E 1	19	7	7	10	14	7	7	5	11	8	4	10	10	9	8	17	153	1.7466
10 E 2	55	49	62	53	50	26	30	20	32	34	49	37	42	44	38	57	678	7.7397
11 E 3	46	41	63	47	55	34	21	33	28	47	43	42	34	36	58	54	682	7.7854
12 E 4	7	17	36	11	25	25	21	32	29	43	30	17	9	7	45	11	365	4.1667
13 F 1	34	34	45	45	43	38	31	22	37	22	49	41	52	47	29	38	607	6.9292
14 F 2	77	125	164	172	115	81	42	55	59	38	53	86	84	78	53	69	1351	15.4224
15 F 3	22	30	27	12	10	10	10	22	26	15	39	34	22	14	13	17	323	3.6872
16 F 4	0	3	2	2	1	0	1	5	2	3	6	0	1	0	0	5	31	0.3539
17 R1 3	28	39	20	15	13	2	12	12	31	22	25	40	18	24	34	17	352	4.0183
18 R1 8	6	7	1	3	3	1	3	5	1	1	2	3	9	7	4	3	59	0.6735
19 R1 16	11	12	3	4	4	2	10	4	8	10	7	9	8	8	8	11	119	1.3584
20 R1 48	28	21	18	9	3	4	7	13	27	25	25	22	29	16	20	21	288	3.2877
21 R1 80	14	21	22	8	5	4	0	2	11	16	25	24	19	19	15	16	221	2.5228
22 R2 3	3	0	3	4	1	2	3	4	10	3	6	8	4	3	5	7	66	0.7534
23 R2 8	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0.0342
24 R2 16	2	3	0	0	2	2	0	0	2	1	1	4	0	0	1	1	19	0.2169
25 R2 48	5	4	7	6	6	3	4	0	6	1	1	4	2	4	1	1	55	0.6279
26 R2 80	3	6	9	4	4	2	2	1	4	3	0	2	3	2	3	3	51	0.5822
27 R3 3	0	0	0	1	1	0	0	2	3	1	1	2	2	0	3	0	16	0.1826
28 R3 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0000
29 R3 16	0	1	0	1	0	0	0	0	0	1	0	0	1	0	0	1	5	0.0571
30 R3 48	0	0	2	3	1	0	0	0	0	0	0	1	1	0	0	1	9	0.1027
31 R3 80	1	0	4	0	0	0	0	0	0	0	2	1	0	0	0	1	9	0.1027
32 R4 3	4	3	1	1	1	2	0	6	4	3	5	3	0	1	4	2	40	0.4566
33 R4 8	0	1	0	0	0	1	1	0	0	1	0	1	0	0	0	0	5	0.0571
34 R4 16	0	1	0	0	1	0	0	1	0	0	1	0	2	0	1	2	9	0.1027
35 R4 48	5	3	2	4	2	0	1	2	0	0	2	4	4	1	2	5	37	0.4224
36 R4 80	4	5	0	3	3	0	1	2	2	1	0	0	3	3	5	7	39	0.4452

* * * * SUMMARIES * * * *

R	115	128	92	66	51	25	44	54	109	89	103	128	105	88	106	99	1402	16.0046
B	43	67	88	116	109	66	40	67	66	49	63	103	104	60	49	36	1126	12.8539
D	78	117	157	156	154	120	117	142	215	154	157	144	110	65	80	76	2042	23.3105
E	127	114	168	121	144	92	79	90	100	132	126	106	95	96	149	139	1878	21.4384
F	133	192	238	231	169	129	84	104	124	78	147	161	159	139	95	129	2312	26.3927
1	54	44	54	59	61	48	41	27	49	33	59	53	64	59	41	60	806	9.2009
2	167	208	267	266	199	143	105	111	145	114	134	171	165	154	118	155	2622	29.9315
3	122	138	180	150	150	105	89	124	166	150	162	165	140	101	104	113	2159	24.6461
4	36	89	132	135	144	91	73	135	131	98	129	115	97	46	103	49	1603	18.2991
5	2	10	17	13	18	20	12	6	14	18	9	9	2	0	6	3	159	1.8151
6	0	1	1	1	4	0	0	0	0	0	0	1	0	0	1	0	9	0.1027

* * * * * BIN WINDROSE SUMMARY * * * * *

BIN	DIRECTION																TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	0.060	0.069	0.091	0.077	0.077	0.044	0.019	0.042	0.044	0.054	0.054	0.104	0.094	0.083	0.044	0.046	1.000000
2	0.022	0.053	0.068	0.122	0.112	0.070	0.048	0.073	0.070	0.036	0.057	0.082	0.091	0.031	0.043	0.022	1.000000
3	0.022	0.065	0.043	0.087	0.087	0.065	0.065	0.000	0.022	0.065	0.130	0.043	0.043	0.065	0.087	0.109	1.000000
4	0.046	0.052	0.058	0.074	0.058	0.066	0.062	0.064	0.104	0.072	0.060	0.088	0.068	0.044	0.038	0.042	1.000000
5	0.048	0.055	0.076	0.076	0.069	0.056	0.066	0.069	0.121	0.089	0.073	0.056	0.057	0.027	0.026	0.036	1.000000
6	0.025	0.062	0.089	0.082	0.088	0.046	0.042	0.083	0.094	0.058	0.097	0.078	0.046	0.029	0.051	0.031	1.000000
7	0.013	0.079	0.118	0.053	0.132	0.145	0.066	0.039	0.105	0.118	0.026	0.039	0.000	0.000	0.039	0.026	1.000000
8	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	1.000000
9	0.124	0.046	0.046	0.065	0.092	0.046	0.046	0.033	0.072	0.052	0.026	0.065	0.065	0.059	0.052	0.111	1.000000
10	0.081	0.072	0.091	0.078	0.074	0.038	0.044	0.029	0.047	0.050	0.072	0.055	0.062	0.065	0.056	0.084	1.000000
11	0.067	0.060	0.092	0.069	0.081	0.050	0.031	0.048	0.041	0.069	0.063	0.062	0.050	0.053	0.085	0.079	1.000000
12	0.019	0.047	0.099	0.030	0.068	0.068	0.058	0.088	0.079	0.118	0.082	0.047	0.025	0.019	0.123	0.030	1.000000
13	0.056	0.056	0.074	0.074	0.071	0.063	0.051	0.036	0.061	0.036	0.081	0.068	0.086	0.077	0.048	0.063	1.000000
14	0.057	0.093	0.121	0.127	0.085	0.060	0.031	0.041	0.044	0.028	0.039	0.064	0.062	0.058	0.039	0.051	1.000000
15	0.068	0.093	0.084	0.037	0.031	0.031	0.031	0.068	0.080	0.046	0.121	0.105	0.068	0.043	0.040	0.053	1.000000
16	0.000	0.097	0.065	0.065	0.032	0.000	0.032	0.161	0.065	0.097	0.194	0.000	0.032	0.000	0.000	0.161	1.000000
17	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
18	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
19	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
20	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
21	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
22	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
23	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
24	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
25	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000
26	0.082	0.091	0.066	0.047	0.036	0.018	0.031	0.039	0.078	0.063	0.073	0.091	0.075	0.063	0.076	0.071	1.000000

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  27  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  28  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  29  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  30  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  31  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  32  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  33  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  34  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  35  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  36  0.082  0.091  0.066  0.047  0.036  0.018  0.031  0.039  0.078  0.063  0.073  0.091  0.075  0.063
0.076  0.071  1.000000
  37  0.057  0.071  0.085  0.079  0.072  0.049  0.042  0.052  0.070  0.057  0.068  0.073  0.065  0.051
0.055  0.055  1.000000


******** BEGINNING OF CHANGE CASE   1 USER INPUT ********
     ********************** RELEASE DATA BLOCK *************
     * SOURCE TERM NUMBER 2 OF 6
     *
  224  RDATNAM2001 'CFE'
********   RECORD NUMBER   224 REPLACES RECORD NUMBER   211   ********
  225  RDOALARM001 3004.
********   RECORD NUMBER   225 REPLACES RECORD NUMBER   212   ********
  226  RDNUMREL001 4 *four plume segments
********   RECORD NUMBER   226 REPLACES RECORD NUMBER   213   ********
  227  RDMAXRIS001 1 *first plume segment carries greatest risk
********   RECORD NUMBER   227 REPLACES RECORD NUMBER   214   ********
  228  RDREFTIM001 0.0 0.0 0.5 0.5 *Table 49-2 values
********   RECORD NUMBER   228 REPLACES RECORD NUMBER   215   ********
  229  RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
********   RECORD NUMBER   229 REPLACES RECORD NUMBER   216   ********
  230  RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
********   RECORD NUMBER   230 REPLACES RECORD NUMBER   217   ********
  231  RDPLUDUR001 16806. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
********   RECORD NUMBER   231 REPLACES RECORD NUMBER   218   ********
  232  RDPDELAY001 3004. 19810. 89970. 176300. *start at Table 49-2 seconds after scram
********   RECORD NUMBER   232 REPLACES RECORD NUMBER   219   ********
     * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
  233  RDRELFRC001 4.16E-1 5.53E-2 5.37E-2 1.23E-3 3.14E-3 1.16E-2 5.57E-5 9.54E-7 4.63E-3
********   RECORD NUMBER   233 REPLACES RECORD NUMBER   220   ********
  234  RDRELFRC002 4.05E-1 1.26E-3 1.21E-3 1.61E-4 3.43E-4 2.58E-3 9.66E-6 4.56E-8 6.45E-4
********   RECORD NUMBER   234 REPLACES RECORD NUMBER   221   ********
  235  RDRELFRC003 1.08E-1 0.00E0 0.00E0 0.00E0    0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   235 REPLACES RECORD NUMBER   222   ********
  236  RDRELFRC004 3.43E-2 0.00E0 0.00E0 6.04E-7   0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   236 REPLACES RECORD NUMBER   223   ********
     .
```

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 1 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE 1
NUMBER OF RECORDS CHANGED = 13
NUMBER OF RECORDS ADDED = 0
****

RELEASED INVENTORY OF ALL PLUMES

Kr-85	1.63E+16	1.59E+16	4.23E+15	1.34E+15
Kr-85m	3.56E+17	1.68E+17	1.01E+15	7.88E+12
Kr-87	4.96E+17	3.79E+16	1.61E+10	1.08E+04
Kr-88	8.96E+17	2.79E+17	1.89E+14	1.72E+11
Rb-86	4.54E+14	1.02E+13	0.00E+00	0.00E+00
Sr-89	1.12E+16	1.22E+15	0.00E+00	0.00E+00
Sr-90	9.64E+14	1.05E+14	0.00E+00	0.00E+00
Sr-91	1.31E+16	1.02E+15	0.00E+00	0.00E+00
Sr-92	1.21E+16	4.00E+14	0.00E+00	0.00E+00
Y-90	2.63E+13	9.00E+12	0.00E+00	0.00E+00
Y-91	2.58E+14	4.57E+13	0.00E+00	0.00E+00
Y-92	2.25E+15	5.27E+14	0.00E+00	0.00E+00
Y-93	2.90E+14	3.65E+13	0.00E+00	0.00E+00
Zr-95	3.42E+14	5.92E+13	0.00E+00	0.00E+00
Zr-97	3.27E+14	4.68E+13	0.00E+00	0.00E+00
Nb-95	3.44E+14	5.97E+13	0.00E+00	0.00E+00
Mo-99	7.83E+16	1.66E+16	0.00E+00	0.00E+00
Tc-99m	6.91E+16	1.52E+16	0.00E+00	0.00E+00
Ru-103	6.23E+16	1.38E+16	0.00E+00	0.00E+00
Ru-105	3.71E+16	3.98E+15	0.00E+00	0.00E+00
Ru-106	2.04E+16	4.54E+15	0.00E+00	0.00E+00
Rh-105	3.86E+16	8.35E+15	0.00E+00	0.00E+00
Sb-127	4.66E+14	5.89E+13	0.00E+00	1.54E+11
Sb-129	1.24E+15	7.66E+13	0.00E+00	1.20E+08
Te-127	4.62E+14	5.95E+13	0.00E+00	1.69E+11
Te-127m	6.00E+13	7.86E+12	0.00E+00	2.95E+10
Te-129	1.29E+15	9.74E+13	0.00E+00	6.33E+10
Te-129m	2.05E+14	2.69E+13	0.00E+00	9.71E+10
Te-131m	6.25E+14	7.34E+13	0.00E+00	8.99E+10
Te-132	6.24E+15	7.84E+14	0.00E+00	1.91E+12
I-131	1.96E+17	4.40E+15	0.00E+00	2.40E+10
I-132	2.24E+17	1.89E+15	0.00E+00	1.97E+12
I-133	3.96E+17	7.72E+15	0.00E+00	0.00E+00
I-134	2.31E+17	1.31E+14	0.00E+00	0.00E+00
I-135	3.49E+17	4.87E+15	0.00E+00	0.00E+00
Xe-133	2.91E+18	2.76E+18	6.44E+17	1.79E+17
Xe-135	7.18E+17	4.78E+17	1.96E+16	1.00E+15
Cs-134	3.86E+16	8.69E+14	0.00E+00	0.00E+00
Cs-136	1.10E+16	2.45E+14	0.00E+00	0.00E+00
Cs-137	2.24E+16	5.06E+14	0.00E+00	0.00E+00
Ba-139	2.01E+16	2.67E+14	0.00E+00	0.00E+00
Ba-140	2.93E+16	4.03E+15	0.00E+00	0.00E+00
La-140	7.87E+14	4.26E+14	0.00E+00	0.00E+00
La-141	2.88E+14	2.19E+13	0.00E+00	0.00E+00
La-142	2.22E+14	4.73E+12	0.00E+00	0.00E+00

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Ce-141     5.98E+12   4.54E+11   0.00E+00   0.00E+00
Ce-143     5.27E+12   2.28E+11   0.00E+00   0.00E+00
Ce-144     4.34E+12   2.07E+11   0.00E+00   0.00E+00
Pr-143     3.00E+14   5.16E+13   0.00E+00   0.00E+00
Nd-147     1.33E+14   2.29E+13   0.00E+00   0.00E+00
Np-239     6.74E+13   3.04E+12   0.00E+00   0.00E+00
Pu-238     1.36E+10   6.53E+08   0.00E+00   0.00E+00
Pu-239     1.19E+09   5.71E+07   0.00E+00   0.00E+00
Pu-240     1.75E+09   8.35E+07   0.00E+00   0.00E+00
Pu-241     3.92E+11   1.87E+10   0.00E+00   0.00E+00
Am-241     2.58E+10   4.47E+09   0.00E+00   0.00E+00
Cm-242     6.07E+12   1.05E+12   0.00E+00   0.00E+00
Cm-244     7.50E+11   1.30E+11   0.00E+00   0.00E+00


******** BEGINNING OF CHANGE CASE   2 USER INPUT ********
     ********************** RELEASE DATA BLOCK *************
     * SOURCE TERM NUMBER 3 OF 6
     *
  237  RDATNAM2001 'IC'
********   RECORD NUMBER   237 REPLACES RECORD NUMBER   211   ********
  238  RDOALARM001 4378.
********   RECORD NUMBER   238 REPLACES RECORD NUMBER   212   ********
  239  RDNUMREL001 4 *four plume segments
********   RECORD NUMBER   239 REPLACES RECORD NUMBER   213   ********
  240  RDMAXRIS001 1 *first plume segment carries greatest risk
********   RECORD NUMBER   240 REPLACES RECORD NUMBER   214   ********
  241  RDREFTIM001 0.5 0.0 0.5 0.5 *decayed the travel time of the middle of the segment
********   RECORD NUMBER   241 REPLACES RECORD NUMBER   215   ********
  242  RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
********   RECORD NUMBER   242 REPLACES RECORD NUMBER   216   ********
  243  RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
********   RECORD NUMBER   243 REPLACES RECORD NUMBER   217   ********
  244  RDPLUDUR001 36000. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
********   RECORD NUMBER   244 REPLACES RECORD NUMBER   218   ********
  245  RDPDELAY001 4378. 84810. 134400. 177600. *start at Table 49-2 seconds after scram
********   RECORD NUMBER   245 REPLACES RECORD NUMBER   219   ********
     * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
  246  RDRELFRC001 9.83E-4 1.20E-5 1.15E-5 8.04E-7 1.07E-5 1.31E-5 1.35E-6 5.85E-9 1.20E-5
********   RECORD NUMBER   246 REPLACES RECORD NUMBER   220   ********
  247  RDRELFRC002 4.93E-4 0.00E0 0.00E0 4.83E-9 0.00E0 0.00E0 6.00E-9 3.20E-11 0.00E0
********   RECORD NUMBER   247 REPLACES RECORD NUMBER   221   ********
  248  RDRELFRC003 3.94E-4 0.00E0 0.00E0 1.21E-9 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   248 REPLACES RECORD NUMBER   222   ********
  249  RDRELFRC004 7.72E-4 0.00E0 0.00E0 6.04E-10 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   249 REPLACES RECORD NUMBER   223   ********
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   2 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   2
NUMBER OF RECORDS CHANGED            =   13
NUMBER OF RECORDS ADDED              =    0
*****************************************************************************************************
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RELEASED INVENTORY OF ALL PLUMES

Kr-85	3.85E+13	1.93E+13	1.54E+13	3.03E+13
Kr-85m	3.66E+14	1.25E+13	5.48E+11	1.68E+11
Kr-87	6.24E+13	2.46E+09	7.05E+04	2.00E+02
Kr-88	5.69E+14	4.14E+12	3.39E+10	3.55E+09
Rb-86	9.65E+10	0.00E+00	0.00E+00	0.00E+00
Sr-89	3.81E+13	0.00E+00	0.00E+00	0.00E+00
Sr-90	3.28E+12	0.00E+00	0.00E+00	0.00E+00
Sr-91	3.02E+13	0.00E+00	0.00E+00	0.00E+00
Sr-92	1.04E+13	0.00E+00	0.00E+00	0.00E+00
Y-90	6.18E+11	1.49E+09	0.00E+00	0.00E+00
Y-91	6.23E+12	2.72E+10	0.00E+00	0.00E+00
Y-92	1.73E+13	2.86E+08	0.00E+00	0.00E+00
Y-93	4.86E+12	6.56E+09	0.00E+00	0.00E+00
Zr-95	8.27E+12	3.65E+10	0.00E+00	0.00E+00
Zr-97	6.35E+12	1.39E+10	0.00E+00	0.00E+00
Nb-95	8.34E+12	3.71E+10	0.00E+00	0.00E+00
Mo-99	8.36E+13	0.00E+00	0.00E+00	0.00E+00
Tc-99m	7.67E+13	0.00E+00	0.00E+00	0.00E+00
Ru-103	7.00E+13	0.00E+00	0.00E+00	0.00E+00
Ru-105	1.81E+13	0.00E+00	0.00E+00	0.00E+00
Ru-106	2.30E+13	0.00E+00	0.00E+00	0.00E+00
Rh-105	4.21E+13	0.00E+00	0.00E+00	0.00E+00
Sb-127	2.92E+11	1.54E+09	3.36E+08	1.53E+08
Sb-129	3.41E+11	1.27E+08	1.56E+06	1.14E+05
Te-127	2.96E+11	1.63E+09	3.64E+08	1.69E+08
Te-127m	3.93E+10	2.36E+08	5.92E+07	2.95E+07
Te-129	4.45E+11	6.53E+08	1.30E+08	6.33E+07
Te-129m	1.34E+11	7.97E+08	1.96E+08	9.71E+07
Te-131m	3.61E+11	1.45E+09	2.36E+08	8.92E+07
Te-132	3.89E+12	2.00E+10	4.25E+09	1.91E+09
I-131	4.18E+13	1.21E+08	4.34E+07	2.41E+07
I-132	1.29E+13	2.06E+10	4.38E+09	1.96E+09
I-133	7.18E+13	0.00E+00	0.00E+00	0.00E+00
I-134	7.11E+11	0.00E+00	0.00E+00	0.00E+00
I-135	4.30E+13	0.00E+00	0.00E+00	0.00E+00
Xe-133	6.68E+15	3.04E+15	2.19E+15	4.02E+15
Xe-135	1.11E+15	1.46E+14	2.80E+13	2.19E+13
Cs-134	8.26E+12	0.00E+00	0.00E+00	0.00E+00
Cs-136	2.33E+12	0.00E+00	0.00E+00	0.00E+00
Cs-137	4.81E+12	0.00E+00	0.00E+00	0.00E+00
Ba-139	3.47E+12	0.00E+00	0.00E+00	0.00E+00
Ba-140	7.49E+13	0.00E+00	0.00E+00	0.00E+00
La-140	1.58E+13	2.69E+10	0.00E+00	0.00E+00
La-141	2.70E+12	5.64E+08	0.00E+00	0.00E+00
La-142	4.79E+11	8.76E+05	0.00E+00	0.00E+00
Ce-141	6.21E+10	3.64E+08	0.00E+00	0.00E+00
Ce-143	2.89E+10	1.10E+08	0.00E+00	0.00E+00
Ce-144	2.66E+10	1.45E+08	0.00E+00	0.00E+00
Pr-143	7.19E+12	3.08E+10	0.00E+00	0.00E+00
Nd-147	3.19E+12	1.35E+10	0.00E+00	0.00E+00
Np-239	3.87E+11	1.71E+09	0.00E+00	0.00E+00
Pu-238	8.39E+07	4.68E+05	0.00E+00	0.00E+00
Pu-239	7.32E+06	4.02E+04	0.00E+00	0.00E+00
Pu-240	1.07E+07	5.86E+04	0.00E+00	0.00E+00

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Pu-241     2.40E+09   1.32E+07   0.00E+00   0.00E+00
Am-241     6.25E+08   2.78E+06   0.00E+00   0.00E+00
Cm-242     1.47E+11   6.51E+08   0.00E+00   0.00E+00
Cm-244     1.82E+10   8.08E+07   0.00E+00   0.00E+00


******** BEGINNING OF CHANGE CASE   3 USER INPUT ********
      ********************** RELEASE DATA BLOCK *************
      * SOURCE TERM NUMBER 4 OF 6
      *
  250  RDATNAM2001 'BP'
********   RECORD NUMBER   250 REPLACES RECORD NUMBER   211   ********
  251  RDOALARM001 31890.
********   RECORD NUMBER   251 REPLACES RECORD NUMBER   212   ********
  252  RDNUMREL001 4 *four plume segments
********   RECORD NUMBER   252 REPLACES RECORD NUMBER   213   ********
  253  RDMAXRIS001 1 *first plume segment carries greatest risk
********   RECORD NUMBER   253 REPLACES RECORD NUMBER   214   ********
  254  RDREFTIM001 0.5 0.0 0.0 0.5 *decayed the travel time of the middle of the segment
********   RECORD NUMBER   254 REPLACES RECORD NUMBER   215   ********
  255  RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
********   RECORD NUMBER   255 REPLACES RECORD NUMBER   216   ********
  256  RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
********   RECORD NUMBER   256 REPLACES RECORD NUMBER   217   ********
  257  RDPLUDUR001 14550. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
********   RECORD NUMBER   257 REPLACES RECORD NUMBER   218   ********
  258  RDPDELAY001 31890. 46440. 86490. 172800. *start at Table 49-2 seconds after scram
********   RECORD NUMBER   258 REPLACES RECORD NUMBER   219   ********
      * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
  259  RDRELFRC001 1.00E0 1.69E-1 1.62E-1 6.27E-3 3.57E-3 4.48E-2 1.30E-4 3.19E-6 8.93E-3
********   RECORD NUMBER   259 REPLACES RECORD NUMBER   220   ********
  260  RDRELFRC002 0.00E0 4.64E-2 3.38E-2 3.12E-3 0.00E0 0.00E0 0.00E0 0.00E0 2.00E-6
********   RECORD NUMBER   260 REPLACES RECORD NUMBER   221   ********
  261  RDRELFRC003 0.00E0 2.31E-1 6.60E-2 5.32E-3 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   261 REPLACES RECORD NUMBER   222   ********
  262  RDRELFRC004 0.00E0 2.80E-3 9.96E-3 1.57E-3 0.00E0 0.00E0 0.00E0 1.00E-6 0.00E0
********   RECORD NUMBER   262 REPLACES RECORD NUMBER   223   ********
      .
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   3 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   3
NUMBER OF RECORDS CHANGED            =   13
NUMBER OF RECORDS ADDED              =    0
*****************************************************************************************************



RELEASED INVENTORY OF ALL PLUMES
Kr-85      3.92E+16   0.00E+00   0.00E+00   0.00E+00
Kr-85m     1.81E+17   0.00E+00   0.00E+00   0.00E+00
Kr-87      5.00E+15   0.00E+00   0.00E+00   0.00E+00
Kr-88      1.86E+17   0.00E+00   0.00E+00   0.00E+00
Rb-86      1.35E+15   2.81E+14   5.39E+14   7.77E+13
Sr-89      1.27E+16   0.00E+00   0.00E+00   0.00E+00
Sr-90      1.10E+15   0.00E+00   0.00E+00   0.00E+00
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Sr-91	7.17E+15	0.00E+00	0.00E+00	0.00E+00
Sr-92	1.05E+15	0.00E+00	0.00E+00	0.00E+00
Y-90	1.59E+14	0.00E+00	0.00E+00	0.00E+00
Y-91	6.18E+14	0.00E+00	0.00E+00	0.00E+00
Y-92	3.24E+15	0.00E+00	0.00E+00	0.00E+00
Y-93	3.40E+14	0.00E+00	0.00E+00	0.00E+00
Zr-95	7.94E+14	0.00E+00	0.00E+00	0.00E+00
Zr-97	5.05E+14	0.00E+00	0.00E+00	0.00E+00
Nb-95	8.03E+14	0.00E+00	0.00E+00	0.00E+00
Mo-99	2.72E+17	0.00E+00	0.00E+00	0.00E+00
Tc-99m	2.55E+17	0.00E+00	0.00E+00	0.00E+00
Ru-103	2.39E+17	0.00E+00	0.00E+00	0.00E+00
Ru-105	2.98E+16	0.00E+00	0.00E+00	0.00E+00
Ru-106	7.88E+16	0.00E+00	0.00E+00	0.00E+00
Rh-105	1.35E+17	0.00E+00	0.00E+00	0.00E+00
Sb-127	2.20E+15	1.08E+15	1.69E+15	4.02E+14
Sb-129	1.26E+15	4.53E+14	1.30E+14	3.66E+11
Te-127	2.26E+15	1.11E+15	1.79E+15	4.43E+14
Te-127m	3.06E+14	1.52E+14	2.60E+14	7.68E+13
Te-129	2.01E+15	8.17E+14	7.08E+14	1.65E+14
Te-129m	1.04E+15	5.19E+14	8.77E+14	2.53E+14
Te-131m	2.53E+15	1.20E+15	1.58E+15	2.39E+14
Te-132	2.91E+16	1.42E+16	2.20E+16	5.02E+15
I-131	5.79E+17	1.58E+17	7.55E+17	8.30E+15
I-132	6.17E+16	1.92E+16	2.35E+16	5.17E+15
I-133	8.66E+17	2.22E+17	7.63E+17	3.52E+15
I-134	2.51E+14	1.39E+13	1.05E+10	1.43E-02
I-135	3.72E+17	8.25E+16	1.28E+17	7.43E+13
Xe-133	6.68E+18	1.84E+16	1.40E+17	2.28E+15
Xe-135	1.09E+18	8.31E+16	2.85E+17	5.96E+14
Cs-134	1.16E+17	2.43E+16	4.73E+16	7.14E+15
Cs-136	3.24E+16	6.73E+15	1.28E+16	1.82E+15
Cs-137	6.77E+16	1.41E+16	2.76E+16	4.16E+15
Ba-139	2.48E+14	2.01E+10	0.00E+00	0.00E+00
Ba-140	5.51E+16	1.23E+13	0.00E+00	0.00E+00
La-140	1.03E+16	2.48E+12	0.00E+00	0.00E+00
La-141	1.14E+14	0.00E+00	0.00E+00	0.00E+00
La-142	5.67E+12	0.00E+00	0.00E+00	0.00E+00
Ce-141	2.24E+13	0.00E+00	0.00E+00	5.75E+12
Ce-143	1.43E+13	0.00E+00	0.00E+00	1.85E+12
Ce-144	1.45E+13	0.00E+00	0.00E+00	4.53E+12
Pr-143	6.86E+14	0.00E+00	0.00E+00	3.58E+11
Nd-147	3.03E+14	0.00E+00	0.00E+00	0.00E+00
Np-239	1.99E+14	0.00E+00	0.00E+00	3.73E+13
Pu-238	4.54E+10	0.00E+00	0.00E+00	1.42E+10
Pu-239	4.00E+09	0.00E+00	0.00E+00	1.26E+09
Pu-240	5.84E+09	0.00E+00	0.00E+00	1.83E+09
Pu-241	1.31E+12	0.00E+00	0.00E+00	4.11E+11
Am-241	6.02E+10	0.00E+00	0.00E+00	3.98E+06
Cm-242	1.41E+13	0.00E+00	0.00E+00	0.00E+00
Cm-244	1.75E+12	0.00E+00	0.00E+00	0.00E+00

******** BEGINNING OF CHANGE CASE 4 USER INPUT ********
********** RELEASE DATA BLOCK **********
* SOURCE TERM NUMBER 5 OF 6

```
     *
  263  RDATNAM2001 'CI'
********   RECORD NUMBER   263 REPLACES RECORD NUMBER   211   ********
  264  RDOALARM001 101.
********   RECORD NUMBER   264 REPLACES RECORD NUMBER   212   ********
  265  RDNUMREL001 4 *four plume segments
********   RECORD NUMBER   265 REPLACES RECORD NUMBER   213   ********
  266  RDMAXRIS001 1 *first plume segment carries greatest risk
********   RECORD NUMBER   266 REPLACES RECORD NUMBER   214   ********
  267  RDREFTIM001 0.5 0.5 0.5 0.5 *decayed the travel time of the middle of the segment
********   RECORD NUMBER   267 REPLACES RECORD NUMBER   215   ********
  268  RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
********   RECORD NUMBER   268 REPLACES RECORD NUMBER   216   ********
  269  RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
********   RECORD NUMBER   269 REPLACES RECORD NUMBER   217   ********
  270  RDPLUDUR001 36000. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
********   RECORD NUMBER   270 REPLACES RECORD NUMBER   218   ********
  271  RDPDELAY001 101. 50020. 136400. 211700. *start at Table 49-2 seconds after scram
********   RECORD NUMBER   271 REPLACES RECORD NUMBER   219   ********
     * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
  272  RDRELFRC001 5.73E-1 4.56E-2 2.10E-2 1.64E-3 2.03E-2 4.04E-2 2.39E-4 2.97E-6 3.16E-2
********   RECORD NUMBER   272 REPLACES RECORD NUMBER   220   ********
  273  RDRELFRC002 1.13E-1 0.00E0 0.00E0 1.15E-5 0.00E0 0.00E0 1.00E-7 0.00E0 0.00E0
********   RECORD NUMBER   273 REPLACES RECORD NUMBER   221   ********
  274  RDRELFRC003 5.66E-2 0.0E0 0.00E0 8.10E-5 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   274 REPLACES RECORD NUMBER   222   ********
  275  RDRELFRC004 2.74E-2 0.0E0 0.00E0 1.27E-5 0.00E0 0.00E0 0.00E0 0.00E0 0.00E0
********   RECORD NUMBER   275 REPLACES RECORD NUMBER   223   ********
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   4 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   4
NUMBER OF RECORDS CHANGED            =   13
NUMBER OF RECORDS ADDED              =    0
*****************************************************************************************************
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RELEASED INVENTORY OF ALL PLUMES

Kr-85	2.25E+16	4.43E+15	2.22E+15	1.07E+15
Kr-85m	2.56E+17	5.91E+15	7.23E+13	1.38E+12
Kr-87	6.95E+16	7.15E+12	7.49E+06	4.05E+01
Kr-88	4.43E+17	2.96E+15	4.25E+12	1.25E+10
Rb-86	1.76E+14	0.00E+00	0.00E+00	0.00E+00
Sr-89	7.23E+16	0.00E+00	0.00E+00	0.00E+00
Sr-90	6.23E+15	0.00E+00	0.00E+00	0.00E+00
Sr-91	6.25E+16	0.00E+00	0.00E+00	0.00E+00
Sr-92	2.68E+16	0.00E+00	0.00E+00	0.00E+00
Y-90	4.03E+14	2.61E+10	0.00E+00	0.00E+00
Y-91	1.17E+15	4.55E+11	0.00E+00	0.00E+00
Y-92	3.12E+16	1.19E+10	0.00E+00	0.00E+00
Y-93	9.33E+14	1.51E+11	0.00E+00	0.00E+00
Zr-95	1.46E+15	6.09E+11	0.00E+00	0.00E+00
Zr-97	1.18E+15	2.80E+11	0.00E+00	0.00E+00
Nb-95	1.48E+15	6.18E+11	0.00E+00	0.00E+00

Mo-99	2.61E+17	0.00E+00	0.00E+00	0.00E+00
Tc-99m	2.38E+17	0.00E+00	0.00E+00	0.00E+00
Ru-103	2.16E+17	0.00E+00	0.00E+00	0.00E+00
Ru-105	6.71E+16	0.00E+00	0.00E+00	0.00E+00
Ru-106	7.11E+16	0.00E+00	0.00E+00	0.00E+00
Rh-105	1.31E+17	0.00E+00	0.00E+00	0.00E+00
Sb-127	6.02E+14	3.80E+12	2.24E+13	3.00E+12
Sb-129	8.42E+14	6.38E+11	9.56E+10	5.23E+08
Te-127	6.07E+14	3.98E+12	2.43E+13	3.35E+12
Te-127m	8.01E+13	5.62E+11	3.96E+12	6.21E+11
Te-129	1.05E+15	1.92E+12	8.66E+12	1.32E+12
Te-129m	2.74E+14	1.90E+12	1.31E+13	2.02E+12
Te-131m	7.56E+14	3.85E+12	1.56E+13	1.51E+12
Te-132	8.02E+15	4.97E+13	2.83E+14	3.69E+13
I-131	1.59E+17	2.46E+11	2.92E+12	5.33E+11
I-132	5.83E+16	5.10E+13	2.92E+14	3.80E+13
I-133	2.84E+17	0.00E+00	0.00E+00	0.00E+00
I-134	6.91E+15	0.00E+00	0.00E+00	0.00E+00
I-135	1.85E+17	0.00E+00	0.00E+00	0.00E+00
Xe-133	3.93E+18	7.16E+17	3.14E+17	1.36E+17
Xe-135	7.64E+17	4.79E+16	3.85E+15	3.78E+14
Cs-134	1.51E+16	0.00E+00	0.00E+00	0.00E+00
Cs-136	4.26E+15	0.00E+00	0.00E+00	0.00E+00
Cs-137	8.78E+15	0.00E+00	0.00E+00	0.00E+00
Ba-139	1.66E+16	0.00E+00	0.00E+00	0.00E+00
Ba-140	1.98E+17	0.00E+00	0.00E+00	0.00E+00
La-140	1.80E+16	4.86E+11	0.00E+00	0.00E+00
La-141	5.90E+14	2.14E+10	0.00E+00	0.00E+00
La-142	1.45E+14	1.19E+08	0.00E+00	0.00E+00
Ce-141	2.21E+13	2.87E+09	0.00E+00	0.00E+00
Ce-143	1.50E+13	0.00E+00	0.00E+00	0.00E+00
Ce-144	1.35E+13	0.00E+00	0.00E+00	0.00E+00
Pr-143	1.28E+15	5.19E+11	0.00E+00	0.00E+00
Nd-147	5.66E+14	2.28E+11	0.00E+00	0.00E+00
Np-239	1.99E+14	0.00E+00	0.00E+00	0.00E+00
Pu-238	4.23E+10	1.85E+05	0.00E+00	0.00E+00
Pu-239	3.72E+09	0.00E+00	0.00E+00	0.00E+00
Pu-240	5.44E+09	3.08E+02	0.00E+00	0.00E+00
Pu-241	1.22E+12	0.00E+00	0.00E+00	0.00E+00
Am-241	1.11E+11	4.63E+07	0.00E+00	0.00E+00
Cm-242	2.60E+13	1.09E+10	0.00E+00	0.00E+00
Cm-244	3.22E+12	1.35E+09	0.00E+00	0.00E+00

```
******** BEGINNING OF CHANGE CASE   5 USER INPUT ********
      ********************** RELEASE DATA BLOCK *************
      * SOURCE TERM NUMBER 6 OF 6
      *
  276  RDATNAM2001 'CFL'
********   RECORD NUMBER   276 REPLACES RECORD NUMBER   211   ********
  277  RDOALARM001 2922.
********   RECORD NUMBER   277 REPLACES RECORD NUMBER   212   ********
  278  RDNUMREL001 4 *four plume segments
********   RECORD NUMBER   278 REPLACES RECORD NUMBER   213   ********
  279  RDMAXRIS001 2 second plume segment carries greatest risk per West. files
********   RECORD NUMBER   279 REPLACES RECORD NUMBER   214   ********
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  280  RDREFTIM001 0.5 0.5 0.5 0.5 *decayed the travel time of the middle of the segment
********   RECORD NUMBER   280 REPLACES RECORD NUMBER   215   ********
  281  RDPLHEAT001 0.0 0.0 0.0 0.0 *conservatively neglects buoyant plume rise
********   RECORD NUMBER   281 REPLACES RECORD NUMBER   216   ********
  282  RDPLHITE001 30. 30. 30. 30. *Release height of each plume (meters above grade)
********   RECORD NUMBER   282 REPLACES RECORD NUMBER   217   ********
  283  RDPLUDUR001 23438. 36000. 36000. 36000. *Pl dur=Tbl49-2 values But lim to 10 hrs
********   RECORD NUMBER   283 REPLACES RECORD NUMBER   218   ********
  284  RDPDELAY001 2922. 26360. 108000. 194400. *start at Table 49-2 seconds after scram
********   RECORD NUMBER   284 REPLACES RECORD NUMBER   219   ********
      * XE/KR I CS TE(SB) SR RU(MO) LA CE BA
  285  RDRELFRC001 3.36E-4 1.20E-5 1.15E-5 1.00E-6 1.57E-5 1.68E-5 9.96E-7 7.41E-9 1.61E-5
********   RECORD NUMBER   285 REPLACES RECORD NUMBER   220   ********
  286  RDRELFRC002 1.19E-3 5.00E-8 3.23E-8 1.75E-8 1.04E-6 2.90E-7 1.07E-5 4.05E-8 6.60E-7
********   RECORD NUMBER   286 REPLACES RECORD NUMBER   221   ********
  287  RDRELFRC003 9.79E-1 2.13E-5 1.16E-5 2.47E-5 2.39E-3 1.26E-3 9.75E-2 3.68E-4 2.25E-3
********   RECORD NUMBER   287 REPLACES RECORD NUMBER   222   ********
  288  RDRELFRC004 0.00E0 0.00E0 2.56E-7 1.20E-5 4.42E-4 1.55E-4 4.39E-2 1.66E-4 3.46E-4
********   RECORD NUMBER   288 REPLACES RECORD NUMBER   223   ********
      .
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   5 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   5
NUMBER OF RECORDS CHANGED            =   13
NUMBER OF RECORDS ADDED              =    0
*****************************************************************************************************
```

RELEASED INVENTORY OF ALL PLUMES

Kr-85	1.32E+13	4.67E+13	3.84E+16	0.00E+00
Kr-85m	1.74E+14	1.72E+14	4.24E+15	0.00E+00
Kr-87	6.88E+13	2.71E+12	9.54E+09	0.00E+00
Kr-88	3.29E+14	1.55E+14	5.04E+14	0.00E+00
Rb-86	9.68E+10	2.68E+08	9.31E+10	1.98E+09
Sr-89	5.59E+13	3.69E+12	8.36E+15	1.53E+15
Sr-90	4.82E+12	3.19E+11	7.34E+14	1.36E+14
Sr-91	5.18E+13	1.88E+12	8.26E+14	2.65E+13
Sr-92	2.65E+13	2.12E+11	1.48E+12	5.89E+08
Y-90	5.13E+11	3.04E+12	2.16E+16	7.48E+15
Y-91	4.61E+12	4.88E+13	4.40E+17	1.96E+17
Y-92	2.60E+13	5.37E+12	5.30E+14	2.09E+12
Y-93	4.15E+12	2.53E+13	4.86E+16	4.22E+15
Zr-95	6.10E+12	6.53E+13	5.89E+17	2.62E+17
Zr-97	5.12E+12	3.92E+13	1.41E+17	2.37E+16
Nb-95	6.15E+12	6.61E+13	6.02E+17	2.71E+17
Mo-99	1.10E+14	1.74E+12	5.94E+15	5.68E+14
Tc-99m	9.93E+13	1.63E+12	5.71E+15	5.47E+14
Ru-103	8.99E+13	1.54E+12	6.59E+15	7.97E+14
Ru-105	3.24E+13	1.54E+11	1.94E+13	5.64E+10
Ru-106	2.96E+13	5.10E+11	2.21E+15	2.72E+14
Rh-105	5.51E+13	8.55E+11	2.44E+15	1.88E+14
Sb-127	3.70E+11	6.08E+09	7.24E+12	2.94E+12
Sb-129	5.99E+11	2.79E+09	1.03E+11	1.07E+09
Te-127	3.72E+11	6.27E+09	7.78E+12	3.26E+12

Te-127m	4.88E+10	8.55E+08	1.21E+12	5.87E+11
Te-129	7.25E+11	4.85E+09	2.74E+12	1.25E+12
Te-129m	1.67E+11	2.91E+09	4.04E+12	1.92E+12
Te-131m	4.72E+11	6.82E+09	5.70E+12	1.59E+12
Te-132	4.93E+12	8.02E+10	9.26E+13	3.63E+13
I-131	4.21E+13	1.71E+11	6.77E+13	4.92E+11
I-132	2.18E+13	8.67E+10	9.54E+13	3.74E+13
I-133	7.71E+13	2.44E+11	4.88E+13	0.00E+00
I-134	3.89E+12	2.37E+07	1.65E+02	0.00E+00
I-135	5.39E+13	9.45E+10	3.73E+12	0.00E+00
Xe-133	2.31E+15	7.82E+15	5.68E+18	0.00E+00
Xe-135	4.56E+14	8.32E+14	1.22E+17	0.00E+00
Cs-134	8.26E+12	2.32E+10	8.32E+12	1.83E+11
Cs-136	2.34E+12	6.44E+09	2.20E+12	4.61E+10
Cs-137	4.81E+12	1.35E+10	4.85E+12	1.07E+11
Ba-139	1.37E+13	8.86E+09	3.37E+08	2.97E+02
Ba-140	1.01E+14	4.06E+12	1.32E+16	1.92E+15
La-140	1.31E+13	5.90E+13	3.65E+17	1.08E+17
La-141	2.91E+12	7.29E+12	1.22E+15	7.95E+12
La-142	9.30E+11	2.44E+11	8.30E+10	7.69E+05
Ce-141	5.99E+10	5.26E+11	5.01E+15	2.21E+15
Ce-143	3.82E+10	1.76E+11	9.92E+14	2.70E+14
Ce-144	3.37E+10	1.84E+11	1.67E+15	7.51E+14
Pr-143	5.33E+12	5.63E+13	4.89E+17	2.09E+17
Nd-147	2.36E+12	2.49E+13	2.13E+17	9.02E+16
Np-239	5.03E+11	2.49E+12	1.71E+16	5.75E+15
Pu-238	1.06E+08	5.88E+08	5.56E+12	2.61E+12
Pu-239	9.27E+06	5.07E+07	4.62E+11	2.09E+11
Pu-240	1.36E+07	7.41E+07	6.74E+11	3.04E+11
Pu-241	3.05E+09	1.66E+10	1.51E+14	6.82E+13
Am-241	4.61E+08	4.95E+09	4.51E+13	2.03E+13
Cm-242	1.08E+11	1.16E+12	1.06E+16	4.74E+15
Cm-244	1.34E+10	1.44E+11	1.31E+15	5.91E+14

USER INPUT IS READ FROM UNIT 25
RECORD IDENTIFIER FIELDS 11 CHARACTERS LONG ARE EXPECTED.
THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS 1000.

```
RECORD
NUMBER                          RECORD

     ********************************************************************************
     * FILE NAME:  VEARLY.INP
     *
     * DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
     *
   1  MIEANAM1001  'SNC AP1000 EARLY FILE – 95% Evacuation'
   2  DCF_FILE001 'C:\MACCS2\DOSDATA.INP' (DCF file of MACCS 1.5.11.1)
     *
     *          ORGNAM        ORGFLG
     *
   3  MIORGDEF001  'A-SKIN'       .TRUE.
   4  MIORGDEF002  'A-RED MARR'    .TRUE.
```

```
 5  MIORGDEF003  'A-LUNGS'       .TRUE.
 6  MIORGDEF004  'A-THYROIDH'    .TRUE.
 7  MIORGDEF005  'A-STOMACH'     .TRUE.
 8  MIORGDEF006  'A-LOWER LI'    .FALSE.  (does not contribute to early fatalities)
 9  MIORGDEF007  'L-EDEWBODY'    .TRUE.
10  MIORGDEF008  'L-RED MARR'    .TRUE.
11  MIORGDEF009  'L-BONE SUR'    .TRUE.
12  MIORGDEF010  'L-BREAST'      .TRUE.
13  MIORGDEF011  'L-LUNGS'       .TRUE.
14  MIORGDEF012  'L-THYROID'     .TRUE.
15  MIORGDEF013  'L-LOWER LI'    .TRUE.
16  MIORGDEF014  'L-BLAD WAL'    .TRUE.
17  MIORGDEF015  'L-LIVER'       .FALSE.
18  MIORGDEF016  'L-THYROIDH'    .TRUE.
  *
  * FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
  *
19  MIENDAT2001  .FALSE.    (SET THIS VALUE TO .TRUE. TO SKIP CHRONC)
  *
  * DISPERSION MODEL OPTION CODE:  1  *  STRAIGHT LINE
  *                                2  *  WIND-SHIFT WITH ROTATION
  *                                3  *  WIND-SHIFT WITHOUT ROTATION
  *
20  MIIPLUME001  1 * URD used 1
  *
  * NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
  *
21  MINUMFIN001  7    (3, 5 OR 7 ALLOWED)
  *
  * LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO
  *
22  MIIPRINT001  0
  *
  * LOGICAL FLAG SIGNIFYING THAT THE BREAKDOWN OF RISK BY WEATHER CATEGORY
  * BIN ARE TO BE PRESENTED TO SHOW THEIR RELATIVE CONTRIBUTION TO THE MEAN
  *
  *           RISBIN
  *
23  MIRISCAT001   .FALSE.
  *
  * FLAG INDICATING IF WIND-ROSES FROM ATMOS ARE TO BE OVERRIDDEN
  *
24  MIOVRRID001  .FALSE.  (USE THE WIND ROSE CALCULATED FOR EACH WEATHER BIN)
  ******************************************************************************
  * POPULATION DISTRIBUTION DATA BLOCK, LOADED BY INPOPU, STORED IN /POPDAT/
  *
25  PDPOPFLG001  FILE
  *
  ******************************************************************************
  * SHIELDING AND EXPOSURE FACTORS, LOADED BY INDFAC, STORED IN /EADFAC/
  *
  * THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,
  * ONE FOR EACH TYPE OF ACTIVTY:
  *
  * ACTIVITY TYPE:
  *     1 - EVACUEES WHILE MOVING
```

```
*     2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
*     3 - SHELTERED ACTIVITY
*
* CLOUD SHIELDING FACTOR
*
*    SITE        GG   PB   SEQ  SUR  ZION
*    SHELTERING  0.7  0.5  0.65 0.6  0.5
*
*           EVACUEES  NORMAL  SHELTER
*
26  SECSFACT001      0.75     0.75     0.75   *  use URD values
*
* PROTECTION FACTOR FOR INHALATION
*
27  SEPROTIN001      0.4      0.4      0.4  * URD Values*
*
* BREATHING RATE (CUBIC METERS PER SECOND)
*
28  SEBRRATE001  3.3E-4  3.3E-4  3.3E-4 *URD values
*
* SKIN PROTECTION FACTOR
*
29  SESKPFAC001  1.0      0.41     0.33    * VALUES FOR NORMAL ACTIVITY AND
*                                 SHELTERING SELECTED BY NRC STAFF
*
* GROUND SHIELDING FACTOR
*
*    SITE        GG   PB   SEQ  SUR  ZION
*    SHELTERING  0.25 0.1  0.2  0.2  0.1
*
30  SEGSHFAC001      0.33    0.33    0.33   * URD values
*
*
* RESUSPENSION INHALATION MODEL CONCENTRATION COEFFICIENT (/METER)
*
*   RESCON = 1.E-4 IS APPROPRIATE FOR MECHANICAL RESUSPENSION BY VEHICLES.
*   RESHAF = 2.11 DAYS CAUSES 1.E-4 TO DECAY IN ONE WEEK TO 1.E-5, THE VALUE
*   OF RESCON USED IN THE FIRST TERM OF THE LONG-TERM RESUSPENSION EQUATION
*   USED IN CHRONC.
*
31  SERESCON001   1.E-4     (RESUSPENSION IS TURNED ON)
*
* RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
*
32  SERESHAF001   1.82E5    (2.11 DAYS)
*******************************************************************************
* EVACUATION ZONE DATA BLOCK, LOADED BY EVNETW, STORED IN /NETWOR/, /EOPTIO/
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
33  EZEANAM2001  '95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
* YOU MUST SUPPLY A VALUE OF 'TIME' OR 'PEOPLE'
*
34  EZWTNAME001  'PEOPLE'
```

```
    *
    * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
    *
  35  EZWTFRAC001  0.95 *95% of people evacuated
    *
    * LAST RING IN THE MOVEMENT ZONE
    *
  36  EZLASMOV001     6    (10 miles)
    *
    *  Flag defining the time at which evacuees "enter" the destination element
    *
  37  TRAVELPOINT   'CENTERPOINT' (new option implemented at MACCS2 v. 1.11f)
    *TRAVELPOINT   'BOUNDARY'    (Westinghouse used BOUNDARY)
    *
    * RADIAL EVACUATION SPEED (M/S) = speed to exit EPZ, 30 min after alarm
    *
  38  EZESPEED001   2.20 2.20 2.20 *(based on 125-42 min for all zones to clear EPZ,
    *                              in 2010, extrapolated for 2040 population)
  39  EZEVATYP001     'RADIAL'
  40  EZDURBEG001    86400.0
  41  EZDURMID001    0.0
  42  EZREFPNT001     'ALARM'
  43  EZNUMEVA001       6
  44  EZDLTSHL001  2520. 2520. 2520. 2520. 2520. 2520. (42 MINUTES DELAY, 95% MOBILIZATION)
  45  EZDLTEVA001     0.    0.    0.    0.    0.    0.

    ************************************************************************
    * SHELTER AND RELOCATION ZONE DATA BLOCK, LOADED BY INPEMR,
    *                                  STORED IN /INPSRZ/, /RELOCA/
    *
    * DURATION OF THE EMERGENCY PHASE (SECONDS FROM PLUME ARRIVAL)
    *
  46  SRENDEMP001  86400.   (ONE DAY)
    *
    * CRITICAL ORGAN FOR RELOCATION DECISIONS
    *
  47  SRCRIORG001 'L-EDEWBODY'
    *
    * HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
    *
  48  SRTIMHOT001  86400.    (ONE DAY)
    *
    * NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
    *
  49  SRTIMNRM001  86400.    (ONE DAY)
    *
    * HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
    *
  50  SRDOSHOT001  10.    (1000 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS
RELOCATION)
    *
    * NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
    *
  51  SRDOSNRM001  10.   (1000 REM DOSE TO WHOLE BODY IN 1 DAY TRIGGERS RELOCATION)
    ********************************************************************************
    * EARLY FATALITY MODEL PARAMETERS, LOADED BY INEFAT, STORED IN /EFATAL/
```

```
  *
  * NUMBER OF EARLY FATALITY EFFECTS
  *
52  EFNUMEFA001   2
  *
  *          ORGNAM       EFFACA   EFFACB   EFFTHR
  *
53  EFATAGRP001 'A-RED MARR'      3.8      5.0    1.5
54  EFATAGRP002 'A-LUNGS'        10.0      7.0    5.0
  ********************************************************************************
  * EARLY INJURY MODEL PARAMETERS, LOADED BY INEINJ, STORED IN /EINJUR/
  *
  * NUMBER OF EARLY INJURY EFFECTS
  *
55  EINUMEIN001  0
  *
  *          EINAME           ORGNAM   EISUSC EITHRE EIFACA EIFACB
  *
  *EINJUGRP001 'PRODROMAL VOMIT' 'A-STOMACH'  1.     .5     2.     3.
  *EINJUGRP002 'DIARRHEA'        'A-STOMACH'  1.     1.     3.     2.5
  *EINJUGRP003 'PNEUMONITIS'     'A-LUNGS'    1.     5.    10.     7.
  *EINJUGRP004 'SKIN ERYTHEMA'   'A-SKIN'     1.     3.     6.     5.
  *EINJUGRP005 'TRANSEPIDERMAL'  'A-SKIN'     1.    10.    20.     5.
  *EINJUGRP006 'THYROIDITIS'     'A-THYROIDH' 1.    40.   240.     2.
  *EINJUGRP007 'HYPOTHYROIDISM'  'A-THYROIDH' 1.     2.    60.     1.3
  ********************************************************************************
  * ACUTE EXPOSURE CANCER PARAMETERS, LOADED BY INACAN STORED IN /ACANCR/.
  *
  * NUMBER OF ACUTE EXPOSURE CANCER EFFECTS
  *
56  LCNUMACA001   1
  *
  * THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
  *
57  LCDDTHRE001   0.2  (LOWEST DOSE FOR WHICH DDREFA WILL BE APPLIED)
  *
  * DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (Sv)
  *
58  LCACTHRE001   0.0  (LINEAR-QUADRATIC MODEL IS NOT BEING USED)
  *
  *          ACNAME     ORGNAM  ACSUSC DOSEFA DOSEFB CFRISK   CIRISK  DDREFA
  *
59  LCANCERS001 'OTHER'    'L-EDEWBODY'  1.0   1.0   0.0   2.76E-2   0.0     2.0
  ********************************************************************************
  * RESULT 1 OPTIONS BLOCK, LOADED BY INOUT1, STORED IN /INOUT1/
  * TOTAL NUMBER OF A GIVEN EFFECT (LATENT CANCER, EARLY DEATH, EARLY INJURY)
  *
  * NUMBER OF DESIRED RESULTS OF THIS TYPE
  *
60  TYPE1NUMBER    5
  *
61  TYPE1OUT001    'CAN FAT/TOTAL'              1  10       (0 to 50 miles)
62  TYPE1OUT002    'CAN FAT/TOTAL'              1   6       (0 to 10 miles)
63  TYPE1OUT003    'ERL FAT/TOTAL'              1  10       (0 to 50 miles)
64  TYPE1OUT004    'ERL FAT/TOTAL'              1   2       (0 to  2 miles)
65  TYPE1OUT005    'ERL FAT/TOTAL'              1   1       (0 to  1 miles)
```

```
  ********************************************************************************
  * RESULT 2 OPTIONS BLOCK, LOADED BY INOUT2, STORED IN /INOUT2/
  * FURTHEST DISTANCE AT WHICH A GIVEN RISK OF EARLY DEATH IS EXCEEDED.
  *
  * NUMBER OF DESIRED RESULTS OF THIS TYPE
  *
66  TYPE2NUMBER  0
  *
  *          FATALITY RISK THRESHOLD
  *
  *TYPE2OUT001  0.
  ********************************************************************************
  * RESULT 3 OPTIONS BLOCK, LOADED BY INOUT3, STORED IN /INOUT3/
  * NUMBER OF PEOPLE WHOSE DOSE TO A GIVEN ORGAN EXCEEDS A GIVEN THRESHOLD.
  *
  * NUMBER OF DESIRED RESULTS OF THIS TYPE
  *
67  TYPE3NUMBER  0
  *
  *             ORGAN NAME   DOSE THRESHOLD (Sv)
  *
  *TYPE3OUT001    'A-RED MARR'       1.5
  *TYPE3OUT002    'A-LUNGS'          5.0
  *TYPE3OUT003    'L-EDEWBODY'       0.05
  ********************************************************************************
  * RESULT 4 OPTIONS BLOCK, LOADED BY INOUT4, STORED IN /INOUT4/
  * 360 DEGREE AVERAGE RISK OF A GIVEN EFFECT AT A GIVEN DISTANCE.
  *
  * POSSIBLE TYPES OF EFFECTS ARE:
  *
  *   'ERL FAT/TOTAL'
  *   'ERL INJ/INJURY NAME'
  *   'CAN FAT/CANCER NAME'
  *   'CAN FAT/TOTAL'
  *
  * NUMBER OF DESIRED RESULTS OF THIS TYPE
  *
68  TYPE4NUMBER  0
  *
  *          RADIAL INDEX   TYPE OF EFFECT
  *
  *TYPE4OUT001      1        'ERL FAT/TOTAL'
  *TYPE4OUT002      2        'ERL FAT/TOTAL'
  *TYPE4OUT003      3        'ERL FAT/TOTAL'
  *TYPE4OUT004      5        'ERL FAT/TOTAL'
  *TYPE4OUT005      6        'ERL FAT/TOTAL'
  ********************************************************************************
  * RESULT 5 OPTIONS BLOCK, LOADED BY INOUT5, STORED IN /INOUT5/
  *
  * TOTAL POPULATION DOSE TO A GIVEN ORGAN BETWEEN TWO DISTANCES.
  *
  * NUMBER OF DESIRED RESULTS OF THIS TYPE
  *
69  TYPE5NUMBER     2
  *
  *           ORGAN      I1DIS5     I2DIS5
```

```
    *
 70  TYPE5OUT001 'L-EDEWBODY'      1          6          (0-10 MILES)
 71  TYPE5OUT002 'L-EDEWBODY'      1         10          (0-50 MILES)
    ********************************************************************************
    * RESULT 6 OPTIONS BLOCK, LOADED BY INOUT6, STORED IN /INOUT6/
    *
    * CENTERLINE DOSE TO AN ORGAN VS DIST BY PATHWAY, PATHWAY NAMES ARE AS
FOLLOWS:
    *
    *  PATHWAY NAME:
    *    'CLD'     - CLOUDSHINE
    *    'GRD'     - GROUNDSHINE
    *    'INH ACU' - "ACUTE DOSE EQUIVALENT" FROM DIRECT INHALATION OF THE CLOUD
    *    'INH LIF' - "LIFETIME DOSE COMMITMENT" FROM DIRECT INHALATION OF THE CLOUD
    *    'RES ACU' - "ACUTE DOSE EQUIVALENT" FROM RESUSPENSION INHALATION
    *    'RES LIF' - "LIFETIME DOSE COMMITMENT" FROM RESUSPENSION INHALATION
    *    'TOT ACU' - "ACUTE DOSE EQUIVALENT" FROM ALL PATHWAYS
    *    'TOT LIF' - "LIFETIME DOSE COMMITMENT" FROM ALL PATHWAYS
    *
    * NUMBER OF DESIRED RESULTS OF THIS TYPE
    *
 72  TYPE6NUMBER     0
    *
    *            ORGNAM        PATHNM      I1DIS6   I2DIS6
    *
    *TYPE6OUT001  'A-RED MARR'    'TOT ACU'      1        19     (0-50 MILES)
    *TYPE6OUT002  'A-LUNGS'       'TOT ACU'      1        19     (0-50 MILES)
    *TYPE6OUT003  'L-EDEWBODY'    'TOT LIF'      1        26     (0-1000 MILES)
    ********************************************************************************
    * RESULT 7 OPTIONS BLOCK, LOADED BY INOUT7, STORED IN /INOUT7/
    *
    * CENTERLINE RISK OF A GIVEN EFFECT VS DISTANCE
    *
    * NUMBER OF DESIRED RESULTS OF THIS TYPE
    *
 73  TYPE7NUMBER   0
    *
    *                  NAME          I1DIS7       I2DIS7
    *
    *TYPE7OUT001     'ERL FAT/TOTAL'        1          10       (0-50 MILES)
    *TYPE7OUT002     'CAN FAT/TOTAL'        1          10       (0-50 MILES)
    ********************************************************************************
    * RESULT 8 OPTIONS BLOCK, LOADED BY INOUT8, STORED IN /INOUT8/
    *
    * POPULATION WEIGHTED FATALITY RISK BETWEEN 2 DISTANCES
    *
    * NUMBER OF DESIRED RESULTS OF THIS TYPE
    *
 74  TYPE8NUMBER   6
    *
    *              NAME       I1DIS8  I2DIS8
    *
 75  TYPE8OUT001 'ERL FAT/TOTAL'   1      10     NOCCDF  (0-50 MILES)
 76  TYPE8OUT002 'ERL FAT/TOTAL'   1       2     NOCCDF  (0- 2 MILES)
 77  TYPE8OUT003 'ERL FAT/TOTAL'   1       1     NOCCDF  (0- 1 MILES)
 78  TYPE8OUT004 'ERL FAT/TOTAL'   3       3     NOCCDF  (2- 3 MILES)
```

```
  79  TYPE8OUT005 'CAN FAT/TOTAL'   1      10     NOCCDF  (0-50 MILES)
  80  TYPE8OUT006 'CAN FAT/TOTAL'   1       6     NOCCDF  (0-10 MILES)
     ******************************************************************************
     * RESULT A OPTIONS BLOCK, LOADED BY INOUTA, STORED IN /INOUTA/
     *
     * peak dose to a given organ
     *
     *          NUMA
  81  TYPEANUMBER   1
     *
     *            ORGNAM    I1DISA  I2DISA
  82  TYPEAOUT001 'L-EDEWBODY'  1       1    CCDF
     *
  83  NUMB
******** WARNING -- RECORD IDENTIFIER HAS   4 CHARACTERS INSTEAD OF 11 CHARACTERS
********
  84  TYPEBNUMBER   0
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********


USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                        =  362
NUMBER OF BLANK OR COMMENT RECORDS READ        =  277
NUMBER OF TERMINATOR RECORDS                   =    1
NUMBER OF RECORDS PROCESSED                    =   84
    NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
    NUMBER OF PROCESSED RECORDS SORTED         =   84
*****************************************************************************************************



The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME):
  A-SKIN
  A-RED MARR
  A-LUNGS
  A-THYROIDH
  A-STOMACH
  L-EDEWBODY
  L-RED MARR
  L-BONE SUR
  L-BREAST
  L-LUNGS
  L-THYROID
  L-LOWER LI
  L-BLAD WAL
  L-THYROIDH
Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file

READING FROM A DOSE CONVERSION FILE WITH THE FOLLOWING HEADER:
MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47
Seven new organs added with MACCS Version 1.5.11.1
```

USING THE FOLLOWING SITE DATA FILE:

```
SECPOP2000 V3.12  MACCS2 Site Data File for Vogtle + transients projected to ye
Lat: 33d 8'31" Long:  81d45'45" Population multiplier: 1.0000   10/06/2006
 10 SPATIAL INTERVALS
 16 WIND DIRECTIONS
  7 CROP CATEGORIES
  4 WATER PATHWAY ISOTOPES
  1 WATERSHEDS
 97 ECONOMIC REGIONS
SPATIAL DISTANCES     KILOMETERS
   1.6093    3.2187    4.8280    6.4374    8.0467   16.0935   32.1869   48.2804
  64.3739   80.4674
POPULATION
       0.       69.        0.        0.        0.        0.     8727.    92192.
   28873.    22032.
       0.        0.        0.        0.        0.        0.     4594.    14508.
    7731.    13488.
       0.        0.        0.        0.        0.        0.        0.     9309.
    5508.    10769.
       0.        0.        0.        0.        0.        0.      774.    13423.
   12596.    11961.
       0.        0.        0.        0.        0.       13.      735.     3547.
    1805.     3263.
       0.        0.        0.       22.        1.      346.      249.     6077.
    7848.    12492.
       0.        0.        0.       19.       17.      281.      336.      344.
     869.    11149.
       0.        0.       34.        0.        0.      991.      881.     7749.
    3263.     7071.
       0.        0.        0.        0.       25.      315.     2322.     1938.
    4168.    69610.
       0.        0.        0.        0.        3.       58.      609.     5337.
    2694.     9893.
       0.        7.        0.        7.        1.      193.      859.      737.
    2006.     7607.
       0.        0.       19.       79.       22.      763.     9211.      797.
    5609.     5525.
       0.        0.       70.        9.        4.      392.     4333.     1613.
    4660.     3290.
       0.        0.       90.        0.       86.      226.     4262.    10681.
   12014.    22397.
       0.       50.        0.      156.      122.      156.    12373.   142545.
  353009.    27595.
       0.        0.        0.        0.        0.       91.     4875.   140058.
   60057.    10509.
LAND FRACTION
0.00 0.00 1.00 0.00 0.00 1.00 1.00 1.00 1.00 1.00
0.00 0.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00
1.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00
1.00 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 1.00
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1.00 1.00 1.00 1.00 1.00 1.00 0.99 1.00 1.00 1.00
1.00 1.00 1.00 1.00 1.00 1.00 0.22 0.53 1.00 1.00
1.00 0.00 1.00 0.00 0.00 1.00 0.20 0.00 0.00 0.68
1.00 1.00 0.00 0.00 1.00 1.00 0.51 0.02 0.30 0.94
```

1.00 1.00 0.00 0.00 1.00 1.00 0.55 0.20 0.40 0.98
1.00 1.00 0.00 1.00 1.00 1.00 0.96 0.46 0.87 0.97
1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.78
1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.97
0.00 0.00 1.00 1.00 1.00 1.00 0.64 0.37 0.49 0.16
0.00 1.00 0.00 1.00 1.00 0.94 0.12 0.00 0.91 0.90
0.00 0.00 0.00 0.00 0.00 0.99 0.87 0.65 0.97 1.00
REGION INDEX
1 2 2 2 2 3 4 5 6 7
1 8 8 8 8 910111213
1141414141516171819
1202020202122232425
1262626262728293031
1323232323334353637
1383838383940414243
1444444444546474849
1505050505152535455
1565656565758596061
1626262626364656667
1686868686970717273
1747474747576777879
1808080808182838485
1868686868788899091
1929292929394959697
WATERSHED INDEX
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 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
CROP SEASON AND SHARE
1 PASTURE 90. 270. 0.4100
2 STORED FORAGE 150. 240. 0.1300
3 GRAINS 150. 240. 0.2100
4 GRN LEAFY VEGETABLES 150. 240. 0.0020
5 OTHER FOOD CROPS 150. 240. 0.0040
6 LEGUMES AND SEEDS 150. 240. 0.1500
7 ROOTS AND TUBERS 150. 240. 0.0030
WATERSHED DEFINITION -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS
1 Sr-89 5.00E-06 0.0
2 Sr-90 5.00E-06 0.0
3 Cs-134 5.00E-06 0.0
4 Cs-137 5.00E-06 0.0
REGIONAL ECONOMIC DATA
1 EXCLUSION .007 0.157 803.0 2607.0 98793.0

2	REGION_02	.237	0.003	258.0	1766.0	66077.0
3	REGION_03	.221	0.046	29.0	1402.0	105865.0
4	REGION_04	.221	0.046	29.0	1402.0	105865.0
5	REGION_05	.221	0.046	29.0	1402.0	105864.8
6	REGION_06	.315	0.040	28.7	1230.0	103527.2
7	REGION_07	.674	0.085	174.1	1085.3	91291.7
8	REGION_08	.000	0.000	0.0	0.0	0.0
9	REGION_09	.000	0.000	0.0	0.0	0.0
10	REGION_10	.221	0.046	29.0	1402.0	105865.0
11	REGION_11	.221	0.046	29.0	1402.0	105865.0
12	REGION_12	.221	0.046	29.0	1402.0	105865.1
13	REGION_13	.282	0.101	23.1	1204.3	93124.5
14	REGION_14	.000	0.000	0.0	0.0	0.0
15	REGION_15	.000	0.000	0.0	0.0	0.0
16	REGION_16	.000	0.000	0.0	0.0	0.0
17	REGION_17	.231	0.019	172.9	1630.7	80863.0
18	REGION_18	.260	0.019	97.6	1687.1	84900.2
19	REGION_19	.319	0.052	29.0	1617.0	81491.9
20	REGION_20	.237	0.003	258.0	1766.0	66077.0
21	REGION_21	.000	0.000	0.0	0.0	0.0
22	REGION_22	.237	0.003	258.0	1766.0	66077.0
23	REGION_23	.237	0.003	258.0	1766.0	66077.0
24	REGION_24	.327	0.003	512.2	2893.6	77218.1
25	REGION_25	.353	0.001	249.2	2546.5	78217.5
26	REGION_26	.000	0.000	0.0	0.0	0.0
27	REGION_27	.237	0.003	258.0	1766.0	66077.0
28	REGION_28	.121	0.001	194.1	4401.7	167153.4
29	REGION_29	.182	0.002	227.4	3029.2	114518.5
30	REGION_30	.300	0.002	581.4	4224.1	118841.5
31	REGION_31	.530	0.052	722.0	3346.9	87094.0
32	REGION_32	.007	0.157	803.0	2607.0	98793.0
33	REGION_33	.024	0.146	763.8	2549.9	96570.1
34	REGION_34	.039	0.006	172.9	6068.0	231078.5
35	REGION_35	.041	0.000	150.0	6224.0	237037.0
36	REGION_36	.449	0.226	184.5	3639.2	161059.3
37	REGION_37	.941	0.422	292.2	850.6	79541.0
38	REGION_38	.007	0.157	803.0	2607.0	98793.0
39	REGION_39	.007	0.157	803.0	2607.0	98793.0
40	REGION_40	.002	0.032	167.5	607.7	23041.7
41	REGION_41	.022	0.000	80.1	3324.3	126602.4
42	REGION_42	.531	0.271	191.3	3119.2	145745.5
43	REGION_43	.883	0.454	212.5	764.6	79208.3
44	REGION_44	.007	0.157	803.0	2607.0	98793.0
45	REGION_45	.007	0.157	803.0	2607.0	98793.0
46	REGION_46	.001	0.031	160.0	519.3	19679.2
47	REGION_47	.000	0.000	0.0	0.0	0.0
48	REGION_48	.000	0.000	0.1	0.4	38.3
49	REGION_49	.223	0.102	326.2	3223.3	66617.3
50	REGION_50	.007	0.157	803.0	2607.0	98793.0
51	REGION_51	.007	0.157	803.0	2607.0	98793.0
52	REGION_52	.004	0.074	22064.3	31003.7	86462.8
53	REGION_53	.000	0.000	12190.9	16738.5	22444.5
54	REGION_54	.042	0.040	1054.1	2435.5	30845.5
55	REGION_55	.130	0.126	721.5	4081.1	91723.7
56	REGION_56	.007	0.157	803.0	2607.0	98793.0
57	REGION_57	.007	0.157	803.0	2607.0	98793.0

```
  58 REGION_58      .004 0.069   58695.7   81248.0  150545.7
  59 REGION_59      .001 0.000  103548.0  142175.0  190641.0
  60 REGION_60      .037 0.018   76868.6  106091.4  165842.0
  61 REGION_61      .375 0.050     401.9    2280.5   93625.5
  62 REGION_62      .007 0.157     803.0    2607.0   98793.0
  63 REGION_63      .007 0.157     803.0    2607.0   98793.0
  64 REGION_64      .007 0.150    5468.0    8943.9  102963.3
  65 REGION_65      .003 0.051   70501.7   97285.2  161099.6
  66 REGION_66      .086 0.046   14708.4   21184.8  108138.2
  67 REGION_67      .149 0.006     150.6    1234.1   93323.7
  68 REGION_68      .007 0.157     803.0    2607.0   98793.0
  69 REGION_69      .007 0.157     803.0    2607.0   98793.0
  70 REGION_70      .007 0.157     803.0    2607.0   98793.0
  71 REGION_71      .007 0.157     803.0    2607.0   98793.0
  72 REGION_72      .056 0.520    1371.3    2197.8   94741.5
  73 REGION_73      .085 0.482    1189.0    1682.9   73792.6
  74 REGION_74      .007 0.157     803.0    2607.0   98793.0
  75 REGION_75      .007 0.157     803.0    2607.0   98793.0
  76 REGION_76      .007 0.157     803.0    2607.0   98793.0
  77 REGION_77      .016 0.229     917.0    2535.3   98037.5
  78 REGION_78      .071 0.677    1634.9    2083.8   93281.6
  79 REGION_79      .130 0.488    2130.9    5974.9  102372.4
  80 REGION_80      .007 0.157     803.0    2607.0   98793.0
  81 REGION_81      .007 0.157     803.0    2607.0   98793.0
  82 REGION_82      .005 0.100     511.3    1660.1   62910.9
  83 REGION_83      .003 0.059     297.4     963.1   36509.4
  84 REGION_84      .035 0.193     486.9    1303.4   44153.0
  85 REGION_85      .043 0.010     522.4    2406.6   21257.0
  86 REGION_86      .007 0.157     803.0    2607.0   98793.0
  87 REGION_87      .010 0.146     742.0    2427.5   92737.6
  88 REGION_88      .001 0.019      98.2     320.7   12223.4
  89 REGION_89      .000 0.000       0.0       0.0       0.0
  90 REGION_90      .080 0.000     101.6    3040.6   78775.6
  91 REGION_91      .083 0.000      98.0    2932.1   77936.1
  92 REGION_92      .000 0.000       0.0       0.0       0.0
  93 REGION_93      .219 0.045      28.7    1389.6  104928.5
  94 REGION_94      .193 0.040      25.4    1227.3   92673.2
  95 REGION_95      .144 0.030      18.9     911.7   68843.6
  96 REGION_96      .718 0.007      32.3     556.3   88492.0
  97 REGION_97      .858 0.000      23.3     156.6   88921.0
POPULATION


******** BEGINNING OF CHANGE CASE   1 USER INPUT ********
      ********************************************************************************
      * EMERGENCY RESPONSE SCENARIO NUMBER 2
      ********************************************************************************
      * EVACUATION ZONE DATA BLOCK, LOADED BY EVNETW, STORED IN /NETWOR/, /EOPTIO/
      *
      * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
      *
   85  EZEANAM2001  'NO EVACUATION'
********   RECORD NUMBER    85 REPLACES RECORD NUMBER    33   ********
      *
      * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
      *
```

```
  86  EZWTFRAC001  0.05 *5% of people relocated but not evacuated
********   RECORD NUMBER    86 REPLACES RECORD NUMBER    35   ********
     *
     * LAST RING IN THE MOVEMENT ZONE
     *
  87  EZLASMOV001     0   (A ZERO TURNS OFF THE EVACUATION MODEL)
********   RECORD NUMBER    87 REPLACES RECORD NUMBER    36   ********
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   1 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   1
NUMBER OF RECORDS CHANGED            =    3
NUMBER OF RECORDS ADDED              =    0
*****************************************************************************************


NO EVACUATION REQUESTED



******** WARNING -- THE FOLLOWING RECORDS WERE NEVER ACCESSED ********

     NUMB


USER INPUT IS READ FROM UNIT 26
RECORD IDENTIFIER FIELDS  11 CHARACTERS LONG ARE EXPECTED.
THE FIRST 100 COLUMNS OF EACH INPUT RECORD ARE PROCESSED.
THE MAXIMUM NUMBER OF IDENTIFIER RECORDS THAT MAY BE SAVED AS THE BASE CASE IS
1000.

RECORD
NUMBER                              RECORD

     ******************************************************************************
     ******************************************************************************
     * FILE NAME Vchronc.inp
     *
     * DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
     *
   1  CHCHNAME001  'SNC AP1000 CHRONC FILE'
     ******************************************************************************
     * EMERGENCY RESPONSE COST DATA BLOCK
     *
     * DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)
     * ESCALATED FROM $27/DAY IN 1986 TO
     *   ESCALATED FROM $27/DAY IN 1986 TO 49.64 in 2006 {FACTOR OF 1.8385036} FROM
     *   WWW.BLS.GOV/CPI/HOME.HTM, INFLATION CALCULATOR
   2  CHEVACST001  49.64   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
     *
     * DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)
     *   ESCALATED '86 TO '06, FACTOR = 1.8385036
   3  CHRELCST001  49.64   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
     ******************************************************************************
     * LONG TERM PROTECTIVE ACTION DATA BLOCK
     *
```

```
    * Duration of the intermediate phase period--at version 1.11c TMIPND is no
    * longer processed.  The new input variable DUR_INTPHAS is the period's
    * duration, not the time after plume arrival at which the period ends.
    *
  4  DUR_INTPHAS   0.0    (in seconds)   (no intermediate phase)
    *
    * LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
    * PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
    *
  5  CHTMPACT001   1.58E8            (5 YEARS)
    *
    * DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv)
    *
  6  CHDSCRTI001   1.0E5             (NO INTERMEDIATE PHASE RELOCATION)
    *
    * DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv)
    *
  7  CHDSCRLT001    0.04
    *
    * CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
    *
  8  CHCRTOCR001 'L-EDEWBODY'
    *
    * Long Term Exposure Period    Previously permanently set to:
    *    one million years = 3.15 E13 seconds
    *    MACCS2 allowable range is 3.15E7 to 1.E10
    *
  9  CHEXPTIM001    1.E10
    ******************************************************************************
    * DECONTAMINATION PLAN DATA BLOCK
    *
    * NUMBER OF LEVELS OF DECONTAMINATION
    *
 10  CHLVLDEC001  2
    *
    * DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF
DECONTAMINATION
    *  (SECONDS)
    *
 11  CHTIMDEC001   5.184E6  1.0368E7    (60, 120 DAYS)
    *
    * DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF
DECONTAMINATION
    *
 12  CHDSRFCT001   3.      15.
    *
    * COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
    *  FOR THE VARIOUS LEVELS OF DECONTAMINATION
    *
    *CHCDFRM0001   562.5   1250. ESCALATED '86 TO '06
    *       FACTOR = 1.8385036
 13  CHCDFRM0001    1034.16  2298.13
    *
    * COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
    *  FOR THE VARIOUS LEVELS OF DECONTAMINATION
    *
```

```
    *CHCDNFRM001   3000.   8000.  ESCALATED '86 TO '06
    *       FACTOR = 1.8385036
  14  CHCDNFRM001  5515.51  14708.03
    *
    * FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
  15  CHFRFDL0001  .3      .35
    *
    * FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
  16  CHFRNFDL001  .7      .5
    *
    * FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
  17  CHTFWKF0001  .10     .33
    *
    * FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
  18  CHTFWKNF001  .33     .33
    *
    * AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
    *
    *CHDLBCST001   35000.  ESCALATED '86 TO '06
    *       FACTOR = 1.8385036
  19  CHDLBCST001    64347.63
    ******************************************************************************
    * INTERDICTION COST DATA BLOCK
    *
    * DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
    *
  20  CHDPRATE001    .20   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
    *
    * INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER
YEAR)
    * THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION
    *
  21  CHDSRATE001    .12   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
    *
    * POPULATION RELOCATION COST (DOLLARS/PERSON):
    *  ALTERNATIVE HOUSING, MOVING COSTS, AND LOST INCOME FOR PEOPLE IN
    *  AREAS WHICH REQUIRE DECONTAMINATION, INTERDICTION, OR CONDEMNATION
    *
    *CHPOPCST001   5000.  ESCALATED '86 TO '06
    *       FACTOR = 1.8385036
  22  CHPOPCST001    9192.52
    ******************************************************************************
    * GROUNDSHINE WEATHERING DEFINITION DATA BLOCK
    *
    * NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
    *
  23  CHNGWTRM001   2
    *
```

```
    * GROUNDSHINE WEATHERING COEFFICIENTS
    *
  24  CHGWCOEF001   0.5    0.5           (JON HELTON)
    *
    * HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
    *
  25  CHTGWHLF001   1.6E7  2.8E9         (JON HELTON)
    ********************************************************************************
    * RESUSPENSION WEATHERING DEFINITION DATA BLOCK
    *
    * NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
    *
  26  CHNRWTRM001    3
    *
    * RESUSPENSION CONCENTRATION COEFFICIENTS   (/ METER)
    *  RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
    *
  27  CHRWCOEF001  1.0E-5   1.0E-7   1.0E-9  (VALUES HERE SELECTED BY JON HELTON)
    *
    * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS
(S)
    *
  28  CHTRWHLF001  1.6E7    1.6E8    1.6E9   (6 MONTHS, 5 YEARS, 50 YEARS)
    ********************************************************************************
    * SITE REGION DESCRIPTION DATA BLOCK
    *
    * FRACTION OF AREA THAT IS LAND IN THE REGION
    *
  29  CHFRACLD001   0.95   (ROUGH GUESS VALUE, SITE FILE OVERRIDES THIS VALUE)
    *
    * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
    *
  30  CHFRCFRM001   0.382  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
    *
    * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
    *  (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN
FARMS)
    *
  31  CHFRMPRD001   371.0  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
    *
    * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE
REGION
    *  (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME
CONSUMPTION)
    *
  32  CHDPFRCT001   0.198  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
    *
    * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
    *  (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 50 MILES)
    *
    *CHVALWF0001   2541.  ESCALATED '03 TO '06
    *      FACTOR = 1.0951087
  33  CHVALWF0001   2782.67  * FARM SIZE/AREA WEIGHTED AVERAGE FOR GA/SC
    *                  COUNTIES WITHIN 50 MILE RADIUS TAKING SRS INTO ACCOUNT
    *
    * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
```

```
    *
  34  CHFRFIM0001   0.25  * SURRY
    *
    * NON-FARM WEALTH, PROPERTY AND IMPROVEMENTS FOR THE REGION
(DOLLARS/PERSON)
    *  THE VALUE OF ALL RESIDENTIAL, BUSINESS, AND PUBLIC ASSETS WHICH WOULD BE
    *  LOST IN THE EVENT OF PERMANENT INTERDICTION (CONDEMNATION) OF THE AREA
    *
    *CHVALWNF001  107602.  ESCALATED 2003 TO 2006
    *       FACTOR = 1.0951087
  35  CHVALWNF001  117836.  * POPULATION/AREA WEIGHTED AVERAGE FOR GA/SC
    *                   COUNTIES WITHIN 50 MILE RADIUS
    *
    * FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
    *
  36  CHFRNFIM001   0.8
    ********************************************************************************
  37  CHFDPATH001 'NEW'
    *
    * name of the COMIDA2 binary output file
    *
  38  BIN_FILE001 'C:\MACCS2\SAMP_A.BIN'   (binary data file of 1/04)
    *
    * Dose limits triggering first year crop disposal of the separate
    * milk and non-milk components of the diet, corresponding in purpose,
    * more or less, to the MACCS 1.5 input variables PSCMLK and PSCOTH
    *
    * For NUREG-1150 calculations, the maximum allowable ground concentrations for
    * production of milk and non-milk crops contaminated by an accident occurring
    * in the growing season were derived based on an assumed maximum allowable
    * dose of 5 rem effective or 15 rem thyroid, per the 1982 FDA guidance that's
    * reprinted in the 1992 EPA PAG Manual.  For purposes of comparison against
    * the prior results, it is being assumed, for simplicity, that milk and
    * non-milk crops contribute equally to the first year dose.  Thus, the 5 rem
    * effective dose limit used in NUREG-1150 is equally split between milk and
    * non-milk crops, with 2.5 rem allowed for each.  Similarly, the 15 rem
    * thyroid limit is split into 7.5 and 7.5 rem for the milk and non-milk
    * portions of the diet.
    *
    * SUPPORTING DOCUMENT FOR GUIDANCE LEVELS FOR RADIONUCLIDES IN DOMESTIC
AND
    * DOMESTIC FOODS, July, 2004, FDA (www.cfsan.fda.gov/~dms/nucleve2.html, see
    * especially Section II) revises limits from 5/15 rem (effective/thyroid) to
    * 0.5/5 rem.  The latter is incorporated below.
    *
    *           effective     thyroid  (doses in sieverts)
  39  DOSEMILK001    0.0025         0.025
  40  DOSEOTHR001    0.0025         0.025
    *
    * Annual dose limits for the subsequent year's (i.e., after the first year)
    * interdiction of BOTH the milk and non-milk (combined) components of the diet
    *
    * Note: the long-term food critera, GCMAXR, used for NUREG-1150 wre based on
    * an ingestion dose integrated from zero to infinity.  It is not possible to
    * translate those parameter values into corresponding annual dose limits, as is
    * required by the COMIDA2-based food model.  The "total" dose limits used in
```

```
    * NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, are used
    * here as annual dose limits for interdiction of food production in years the
    * years subsequent to the accident.
    *
    *           effective     thyroid  (doses in sieverts)
  41  DOSELONG001    0.005          0.015
    *
    ********************************************************************************
    *
    * NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
    *
  42  CHNUMWPI001    4
    *
    * TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
    *
    * IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
    *  FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
    *
    *                    INITIAL     ANNUAL    INGESTION FACTOR
    *           WATER      WASHOFF     WASHOFF    ((Bq INGESTED)/
    *          NUCLIDE     FRACTION     RATE       (Bq IN WATER))
    *
    *           NAMWPI      WSHFRI      WSHRTA         WINGF
  43  CHWTRISO001   Sr-89       0.01       0.004          5.0E-6
  44  CHWTRISO002   Sr-90       0.01       0.004          5.0E-6
  45  CHWTRISO003   Cs-134       0.005      0.001          5.0E-6
  46  CHWTRISO004   Cs-137       0.005      0.001          5.0E-6
    ********************************************************************************
    * SPECIAL OPTIONS DATA BLOCK
    *
    * DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING
ON!!
    *         KSWDSC
    *
  47  CHKSWTCH001   0
    ********************************************************************************
    * DEFINE THE TYPE 9 RESULTS
    *
    * LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12
PATHWAYS
    *
    * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
    * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
    *
  48  TYPE9NUMBER   2      (UP TO 10 ALLOWED)
    *
    *            ORGNAM        INNER      OUTER
    *
  49  TYPE9OUT001   'L-EDEWBODY'       1          6     (0-10 MILES)
  50  TYPE9OUT002   'L-EDEWBODY'       1         10     (0-50 MILES)
    ********************************************************************************
    * ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
    *
    * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
    * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
    *
```

```
  51  TYP10NUMBER   1      (UP TO 10 ALLOWED)
     *
     *            INNER      OUTER
     *
  52  TYP10OUT001      1          10   (0-50 MILES)
     ********************************************************************************
     * DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
     *
     * SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
     * A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE
OUTPUT.
     *
  53  TYP11FLAG11  .FALSE.
     ********************************************************************************
     * IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF
IMPACTS
     *
     * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
     * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
     *
  54  TYP12NUMBER   1      (UP TO 10 ALLOWED)
     *
     *            INNER      OUTER
     *
  55  TYP12OUT001      1          10   (0-50 MILES)
     ********************************************************************************
     * Maximal annual food ingestion dose to an individual, requested by IXOT13
     *
     * This result is calculated after accounting for temporary or
     * permanent interdiction.  It is only available for the "new" food model.
     *
     * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
     *
  56  TYP13NUMBER   0  (UP TO 10 ALLOWED)
     *
     * IRAD13 is the radial spatial interval at which results are requested
     *
     * ORGN13 is the name of the organ for which results are requested
     *  (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')
     *
     *         IRAD13   ORGN13
     *
     *TYP13OUT001   2    EFFECTIVE
     *TYP13OUT002   4    EFFECTIVE
     *TYP13OUT003   6    EFFECTIVE
     *TYP13OUT004   9    EFFECTIVE
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********


USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                        =  336
NUMBER OF BLANK OR COMMENT RECORDS READ        =  279
NUMBER OF TERMINATOR RECORDS                   =    1
NUMBER OF RECORDS PROCESSED                    =   56
```

NUMBER OF PROCESSED RECORDS DUPLICATED = 0
NUMBER OF PROCESSED RECORDS SORTED = 56
****

COMIDA2 binary file header =
COMIDA2 01/14/2004 13:06:02 Version 1.11.1, 01/12/2004

COMIDA2 descriptive title =
MACCS File DOSDATA.INP: Changed by D. CHANIN25-JUN-92, 09:53:47

Seven new organs added with MACCS Version 1.5.11.1

A SITE DATA FILE IS BEING USED FOR BOTH "EARLY" AND "CHRONC"

1 CANCER EFFECTS ARE DEFINED IN THE MODEL.

INDEX	CANCER EFFECT	ORGAN	ALPHA	BETA	CFRISK	CIRISK
1	OTHER	L-EDEWBODY	1.000E+00	0.000E+00	2.760E-02	0.000E+00

TIME OF HOTSPOT RELOCATION IS 8.6400E+04.
TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 8.640E+04.

GROUNDSHINE SHIELDING FACTOR = 0.330

RESUSPENSION PROTECTION FACTOR = 0.400

BREATHING RATE (CUBIC M/S) = 3.300E-04

DISPERSION MODEL FLAG IS 1

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER

BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0.0603	0.0686	0.0915	0.0769	0.0769	0.0437	0.0187	0.0416	0.0437	0.0541	0.0541	0.1040	0.0936	0.0832	0.0437	0.0457
2	0.0217	0.0527	0.0682	0.1225	0.1116	0.0698	0.0481	0.0729	0.0698	0.0357	0.0574	0.0822	0.0915	0.0310	0.0434	0.0217
3	0.0217	0.0652	0.0435	0.0870	0.0870	0.0652	0.0652	0.0000	0.0217	0.0652	0.1304	0.0435	0.0435	0.0652	0.0870	0.1087
4	0.0462	0.0522	0.0582	0.0743	0.0582	0.0663	0.0622	0.0643	0.1044	0.0723	0.0602	0.0884	0.0683	0.0442	0.0382	0.0422
5	0.0482	0.0547	0.0755	0.0755	0.0690	0.0560	0.0664	0.0690	0.1211	0.0885	0.0729	0.0560	0.0573	0.0273	0.0260	0.0365
6	0.0246	0.0615	0.0892	0.0815	0.0877	0.0462	0.0415	0.0831	0.0938	0.0585	0.0969	0.0785	0.0462	0.0292	0.0508	0.0308
7	0.0132	0.0789	0.1184	0.0526	0.1316	0.1447	0.0658	0.0395	0.1053	0.1184	0.0263	0.0395	0.0000	0.0000	0.0395	0.0263
8	0.0000	0.0000	0.2500	0.0000	0.2500	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.2500	0.0000	0.0000	0.2500	0.0000
9	0.1242	0.0458	0.0458	0.0654	0.0915	0.0458	0.0458	0.0327	0.0719	0.0523	0.0261	0.0654	0.0654	0.0588	0.0523	0.1111
10	0.0811	0.0723	0.0914	0.0782	0.0737	0.0383	0.0442	0.0295	0.0472	0.0501	0.0723	0.0546	0.0619	0.0649	0.0560	0.0841
11	0.0674	0.0601	0.0924	0.0689	0.0806	0.0499	0.0308	0.0484	0.0411	0.0689	0.0630	0.0616	0.0499	0.0528	0.0850	0.0792

12 0.0192 0.0466 0.0986 0.0301 0.0685 0.0685 0.0575 0.0877 0.0795 0.1178 0.0822 0.0466 0.0247 0.0192 0.1233 0.0301
13 0.0560 0.0560 0.0741 0.0741 0.0708 0.0626 0.0511 0.0362 0.0610 0.0362 0.0807 0.0675 0.0857 0.0774 0.0478 0.0626
14 0.0570 0.0925 0.1214 0.1273 0.0851 0.0600 0.0311 0.0407 0.0437 0.0281 0.0392 0.0637 0.0622 0.0577 0.0392 0.0511
15 0.0681 0.0929 0.0836 0.0372 0.0310 0.0310 0.0310 0.0681 0.0805 0.0464 0.1207 0.1053 0.0681 0.0433 0.0402 0.0526
16 0.0000 0.0968 0.0645 0.0645 0.0323 0.0000 0.0323 0.1613 0.0645 0.0968 0.1935 0.0000 0.0323 0.0000 0.0000 0.1613
17 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
18 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
19 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
20 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
21 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
22 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
23 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
24 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
25 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
26 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
27 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
28 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
29 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
30 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
31 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
32 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
33 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
34 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
35 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
36 0.0820 0.0913 0.0656 0.0471 0.0364 0.0178 0.0314 0.0385 0.0777 0.0635 0.0735 0.0913 0.0749 0.0628 0.0756 0.0706
37 0.0566 0.0705 0.0848 0.0788 0.0716 0.0493 0.0416 0.0522 0.0701 0.0573 0.0680 0.0733 0.0654 0.0511 0.0547 0.0547
38 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
39 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

40 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
41 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000

Processing a Site Data File with Header: SECPOP2000 V3.12 MACCS2 Site Data File for Vogtle + transients projected to ye
Lat: 33d 8'31" Long: 81d45'45" Population multiplier: 1.0000 10/06/2006

THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO 394 RESULTS

YOU HAVE REQUESTED 14 RESULTS FROM "EARLY" COMPOSED OF:

5 RESULTS OF TYPE 1
0 RESULTS OF TYPE 2
0 RESULTS OF TYPE 3
0 RESULTS OF TYPE 4
2 RESULTS OF TYPE 5
0 RESULTS OF TYPE 6
0 RESULTS OF TYPE 7
6 RESULTS OF TYPE 8
1 RESULTS OF TYPE A
0 RESULTS OF TYPE B

YOU HAVE REQUESTED 55 RESULTS FROM "CHRONC" COMPOSED OF:

34 RESULTS OF TYPE 9
13 RESULTS OF TYPE 10
0 RESULTS OF TYPE 11
8 RESULTS OF TYPE 12
0 RESULTS OF TYPE 13

TRIAL	DAY	HOUR	BIN	PRBMET
1	153	16	21	6.31E-03

WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

```
For Julian Day 153, selecting COMIDA2 results # 4 of 9
      2      154       4      18   1.68E-03
For Julian Day 154, selecting COMIDA2 results # 4 of 9
      3      154      18      24   5.42E-04
For Julian Day 154, selecting COMIDA2 results # 4 of 9
      4      160      10       1   1.37E-02
For Julian Day 160, selecting COMIDA2 results # 4 of 9
      5      160      15       2   1.84E-02
For Julian Day 160, selecting COMIDA2 results # 4 of 9
      6      162       4      25   1.57E-03
For Julian Day 162, selecting COMIDA2 results # 4 of 9
      7      162       9      32   1.14E-03
For Julian Day 162, selecting COMIDA2 results # 4 of 9
      8      167       3      26   1.46E-03
For Julian Day 167, selecting COMIDA2 results # 5 of 9
      9      169       1       6   1.86E-02
For Julian Day 169, selecting COMIDA2 results # 5 of 9
     10      173      18       3   1.31E-03
For Julian Day 173, selecting COMIDA2 results # 5 of 9
     11      174       8       4   1.42E-02
For Julian Day 174, selecting COMIDA2 results # 5 of 9
     12      175       7       9   4.37E-03
For Julian Day 175, selecting COMIDA2 results # 5 of 9
     13      179       3      12   1.04E-02
For Julian Day 179, selecting COMIDA2 results # 5 of 9
     14      180      12      20   8.22E-03
For Julian Day 180, selecting COMIDA2 results # 5 of 9
     15      182       9      19   3.40E-03
For Julian Day 182, selecting COMIDA2 results # 5 of 9
     16      182      14      17   1.00E-02
For Julian Day 182, selecting COMIDA2 results # 5 of 9
     17      183       6      33   1.43E-04
For Julian Day 183, selecting COMIDA2 results # 5 of 9
     18      183      19      10   1.93E-02
For Julian Day 183, selecting COMIDA2 results # 5 of 9
     19      186      24      31   2.57E-04
For Julian Day 186, selecting COMIDA2 results # 5 of 9
     20      187       2      31   2.57E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
     21      187       4      31   2.57E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
     22      187       6      30   2.57E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
     23      187       8      30   2.57E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
     24      187      10      30   2.57E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
```

25 187 12 29 1.43E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
26 187 13 29 1.43E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
27 187 21 33 1.43E-04
For Julian Day 187, selecting COMIDA2 results # 5 of 9
28 192 18 22 1.88E-03
For Julian Day 192, selecting COMIDA2 results # 6 of 9
29 193 4 36 1.11E-03
For Julian Day 193, selecting COMIDA2 results # 6 of 9
30 193 12 35 1.06E-03
For Julian Day 193, selecting COMIDA2 results # 6 of 9
31 193 16 34 2.57E-04
For Julian Day 193, selecting COMIDA2 results # 6 of 9
32 193 17 33 1.43E-04
For Julian Day 193, selecting COMIDA2 results # 6 of 9
33 193 18 32 1.14E-03
For Julian Day 193, selecting COMIDA2 results # 6 of 9
34 193 21 27 4.57E-04
For Julian Day 193, selecting COMIDA2 results # 6 of 9
35 197 7 35 1.06E-03
For Julian Day 197, selecting COMIDA2 results # 6 of 9
36 197 12 34 2.57E-04
For Julian Day 197, selecting COMIDA2 results # 6 of 9
37 197 13 33 1.43E-04
For Julian Day 197, selecting COMIDA2 results # 6 of 9
38 197 17 17 1.00E-02
For Julian Day 197, selecting COMIDA2 results # 6 of 9
39 200 15 19 3.40E-03
For Julian Day 200, selecting COMIDA2 results # 6 of 9
40 205 18 21 6.31E-03
For Julian Day 205, selecting COMIDA2 results # 6 of 9
41 210 20 18 1.68E-03
For Julian Day 210, selecting COMIDA2 results # 6 of 9
42 213 8 5 2.19E-02
For Julian Day 213, selecting COMIDA2 results # 6 of 9
43 222 22 11 1.95E-02
For Julian Day 222, selecting COMIDA2 results # 7 of 9
44 226 3 10 1.93E-02
For Julian Day 226, selecting COMIDA2 results # 7 of 9
45 226 7 36 1.11E-03
For Julian Day 226, selecting COMIDA2 results # 7 of 9
46 232 2 27 4.57E-04
For Julian Day 232, selecting COMIDA2 results # 7 of 9
47 236 10 1 1.37E-02
For Julian Day 236, selecting COMIDA2 results # 7 of 9
48 239 24 13 1.73E-02
For Julian Day 239, selecting COMIDA2 results # 7 of 9
49 248 2 14 3.86E-02
For Julian Day 248, selecting COMIDA2 results # 7 of 9
50 249 3 15 9.22E-03
For Julian Day 249, selecting COMIDA2 results # 7 of 9

TRIAL DAY HOUR BIN PRBMET
51 252 5 9 4.37E-03

For Julian Day 252, selecting COMIDA2 results # 7 of 9
52 252 12 36 1.11E-03
For Julian Day 252, selecting COMIDA2 results # 7 of 9
53 252 16 35 1.06E-03
For Julian Day 252, selecting COMIDA2 results # 7 of 9
54 257 6 16 8.85E-04
For Julian Day 257, selecting COMIDA2 results # 8 of 9
55 262 22 18 1.68E-03
For Julian Day 262, selecting COMIDA2 results # 8 of 9
56 264 10 20 8.22E-03
For Julian Day 264, selecting COMIDA2 results # 8 of 9
57 265 1 7 2.17E-03
For Julian Day 265, selecting COMIDA2 results # 8 of 9
58 266 15 5 2.19E-02
For Julian Day 266, selecting COMIDA2 results # 8 of 9
59 271 11 3 1.31E-03
For Julian Day 271, selecting COMIDA2 results # 8 of 9
60 272 9 26 1.46E-03
For Julian Day 272, selecting COMIDA2 results # 8 of 9
61 272 14 24 5.42E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9
62 276 7 14 3.86E-02
For Julian Day 276, selecting COMIDA2 results # 8 of 9
63 277 13 32 1.14E-03
For Julian Day 277, selecting COMIDA2 results # 8 of 9
64 284 7 9 4.37E-03
For Julian Day 284, selecting COMIDA2 results # 8 of 9
65 297 17 11 1.95E-02
For Julian Day 297, selecting COMIDA2 results # 9 of 9
66 298 12 4 1.42E-02
For Julian Day 298, selecting COMIDA2 results # 9 of 9
67 306 4 22 1.88E-03
For Julian Day 306, selecting COMIDA2 results # 9 of 9
68 307 13 2 1.84E-02
For Julian Day 307, selecting COMIDA2 results # 9 of 9
69 312 4 13 1.73E-02
For Julian Day 312, selecting COMIDA2 results # 9 of 9
70 314 10 15 9.22E-03
For Julian Day 314, selecting COMIDA2 results # 9 of 9
71 314 13 16 8.85E-04
For Julian Day 314, selecting COMIDA2 results # 9 of 9
72 336 9 13 1.73E-02
For Julian Day 336, selecting COMIDA2 results # 1 of 9
73 342 12 4 1.42E-02
For Julian Day 342, selecting COMIDA2 results # 1 of 9
74 344 15 7 2.17E-03
For Julian Day 344, selecting COMIDA2 results # 1 of 9
75 348 16 6 1.86E-02
For Julian Day 348, selecting COMIDA2 results # 1 of 9
76 349 21 16 8.85E-04
For Julian Day 349, selecting COMIDA2 results # 1 of 9
77 354 19 25 1.57E-03
For Julian Day 354, selecting COMIDA2 results # 1 of 9
78 355 9 24 5.42E-04
For Julian Day 355, selecting COMIDA2 results # 1 of 9
79 355 10 23 1.14E-04

For Julian Day 355, selecting COMIDA2 results # 1 of 9
80 359 16 5 2.19E-02
For Julian Day 359, selecting COMIDA2 results # 1 of 9
81 360 5 14 3.86E-02
For Julian Day 360, selecting COMIDA2 results # 1 of 9
82 362 9 10 1.93E-02
For Julian Day 362, selecting COMIDA2 results # 1 of 9
83 362 23 12 1.04E-02
For Julian Day 362, selecting COMIDA2 results # 1 of 9
84 2 19 29 1.43E-04
For Julian Day 2, selecting COMIDA2 results # 1 of 9
85 2 22 17 1.00E-02
For Julian Day 2, selecting COMIDA2 results # 1 of 9
86 8 10 3 1.31E-03
For Julian Day 8, selecting COMIDA2 results # 1 of 9
87 9 7 20 8.22E-03
For Julian Day 9, selecting COMIDA2 results # 1 of 9
88 9 13 18 1.68E-03
For Julian Day 9, selecting COMIDA2 results # 1 of 9
89 14 14 36 1.11E-03
For Julian Day 14, selecting COMIDA2 results # 1 of 9
90 14 19 34 2.57E-04
For Julian Day 14, selecting COMIDA2 results # 1 of 9
91 15 1 23 1.14E-04
For Julian Day 15, selecting COMIDA2 results # 1 of 9
92 15 2 22 1.88E-03
For Julian Day 15, selecting COMIDA2 results # 1 of 9
93 17 9 21 6.31E-03
For Julian Day 17, selecting COMIDA2 results # 1 of 9
94 18 3 35 1.06E-03
For Julian Day 18, selecting COMIDA2 results # 1 of 9
95 18 6 34 2.57E-04
For Julian Day 18, selecting COMIDA2 results # 1 of 9
96 18 7 32 1.14E-03
For Julian Day 18, selecting COMIDA2 results # 1 of 9
97 23 12 29 1.43E-04
For Julian Day 23, selecting COMIDA2 results # 1 of 9
98 26 4 11 1.95E-02
For Julian Day 26, selecting COMIDA2 results # 1 of 9
99 31 14 8 1.14E-04
For Julian Day 31, selecting COMIDA2 results # 1 of 9
100 32 11 22 1.88E-03
For Julian Day 32, selecting COMIDA2 results # 2 of 9

TRIAL DAY HOUR BIN PRBMET
101 33 6 19 3.40E-03
For Julian Day 33, selecting COMIDA2 results # 2 of 9
102 38 15 8 1.14E-04
For Julian Day 38, selecting COMIDA2 results # 2 of 9
103 40 22 25 1.57E-03
For Julian Day 40, selecting COMIDA2 results # 2 of 9
104 41 5 24 5.42E-04
For Julian Day 41, selecting COMIDA2 results # 2 of 9
105 41 6 23 1.14E-04
For Julian Day 41, selecting COMIDA2 results # 2 of 9

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      106        41        12         4   1.42E-02
For Julian Day  41, selecting COMIDA2 results # 2 of 9
      107        43        10         6   1.86E-02
For Julian Day  43, selecting COMIDA2 results # 2 of 9
      108        43        24        12   1.04E-02
For Julian Day  43, selecting COMIDA2 results # 2 of 9
      109        48        16        21   6.31E-03
For Julian Day  48, selecting COMIDA2 results # 2 of 9
      110        53        16         1   1.37E-02
For Julian Day  53, selecting COMIDA2 results # 2 of 9
      111        59        15         8   1.14E-04
For Julian Day  59, selecting COMIDA2 results # 2 of 9
      112        59        17         7   2.17E-03
For Julian Day  59, selecting COMIDA2 results # 2 of 9
      113        61        13         1   1.37E-02
For Julian Day  61, selecting COMIDA2 results # 2 of 9
      114        72        11         2   1.84E-02
For Julian Day  72, selecting COMIDA2 results # 2 of 9
      115        72        23        31   2.57E-04
For Julian Day  72, selecting COMIDA2 results # 2 of 9
      116        73         2        30   2.57E-04
For Julian Day  73, selecting COMIDA2 results # 2 of 9
      117        73         4        27   4.57E-04
For Julian Day  73, selecting COMIDA2 results # 2 of 9
      118        76         7        15   9.22E-03
For Julian Day  76, selecting COMIDA2 results # 2 of 9
      119        84         1        26   1.46E-03
For Julian Day  84, selecting COMIDA2 results # 2 of 9
      120        84         5        26   1.46E-03
For Julian Day  84, selecting COMIDA2 results # 2 of 9
      121        84        10        25   1.57E-03
For Julian Day  84, selecting COMIDA2 results # 2 of 9
      122        84        17        19   3.40E-03
For Julian Day  84, selecting COMIDA2 results # 2 of 9
      123        92        20        14   3.86E-02
For Julian Day  92, selecting COMIDA2 results # 3 of 9
      124        93        12         6   1.86E-02
For Julian Day  93, selecting COMIDA2 results # 3 of 9
      125        95        18         8   1.14E-04
For Julian Day  95, selecting COMIDA2 results # 3 of 9
      126        99        16         7   2.17E-03
For Julian Day  99, selecting COMIDA2 results # 3 of 9
      127       101        24        15   9.22E-03
For Julian Day 101, selecting COMIDA2 results # 3 of 9
      128       102         2        12   1.04E-02
For Julian Day 102, selecting COMIDA2 results # 3 of 9
      129       103        20        13   1.73E-02
For Julian Day 103, selecting COMIDA2 results # 3 of 9
      130       107         4        11   1.95E-02
For Julian Day 107, selecting COMIDA2 results # 3 of 9
      131       111        23        10   1.93E-02
For Julian Day 111, selecting COMIDA2 results # 3 of 9
      132       120        13        27   4.57E-04
For Julian Day 120, selecting COMIDA2 results # 3 of 9
      133       120        16        17   1.00E-02
For Julian Day 120, selecting COMIDA2 results # 3 of 9
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     134       120        20        20   8.22E-03
For Julian Day 120, selecting COMIDA2 results # 3 of 9
     135       124        12         5   2.19E-02
For Julian Day 124, selecting COMIDA2 results # 3 of 9
     136       141        20        16   8.85E-04
For Julian Day 141, selecting COMIDA2 results # 4 of 9
     137       147         6         9   4.37E-03
For Julian Day 147, selecting COMIDA2 results # 4 of 9
     138       148         8         3   1.31E-03
For Julian Day 148, selecting COMIDA2 results # 4 of 9
     139       150        12         2   1.84E-02
For Julian Day 150, selecting COMIDA2 results # 4 of 9
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WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 153, selecting COMIDA2 results # 4 of 9
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For Julian Day 150, selecting COMIDA2 results # 4 of 9
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WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 153, selecting COMIDA2 results # 4 of 9
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For Julian Day 150, selecting COMIDA2 results # 4 of 9
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WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

For Julian Day 153, selecting COMIDA2 results # 4 of 9
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WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

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WARNING!! WARNING!! WARNING!! WARNING!!

THE TOTAL RELEASE DURATION EXCEEDS 20 HOURS.

THIS MAY CAUSE ERRONEOUS RESULTS TO BE PRODUCED.

WARNING!! WARNING!! WARNING!! WARNING!!

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DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 1 OF 6:
CFI

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

FRACTION OF THE PEOPLE

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION 0.950

COHORT 2 = NO EVACUATION 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = SNC AP1000 CHRONC FILE

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

01-JUN-07 10:36:24 PAGE 1 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.32E+02 5.21E+01 3.57E+02 5.42E+02 1.01E+03 1.21E+03 1.62E+03 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 1.0000 2.64E+00 2.03E+00 5.03E+00 6.28E+00 1.16E+01 1.39E+01 2.69E+01 1.30E-05 27
ERL FAT/TOTAL 0-80.5 km 0.0191 9.09E-05 0.00E+00 0.00E+00 0.00E+00 3.02E-03 7.39E-03 2.55E-02 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0191 9.09E-05 0.00E+00 0.00E+00 0.00E+00 3.02E-03 7.39E-03 2.55E-02 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 1.65E+02 1.22E+02 2.88E+02 3.87E+02 8.82E+02 1.04E+03 1.94E+03 1.30E-05 27
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 8.58E+03 3.47E+03 2.49E+04 3.51E+04 6.15E+04 7.14E+04 9.24E+04 1.19E-04 77

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0191 7.15E-11 0.00E+00 0.00E+00 0.00E+00 2.32E-09 5.84E-09 2.00E-08 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0191 7.22E-07 0.00E+00 0.00E+00 0.00E+00 2.90E-05 5.84E-05 2.02E-04 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 9.75E-05 3.63E-05 2.61E-04 4.03E-04 7.66E-04 9.24E-04 1.26E-03 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.9697 2.44E-04 1.81E-04 5.76E-04 7.16E-04 9.76E-04 1.02E-03 1.35E-03 8.63E-06 105

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 4.82E+00 4.03E+00 8.66E+00 1.01E+01 NOT-FOUND NOT-FOUND 1.27E+01 1.73E-02 72

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 1 OF 6:
CFI

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION

01-JUN-07 10:36:24 PAGE 2 PROB QUANTILES PEAK PEAK PEAK

		NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS PROB	TRIAL
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	8.33E+01	2.79E+01	1.92E+02	3.51E+02	8.54E+02	1.06E+03	1.33E+03	1.66E-03	65
CAN FAT/TOTAL	0-16.1 km	0.8176	2.27E-01	4.55E-02	7.92E-01	1.17E+00	2.09E+00	2.36E+00	3.71E+00	3.71E-04	50
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	0.8176	1.16E+01	3.26E+00	3.61E+01	5.63E+01	8.42E+01	9.37E+01	1.40E+02	3.71E-04	50
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	5.08E+03	1.83E+03	1.26E+04	2.29E+04	4.82E+04	5.61E+04	7.28E+04	7.60E-04	38
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL FAT/TOTAL	0-3.2 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL FAT/TOTAL	3.2-4.8 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
CAN FAT/TOTAL	0-80.5 km	1.0000	6.55E-05	2.22E-05	1.59E-04	2.77E-04	6.56E-04	8.13E-04	1.05E-03	1.66E-03	65
CAN FAT/TOTAL	0-16.1 km	0.8176	4.79E-05	9.74E-06	1.56E-04	2.44E-04	3.95E-04	4.68E-04	7.83E-04	3.71E-04	50
PEAK DOSE FOUND ON SPATIAL GRID (Sv)										
L-EDEWBODY	0-1.6 km	1.0000	2.37E+00	1.72E+00	5.07E+00	5.61E+00	NOT-FOUND	NOT-FOUND	6.57E+00	1.73E-02	72

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 1 OF 6:
CFI

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

01-JUN-07 10:36:24 PAGE 3 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 9.51E+01 3.82E+01 2.17E+02 3.74E+02 8.54E+02 1.07E+03 1.40E+03 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.9688 1.20E+01 7.40E+00 3.01E+01 3.80E+01 6.01E+01 7.02E+01 9.23E+01 1.19E-04 77
ERL FAT/TOTAL 0-80.5 km 0.0191 1.82E-03 0.00E+00 0.00E+00 0.00E+00 6.87E-02 1.32E-01 5.09E-01 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0191 1.82E-03 0.00E+00 0.00E+00 0.00E+00 6.87E-02 1.32E-01 5.09E-01 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.9688 4.47E+02 2.89E+02 1.10E+03 1.34E+03 2.07E+03 2.27E+03 3.35E+03 1.19E-04 77
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 5.52E+03 2.24E+03 1.35E+04 2.43E+04 4.90E+04 5.64E+04 7.53E+04 7.60E-04 38

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0191 1.43E-09 0.00E+00 0.00E+00 0.00E+00 5.02E-08 1.10E-07 4.00E-07 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0191 1.44E-05 0.00E+00 0.00E+00 0.00E+00 5.02E-04 1.10E-03 4.04E-03 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 7.47E-05 3.02E-05 1.70E-04 3.02E-04 6.97E-04 8.71E-04 1.10E-03 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.9688 2.54E-03 1.45E-03 6.28E-03 8.27E-03 1.14E-02 1.24E-02 1.95E-02 1.19E-04 77

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 4.93E+01 4.18E+01 9.12E+01 1.08E+02 NOT-FOUND NOT-FOUND 1.28E+02 1.73E-02 72

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 1 OF 6:
CFI

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = SNC AP1000 CHRONC FILE

01-JUN-07 10:36:24 PAGE 4 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 4.79E+01 1.83E+01 1.29E+02 2.09E+02 3.26E+02 3.55E+02 6.27E+02 1.19E-04 77
CAN FAT/TOTAL 0-16.1 km 1.0000 1.82E+00 1.24E+00 3.28E+00 4.41E+00 1.10E+01 1.33E+01 2.67E+01 1.30E-05 27

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 1.32E+02 9.42E+01 2.34E+02 2.98E+02 8.58E+02 1.04E+03 1.94E+03 1.30E-05 27
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 3.47E+03 1.37E+03 9.76E+03 1.40E+04 2.45E+04 2.86E+04 4.54E+04 1.19E-04 77

POPULATION WEIGHTED RISK
CAN FAT/TOTAL 0-80.5 km 1.0000 3.16E-05 1.10E-05 9.29E-05 1.31E-04 2.27E-04 2.58E-04 3.78E-04 1.19E-04 77
CAN FAT/TOTAL 0-16.1 km 0.9346 7.15E-05 5.90E-05 1.43E-04 1.78E-04 2.31E-04 2.51E-04 3.39E-04 4.07E-05 30

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 0.9966 1.02E-01 9.05E-02 1.13E-01 1.20E-01 1.37E-01 1.46E-01 1.96E-01 1.43E-04 84

L-EDEWBODY POP. DOSE (Sv) 0-16.1 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 1.32E+02 9.42E+01 2.34E+02 2.98E+02 8.58E+02 1.04E+03 1.94E+03 1.30E-05 27
LONG-TERM DIRECT EXPOSURE PATHWAYS 0.9346 2.45E+01 2.08E+01 5.32E+01 6.21E+01 8.05E+01 8.81E+01 1.16E+02 4.07E-05 30
TOTAL INGESTION PATHWAYS DOSE 1.0000 8.84E+01 4.69E+01 1.87E+02 2.64E+02 7.39E+02 1.01E+03 1.92E+03 1.30E-05 27
LONG-TERM GROUNDSHINE DOSE 0.9346 1.19E+01 8.67E+00 2.68E+01 3.39E+01 5.39E+01 6.35E+01 8.44E+01 4.07E-05 30
LONG-TERM RESUSPENSION DOSE 0.9346 1.26E+01 1.06E+01 2.78E+01 3.13E+01 3.61E+01 3.83E+01 4.64E+01 5.71E-04 44
WATER INGESTION DOSE 1.0000 8.61E+01 4.49E+01 1.81E+02 2.61E+02 7.35E+02 1.01E+03 1.91E+03 1.30E-05 27
POP.-DEPENDENT DECONTAMINATION DOSE 0.8982 1.90E+01 9.59E+00 4.72E+01 6.90E+01 1.21E+02 1.45E+02 2.55E+02 1.61E-05 31
FARM-DEPENDENT DECONTAMINATION DOSE 0.9256 1.87E-01 1.36E-02 2.50E-01 1.13E+00 3.20E+00 3.78E+00 5.14E+00 1.57E-03 65

INGESTION OF GRAINS 0.9561 8.27E-02 2.20E-02 2.94E-01 3.63E-01 5.73E-01 6.98E-01 7.69E-01 1.57E-03 65
INGESTION OF LEAF VEG 0.9561 5.42E-01 1.51E-01 1.20E+00 2.39E+00 5.87E+00 7.04E+00 8.13E+00 1.57E-03 65
INGESTION OF ROOT CROPS 0.9561 3.45E-01 9.17E-02 7.97E-01 1.40E+00 3.83E+00 4.88E+00 5.24E+00 1.57E-03 65
INGESTION OF FRUITS 0.9561 1.75E-01 4.38E-02 5.77E-01 7.80E-01 1.17E+00 1.36E+00 1.75E+00 1.57E-03 65
INGESTION OF LEGUMES 0.9561 5.93E-01 1.52E-01 1.20E+00 3.05E+00 7.50E+00 8.31E+00 9.87E+00 1.57E-03 65
INGESTION OF BEEF 0.9561 1.31E-01 3.36E-02 3.36E-01 7.31E-01 1.16E+00 1.28E+00 1.62E+00 1.06E-03 110
INGESTION OF MILK 0.9561 2.89E-01 8.48E-02 8.76E-01 1.47E+00 2.29E+00 2.50E+00 3.20E+00 4.85E-04 118
INGESTION OF POULTRY 0.9561 4.70E-02 1.17E-02 1.53E-01 2.16E-01 3.00E-01 3.12E-01 4.14E-01 3.36E-05 67
INGESTION OF OTHER MEAT CROPS 0.9561 5.04E-02 1.38E-02 1.58E-01 2.57E-01 3.82E-01 4.35E-01 6.35E-01 5.99E-04 66

L-EDEWBODY POP. DOSE (Sv) 0-80.5 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 3.47E+03 1.37E+03 9.76E+03 1.40E+04 2.45E+04 2.86E+04 4.54E+04 1.19E-04 77
LONG-TERM DIRECT EXPOSURE PATHWAYS 1.0000 2.91E+03 1.00E+03 8.39E+03 1.21E+04 2.08E+04 2.28E+04 3.48E+04 1.19E-04 77
TOTAL INGESTION PATHWAYS DOSE 1.0000 3.00E+02 2.04E+02 7.07E+02 9.69E+02 1.25E+03 1.39E+03 2.22E+03 4.29E-05 29
LONG-TERM GROUNDSHINE DOSE 1.0000 1.57E+03 5.11E+02 4.32E+03 6.82E+03 1.18E+04 1.34E+04 2.27E+04 1.19E-04 77
LONG-TERM RESUSPENSION DOSE 1.0000 1.35E+03 4.91E+02 3.83E+03 5.93E+03 9.23E+03 1.03E+04 1.42E+04 2.28E-04 12
WATER INGESTION DOSE 1.0000 1.64E+02 9.32E+01 3.83E+02 6.17E+02 1.04E+03 1.11E+03 1.98E+03 9.36E-06 97

	PROB NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH	PEAK CONS	PEAK PROB	PEAK TRIAL
L-EDEWBODY POP. DOSE (Sv) 0-80.5 km										
POP.-DEPENDENT DECONTAMINATION DOSE	0.9810	2.60E+02	4.70E+01	5.04E+02	1.09E+03	4.19E+03	5.67E+03	1.64E+04	8.42E-05	29
FARM-DEPENDENT DECONTAMINATION DOSE	1.0000	1.73E+00	2.56E-01	5.09E+00	9.15E+00	1.81E+01	2.36E+01	6.76E+01	1.19E-04	119
INGESTION OF GRAINS	1.0000	5.51E+00	2.29E+00	1.40E+01	2.04E+01	3.33E+01	3.67E+01	4.84E+01	7.13E-04	13
INGESTION OF LEAF VEG	1.0000	2.72E+01	1.28E+01	6.81E+01	1.06E+02	2.02E+02	2.18E+02	3.89E+02	2.60E-05	119
INGESTION OF ROOT CROPS	1.0000	1.58E+01	8.04E+00	3.47E+01	6.20E+01	1.12E+02	1.26E+02	2.51E+02	2.60E-05	119
INGESTION OF FRUITS	1.0000	1.12E+01	4.88E+00	2.75E+01	4.05E+01	7.00E+01	7.65E+01	9.81E+01	7.13E-04	13
INGESTION OF LEGUMES	1.0000	2.41E+01	1.15E+01	5.25E+01	9.99E+01	1.92E+02	2.15E+02	4.72E+02	2.60E-05	119
INGESTION OF BEEF	1.0000	1.80E+01	9.82E+00	4.52E+01	5.86E+01	8.28E+01	9.26E+01	1.37E+02	8.56E-05	138
INGESTION OF MILK	1.0000	2.69E+01	1.76E+01	6.00E+01	7.53E+01	1.09E+02	1.26E+02	3.02E+02	2.60E-05	119
INGESTION OF POULTRY	1.0000	4.24E+00	2.37E+00	9.75E+00	1.33E+01	2.29E+01	2.62E+01	3.55E+01	5.99E-04	47
INGESTION OF OTHER MEAT CROPS	1.0000	2.85E+00	2.14E+00	6.15E+00	8.18E+00	1.19E+01	1.33E+01	1.89E+01	5.71E-04	75
ECONOMIC COST MEASURES ($) 0-80.5 km										
TOTAL ECONOMIC COSTS	1.0000	1.24E+09	2.74E+08	3.03E+09	5.21E+09	1.83E+10	2.09E+10	2.39E+10	1.08E-03	44
POP.-DEPENDENT COSTS	0.9810	1.20E+09	2.40E+08	2.86E+09	4.96E+09	1.83E+10	2.04E+10	2.37E+10	1.10E-04	119
FARM-DEPENDENT COSTS	1.0000	3.68E+07	1.48E+07	1.04E+08	1.37E+08	2.30E+08	2.67E+08	4.03E+08	4.00E-04	51
POP.-DEPENDENT DECONTAMINATION COST	0.9810	3.90E+08	7.72E+07	8.25E+08	1.90E+09	5.39E+09	7.11E+09	9.35E+09	1.10E-04	119
FARM-DEPENDENT DECONTAMINATION COST	1.0000	1.23E+07	3.62E+06	3.91E+07	5.98E+07	9.67E+07	1.07E+08	2.09E+08	2.60E-05	119
POP.-DEPENDENT INTERDICTION COST	0.9810	8.13E+08	1.71E+08	2.14E+09	3.89E+09	1.02E+10	1.08E+10	1.44E+10	1.10E-04	119
FARM-DEPENDENT INTERDICTION COST	1.0000	1.07E+07	2.82E+06	3.31E+07	5.12E+07	7.20E+07	7.73E+07	1.09E+08	4.00E-04	51
POP.-DEPENDENT CONDEMNATION COST	0.0056	2.31E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.92E+05	9.72E+06	2.24E-04	27
FARM-DEPENDENT CONDEMNATION COST	0.9823	3.64E+06	1.06E+05	6.73E+06	1.64E+07	7.18E+07	9.01E+07	1.60E+08	2.99E-04	14
EMERGENCY PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
MILK DISPOSAL COST	0.9990	3.69E+05	1.77E+04	1.30E+06	2.21E+06	3.14E+06	3.29E+06	3.57E+06	1.43E-03	47
CROP DISPOSAL COST	0.9990	9.86E+06	1.34E+06	3.41E+07	4.83E+07	7.51E+07	8.00E+07	1.05E+08	1.14E-04	51

AFFECTED AREA/POPULATION 0-80.5 km
FARM DECONTAMINATION (HECTARES) 1.0000 1.06E+04 3.27E+03 3.36E+04 5.25E+04 7.51E+04 8.26E+04 1.47E+05 2.60E-05 119
POP. DECONTAMINATION (INDIVIDUALS) 0.9810 5.18E+04 1.11E+04 1.33E+05 2.43E+05 7.01E+05 7.75E+05 9.03E+05 1.73E-03 44
FARM INTERDICTION (HECTARES) 1.0000 2.38E+04 9.05E+03 7.26E+04 1.01E+05 1.24E+05 1.35E+05 1.86E+05 4.00E-04 51
POP. INTERDICTION (INDIVIDUALS) 0.9810 5.18E+04 1.11E+04 1.33E+05 2.43E+05 7.01E+05 7.75E+05 9.03E+05 1.73E-03 44
FARM CONDEMNATION (HECTARES) 0.9823 1.76E+03 4.09E+01 3.92E+03 7.39E+03 4.04E+04 5.28E+04 7.42E+04 5.80E-04 14
POP. CONDEMNATION (INDIVIDUALS) 0.0056 2.48E-01 0.00E+00 0.00E+00 0.00E+00 0.00E+00 7.92E+00 9.00E+01 2.24E-04 27
MILK DISPOSAL AREA (HECTARES) 0.9990 2.58E+04 7.66E+03 7.70E+04 1.02E+05 1.25E+05 1.37E+05 1.89E+05 4.00E-04 51
CROP DISPOSAL AREA (HECTARES) 0.9990 2.36E+04 6.15E+03 7.82E+04 1.05E+05 1.33E+05 1.47E+05 2.24E+05 4.00E-04 51

SOURCE TERM 1 OF 6:
CFI

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-06	1.00E+00	1.00E-07	1.00E+00	1.00E-05	1.00E+00	1.00E-08	9.97E-01
2.00E-06	1.00E+00	2.00E-07	1.00E+00	2.00E-05	1.00E+00	2.00E-08	9.97E-01
3.00E-06	1.00E+00	3.00E-07	1.00E+00	3.00E-05	1.00E+00	3.00E-08	9.97E-01
5.00E-06	1.00E+00	5.00E-07	1.00E+00	5.00E-05	1.00E+00	5.00E-08	9.97E-01
7.00E-06	1.00E+00	7.00E-07	1.00E+00	7.00E-05	1.00E+00	7.00E-08	9.97E-01
1.00E-05	1.00E+00	1.00E-06	1.00E+00	1.00E-04	1.00E+00	1.00E-07	9.97E-01
2.00E-05	1.00E+00	2.00E-06	1.00E+00	2.00E-04	1.00E+00	2.00E-07	9.97E-01
3.00E-05	1.00E+00	3.00E-06	1.00E+00	3.00E-04	1.00E+00	3.00E-07	9.97E-01
5.00E-05	1.00E+00	5.00E-06	1.00E+00	5.00E-04	1.00E+00	5.00E-07	9.97E-01
7.00E-05	1.00E+00	7.00E-06	1.00E+00	7.00E-04	1.00E+00	7.00E-07	9.97E-01
1.00E-04	1.00E+00	1.00E-05	1.00E+00	1.00E-03	1.00E+00	1.00E-06	9.97E-01
2.00E-04	1.00E+00	2.00E-05	1.00E+00	2.00E-03	1.00E+00	2.00E-06	9.97E-01
3.00E-04	1.00E+00	3.00E-05	1.00E+00	3.00E-03	1.00E+00	3.00E-06	9.97E-01
5.00E-04	1.00E+00	5.00E-05	1.00E+00	5.00E-03	1.00E+00	5.00E-06	9.97E-01
7.00E-04	1.00E+00	7.00E-05	1.00E+00	7.00E-03	1.00E+00	7.00E-06	9.97E-01
1.00E-03	1.00E+00	1.00E-04	1.00E+00	1.00E-02	1.00E+00	1.00E-05	9.97E-01
2.00E-03	1.00E+00	2.00E-04	1.00E+00	2.00E-02	1.00E+00	2.00E-05	9.97E-01
3.00E-03	1.00E+00	3.00E-04	1.00E+00	3.00E-02	1.00E+00	3.00E-05	9.97E-01
5.00E-03	1.00E+00	5.00E-04	1.00E+00	5.00E-02	1.00E+00	5.00E-05	9.97E-01
7.00E-03	1.00E+00	7.00E-04	1.00E+00	7.00E-02	1.00E+00	7.00E-05	9.97E-01
1.00E-02	1.00E+00	1.00E-03	1.00E+00	1.00E-01	1.00E+00	1.00E-04	9.97E-01
2.00E-02	1.00E+00	2.00E-03	1.00E+00	2.00E-01	1.00E+00	2.00E-04	9.97E-01
3.00E-02	1.00E+00	3.00E-03	1.00E+00	3.00E-01	1.00E+00	3.00E-04	9.97E-01
5.00E-02	1.00E+00	5.00E-03	1.00E+00	5.00E-01	1.00E+00	5.00E-04	9.97E-01
7.00E-02	1.00E+00	7.00E-03	1.00E+00	7.00E-01	1.00E+00	7.00E-04	9.97E-01
1.00E-01	1.00E+00	1.00E-02	1.00E+00	1.00E+00	1.00E+00	1.00E-03	9.97E-01
2.00E-01	1.00E+00	2.00E-02	1.00E+00	2.00E+00	1.00E+00	2.00E-03	9.97E-01
3.00E-01	1.00E+00	3.00E-02	9.26E-01	3.00E+00	1.00E+00	3.00E-03	9.97E-01
5.00E-01	9.82E-01	5.00E-02	9.12E-01	5.00E+00	1.00E+00	5.00E-03	9.97E-01
7.00E-01	9.82E-01	7.00E-02	9.12E-01	7.00E+00	9.82E-01	7.00E-03	9.95E-01
1.00E+00	9.81E-01	1.00E-01	9.12E-01	1.00E+01	9.63E-01	1.00E-02	9.95E-01
2.00E+00	7.74E-01	2.00E-01	9.03E-01	2.00E+01	8.66E-01	2.00E-02	9.94E-01
3.00E+00	6.68E-01	3.00E-01	8.52E-01	3.00E+01	7.03E-01	3.00E-02	9.92E-01
5.00E+00	4.05E-01	5.00E-01	8.11E-01	5.00E+01	4.16E-01	5.00E-02	9.04E-01
7.00E+00	2.65E-01	7.00E-01	7.56E-01	7.00E+01	1.99E-01	7.00E-02	7.26E-01
1.00E+01	5.20E-02	1.00E+00	6.71E-01	1.00E+02	7.86E-02	1.00E-01	4.33E-01
1.27E+01	1.73E-02	2.00E+00	4.60E-01	1.28E+02	1.73E-02	1.96E-01	1.43E-04
N.D.	N.D.	3.00E+00	3.40E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	5.00E+00	1.09E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	6.57E+00	1.73E-02	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

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DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 2 OF 6:
CFE

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

FRACTION OF THE PEOPLE

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION 0.950

COHORT 2 = NO EVACUATION 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = SNC AP1000 CHRONC FILE

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

01-JUN-07 10:36:24 PAGE 7 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 9.86E+01 3.85E+01 2.72E+02 4.47E+02 7.36E+02 8.05E+02 1.31E+03 1.10E-04 120
CAN FAT/TOTAL 0-16.1 km 1.0000 3.89E+00 2.68E+00 7.21E+00 9.22E+00 2.87E+01 3.76E+01 7.19E+01 1.30E-05 27
ERL FAT/TOTAL 0-80.5 km 0.0821 4.66E-03 0.00E+00 0.00E+00 6.06E-03 1.43E-01 2.79E-01 1.16E+00 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0742 4.60E-03 0.00E+00 0.00E+00 4.59E-03 1.43E-01 2.79E-01 1.16E+00 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 2.67E+02 1.90E+02 4.63E+02 6.32E+02 2.06E+03 3.00E+03 5.21E+03 1.30E-05 27
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 7.02E+03 2.73E+03 2.02E+04 3.10E+04 5.28E+04 5.83E+04 9.47E+04 1.10E-04 120

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0821 3.66E-09 0.00E+00 0.00E+00 4.66E-09 1.17E-07 2.08E-07 9.14E-07 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0742 3.65E-05 0.00E+00 0.00E+00 3.96E-05 1.22E-03 2.17E-03 9.22E-03 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

ERL FAT/TOTAL 3.2-4.8 km 0.0079 2.91E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.08E-05 1.11E-04 8.96E-06 27
CAN FAT/TOTAL 0-80.5 km 1.0000 7.07E-05 2.51E-05 2.09E-04 3.22E-04 5.35E-04 5.81E-04 8.53E-04 1.10E-04 120
CAN FAT/TOTAL 0-16.1 km 0.9564 2.40E-04 1.69E-04 5.75E-04 7.17E-04 9.26E-04 1.03E-03 1.45E-03 3.71E-04 118

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 4.60E+00 3.51E+00 1.01E+01 1.13E+01 NOT-FOUND NOT-FOUND 1.34E+01 1.73E-02 72

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SOURCE TERM 2 OF 6:
CFE

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION

01-JUN-07 10:36:24 PAGE 8 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 2.69E+01 8.61E+00 6.17E+01 1.14E+02 3.02E+02 3.66E+02 4.96E+02 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.8136 3.13E-01 6.05E-02 1.07E+00 1.55E+00 2.77E+00 3.22E+00 5.08E+00 3.71E-04 118
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.8136 1.53E+01 4.20E+00 5.11E+01 7.36E+01 1.15E+02 1.28E+02 1.91E+02 3.71E-04 118
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 1.83E+03 6.09E+02 4.29E+03 8.17E+03 2.04E+04 2.25E+04 2.93E+04 7.60E-04 38

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 2.12E-05 6.74E-06 4.82E-05 9.12E-05 2.31E-04 2.81E-04 3.90E-04 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.8136 6.60E-05 1.24E-05 2.28E-04 3.54E-04 5.78E-04 6.48E-04 1.07E-03 3.71E-04 118

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 3.40E+00 2.48E+00 7.39E+00 8.14E+00 NOT-FOUND NOT-FOUND 9.42E+00 1.73E-02 72

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"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 2 OF 6:
CFE

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

01-JUN-07 10:36:24 PAGE 9 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 3.12E+01 1.17E+01 7.09E+01 1.21E+02 3.23E+02 3.82E+02 5.17E+02 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.9508 4.64E+00 1.59E+00 1.34E+01 1.94E+01 3.04E+01 3.28E+01 5.06E+01 1.19E-04 77
ERL FAT/TOTAL 0-80.5 km 0.0821 9.32E-02 0.00E+00 0.00E+00 1.24E-01 3.27E+00 5.36E+00 2.32E+01 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0742 9.20E-02 0.00E+00 0.00E+00 9.27E-02 3.27E+00 5.36E+00 2.32E+01 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.9508 1.82E+02 7.84E+01 5.12E+02 7.07E+02 1.06E+03 1.15E+03 1.85E+03 1.19E-04 77
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 2.00E+03 7.39E+02 4.47E+03 8.57E+03 2.05E+04 2.27E+04 3.01E+04 7.60E-04 38

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0821 7.33E-08 0.00E+00 0.00E+00 9.36E-08 2.34E-06 4.57E-06 1.83E-05 1.17E-05 27
ERL FAT/TOTAL 0-3.2 km 0.0742 7.30E-04 0.00E+00 0.00E+00 7.98E-04 2.34E-02 4.57E-02 1.84E-01 1.17E-05 27
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0079 5.82E-06 0.00E+00 0.00E+00 0.00E+00 0.00E+00 5.07E-04 2.22E-03 8.96E-06 27
CAN FAT/TOTAL 0-80.5 km 1.0000 2.46E-05 9.48E-06 5.54E-05 1.03E-04 2.50E-04 3.18E-04 4.06E-04 1.66E-03 65
CAN FAT/TOTAL 0-16.1 km 0.9508 9.79E-04 3.35E-04 2.89E-03 3.84E-03 6.51E-03 7.27E-03 1.07E-02 1.19E-04 77

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 2.53E+01 1.73E+01 5.75E+01 7.36E+01 NOT-FOUND NOT-FOUND 8.54E+01 1.73E-02 72

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"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 2 OF 6:
CFE

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = SNC AP1000 CHRONC FILE

01-JUN-07 10:36:24 PAGE 10 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 7.14E+01 2.68E+01 1.91E+02 3.11E+02 5.86E+02 6.87E+02 1.19E+03 1.10E-04 120
CAN FAT/TOTAL 0-16.1 km 1.0000 3.36E+00 2.19E+00 6.14E+00 8.71E+00 2.84E+01 3.71E+01 7.19E+01 1.30E-05 27

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 2.43E+02 1.50E+02 4.42E+02 6.19E+02 2.06E+03 3.00E+03 5.21E+03 1.30E-05 27
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 5.18E+03 1.96E+03 1.31E+04 2.23E+04 4.01E+04 4.88E+04 8.66E+04 1.10E-04 120

POPULATION WEIGHTED RISK
CAN FAT/TOTAL 0-80.5 km 1.0000 4.94E-05 1.64E-05 1.31E-04 2.25E-04 3.83E-04 4.53E-04 7.64E-04 1.10E-04 120
CAN FAT/TOTAL 0-16.1 km 0.9353 1.28E-04 1.06E-04 3.00E-04 3.26E-04 3.97E-04 4.32E-04 7.33E-04 6.05E-05 121

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 0.9209 1.11E-01 1.03E-01 1.17E-01 1.24E-01 1.41E-01 1.49E-01 1.88E-01 2.57E-04 36

L-EDEWBODY POP. DOSE (Sv) 0-16.1 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 2.43E+02 1.50E+02 4.42E+02 6.19E+02 2.06E+03 3.00E+03 5.21E+03 1.30E-05 27
LONG-TERM DIRECT EXPOSURE PATHWAYS 0.9353 4.41E+01 3.60E+01 1.01E+02 1.11E+02 1.38E+02 1.52E+02 2.52E+02 6.05E-05 121
TOTAL INGESTION PATHWAYS DOSE 1.0000 1.90E+02 8.66E+01 4.06E+02 5.96E+02 2.04E+03 2.99E+03 5.21E+03 1.30E-05 27
LONG-TERM GROUNDSHINE DOSE 0.9353 4.29E+01 3.52E+01 1.00E+02 1.10E+02 1.37E+02 1.51E+02 2.51E+02 6.05E-05 121
LONG-TERM RESUSPENSION DOSE 0.9353 1.16E+00 8.52E-01 2.62E+00 3.34E+00 5.54E+00 6.69E+00 1.48E+01 7.07E-05 45
WATER INGESTION DOSE 1.0000 1.90E+02 8.53E+01 4.05E+02 5.96E+02 2.04E+03 2.99E+03 5.21E+03 1.30E-05 27
POP.-DEPENDENT DECONTAMINATION DOSE 0.8305 8.68E+00 2.87E+00 2.44E+01 3.24E+01 5.43E+01 6.19E+01 1.30E+02 6.05E-05 121
FARM-DEPENDENT DECONTAMINATION DOSE 0.8579 6.96E-02 3.64E-03 7.31E-02 1.57E-01 1.48E+00 1.94E+00 3.46E+00 1.57E-03 65

INGESTION OF GRAINS 0.9630 1.88E-02 4.77E-03 4.88E-02 7.55E-02 2.94E-01 3.22E-01 7.33E-01 7.30E-05 45
INGESTION OF LEAF VEG 0.9630 9.87E-02 3.03E-02 2.25E-01 4.21E-01 1.31E+00 1.92E+00 2.56E+00 1.57E-03 65
INGESTION OF ROOT CROPS 0.9630 5.77E-02 1.76E-02 1.19E-01 2.62E-01 6.52E-01 9.55E-01 1.44E+00 1.57E-03 65
INGESTION OF FRUITS 0.9630 8.32E-02 2.20E-02 1.48E-01 3.84E-01 1.26E+00 1.87E+00 2.27E+00 1.57E-03 65
INGESTION OF LEGUMES 0.9630 1.10E-01 3.10E-02 2.36E-01 4.54E-01 1.48E+00 1.94E+00 3.09E+00 1.57E-03 65
INGESTION OF BEEF 0.9630 1.03E-01 2.21E-02 2.39E-01 5.50E-01 1.17E+00 1.30E+00 3.04E+00 7.49E-05 7
INGESTION OF MILK 0.9630 8.54E-02 2.14E-02 1.87E-01 4.64E-01 1.03E+00 1.09E+00 1.48E+00 1.12E-04 109
INGESTION OF POULTRY 0.9630 2.97E-02 5.57E-03 7.06E-02 1.35E-01 3.76E-01 4.51E-01 1.51E+00 7.30E-05 45
INGESTION OF OTHER MEAT CROPS 0.9630 1.00E-02 1.49E-03 2.13E-02 4.68E-02 1.57E-01 3.05E-01 3.45E-01 1.28E-03 68

L-EDEWBODY POP. DOSE (Sv) 0-80.5 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 5.18E+03 1.96E+03 1.31E+04 2.23E+04 4.01E+04 4.88E+04 8.66E+04 1.10E-04 120
LONG-TERM DIRECT EXPOSURE PATHWAYS 1.0000 4.55E+03 1.51E+03 1.19E+04 2.09E+04 3.76E+04 4.45E+04 7.04E+04 1.10E-04 120
TOTAL INGESTION PATHWAYS DOSE 1.0000 4.18E+02 2.86E+02 8.07E+02 1.19E+03 2.71E+03 3.16E+03 5.43E+03 1.30E-05 27
LONG-TERM GROUNDSHINE DOSE 1.0000 4.41E+03 1.48E+03 1.17E+04 2.07E+04 3.54E+04 4.07E+04 6.93E+04 1.10E-04 120
LONG-TERM RESUSPENSION DOSE 1.0000 1.39E+02 4.68E+01 3.74E+02 6.09E+02 1.10E+03 1.22E+03 2.58E+03 1.08E-05 32
WATER INGESTION DOSE 1.0000 3.28E+02 1.85E+02 7.06E+02 1.09E+03 2.63E+03 3.09E+03 5.21E+03 1.30E-05 27

	PROB NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH	PEAK CONS	PEAK PROB	PEAK TRIAL
L-EDEWBODY POP. DOSE (Sv) 0-80.5 km										
POP.-DEPENDENT DECONTAMINATION DOSE	0.9535	2.04E+02	2.65E+01	4.35E+02	8.45E+02	3.38E+03	5.34E+03	1.55E+04	1.94E-05	21
FARM-DEPENDENT DECONTAMINATION DOSE	0.9781	7.40E-01	9.20E-02	1.64E+00	2.95E+00	1.22E+01	1.66E+01	4.45E+01	2.85E-05	99
INGESTION OF GRAINS	1.0000	4.32E+00	1.33E+00	1.24E+01	1.95E+01	2.64E+01	2.99E+01	4.25E+01	3.00E-05	2
INGESTION OF LEAF VEG	1.0000	8.75E+00	4.46E+00	2.33E+01	3.15E+01	4.93E+01	5.15E+01	5.94E+01	2.00E-04	64
INGESTION OF ROOT CROPS	1.0000	6.74E+00	3.24E+00	1.82E+01	2.49E+01	3.66E+01	4.13E+01	6.00E+01	1.79E-04	133
INGESTION OF FRUITS	1.0000	9.81E+00	4.68E+00	2.64E+01	3.57E+01	5.48E+01	6.05E+01	8.64E+01	1.79E-04	133
INGESTION OF LEGUMES	1.0000	7.56E+00	4.26E+00	1.88E+01	2.45E+01	3.64E+01	4.15E+01	6.25E+01	2.85E-05	99
INGESTION OF BEEF	1.0000	2.07E+01	1.31E+01	4.90E+01	6.19E+01	1.01E+02	1.07E+02	1.86E+02	4.58E-06	115
INGESTION OF MILK	1.0000	1.83E+01	1.09E+01	4.50E+01	6.26E+01	1.01E+02	1.09E+02	1.48E+02	2.85E-04	118
INGESTION OF POULTRY	1.0000	9.95E+00	5.35E+00	2.79E+01	3.31E+01	4.34E+01	4.88E+01	7.17E+01	2.00E-04	64
INGESTION OF OTHER MEAT CROPS	1.0000	3.97E+00	2.11E+00	9.96E+00	1.32E+01	2.12E+01	2.27E+01	3.04E+01	2.85E-04	118
ECONOMIC COST MEASURES ($) 0-80.5 km										
TOTAL ECONOMIC COSTS	1.0000	1.19E+09	2.68E+08	3.18E+09	5.39E+09	1.60E+10	2.03E+10	3.22E+10	1.94E-05	20
POP.-DEPENDENT COSTS	0.9547	1.13E+09	2.11E+08	3.03E+09	4.98E+09	1.60E+10	2.02E+10	3.21E+10	1.94E-05	20
FARM-DEPENDENT COSTS	1.0000	6.54E+07	5.44E+07	1.31E+08	1.64E+08	2.59E+08	3.03E+08	4.23E+08	4.05E-05	45
POP.-DEPENDENT DECONTAMINATION COST	0.9535	3.85E+08	6.94E+07	8.97E+08	2.00E+09	5.68E+09	7.45E+09	1.26E+10	7.86E-05	45
FARM-DEPENDENT DECONTAMINATION COST	0.9781	9.34E+06	2.07E+06	2.64E+07	4.45E+07	7.91E+07	9.46E+07	1.59E+08	4.45E-04	109
POP.-DEPENDENT INTERDICTION COST	0.9535	7.40E+08	1.40E+08	2.03E+09	3.65E+09	1.01E+10	1.10E+10	2.21E+10	1.94E-05	20
FARM-DEPENDENT INTERDICTION COST	1.0000	2.51E+07	1.48E+07	6.19E+07	7.22E+07	8.58E+07	9.24E+07	1.26E+08	2.04E-05	7
POP.-DEPENDENT CONDEMNATION COST	0.1981	2.19E+06	0.00E+00	5.72E+06	7.91E+06	4.08E+07	6.52E+07	1.01E+09	8.66E-05	35
FARM-DEPENDENT CONDEMNATION COST	0.9791	7.56E+06	9.50E+04	1.38E+07	4.74E+07	1.24E+08	1.65E+08	3.11E+08	5.99E-04	47
EMERGENCY PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
MILK DISPOSAL COST	1.0000	8.49E+05	2.30E+05	2.64E+06	3.04E+06	3.19E+06	3.26E+06	3.73E+06	5.71E-05	138
CROP DISPOSAL COST	1.0000	2.25E+07	9.89E+06	5.93E+07	7.13E+07	7.76E+07	8.04E+07	9.47E+07	2.28E-04	51

AFFECTED AREA/POPULATION 0-80.5 km

FARM DECONTAMINATION (HECTARES)	0.9781	8.32E+03	1.74E+03	2.36E+04	3.96E+04	6.58E+04	7.30E+04	1.09E+05	2.00E-04	51
POP. DECONTAMINATION (INDIVIDUALS)	0.9535	4.46E+04	8.74E+03	1.25E+05	2.27E+05	5.80E+05	6.43E+05	9.04E+05	7.86E-05	45
FARM INTERDICTION (HECTARES)	1.0000	4.93E+04	3.40E+04	1.05E+05	1.11E+05	1.26E+05	1.33E+05	1.72E+05	2.00E-04	51
POP. INTERDICTION (INDIVIDUALS)	0.9535	4.46E+04	8.74E+03	1.25E+05	2.27E+05	5.80E+05	6.43E+05	9.04E+05	7.86E-05	45
FARM CONDEMNATION (HECTARES)	0.9791	3.89E+03	3.85E+01	7.18E+03	1.96E+04	7.97E+04	9.57E+04	1.53E+05	5.99E-04	47
POP. CONDEMNATION (INDIVIDUALS)	0.1981	2.20E+01	0.00E+00	5.71E+01	7.72E+01	3.56E+02	5.22E+02	1.24E+04	7.98E-05	35
MILK DISPOSAL AREA (HECTARES)	1.0000	5.47E+04	3.75E+04	1.12E+05	1.23E+05	1.52E+05	1.67E+05	1.96E+05	1.51E-03	42
CROP DISPOSAL AREA (HECTARES)	1.0000	5.32E+04	3.67E+04	1.06E+05	1.12E+05	1.27E+05	1.34E+05	1.72E+05	2.00E-04	51

SOURCE TERM 2 OF 6:
CFE

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-06	1.00E+00	1.00E-06	1.00E+00	1.00E-06	1.00E+00	1.00E-07	9.15E-01
2.00E-06	1.00E+00	2.00E-06	1.00E+00	2.00E-06	1.00E+00	2.00E-07	9.14E-01
3.00E-06	1.00E+00	3.00E-06	1.00E+00	3.00E-06	1.00E+00	3.00E-07	9.14E-01
5.00E-06	1.00E+00	5.00E-06	1.00E+00	5.00E-06	1.00E+00	5.00E-07	9.03E-01
7.00E-06	1.00E+00	7.00E-06	1.00E+00	7.00E-06	1.00E+00	7.00E-07	9.03E-01
1.00E-05	1.00E+00	1.00E-05	1.00E+00	1.00E-05	1.00E+00	1.00E-06	9.03E-01
2.00E-05	1.00E+00	2.00E-05	1.00E+00	2.00E-05	1.00E+00	2.00E-06	9.03E-01
3.00E-05	1.00E+00	3.00E-05	1.00E+00	3.00E-05	1.00E+00	3.00E-06	9.03E-01
5.00E-05	1.00E+00	5.00E-05	1.00E+00	5.00E-05	1.00E+00	5.00E-06	9.03E-01
7.00E-05	1.00E+00	7.00E-05	1.00E+00	7.00E-05	1.00E+00	7.00E-06	9.03E-01
1.00E-04	1.00E+00	1.00E-04	1.00E+00	1.00E-04	1.00E+00	1.00E-05	9.03E-01
2.00E-04	1.00E+00	2.00E-04	1.00E+00	2.00E-04	1.00E+00	2.00E-05	9.03E-01
3.00E-04	1.00E+00	3.00E-04	1.00E+00	3.00E-04	1.00E+00	3.00E-05	9.03E-01
5.00E-04	1.00E+00	5.00E-04	1.00E+00	5.00E-04	1.00E+00	5.00E-05	9.03E-01
7.00E-04	1.00E+00	7.00E-04	1.00E+00	7.00E-04	1.00E+00	7.00E-05	9.03E-01
1.00E-03	1.00E+00	1.00E-03	1.00E+00	1.00E-03	1.00E+00	1.00E-04	9.03E-01
2.00E-03	1.00E+00	2.00E-03	1.00E+00	2.00E-03	1.00E+00	2.00E-04	9.03E-01
3.00E-03	1.00E+00	3.00E-03	1.00E+00	3.00E-03	1.00E+00	3.00E-04	9.03E-01
5.00E-03	1.00E+00	5.00E-03	1.00E+00	5.00E-03	1.00E+00	5.00E-04	9.03E-01
7.00E-03	1.00E+00	7.00E-03	1.00E+00	7.00E-03	1.00E+00	7.00E-04	9.03E-01
1.00E-02	1.00E+00	1.00E-02	1.00E+00	1.00E-02	1.00E+00	1.00E-03	9.03E-01
2.00E-02	1.00E+00	2.00E-02	1.00E+00	2.00E-02	1.00E+00	2.00E-03	9.03E-01
3.00E-02	1.00E+00	3.00E-02	1.00E+00	3.00E-02	1.00E+00	3.00E-03	9.03E-01
5.00E-02	1.00E+00	5.00E-02	9.26E-01	5.00E-02	1.00E+00	5.00E-03	9.03E-01
7.00E-02	1.00E+00	7.00E-02	9.12E-01	7.00E-02	1.00E+00	7.00E-03	9.03E-01
1.00E-01	1.00E+00	1.00E-01	9.12E-01	1.00E-01	1.00E+00	1.00E-02	9.03E-01
2.00E-01	9.45E-01	2.00E-01	9.12E-01	2.00E-01	1.00E+00	2.00E-02	8.75E-01
3.00E-01	9.25E-01	3.00E-01	9.03E-01	3.00E-01	1.00E+00	3.00E-02	8.43E-01
5.00E-01	9.03E-01	5.00E-01	8.52E-01	5.00E-01	9.82E-01	5.00E-02	7.88E-01
7.00E-01	8.93E-01	7.00E-01	8.33E-01	7.00E-01	9.63E-01	7.00E-02	7.22E-01
1.00E+00	8.33E-01	1.00E+00	7.63E-01	1.00E+00	9.63E-01	1.00E-01	7.04E-01
2.00E+00	6.98E-01	2.00E+00	6.06E-01	2.00E+00	9.25E-01	1.88E-01	2.57E-04
3.00E+00	5.67E-01	3.00E+00	4.21E-01	3.00E+00	8.98E-01	N.D.	N.D.
5.00E+00	3.78E-01	5.00E+00	2.58E-01	5.00E+00	8.25E-01	N.D.	N.D.
7.00E+00	2.58E-01	7.00E+00	1.48E-01	7.00E+00	7.73E-01	N.D.	N.D.
1.00E+01	1.09E-01	9.42E+00	1.73E-02	1.00E+01	6.97E-01	N.D.	N.D.
1.34E+01	1.73E-02	N.D.	N.D.	2.00E+01	4.58E-01	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	3.00E+01	3.50E-01	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	5.00E+01	1.28E-01	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	7.00E+01	7.12E-02	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	8.54E+01	1.73E-02	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

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DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 3 OF 6:
IC

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

FRACTION OF THE PEOPLE

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION 0.950

COHORT 2 = NO EVACUATION 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = SNC AP1000 CHRONC FILE

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

01-JUN-07 10:36:24 PAGE 13 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.61E-01 4.62E-02 3.35E-01 6.88E-01 2.29E+00 3.02E+00 6.21E+00 8.42E-05 29
CAN FAT/TOTAL 0-16.1 km 1.0000 9.00E-03 4.26E-03 2.19E-02 3.31E-02 6.61E-02 7.79E-02 1.45E-01 1.42E-04 28
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 6.52E-01 3.09E-01 1.56E+00 2.34E+00 4.70E+00 5.61E+00 1.05E+01 1.42E-04 28
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 1.17E+01 3.26E+00 2.38E+01 4.92E+01 1.62E+02 2.19E+02 4.50E+02 8.42E-05 29

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 1.01E-07 2.28E-08 1.83E-07 3.87E-07 1.54E-06 2.15E-06 4.78E-06 8.42E-05 29
CAN FAT/TOTAL 0-16.1 km 0.9655 1.17E-06 3.50E-07 3.00E-06 4.92E-06 1.12E-05 1.32E-05 2.78E-05 1.08E-05 97

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 2.03E-02 1.81E-02 4.27E-02 5.08E-02 5.55E-02 5.76E-02 7.90E-02 1.43E-04 27

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 3 OF 6:
IC

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION

01-JUN-07 10:36:24 PAGE 14 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 2.25E-02 7.95E-03 4.89E-02 8.67E-02 2.35E-01 3.13E-01 5.68E-01 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.8087 1.54E-04 2.36E-05 4.68E-04 7.15E-04 1.46E-03 1.81E-03 3.11E-03 1.43E-04 136
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.8087 1.12E-02 1.69E-03 3.30E-02 5.18E-02 1.15E-01 1.33E-01 2.25E-01 1.43E-04 136
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 1.63E+00 5.74E-01 3.58E+00 6.24E+00 1.78E+01 2.48E+01 4.12E+01 7.99E-04 68

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 1.77E-08 6.16E-09 3.83E-08 6.98E-08 1.87E-07 2.53E-07 4.47E-07 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.8087 3.26E-08 4.90E-09 9.84E-08 1.55E-07 3.52E-07 4.17E-07 6.56E-07 1.43E-04 136

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 1.40E-03 9.06E-04 2.81E-03 3.60E-03 NOT-FOUND NOT-FOUND 7.37E-03 1.95E-02 65

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 3 OF 6:
IC

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

01-JUN-07 10:36:24 PAGE 15 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 2.48E-02 9.70E-03 5.30E-02 9.00E-02 2.47E-01 3.27E-01 5.79E-01 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.9538 2.42E-03 9.21E-04 7.10E-03 9.71E-03 1.60E-02 1.97E-02 2.94E-02 1.66E-03 65
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.9538 1.75E-01 6.66E-02 5.08E-01 7.16E-01 1.22E+00 1.47E+00 2.13E+00 1.66E-03 65
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 1.80E+00 7.08E-01 3.87E+00 6.62E+00 1.87E+01 2.53E+01 4.19E+01 7.99E-04 68

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 1.95E-08 7.51E-09 4.06E-08 7.42E-08 1.87E-07 2.53E-07 4.55E-07 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.9538 5.10E-07 1.91E-07 1.36E-06 2.08E-06 3.45E-06 4.01E-06 6.21E-06 1.66E-03 65

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 1.66E-02 1.09E-02 3.36E-02 4.48E-02 NOT-FOUND NOT-FOUND 8.73E-02 1.95E-02 65

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 3 OF 6:
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RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = SNC AP1000 CHRONC FILE

01-JUN-07 10:36:24 PAGE 16 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.38E-01 3.30E-02 2.72E-01 5.56E-01 2.27E+00 3.02E+00 6.13E+00 8.42E-05 29
CAN FAT/TOTAL 0-16.1 km 1.0000 8.74E-03 4.14E-03 2.14E-02 3.24E-02 6.60E-02 7.79E-02 1.44E-01 1.42E-04 28

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 6.33E-01 3.02E-01 1.50E+00 2.28E+00 4.67E+00 5.59E+00 1.05E+01 1.42E-04 28
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 1.00E+01 2.37E+00 1.95E+01 3.98E+01 1.44E+02 2.02E+02 4.44E+02 8.42E-05 29

POPULATION WEIGHTED RISK
CAN FAT/TOTAL 0-80.5 km 1.0000 8.32E-08 1.44E-08 1.45E-07 2.89E-07 1.47E-06 2.10E-06 4.72E-06 8.42E-05 29
CAN FAT/TOTAL 0-16.1 km 0.9369 1.11E-06 3.32E-07 2.91E-06 4.53E-06 1.12E-05 1.31E-05 2.76E-05 1.08E-05 97

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 1.81E-02 1.53E-02 3.62E-02 4.71E-02 5.45E-02 5.67E-02 7.59E-02 1.43E-04 27

L-EDEWBODY POP. DOSE (Sv) 0-16.1 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 6.33E-01 3.02E-01 1.50E+00 2.28E+00 4.67E+00 5.59E+00 1.05E+01 1.42E-04 28
LONG-TERM DIRECT EXPOSURE PATHWAYS 0.9369 3.82E-01 1.14E-01 1.00E+00 1.57E+00 3.75E+00 4.83E+00 9.48E+00 1.08E-05 97
TOTAL INGESTION PATHWAYS DOSE 1.0000 2.51E-01 9.30E-02 5.93E-01 1.18E+00 2.34E+00 2.77E+00 5.11E+00 2.11E-05 24
LONG-TERM GROUNDSHINE DOSE 0.9369 3.35E-01 1.02E-01 8.61E-01 1.32E+00 3.42E+00 4.08E+00 8.32E+00 1.08E-05 97
LONG-TERM RESUSPENSION DOSE 0.9369 4.65E-02 1.33E-02 1.21E-01 1.96E-01 4.48E-01 5.59E-01 1.16E+00 1.08E-05 97
WATER INGESTION DOSE 1.0000 7.76E-02 3.81E-02 1.69E-01 2.68E-01 7.01E-01 8.28E-01 1.70E+00 2.34E-05 31
POP.-DEPENDENT DECONTAMINATION DOSE 0.0001 7.80E-06 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.15E-01 1.17E-05 27
FARM-DEPENDENT DECONTAMINATION DOSE 0.0323 5.91E-07 0.00E+00 0.00E+00 0.00E+00 1.56E-05 2.04E-05 9.46E-05 3.77E-05 27

INGESTION OF GRAINS 1.0000 5.32E-03 7.38E-04 1.12E-02 3.36E-02 7.51E-02 9.03E-02 1.99E-01 2.11E-05 24
INGESTION OF LEAF VEG 1.0000 1.22E-02 1.87E-03 2.73E-02 5.64E-02 2.16E-01 3.00E-01 4.76E-01 9.13E-05 52
INGESTION OF ROOT CROPS 1.0000 7.73E-03 1.35E-03 1.62E-02 5.13E-02 1.05E-01 1.24E-01 2.74E-01 2.11E-05 24
INGESTION OF FRUITS 1.0000 1.04E-02 1.43E-03 1.99E-02 7.19E-02 1.35E-01 1.67E-01 3.84E-01 2.11E-05 24
INGESTION OF LEGUMES 1.0000 7.51E-03 1.52E-03 1.60E-02 4.11E-02 1.04E-01 1.20E-01 2.50E-01 2.11E-05 24
INGESTION OF BEEF 1.0000 5.52E-02 1.14E-02 1.27E-01 3.48E-01 6.18E-01 7.01E-01 1.42E+00 2.11E-05 24
INGESTION OF MILK 1.0000 6.03E-02 1.40E-02 1.29E-01 2.79E-01 7.84E-01 9.93E-01 2.01E+00 7.46E-05 35
INGESTION OF POULTRY 1.0000 1.09E-02 1.98E-03 2.31E-02 5.79E-02 1.44E-01 1.98E-01 3.93E-01 9.13E-05 52
INGESTION OF OTHER MEAT CROPS 1.0000 3.85E-03 1.12E-03 1.09E-02 2.04E-02 3.66E-02 4.78E-02 7.68E-02 9.13E-05 52

L-EDEWBODY POP. DOSE (Sv) 0-80.5 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 1.00E+01 2.37E+00 1.95E+01 3.98E+01 1.44E+02 2.02E+02 4.44E+02 8.42E-05 29
LONG-TERM DIRECT EXPOSURE PATHWAYS 1.0000 7.67E+00 1.32E+00 1.33E+01 2.62E+01 1.41E+02 2.01E+02 4.35E+02 8.42E-05 29
TOTAL INGESTION PATHWAYS DOSE 1.0000 2.37E+00 5.36E-01 4.42E+00 9.70E+00 3.10E+01 3.37E+01 5.43E+01 2.00E-04 51
LONG-TERM GROUNDSHINE DOSE 1.0000 6.73E+00 1.15E+00 1.17E+01 2.32E+01 1.29E+02 1.93E+02 3.81E+02 8.42E-05 29
LONG-TERM RESUSPENSION DOSE 1.0000 9.38E-01 1.55E-01 1.68E+00 3.35E+00 1.70E+01 2.36E+01 5.33E+01 8.42E-05 29
WATER INGESTION DOSE 1.0000 1.46E-01 7.06E-02 3.52E-01 5.86E-01 1.01E+00 1.06E+00 1.76E+00 9.36E-06 26

	PROB NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH	PEAK CONS	PEAK PROB	PEAK TRIAL
L-EDEWBODY POP. DOSE (Sv) 0-80.5 km										
POP.-DEPENDENT DECONTAMINATION DOSE	0.0001	7.80E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-01	1.17E-05	27
FARM-DEPENDENT DECONTAMINATION DOSE	0.0323	5.91E-07	0.00E+00	0.00E+00	0.00E+00	1.56E-05	2.04E-05	9.46E-05	3.77E-05	27
INGESTION OF GRAINS	1.0000	8.15E-02	7.24E-03	1.46E-01	4.07E-01	1.26E+00	1.52E+00	2.49E+00	2.00E-04	51
INGESTION OF LEAF VEG	1.0000	1.88E-01	1.82E-02	3.01E-01	1.02E+00	3.35E+00	4.08E+00	6.94E+00	1.43E-04	59
INGESTION OF ROOT CROPS	1.0000	1.14E-01	1.33E-02	1.89E-01	4.72E-01	2.03E+00	2.25E+00	3.40E+00	2.00E-04	51
INGESTION OF FRUITS	1.0000	1.58E-01	1.39E-02	2.74E-01	6.63E-01	2.73E+00	3.18E+00	4.81E+00	2.00E-04	51
INGESTION OF LEGUMES	1.0000	1.05E-01	1.57E-02	1.77E-01	4.60E-01	1.77E+00	2.10E+00	3.06E+00	2.00E-04	51
INGESTION OF BEEF	1.0000	6.35E-01	1.19E-01	1.33E+00	2.59E+00	8.99E+00	1.04E+01	1.42E+01	2.00E-04	51
INGESTION OF MILK	1.0000	7.35E-01	1.57E-01	1.63E+00	2.97E+00	8.74E+00	1.02E+01	1.37E+01	2.00E-04	51
INGESTION OF POULTRY	1.0000	1.65E-01	2.07E-02	2.64E-01	9.62E-01	3.04E+00	3.32E+00	5.21E+00	2.00E-04	51
INGESTION OF OTHER MEAT CROPS	1.0000	4.05E-02	1.14E-02	6.78E-02	2.01E-01	5.92E-01	7.22E-01	9.85E-01	2.00E-04	51
ECONOMIC COST MEASURES ($) 0-80.5 km										
TOTAL ECONOMIC COSTS	0.7290	6.99E+03	6.78E+02	9.17E+03	3.26E+04	8.54E+04	1.88E+05	1.83E+06	4.45E-05	27
POP.-DEPENDENT COSTS	0.0001	1.08E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+06	4.45E-05	27
FARM-DEPENDENT COSTS	0.7290	6.88E+03	6.78E+02	9.17E+03	3.26E+04	8.52E+04	1.81E+05	7.04E+05	3.84E-05	30
POP.-DEPENDENT DECONTAMINATION COST	0.0001	2.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+05	4.45E-05	27
FARM-DEPENDENT DECONTAMINATION COST	0.0323	1.21E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E+02	3.61E+02	1.47E+03	1.43E-04 27
POP.-DEPENDENT INTERDICTION COST	0.0001	7.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E+06	4.45E-05	27
FARM-DEPENDENT INTERDICTION COST	0.6792	4.05E+03	1.82E+02	3.35E+03	1.57E+04	3.85E+04	4.96E+04	4.36E+05	7.68E-05	30
POP.-DEPENDENT CONDEMNATION COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
FARM-DEPENDENT CONDEMNATION COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
EMERGENCY PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
MILK DISPOSAL COST	0.7283	1.48E+02	2.15E+01	3.27E+02	1.07E+03	1.69E+03	2.02E+03	3.05E+03	1.88E-05	30
CROP DISPOSAL COST	0.6792	2.67E+03	2.84E+02	5.39E+03	1.25E+04	2.77E+04	3.56E+04	2.67E+05	7.68E-05	30

AFFECTED AREA/POPULATION 0-80.5 km
FARM DECONTAMINATION (HECTARES) 0.0323 1.17E-02 0.00E+00 0.00E+00 0.00E+00
3.37E-01 3.61E-01 1.42E+00 1.43E-04 27
POP. DECONTAMINATION (INDIVIDUALS) 0.0001 5.40E-03 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 6.90E+01 4.45E-05 27
FARM INTERDICTION (HECTARES) 0.6792 9.48E+00 4.66E-01 7.58E+00 4.03E+01
1.40E+02 1.98E+02 1.02E+03 7.68E-05 30
POP. INTERDICTION (INDIVIDUALS) 0.0001 5.40E-03 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 6.90E+01 4.45E-05 27
FARM CONDEMNATION (HECTARES) 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
POP. CONDEMNATION (INDIVIDUALS) 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
MILK DISPOSAL AREA (HECTARES) 0.7283 3.16E+01 8.63E-01 4.24E+01 1.12E+02
7.27E+02 7.48E+02 9.11E+02 3.84E-05 30
CROP DISPOSAL AREA (HECTARES) 0.6792 9.48E+00 4.66E-01 7.58E+00 4.03E+01
1.40E+02 1.98E+02 1.02E+03 7.68E-05 30

SOURCE TERM 3 OF 6:
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RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-08	1.00E+00	1.00E-10	1.00E+00	1.00E-09	1.00E+00	1.00E-08	1.00E+00
2.00E-08	1.00E+00	2.00E-10	1.00E+00	2.00E-09	1.00E+00	2.00E-08	1.00E+00
3.00E-08	1.00E+00	3.00E-10	1.00E+00	3.00E-09	1.00E+00	3.00E-08	1.00E+00
5.00E-08	1.00E+00	5.00E-10	1.00E+00	5.00E-09	1.00E+00	5.00E-08	1.00E+00
7.00E-08	1.00E+00	7.00E-10	1.00E+00	7.00E-09	1.00E+00	7.00E-08	1.00E+00
1.00E-07	1.00E+00	1.00E-09	1.00E+00	1.00E-08	1.00E+00	1.00E-07	1.00E+00
2.00E-07	1.00E+00	2.00E-09	1.00E+00	2.00E-08	1.00E+00	2.00E-07	1.00E+00
3.00E-07	1.00E+00	3.00E-09	1.00E+00	3.00E-08	1.00E+00	3.00E-07	1.00E+00
5.00E-07	1.00E+00	5.00E-09	1.00E+00	5.00E-08	1.00E+00	5.00E-07	1.00E+00
7.00E-07	1.00E+00	7.00E-09	1.00E+00	7.00E-08	1.00E+00	7.00E-07	1.00E+00
1.00E-06	1.00E+00	1.00E-08	1.00E+00	1.00E-07	1.00E+00	1.00E-06	1.00E+00
2.00E-06	1.00E+00	2.00E-08	1.00E+00	2.00E-07	1.00E+00	2.00E-06	1.00E+00
3.00E-06	1.00E+00	3.00E-08	1.00E+00	3.00E-07	1.00E+00	3.00E-06	1.00E+00
5.00E-06	1.00E+00	5.00E-08	1.00E+00	5.00E-07	1.00E+00	5.00E-06	1.00E+00
7.00E-06	1.00E+00	7.00E-08	1.00E+00	7.00E-07	1.00E+00	7.00E-06	1.00E+00
1.00E-05	1.00E+00	1.00E-07	1.00E+00	1.00E-06	1.00E+00	1.00E-05	1.00E+00
2.00E-05	1.00E+00	2.00E-07	1.00E+00	2.00E-06	1.00E+00	2.00E-05	1.00E+00
3.00E-05	1.00E+00	3.00E-07	1.00E+00	3.00E-06	1.00E+00	3.00E-05	1.00E+00
5.00E-05	1.00E+00	5.00E-07	1.00E+00	5.00E-06	1.00E+00	5.00E-05	1.00E+00
7.00E-05	1.00E+00	7.00E-07	1.00E+00	7.00E-06	1.00E+00	7.00E-05	1.00E+00
1.00E-04	1.00E+00	1.00E-06	1.00E+00	1.00E-05	1.00E+00	1.00E-04	1.00E+00
2.00E-04	9.76E-01	2.00E-06	1.00E+00	2.00E-05	1.00E+00	2.00E-04	9.76E-01
3.00E-04	9.75E-01	3.00E-06	1.00E+00	3.00E-05	1.00E+00	3.00E-04	9.70E-01
5.00E-04	9.70E-01	5.00E-06	1.00E+00	5.00E-05	1.00E+00	5.00E-04	9.70E-01
7.00E-04	9.70E-01	7.00E-06	1.00E+00	7.00E-05	1.00E+00	7.00E-04	9.70E-01
1.00E-03	9.52E-01	1.00E-05	9.98E-01	1.00E-04	9.99E-01	1.00E-03	9.33E-01
2.00E-03	8.94E-01	2.00E-05	9.62E-01	2.00E-04	9.69E-01	2.00E-03	8.94E-01
3.00E-03	8.67E-01	3.00E-05	9.62E-01	3.00E-04	9.63E-01	3.00E-03	8.48E-01
5.00E-03	8.48E-01	5.00E-05	9.62E-01	5.00E-04	9.62E-01	5.00E-03	7.91E-01
7.00E-03	7.55E-01	7.00E-05	9.22E-01	7.00E-04	9.62E-01	7.00E-03	7.53E-01
1.00E-02	6.78E-01	1.00E-04	9.21E-01	1.00E-03	9.24E-01	1.00E-02	6.69E-01
2.00E-02	4.74E-01	2.00E-04	8.25E-01	2.00E-03	8.63E-01	2.00E-02	4.15E-01
3.00E-02	2.46E-01	3.00E-04	8.06E-01	3.00E-03	8.25E-01	3.00E-02	1.64E-01
5.00E-02	6.70E-02	5.00E-04	7.25E-01	5.00E-03	7.28E-01	5.00E-02	4.26E-02
7.00E-02	1.43E-04	7.00E-04	5.60E-01	7.00E-03	6.59E-01	7.00E-02	1.43E-04
7.90E-02	1.43E-04	1.00E-03	4.79E-01	1.00E-02	5.31E-01	7.59E-02	1.43E-04
N.D.	N.D.	2.00E-03	3.10E-01	2.00E-02	3.31E-01	N.D.	N.D.
N.D.	N.D.	3.00E-03	8.05E-02	3.00E-02	1.32E-01	N.D.	N.D.
N.D.	N.D.	5.00E-03	2.10E-02	5.00E-02	3.84E-02	N.D.	N.D.
N.D.	N.D.	7.00E-03	1.95E-02	7.00E-02	2.10E-02	N.D.	N.D.
N.D.	N.D.	7.37E-03	1.95E-02	8.73E-02	1.95E-02	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

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DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 4 OF 6:
BP

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

FRACTION OF THE PEOPLE

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION 0.950

COHORT 2 = NO EVACUATION 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = SNC AP1000 CHRONC FILE

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

01-JUN-07 10:36:24 PAGE 19 PROB QUANTILES PEAK PEAK PEAK

	NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	PROB	TRIAL
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	2.85E+02	1.25E+02	7.91E+02	1.11E+03	1.87E+03	2.19E+03	3.13E+03	9.42E-04 75
CAN FAT/TOTAL	0-16.1 km	1.0000	1.57E+01	1.07E+01	3.02E+01	4.01E+01	1.00E+02	1.19E+02	2.53E+02	1.30E-05 32
ERL FAT/TOTAL	0-80.5 km	0.1324	2.79E-02	0.00E+00	3.56E-03	7.37E-02	1.04E+00	1.20E+00	2.47E+00	1.29E-04 77
ERL FAT/TOTAL	0-3.2 km	0.0855	2.60E-02	0.00E+00	0.00E+00	2.67E-02	1.04E+00	1.20E+00	2.47E+00	1.29E-04 77
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	1.06E+03	7.14E+02	1.96E+03	2.75E+03	7.06E+03	9.18E+03	1.83E+04	1.30E-05 32
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	1.85E+04	8.22E+03	5.28E+04	7.28E+04	1.07E+05	1.14E+05	1.93E+05	1.94E-05 21
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL	0-80.5 km	0.1324	2.19E-08	0.00E+00	2.82E-09	5.45E-08	7.58E-07	9.65E-07	1.94E-06	1.29E-04 77
ERL FAT/TOTAL	0-3.2 km	0.0855	2.06E-04	0.00E+00	0.00E+00	1.95E-04	7.60E-03	9.65E-03	1.96E-02	1.29E-04 77
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0

ERL FAT/TOTAL 3.2-4.8 km 0.0451 8.51E-06 0.00E+00 0.00E+00 0.00E+00 1.79E-04 5.47E-04 3.47E-03 9.85E-05 77
CAN FAT/TOTAL 0-80.5 km 1.0000 1.96E-04 7.74E-05 5.73E-04 8.14E-04 1.31E-03 1.57E-03 2.36E-03 9.42E-04 75
CAN FAT/TOTAL 0-16.1 km 0.9718 6.77E-04 3.90E-04 1.65E-03 2.45E-03 4.48E-03 5.31E-03 7.87E-03 9.42E-04 75

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 1.50E+01 1.05E+01 3.57E+01 4.61E+01 5.74E+01 6.15E+01 6.90E+01 1.57E-03 77

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 4 OF 6:
BP

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION

01-JUN-07 10:36:24 PAGE 20 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.18E+02 3.82E+01 2.62E+02 4.97E+02 1.19E+03 1.49E+03 2.58E+03 9.42E-04 75
CAN FAT/TOTAL 0-16.1 km 0.8159 1.59E+00 2.01E-01 5.12E+00 8.71E+00 1.73E+01 2.14E+01 3.27E+01 9.42E-04 75
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.8159 6.17E+01 1.15E+01 1.94E+02 3.09E+02 6.09E+02 7.61E+02 1.18E+03 9.42E-04 75
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 6.37E+03 2.23E+03 1.67E+04 2.94E+04 6.05E+04 7.38E+04 1.03E+05 9.42E-04 75

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 9.24E-05 2.99E-05 1.90E-04 3.90E-04 1.04E-03 1.26E-03 2.03E-03 9.42E-04 75
CAN FAT/TOTAL 0-16.1 km 0.8159 3.35E-04 4.11E-05 1.06E-03 1.83E-03 3.18E-03 4.03E-03 6.90E-03 9.42E-04 75

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 1.11E+01 7.77E+00 2.51E+01 3.08E+01 3.86E+01 4.25E+01 5.16E+01 1.57E-03 77

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
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"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 4 OF 6:
BP

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

01-JUN-07 10:36:24 PAGE 21 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.33E+02 5.14E+01 2.83E+02 5.23E+02 1.24E+03 1.54E+03 2.67E+03 9.42E-04 75
CAN FAT/TOTAL 0-16.1 km 0.9619 1.74E+01 9.82E+00 4.54E+01 6.36E+01 9.63E+01 1.09E+02 1.42E+02 9.42E-04 65
ERL FAT/TOTAL 0-80.5 km 0.1324 5.57E-01 0.00E+00 7.11E-02 1.16E+00 2.14E+01 2.75E+01 4.94E+01 1.29E-04 77
ERL FAT/TOTAL 0-3.2 km 0.0855 5.20E-01 0.00E+00 0.00E+00 4.89E-01 2.14E+01 2.75E+01 4.94E+01 1.29E-04 77
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.9619 6.68E+02 3.56E+02 1.77E+03 2.44E+03 3.83E+03 4.48E+03 6.41E+03 1.19E-04 77
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 6.98E+03 2.74E+03 1.78E+04 3.05E+04 6.42E+04 7.95E+04 1.07E+05 9.42E-04 75

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.1324 4.38E-07 0.00E+00 5.66E-08 1.05E-06 1.36E-05 1.90E-05 3.89E-05 1.29E-04 77
ERL FAT/TOTAL 0-3.2 km 0.0855 4.13E-03 0.00E+00 0.00E+00 4.37E-03 1.36E-01 1.90E-01 3.92E-01 1.29E-04 77
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0451 1.70E-04 0.00E+00 0.00E+00 0.00E+00 3.08E-03 1.16E-02 6.93E-02 9.85E-05 77
CAN FAT/TOTAL 0-80.5 km 1.0000 1.05E-04 3.94E-05 2.29E-04 4.28E-04 1.04E-03 1.26E-03 2.10E-03 9.42E-04 75
CAN FAT/TOTAL 0-16.1 km 0.9619 3.68E-03 2.06E-03 9.64E-03 1.24E-02 2.07E-02 2.31E-02 3.00E-02 9.42E-04 65

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 8.83E+01 6.96E+01 1.63E+02 2.05E+02 2.45E+02 2.64E+02 3.99E+02 1.57E-03 77

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 4 OF 6:
BP

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = SNC AP1000 CHRONC FILE

01-JUN-07 10:36:24 PAGE 22 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.67E+02 7.71E+01 4.20E+02 6.07E+02 1.03E+03 1.15E+03 2.32E+03 1.94E-05 21
CAN FAT/TOTAL 0-16.1 km 1.0000 1.33E+01 8.25E+00 2.66E+01 3.75E+01 9.97E+01 1.19E+02 2.53E+02 1.30E-05 32

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 9.67E+02 6.03E+02 1.86E+03 2.62E+03 7.05E+03 9.18E+03 1.83E+04 1.30E-05 32
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 1.21E+04 5.56E+03 3.19E+04 4.32E+04 7.55E+04 8.63E+04 1.68E+05 1.94E-05 21

POPULATION WEIGHTED RISK
CAN FAT/TOTAL 0-80.5 km 1.0000 1.03E-04 4.15E-05 3.03E-04 4.03E-04 6.71E-04 7.38E-04 1.17E-03 1.94E-05 21
CAN FAT/TOTAL 0-16.1 km 0.9219 1.75E-04 1.31E-04 3.83E-04 4.72E-04 5.63E-04 5.97E-04 7.64E-04 6.49E-05 55

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 0.4243 2.65E-02 0.00E+00 7.75E-02 9.06E-02 1.21E-01 1.35E-01 1.72E-01 1.06E-03 30

L-EDEWBODY POP. DOSE (Sv) 0-16.1 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 9.67E+02 6.03E+02 1.86E+03 2.62E+03 7.05E+03 9.18E+03 1.83E+04 1.30E-05 32
LONG-TERM DIRECT EXPOSURE PATHWAYS 0.9219 6.01E+01 5.08E+01 1.22E+02 1.43E+02 2.02E+02 2.09E+02 2.62E+02 6.49E-05 55
TOTAL INGESTION PATHWAYS DOSE 1.0000 8.83E+02 5.02E+02 1.83E+03 2.61E+03 7.04E+03 9.18E+03 1.83E+04 1.30E-05 32
LONG-TERM GROUNDSHINE DOSE 0.9219 5.98E+01 5.05E+01 1.22E+02 1.43E+02 2.02E+02 2.09E+02 2.62E+02 6.49E-05 55
LONG-TERM RESUSPENSION DOSE 0.9219 3.67E-01 2.75E-01 8.68E-01 1.13E+00 1.87E+00 2.17E+00 2.97E+00 7.42E-04 113
WATER INGESTION DOSE 1.0000 8.83E+02 5.02E+02 1.83E+03 2.61E+03 7.04E+03 9.18E+03 1.83E+04 1.30E-05 32
POP.-DEPENDENT DECONTAMINATION DOSE 0.9000 2.37E+01 1.51E+01 5.61E+01 7.39E+01 1.13E+02 1.24E+02 1.65E+02 5.71E-04 110
FARM-DEPENDENT DECONTAMINATION DOSE 0.6396 6.60E-02 4.60E-03 1.09E-01 2.97E-01 1.02E+00 1.09E+00 1.69E+00 3.36E-05 92

INGESTION OF GRAINS 0.7304 1.40E-02 2.29E-03 3.09E-02 6.36E-02 1.97E-01 2.54E-01 5.46E-01 1.10E-04 41
INGESTION OF LEAF VEG 0.7304 3.83E-02 7.74E-03 1.05E-01 1.78E-01 4.12E-01 5.52E-01 8.19E-01 6.56E-04 92
INGESTION OF ROOT CROPS 0.7304 2.55E-02 5.00E-03 6.62E-02 1.19E-01 3.26E-01 3.89E-01 7.17E-01 1.10E-04 41
INGESTION OF FRUITS 0.7304 7.61E-02 1.46E-02 1.94E-01 3.52E-01 9.49E-01 1.04E+00 1.32E+00 1.12E-04 93
INGESTION OF LEGUMES 0.7304 4.38E-02 8.69E-03 1.19E-01 2.01E-01 4.80E-01 6.92E-01 9.81E-01 2.37E-03 92
INGESTION OF BEEF 0.7304 1.20E-01 2.08E-02 3.22E-01 6.07E-01 1.49E+00 2.03E+00 2.90E+00 2.57E-04 126
INGESTION OF MILK 0.7304 8.61E-02 1.21E-02 2.19E-01 4.72E-01 1.05E+00 1.17E+00 1.63E+00 6.59E-04 16
INGESTION OF POULTRY 0.7304 2.50E-02 4.88E-03 6.02E-02 1.01E-01 3.07E-01 4.25E-01 9.20E-01 1.88E-03 41
INGESTION OF OTHER MEAT CROPS 0.7304 4.17E-03 7.24E-04 1.07E-02 2.12E-02 5.28E-02 6.97E-02 1.27E-01 1.10E-04 41

L-EDEWBODY POP. DOSE (Sv) 0-80.5 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 1.21E+04 5.56E+03 3.19E+04 4.32E+04 7.55E+04 8.63E+04 1.68E+05 1.94E-05 21
LONG-TERM DIRECT EXPOSURE PATHWAYS 1.0000 9.47E+03 3.79E+03 2.71E+04 3.73E+04 5.75E+04 6.43E+04 1.08E+05 1.94E-05 21
TOTAL INGESTION PATHWAYS DOSE 1.0000 1.65E+03 1.07E+03 3.43E+03 4.93E+03 9.64E+03 1.10E+04 1.87E+04 1.72E-04 28
LONG-TERM GROUNDSHINE DOSE 1.0000 9.34E+03 3.68E+03 2.61E+04 3.65E+04 5.71E+04 6.39E+04 1.08E+05 1.94E-05 21
LONG-TERM RESUSPENSION DOSE 1.0000 1.34E+02 5.47E+01 3.80E+02 5.42E+02 7.49E+02 8.00E+02 1.39E+03 1.01E-05 25
WATER INGESTION DOSE 1.0000 1.57E+03 1.01E+03 3.34E+03 4.86E+03 9.44E+03 1.09E+04 1.87E+04 1.72E-04 28

	PROB NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH	PEAK CONS	PEAK PROB	PEAK TRIAL
L-EDEWBODY POP. DOSE (Sv) 0-80.5 km										
POP.-DEPENDENT DECONTAMINATION DOSE	0.9987	9.50E+02	2.49E+02	2.24E+03	3.87E+03	1.13E+04	1.49E+04	4.94E+04	1.94E-05	21
FARM-DEPENDENT DECONTAMINATION DOSE	0.9951	3.49E+00	9.33E-01	1.04E+01	1.60E+01	3.36E+01	4.13E+01	7.57E+01	1.12E-04	93
INGESTION OF GRAINS	0.9985	4.71E+00	1.23E+00	1.45E+01	2.16E+01	3.13E+01	3.42E+01	4.39E+01	7.13E-04	128
INGESTION OF LEAF VEG	0.9985	8.38E+00	4.16E+00	2.31E+01	2.87E+01	3.50E+01	3.77E+01	5.28E+01	2.85E-05	54
INGESTION OF ROOT CROPS	0.9985	7.01E+00	2.66E+00	2.24E+01	3.08E+01	4.18E+01	4.76E+01	6.02E+01	7.13E-04	128
INGESTION OF FRUITS	0.9985	1.35E+01	7.57E+00	3.57E+01	4.99E+01	6.69E+01	7.34E+01	9.03E+01	7.13E-04	128
INGESTION OF LEGUMES	0.9985	8.14E+00	4.64E+00	2.18E+01	2.92E+01	3.65E+01	3.98E+01	5.69E+01	1.12E-04	93
INGESTION OF BEEF	0.9985	1.56E+01	8.58E+00	3.79E+01	5.34E+01	7.84E+01	8.76E+01	1.92E+02	2.60E-05	119
INGESTION OF MILK	0.9985	1.26E+01	6.47E+00	3.12E+01	5.06E+01	7.58E+01	8.40E+01	1.53E+02	2.80E-05	77
INGESTION OF POULTRY	0.9985	9.32E+00	2.94E+00	3.05E+01	3.65E+01	5.11E+01	5.31E+01	7.02E+01	2.85E-05	54
INGESTION OF OTHER MEAT CROPS	0.9985	2.72E+00	6.20E-01	6.68E+00	1.20E+01	2.17E+01	2.36E+01	2.90E+01	9.70E-04	98
ECONOMIC COST MEASURES ($) 0-80.5 km										
TOTAL ECONOMIC COSTS	1.0000	3.30E+09	1.07E+09	8.90E+09	1.44E+10	3.04E+10	3.41E+10	6.46E+10	1.10E-04	120
POP.-DEPENDENT COSTS	0.9987	3.17E+09	9.75E+08	8.73E+09	1.42E+10	3.04E+10	3.41E+10	6.45E+10	1.94E-05	21
FARM-DEPENDENT COSTS	1.0000	1.24E+08	1.09E+08	2.12E+08	2.50E+08	3.30E+08	3.56E+08	5.05E+08	2.29E-04	1
POP.-DEPENDENT DECONTAMINATION COST	0.9987	1.06E+09	3.19E+08	3.01E+09	4.86E+09	9.86E+09	1.04E+10	1.33E+10	7.86E-05	45
FARM-DEPENDENT DECONTAMINATION COST	0.9951	2.92E+07	1.69E+07	6.59E+07	8.31E+07	1.25E+08	1.44E+08	2.49E+08	1.12E-04	93
POP.-DEPENDENT INTERDICTION COST	0.9987	2.07E+09	6.21E+08	5.22E+09	9.90E+09	2.04E+10	2.40E+10	5.29E+10	1.94E-05	21
FARM-DEPENDENT INTERDICTION COST	0.9985	3.87E+07	3.31E+07	7.83E+07	9.25E+07	1.18E+08	1.30E+08	1.46E+08	2.05E-03	139
POP.-DEPENDENT CONDEMNATION COST	0.6196	4.51E+07	2.51E+06	5.78E+07	1.29E+08	1.03E+09	1.31E+09	1.16E+10	2.41E-04	89
FARM-DEPENDENT CONDEMNATION COST	1.0000	2.16E+07	3.46E+06	7.40E+07	1.07E+08	1.72E+08	2.14E+08	3.47E+08	1.03E-04	8
EMERGENCY PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
MILK DISPOSAL COST	1.0000	1.25E+06	7.79E+05	3.03E+06	3.11E+06	3.29E+06	3.37E+06	3.98E+06	3.98E-05	3
CROP DISPOSAL COST	1.0000	3.35E+07	1.83E+07	7.27E+07	7.99E+07	9.97E+07	1.02E+08	1.06E+08	1.06E-03	139

AFFECTED AREA/POPULATION 0-80.5 km
FARM DECONTAMINATION (HECTARES) 0.9951 2.41E+04 1.39E+04 5.45E+04 6.24E+04 8.11E+04 8.97E+04 1.45E+05 1.12E-04 93
POP. DECONTAMINATION (INDIVIDUALS) 0.9987 1.05E+05 3.37E+04 2.90E+05 5.62E+05 7.46E+05 7.86E+05 9.03E+05 7.99E-04 135
FARM INTERDICTION (HECTARES) 0.9985 7.00E+04 6.57E+04 1.25E+05 1.45E+05 2.02E+05 2.13E+05 2.29E+05 2.05E-03 139
POP. INTERDICTION (INDIVIDUALS) 0.9987 1.05E+05 3.37E+04 2.90E+05 5.62E+05 7.46E+05 7.86E+05 9.03E+05 7.99E-04 135
FARM CONDEMNATION (HECTARES) 1.0000 1.04E+04 8.59E+02 3.58E+04 5.79E+04 9.47E+04 1.05E+05 1.63E+05 5.04E-05 8
POP. CONDEMNATION (INDIVIDUALS) 0.6196 5.29E+02 2.41E+01 4.89E+02 1.01E+03 1.01E+04 1.32E+04 1.55E+05 8.42E-05 89
MILK DISPOSAL AREA (HECTARES) 1.0000 8.04E+04 7.96E+04 1.33E+05 1.54E+05 2.02E+05 2.05E+05 2.30E+05 1.97E-05 3
CROP DISPOSAL AREA (HECTARES) 1.0000 8.04E+04 7.96E+04 1.33E+05 1.54E+05 2.05E+05 2.16E+05 2.30E+05 2.05E-03 139

SOURCE TERM 4 OF 6:
BP

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-05	1.00E+00	1.00E-06	1.00E+00	1.00E-05	1.00E+00	1.00E-08	4.24E-01
2.00E-05	1.00E+00	2.00E-06	1.00E+00	2.00E-05	1.00E+00	2.00E-08	4.24E-01
3.00E-05	1.00E+00	3.00E-06	1.00E+00	3.00E-05	1.00E+00	3.00E-08	4.24E-01
5.00E-05	1.00E+00	5.00E-06	1.00E+00	5.00E-05	1.00E+00	5.00E-08	4.24E-01
7.00E-05	1.00E+00	7.00E-06	1.00E+00	7.00E-05	1.00E+00	7.00E-08	4.24E-01
1.00E-04	1.00E+00	1.00E-05	1.00E+00	1.00E-04	1.00E+00	1.00E-07	4.24E-01
2.00E-04	1.00E+00	2.00E-05	1.00E+00	2.00E-04	1.00E+00	2.00E-07	4.24E-01
3.00E-04	1.00E+00	3.00E-05	1.00E+00	3.00E-04	1.00E+00	3.00E-07	4.24E-01
5.00E-04	1.00E+00	5.00E-05	1.00E+00	5.00E-04	1.00E+00	5.00E-07	4.24E-01
7.00E-04	1.00E+00	7.00E-05	1.00E+00	7.00E-04	1.00E+00	7.00E-07	4.24E-01
1.00E-03	1.00E+00	1.00E-04	1.00E+00	1.00E-03	1.00E+00	1.00E-06	4.24E-01
2.00E-03	1.00E+00	2.00E-04	1.00E+00	2.00E-03	1.00E+00	2.00E-06	4.24E-01
3.00E-03	1.00E+00	3.00E-04	1.00E+00	3.00E-03	1.00E+00	3.00E-06	4.24E-01
5.00E-03	1.00E+00	5.00E-04	1.00E+00	5.00E-03	1.00E+00	5.00E-06	4.24E-01
7.00E-03	1.00E+00	7.00E-04	1.00E+00	7.00E-03	1.00E+00	7.00E-06	4.24E-01
1.00E-02	1.00E+00	1.00E-03	1.00E+00	1.00E-02	1.00E+00	1.00E-05	4.24E-01
2.00E-02	1.00E+00	2.00E-03	1.00E+00	2.00E-02	1.00E+00	2.00E-05	4.24E-01
3.00E-02	1.00E+00	3.00E-03	1.00E+00	3.00E-02	1.00E+00	3.00E-05	4.24E-01
5.00E-02	1.00E+00	5.00E-03	1.00E+00	5.00E-02	1.00E+00	5.00E-05	4.24E-01
7.00E-02	1.00E+00	7.00E-03	1.00E+00	7.00E-02	1.00E+00	7.00E-05	4.24E-01
1.00E-01	1.00E+00	1.00E-02	1.00E+00	1.00E-01	1.00E+00	1.00E-04	4.24E-01
2.00E-01	1.00E+00	2.00E-02	1.00E+00	2.00E-01	1.00E+00	2.00E-04	4.24E-01
3.00E-01	1.00E+00	3.00E-02	1.00E+00	3.00E-01	1.00E+00	3.00E-04	4.24E-01
5.00E-01	1.00E+00	5.00E-02	1.00E+00	5.00E-01	1.00E+00	5.00E-04	4.24E-01
7.00E-01	1.00E+00	7.00E-02	1.00E+00	7.00E-01	1.00E+00	7.00E-04	4.24E-01
1.00E+00	1.00E+00	1.00E-01	1.00E+00	1.00E+00	1.00E+00	1.00E-03	4.24E-01
2.00E+00	9.08E-01	2.00E-01	9.32E-01	2.00E+00	1.00E+00	2.00E-03	4.24E-01
3.00E+00	8.75E-01	3.00E-01	9.27E-01	3.00E+00	1.00E+00	3.00E-03	4.24E-01
5.00E+00	7.87E-01	5.00E-01	9.08E-01	5.00E+00	1.00E+00	5.00E-03	4.24E-01
7.00E+00	6.88E-01	7.00E-01	8.90E-01	7.00E+00	1.00E+00	7.00E-03	4.24E-01
1.00E+01	5.26E-01	1.00E+00	8.57E-01	1.00E+01	1.00E+00	1.00E-02	4.24E-01
2.00E+01	2.71E-01	2.00E+00	7.56E-01	2.00E+01	9.48E-01	2.00E-02	4.15E-01
3.00E+01	1.61E-01	3.00E+00	7.22E-01	3.00E+01	8.60E-01	3.00E-02	3.69E-01
5.00E+01	4.01E-02	5.00E+00	6.87E-01	5.00E+01	7.37E-01	5.00E-02	2.44E-01
6.90E+01	1.57E-03	7.00E+00	5.55E-01	7.00E+01	4.97E-01	7.00E-02	1.57E-01
N.D.	N.D.	1.00E+01	3.90E-01	1.00E+02	2.84E-01	1.00E-01	3.23E-02
N.D.	N.D.	2.00E+01	1.88E-01	2.00E+02	6.40E-02	1.72E-01	1.06E-03
N.D.	N.D.	3.00E+01	6.06E-02	3.00E+02	1.57E-03	N.D.	N.D.
N.D.	N.D.	5.00E+01	1.57E-03	3.99E+02	1.57E-03	N.D.	N.D.
N.D.	N.D.	5.16E+01	1.57E-03	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
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DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 5 OF 6:
CI

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

FRACTION OF THE PEOPLE

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION 0.950

COHORT 2 = NO EVACUATION 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = SNC AP1000 CHRONC FILE

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

01-JUN-07 10:36:24 PAGE 25 PROB QUANTILES PEAK PEAK PEAK

		NON-ZERO PROB	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS	TRIAL
HEALTH EFFECTS CASES										
CAN FAT/TOTAL	0-80.5 km	1.0000	1.07E+02	4.31E+01	2.58E+02	4.50E+02	9.65E+02	1.18E+03	1.95E+03	7.99E-04 68
CAN FAT/TOTAL	0-16.1 km	1.0000	3.63E+00	2.39E+00	8.00E+00	1.08E+01	1.97E+01	2.30E+01	4.42E+01	2.34E-05 31
ERL FAT/TOTAL	0-80.5 km	0.0183	3.98E-03	0.00E+00	0.00E+00	0.00E+00	8.62E-03	8.53E-02	1.39E+00	1.31E-03 65
ERL FAT/TOTAL	0-3.2 km	0.0178	3.97E-03	0.00E+00	0.00E+00	0.00E+00	8.62E-03	8.53E-02	1.39E+00	1.31E-03 65
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
POPULATION DOSE (Sv)										
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	2.35E+02	1.55E+02	5.06E+02	6.68E+02	1.23E+03	1.51E+03	3.20E+03	2.34E-05 31
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	6.98E+03	2.99E+03	1.72E+04	3.10E+04	6.16E+04	7.38E+04	9.91E+04	7.99E-04 68
POPULATION WEIGHTED RISK										
ERL FAT/TOTAL	0-80.5 km	0.0183	3.12E-09	0.00E+00	0.00E+00	0.00E+00	6.08E-09	6.03E-08	1.09E-06	1.31E-03 65
ERL FAT/TOTAL	0-3.2 km	0.0178	3.15E-05	0.00E+00	0.00E+00	0.00E+00	6.14E-05	6.03E-04	1.10E-02	1.31E-03 65
ERL FAT/TOTAL	0-1.6 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0

ERL FAT/TOTAL 3.2-4.8 km 0.0004 5.05E-09 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.08E-05 9.85E-05 77
CAN FAT/TOTAL 0-80.5 km 1.0000 7.70E-05 2.86E-05 1.92E-04 3.29E-04 7.25E-04 9.03E-04 1.49E-03 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.9581 3.01E-04 1.52E-04 7.66E-04 1.06E-03 2.12E-03 2.51E-03 3.71E-03 1.43E-04 136

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 4.57E+00 3.05E+00 9.03E+00 1.17E+01 NOT-FOUND NOT-FOUND 2.34E+01 1.95E-02 65

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 5 OF 6:
CI

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION

01-JUN-07 10:36:24 PAGE 26 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 5.59E+01 1.75E+01 1.24E+02 2.16E+02 6.59E+02 9.42E+02 1.69E+03 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.8087 4.81E-01 5.02E-02 1.34E+00 2.42E+00 5.73E+00 7.37E+00 1.22E+01 1.43E-04 136
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.8087 2.23E+01 3.48E+00 6.79E+01 1.03E+02 2.35E+02 2.78E+02 4.44E+02 1.43E-04 136
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 3.27E+03 1.15E+03 6.99E+03 1.27E+04 3.47E+04 4.64E+04 8.07E+04 7.99E-04 68

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 4.40E-05 1.39E-05 9.21E-05 1.56E-04 5.33E-04 6.88E-04 1.33E-03 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.8087 1.02E-04 1.04E-05 3.01E-04 4.98E-04 1.21E-03 1.54E-03 2.59E-03 1.43E-04 136

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 2.87E+00 1.89E+00 5.70E+00 7.57E+00 NOT-FOUND NOT-FOUND 1.50E+01 1.95E-02 65

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 5 OF 6:
CI

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

01-JUN-07 10:36:24 PAGE 27 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 6.48E+01 2.42E+01 1.45E+02 2.37E+02 6.63E+02 9.66E+02 1.74E+03 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.9499 9.42E+00 3.17E+00 2.74E+01 3.82E+01 6.89E+01 7.38E+01 1.11E+02 1.19E-04 77
ERL FAT/TOTAL 0-80.5 km 0.0183 7.95E-02 0.00E+00 0.00E+00 0.00E+00 1.51E-01 1.64E+00 2.78E+01 1.31E-03 65
ERL FAT/TOTAL 0-3.2 km 0.0178 7.95E-02 0.00E+00 0.00E+00 0.00E+00 1.51E-01 1.64E+00 2.78E+01 1.31E-03 65
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.9499 3.57E+02 1.42E+02 1.02E+03 1.37E+03 2.30E+03 2.64E+03 4.26E+03 1.66E-03 65
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 3.61E+03 1.40E+03 7.75E+03 1.33E+04 3.47E+04 4.64E+04 8.23E+04 7.99E-04 68

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0183 6.25E-08 0.00E+00 0.00E+00 0.00E+00 1.47E-07 1.47E-06 2.19E-05 1.31E-03 65
ERL FAT/TOTAL 0-3.2 km 0.0178 6.31E-04 0.00E+00 0.00E+00 0.00E+00 1.47E-03 1.47E-02 2.21E-01 1.31E-03 65
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0004 1.01E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 4.16E-04 9.85E-05 77
CAN FAT/TOTAL 0-80.5 km 1.0000 5.10E-05 1.98E-05 1.11E-04 1.82E-04 5.33E-04 6.88E-04 1.36E-03 7.99E-04 68
CAN FAT/TOTAL 0-16.1 km 0.9499 1.99E-03 6.79E-04 5.74E-03 8.30E-03 1.15E-02 1.26E-02 2.34E-02 1.19E-04 77

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 3.46E+01 2.33E+01 7.39E+01 1.10E+02 NOT-FOUND NOT-FOUND 1.81E+02 1.95E-02 65

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 5 OF 6:
CI

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = SNC AP1000 CHRONC FILE

01-JUN-07 10:36:24 PAGE 28 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 5.09E+01 1.88E+01 1.15E+02 2.15E+02 4.74E+02 5.48E+02 8.02E+02 8.42E-05 29
CAN FAT/TOTAL 0-16.1 km 1.0000 2.70E+00 1.77E+00 5.41E+00 7.97E+00 1.69E+01 2.16E+01 4.40E+01 2.34E-05 31

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 1.96E+02 1.24E+02 4.01E+02 5.79E+02 1.18E+03 1.46E+03 3.19E+03 2.34E-05 31
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 3.69E+03 1.39E+03 8.73E+03 1.59E+04 3.28E+04 3.76E+04 5.81E+04 8.42E-05 29

POPULATION WEIGHTED RISK
CAN FAT/TOTAL 0-80.5 km 1.0000 3.27E-05 1.10E-05 8.32E-05 1.48E-04 3.02E-04 3.19E-04 4.84E-04 1.81E-05 23
CAN FAT/TOTAL 0-16.1 km 0.9329 1.06E-04 7.88E-05 2.38E-04 2.91E-04 3.53E-04 3.81E-04 6.25E-04 5.50E-06 25

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 0.9636 1.18E-01 1.05E-01 1.27E-01 1.37E-01 1.66E-01 1.80E-01 1.89E-01 3.40E-03 15

L-EDEWBODY POP. DOSE (Sv) 0-16.1 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 1.96E+02 1.24E+02 4.01E+02 5.79E+02 1.18E+03 1.46E+03 3.19E+03 2.34E-05 31
LONG-TERM DIRECT EXPOSURE PATHWAYS 0.9329 3.62E+01 2.73E+01 8.29E+01 1.01E+02 1.15E+02 1.21E+02 2.15E+02 5.50E-06 25
TOTAL INGESTION PATHWAYS DOSE 1.0000 1.41E+02 6.81E+01 3.28E+02 4.95E+02 1.12E+03 1.41E+03 3.19E+03 2.34E-05 31
LONG-TERM GROUNDSHINE DOSE 0.9329 3.31E+01 2.43E+01 7.57E+01 9.17E+01 1.12E+02 1.19E+02 2.11E+02 5.50E-06 25
LONG-TERM RESUSPENSION DOSE 0.9329 3.15E+00 2.61E+00 7.30E+00 8.25E+00 1.03E+01 1.06E+01 1.26E+01 1.98E-04 1
WATER INGESTION DOSE 1.0000 1.40E+02 6.75E+01 3.24E+02 4.93E+02 1.12E+03 1.41E+03 3.19E+03 2.34E-05 31
POP.-DEPENDENT DECONTAMINATION DOSE 0.8370 1.86E+01 5.22E+00 5.62E+01 7.91E+01 1.33E+02 1.63E+02 3.99E+02 5.50E-06 25
FARM-DEPENDENT DECONTAMINATION DOSE 0.8548 4.30E-02 6.44E-03 1.03E-01 1.41E-01 3.08E-01 1.25E+00 3.02E+00 2.85E-04 70

INGESTION OF GRAINS 0.9484 4.39E-02 1.11E-02 1.18E-01 1.80E-01 4.10E-01 4.95E-01 6.00E-01 2.85E-04 70
INGESTION OF LEAF VEG 0.9484 3.34E-01 9.38E-02 9.67E-01 1.28E+00 2.51E+00 3.35E+00 6.36E+00 2.85E-04 70
INGESTION OF ROOT CROPS 0.9484 1.99E-01 5.93E-02 5.59E-01 8.05E-01 1.58E+00 2.09E+00 3.86E+00 2.85E-04 70
INGESTION OF FRUITS 0.9484 1.06E-01 2.87E-02 3.06E-01 4.53E-01 9.40E-01 1.08E+00 1.71E+00 2.85E-04 70
INGESTION OF LEGUMES 0.9484 3.66E-01 1.17E-01 9.66E-01 1.43E+00 2.95E+00 3.64E+00 7.72E+00 2.85E-04 70
INGESTION OF BEEF 0.9484 6.96E-02 1.80E-02 2.27E-01 3.40E-01 5.84E-01 6.77E-01 1.31E+00 2.85E-05 111
INGESTION OF MILK 0.9484 1.27E-01 3.74E-02 3.55E-01 5.15E-01 8.51E-01 1.01E+00 1.99E+00 2.85E-05 111
INGESTION OF POULTRY 0.9484 4.04E-02 2.72E-03 4.85E-02 3.05E-01 5.98E-01 6.68E-01 9.83E-01 4.85E-04 64
INGESTION OF OTHER MEAT CROPS 0.9484 1.89E-02 4.37E-03 4.50E-02 1.03E-01 2.06E-01 2.28E-01 2.88E-01 9.70E-04 98

L-EDEWBODY POP. DOSE (Sv) 0-80.5 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 3.69E+03 1.39E+03 8.73E+03 1.59E+04 3.28E+04 3.76E+04 5.81E+04 8.42E-05 29
LONG-TERM DIRECT EXPOSURE PATHWAYS 1.0000 3.01E+03 9.99E+02 7.68E+03 1.35E+04 2.82E+04 3.10E+04 4.46E+04 1.81E-05 23
TOTAL INGESTION PATHWAYS DOSE 1.0000 3.61E+02 2.31E+02 7.82E+02 1.10E+03 1.94E+03 2.19E+03 3.53E+03 2.34E-05 31
LONG-TERM GROUNDSHINE DOSE 1.0000 2.70E+03 9.03E+02 7.07E+03 1.22E+04 2.44E+04 2.93E+04 4.00E+04 1.81E-05 23
LONG-TERM RESUSPENSION DOSE 1.0000 3.19E+02 1.07E+02 8.14E+02 1.41E+03 2.96E+03 3.14E+03 4.64E+03 1.81E-05 23
WATER INGESTION DOSE 1.0000 2.55E+02 1.21E+02 5.97E+02 1.01E+03 1.61E+03 1.97E+03 3.25E+03 2.34E-05 31

	PROB NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH	PEAK CONS	PEAK PROB	PEAK TRIAL
L-EDEWBODY POP. DOSE (Sv) 0-80.5 km										
POP.-DEPENDENT DECONTAMINATION DOSE	0.8989	3.09E+02	3.16E+01	5.67E+02	1.16E+03	6.79E+03	8.79E+03	2.21E+04	8.42E-05	29
FARM-DEPENDENT DECONTAMINATION DOSE	0.9563	9.75E-01	5.10E-02	2.77E+00	5.44E+00	1.31E+01	1.80E+01	6.60E+01	2.60E-05	119
INGESTION OF GRAINS	1.0000	4.86E+00	2.39E+00	1.23E+01	1.63E+01	2.50E+01	2.87E+01	4.11E+01	8.14E-06	132
INGESTION OF LEAF VEG	1.0000	1.74E+01	9.88E+00	4.13E+01	5.52E+01	9.03E+01	1.07E+02	2.36E+02	2.60E-05	119
INGESTION OF ROOT CROPS	1.0000	1.18E+01	6.40E+00	2.96E+01	3.65E+01	5.71E+01	6.81E+01	1.43E+02	2.60E-05	119
INGESTION OF FRUITS	1.0000	1.03E+01	5.53E+00	2.84E+01	3.45E+01	5.00E+01	5.40E+01	8.66E+01	8.14E-06	132
INGESTION OF LEGUMES	1.0000	1.77E+01	8.86E+00	4.20E+01	5.92E+01	1.01E+02	1.22E+02	2.87E+02	2.60E-05	119
INGESTION OF BEEF	1.0000	1.69E+01	9.05E+00	4.08E+01	6.24E+01	1.02E+02	1.07E+02	1.48E+02	2.85E-05	136
INGESTION OF MILK	1.0000	1.53E+01	8.37E+00	3.68E+01	4.98E+01	9.09E+01	1.07E+02	2.12E+02	2.60E-05	120
INGESTION OF POULTRY	1.0000	7.29E+00	3.67E+00	1.93E+01	2.35E+01	3.19E+01	3.40E+01	5.07E+01	8.56E-05	59
INGESTION OF OTHER MEAT CROPS	1.0000	4.02E+00	2.30E+00	9.48E+00	1.35E+01	2.50E+01	3.00E+01	3.27E+01	8.56E-04	107
ECONOMIC COST MEASURES ($) 0-80.5 km										
TOTAL ECONOMIC COSTS	1.0000	9.74E+08	1.61E+08	2.31E+09	4.22E+09	1.99E+10	2.08E+10	2.63E+10	8.42E-05	29
POP.-DEPENDENT COSTS	0.8989	9.16E+08	1.03E+08	2.14E+09	3.99E+09	1.99E+10	2.08E+10	2.62E+10	8.42E-05	29
FARM-DEPENDENT COSTS	1.0000	5.81E+07	5.05E+07	1.23E+08	1.54E+08	2.40E+08	2.81E+08	3.81E+08	9.34E-06	19
POP.-DEPENDENT DECONTAMINATION COST	0.8989	3.05E+08	3.23E+07	6.37E+08	1.30E+09	5.31E+09	7.18E+09	1.07E+10	1.94E-05	19
FARM-DEPENDENT DECONTAMINATION COST	0.9563	7.42E+06	4.14E+05	2.21E+07	4.26E+07	8.58E+07	1.01E+08	1.39E+08	2.60E-05	119
POP.-DEPENDENT INTERDICTION COST	0.8989	6.11E+08	7.24E+07	1.39E+09	2.86E+09	1.01E+10	1.08E+10	1.61E+10	7.86E-05	29
FARM-DEPENDENT INTERDICTION COST	1.0000	2.35E+07	1.43E+07	5.58E+07	6.43E+07	7.82E+07	8.34E+07	1.12E+08	3.00E-05	2
POP.-DEPENDENT CONDEMNATION COST	0.0589	3.31E+05	0.00E+00	0.00E+00	8.60E+05	7.92E+06	1.30E+07	3.54E+07	9.49E-04	25
FARM-DEPENDENT CONDEMNATION COST	0.9504	4.60E+06	9.35E+04	6.55E+06	2.66E+07	8.21E+07	1.01E+08	1.67E+08	9.34E-06	19
EMERGENCY PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
MILK DISPOSAL COST	1.0000	8.62E+05	2.33E+05	2.66E+06	3.08E+06	3.41E+06	NOT-FOUND	3.53E+06	5.73E-03	9
CROP DISPOSAL COST	1.0000	2.17E+07	9.38E+06	5.85E+07	7.25E+07	8.78E+07	NOT-FOUND	9.44E+07	5.42E-03	9

AFFECTED AREA/POPULATION 0-80.5 km

FARM DECONTAMINATION (HECTARES)	0.9563	6.76E+03	3.69E+02	1.84E+04	3.91E+04	7.44E+04	8.20E+04	1.19E+05	6.06E-05	15
POP. DECONTAMINATION (INDIVIDUALS)	0.8989	3.81E+04	4.38E+03	9.80E+04	1.94E+05	6.46E+05	7.56E+05	9.03E+05	1.88E-03	15
FARM INTERDICTION (HECTARES)	1.0000	4.97E+04	3.40E+04	1.05E+05	1.12E+05	1.28E+05	1.36E+05	1.63E+05	5.99E-04	4
POP. INTERDICTION (INDIVIDUALS)	0.8989	3.81E+04	4.38E+03	9.80E+04	1.94E+05	6.46E+05	7.56E+05	9.03E+05	1.88E-03	15
FARM CONDEMNATION (HECTARES)	0.9504	2.22E+03	3.86E+01	3.91E+03	9.14E+03	5.10E+04	5.60E+04	7.55E+04	1.81E-05	19
POP. CONDEMNATION (INDIVIDUALS)	0.0589	3.41E+00	0.00E+00	0.00E+00	8.60E+00	7.80E+01	1.27E+02	3.28E+02	9.49E-04	25
MILK DISPOSAL AREA (HECTARES)	1.0000	5.59E+04	3.80E+04	1.11E+05	1.20E+05	1.45E+05	1.58E+05	1.63E+05	3.81E-03	9
CROP DISPOSAL AREA (HECTARES)	1.0000	5.19E+04	3.53E+04	1.09E+05	1.19E+05	1.45E+05	1.58E+05	1.63E+05	3.87E-03	9

SOURCE TERM 5 OF 6:
CI

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-06	1.00E+00	1.00E-06	1.00E+00	1.00E-05	1.00E+00	1.00E-07	9.64E-01
2.00E-06	1.00E+00	2.00E-06	1.00E+00	2.00E-05	1.00E+00	2.00E-07	9.64E-01
3.00E-06	1.00E+00	3.00E-06	1.00E+00	3.00E-05	1.00E+00	3.00E-07	9.64E-01
5.00E-06	1.00E+00	5.00E-06	1.00E+00	5.00E-05	1.00E+00	5.00E-07	9.64E-01
7.00E-06	1.00E+00	7.00E-06	1.00E+00	7.00E-05	1.00E+00	7.00E-07	9.64E-01
1.00E-05	1.00E+00	1.00E-05	1.00E+00	1.00E-04	1.00E+00	1.00E-06	9.64E-01
2.00E-05	1.00E+00	2.00E-05	1.00E+00	2.00E-04	1.00E+00	2.00E-06	9.63E-01
3.00E-05	1.00E+00	3.00E-05	1.00E+00	3.00E-04	1.00E+00	3.00E-06	9.63E-01
5.00E-05	1.00E+00	5.00E-05	1.00E+00	5.00E-04	1.00E+00	5.00E-06	9.63E-01
7.00E-05	1.00E+00	7.00E-05	1.00E+00	7.00E-04	1.00E+00	7.00E-06	9.63E-01
1.00E-04	1.00E+00	1.00E-04	1.00E+00	1.00E-03	1.00E+00	1.00E-05	9.63E-01
2.00E-04	1.00E+00	2.00E-04	1.00E+00	2.00E-03	1.00E+00	2.00E-05	9.63E-01
3.00E-04	1.00E+00	3.00E-04	1.00E+00	3.00E-03	1.00E+00	3.00E-05	9.53E-01
5.00E-04	1.00E+00	5.00E-04	1.00E+00	5.00E-03	1.00E+00	5.00E-05	9.51E-01
7.00E-04	1.00E+00	7.00E-04	1.00E+00	7.00E-03	1.00E+00	7.00E-05	9.51E-01
1.00E-03	1.00E+00	1.00E-03	1.00E+00	1.00E-02	1.00E+00	1.00E-04	9.50E-01
2.00E-03	1.00E+00	2.00E-03	1.00E+00	2.00E-02	1.00E+00	2.00E-04	9.48E-01
3.00E-03	1.00E+00	3.00E-03	1.00E+00	3.00E-02	1.00E+00	3.00E-04	9.48E-01
5.00E-03	1.00E+00	5.00E-03	1.00E+00	5.00E-02	1.00E+00	5.00E-04	9.48E-01
7.00E-03	1.00E+00	7.00E-03	1.00E+00	7.00E-02	1.00E+00	7.00E-04	9.48E-01
1.00E-02	1.00E+00	1.00E-02	1.00E+00	1.00E-01	1.00E+00	1.00E-03	9.48E-01
2.00E-02	1.00E+00	2.00E-02	9.98E-01	2.00E-01	9.99E-01	2.00E-03	9.48E-01
3.00E-02	1.00E+00	3.00E-02	9.73E-01	3.00E-01	9.76E-01	3.00E-03	9.48E-01
5.00E-02	9.99E-01	5.00E-02	9.62E-01	5.00E-01	9.63E-01	5.00E-03	9.48E-01
7.00E-02	9.98E-01	7.00E-02	9.62E-01	7.00E-01	9.63E-01	7.00E-03	9.48E-01
1.00E-01	9.96E-01	1.00E-01	9.62E-01	1.00E+00	9.62E-01	1.00E-02	9.48E-01
2.00E-01	9.62E-01	2.00E-01	9.21E-01	2.00E+00	9.24E-01	2.00E-02	9.48E-01
3.00E-01	9.24E-01	3.00E-01	8.59E-01	3.00E+00	8.90E-01	3.00E-02	9.47E-01
5.00E-01	8.88E-01	5.00E-01	8.25E-01	5.00E+00	8.45E-01	5.00E-02	9.47E-01
7.00E-01	8.45E-01	7.00E-01	7.66E-01	7.00E+00	8.25E-01	7.00E-02	9.13E-01
1.00E+00	8.25E-01	1.00E+00	7.25E-01	1.00E+01	7.30E-01	1.00E-01	7.34E-01
2.00E+00	6.76E-01	2.00E+00	4.84E-01	2.00E+01	5.51E-01	1.89E-01	3.40E-03
3.00E+00	5.05E-01	3.00E+00	3.89E-01	3.00E+01	4.26E-01	N.D.	N.D.
5.00E+00	3.62E-01	5.00E+00	1.34E-01	5.00E+01	2.91E-01	N.D.	N.D.
7.00E+00	2.89E-01	7.00E+00	6.37E-02	7.00E+01	1.10E-01	N.D.	N.D.
1.00E+01	6.54E-02	1.00E+01	2.10E-02	1.00E+02	6.03E-02	N.D.	N.D.
2.00E+01	1.95E-02	1.50E+01	1.95E-02	1.81E+02	1.95E-02	N.D.	N.D.
2.34E+01	1.95E-02	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
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DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 6 OF 6:
CFL

OVERALL RESULTS OBTAINED BY COMBINING 2 EMERGENCY RESPONSE COHORTS FROM "EARLY" WITH THE WEIGHTING FRACTIONS BELOW APPLIED TO THEM:

FRACTION OF THE PEOPLE

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION 0.950

COHORT 2 = NO EVACUATION 0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC" DESCRIBED BELOW:

COHORT 3 = SNC AP1000 CHRONC FILE

RESULTS WHICH ARE PRODUCED ONLY BY "EARLY" OR ONLY BY "CHRONC" ARE PRESENTED IN LATER SECTIONS.

01-JUN-07 10:36:24 PAGE 31 PROB QUANTILES PEAK PEAK PEAK

		NON-ZERO MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS PROB	TRIAL
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-80.5 km	1.0000 7.79E+01	3.20E+01	2.20E+02	2.96E+02	4.32E+02	5.11E+02	1.36E+03	2.28E-04 64
CAN FAT/TOTAL	0-16.1 km	1.0000 1.80E+00	9.62E-01	3.75E+00	5.76E+00	1.56E+01	2.13E+01	2.73E+01	1.51E-03 62
ERL FAT/TOTAL	0-80.5 km	0.0000 0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
ERL FAT/TOTAL	0-3.2 km	0.0000 0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
ERL FAT/TOTAL	0-1.6 km	0.0000 0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
POPULATION DOSE (Sv)									
L-EDEWBODY TOT LIF	0-16.1 km	1.0000 1.30E+02	6.97E+01	2.80E+02	4.21E+02	1.12E+03	1.38E+03	1.98E+03	1.51E-03 62
L-EDEWBODY TOT LIF	0-80.5 km	1.0000 5.65E+03	2.32E+03	1.47E+04	2.10E+04	3.17E+04	3.92E+04	9.82E+04	2.28E-04 64
POPULATION WEIGHTED RISK									
ERL FAT/TOTAL	0-80.5 km	0.0000 0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
ERL FAT/TOTAL	0-3.2 km	0.0000 0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0
ERL FAT/TOTAL	0-1.6 km	0.0000 0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00 0

ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 4.99E-05 1.93E-05 1.34E-04 1.90E-04 2.49E-04 2.75E-04 3.64E-04 1.14E-04 59
CAN FAT/TOTAL 0-16.1 km 0.9612 7.37E-05 6.65E-05 1.34E-04 1.59E-04 2.08E-04 2.16E-04 2.74E-04 8.56E-05 138

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 5.23E-02 5.07E-02 5.45E-02 5.62E-02 6.04E-02 6.24E-02 6.57E-02 1.57E-03 103

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 6 OF 6:
CFL

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 1 = 95% EVACUATION WITHIN 10 MILES– 24-HOUR RELOCATION

01-JUN-07 10:36:24 PAGE 32 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.37E+00 3.79E-02 1.54E+00 6.00E+00 3.22E+01 4.75E+01 1.74E+02 1.14E-04 59
CAN FAT/TOTAL 0-16.1 km 0.7502 1.38E-04 2.27E-05 4.28E-04 7.50E-04 1.31E-03 1.56E-03 4.18E-03 1.27E-04 2
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.7502 1.00E-02 1.60E-03 3.11E-02 5.39E-02 1.01E-01 1.16E-01 3.03E-01 1.27E-04 2
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 9.91E+01 2.80E+00 1.06E+02 4.15E+02 2.19E+03 2.91E+03 1.26E+04 1.14E-04 59

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 1.08E-06 2.98E-08 1.13E-06 4.65E-06 2.32E-05 3.54E-05 1.37E-04 1.14E-04 59
CAN FAT/TOTAL 0-16.1 km 0.7502 2.92E-08 4.73E-09 9.05E-08 1.49E-07 2.91E-07 3.32E-07 8.82E-07 1.27E-04 2

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 2.45E-03 2.07E-03 5.33E-03 6.17E-03 8.09E-03 8.93E-03 9.86E-03 2.48E-03 138

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation

SOURCE TERM 6 OF 6:
CFL

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION

01-JUN-07 10:36:24 PAGE 33 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 1.38E+00 4.68E-02 1.55E+00 6.00E+00 3.22E+01 4.75E+01 1.74E+02 1.14E-04 59
CAN FAT/TOTAL 0-16.1 km 0.9547 8.89E-03 5.35E-03 2.29E-02 2.98E-02 4.94E-02 5.70E-02 8.11E-02 1.66E-03 65
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 0.9547 6.44E-01 3.75E-01 1.56E+00 2.16E+00 3.39E+00 3.96E+00 5.88E+00 1.66E-03 65
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 9.98E+01 3.24E+00 1.08E+02 4.15E+02 2.19E+03 2.91E+03 1.26E+04 1.14E-04 59

POPULATION WEIGHTED RISK
ERL FAT/TOTAL 0-80.5 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-3.2 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 0-1.6 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
ERL FAT/TOTAL 3.2-4.8 km 0.0000 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0
CAN FAT/TOTAL 0-80.5 km 1.0000 1.08E-06 3.63E-08 1.18E-06 4.65E-06 2.32E-05 3.54E-05 1.37E-04 1.14E-04 59
CAN FAT/TOTAL 0-16.1 km 0.9547 1.88E-06 1.09E-06 4.90E-06 6.34E-06 1.03E-05 1.25E-05 1.71E-05 1.66E-03 65

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 1.0000 6.44E-02 5.13E-02 1.14E-01 1.47E-01 2.10E-01 2.19E-01 2.36E-01 1.57E-03 103

DATE AND TIME OF RUN = MACCS2 01-JUN-07 10:36:24 VERSION 1.13.1: last revised 1/8/04, K. McFadden
"ATMOS" DESCRIPTION = ATMOS INPUT FOR VOGTLE ESP SAMA CALCULATIONS – AP1000
"EARLY" DESCRIPTION = SNC AP1000 EARLY FILE – 95% Evacuation
"CHRONC" DESCRIPTION = SNC AP1000 CHRONC FILE

SOURCE TERM 6 OF 6:
CFL

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = SNC AP1000 CHRONC FILE

01-JUN-07 10:36:24 PAGE 34 PROB QUANTILES PEAK PEAK PEAK
NON-ZERO MEAN 50TH 90TH 95TH 99TH 99.5TH CONS PROB TRIAL
HEALTH EFFECTS CASES
CAN FAT/TOTAL 0-80.5 km 1.0000 7.65E+01 3.10E+01 2.18E+02 2.89E+02 4.30E+02 5.10E+02 1.35E+03 2.28E-04 64
CAN FAT/TOTAL 0-16.1 km 1.0000 1.80E+00 9.59E-01 3.75E+00 5.76E+00 1.56E+01 2.13E+01 2.73E+01 1.51E-03 62

POPULATION DOSE (Sv)
L-EDEWBODY TOT LIF 0-16.1 km 1.0000 1.30E+02 6.97E+01 2.80E+02 4.21E+02 1.12E+03 1.38E+03 1.98E+03 1.51E-03 62
L-EDEWBODY TOT LIF 0-80.5 km 1.0000 5.55E+03 2.27E+03 1.44E+04 2.07E+04 3.09E+04 3.84E+04 9.76E+04 2.28E-04 64

POPULATION WEIGHTED RISK
CAN FAT/TOTAL 0-80.5 km 1.0000 4.88E-05 1.89E-05 1.30E-04 1.80E-04 2.27E-04 2.42E-04 3.23E-04 1.43E-04 86
CAN FAT/TOTAL 0-16.1 km 0.9363 7.36E-05 6.65E-05 1.34E-04 1.58E-04 2.08E-04 2.16E-04 2.74E-04 8.56E-05 138

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km 0.9981 4.68E-02 3.83E-02 5.09E-02 5.16E-02 5.33E-02 5.40E-02 5.55E-02 1.31E-03 59

L-EDEWBODY POP. DOSE (Sv) 0-16.1 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 1.30E+02 6.97E+01 2.80E+02 4.21E+02 1.12E+03 1.38E+03 1.98E+03 1.51E-03 62
LONG-TERM DIRECT EXPOSURE PATHWAYS 0.9363 2.52E+01 2.23E+01 5.23E+01 5.83E+01 7.18E+01 7.47E+01 9.42E+01 8.56E-05 138
TOTAL INGESTION PATHWAYS DOSE 1.0000 1.23E+01 6.04E+00 2.25E+01 3.83E+01 1.08E+02 1.19E+02 1.86E+02 1.72E-04 28
LONG-TERM GROUNDSHINE DOSE 0.9363 4.51E+00 3.14E+00 1.06E+01 1.30E+01 2.04E+01 2.32E+01 3.41E+01 8.56E-05 138
LONG-TERM RESUSPENSION DOSE 0.9363 2.07E+01 1.85E+01 4.14E+01 5.02E+01 5.88E+01 6.29E+01 7.89E+01 6.16E-04 14
WATER INGESTION DOSE 1.0000 1.14E+01 5.15E+00 2.09E+01 3.75E+01 1.08E+02 1.19E+02 1.86E+02 1.72E-04 28
POP.-DEPENDENT DECONTAMINATION DOSE 0.9353 9.20E+01 3.15E+01 2.06E+02 3.50E+02 1.09E+03 1.32E+03 1.85E+03 1.51E-03 62
FARM-DEPENDENT DECONTAMINATION DOSE 0.9350 7.21E-01 1.90E-01 1.68E+00 2.66E+00 9.55E+00 1.03E+01 1.27E+01 1.11E-04 103

INGESTION OF GRAINS 0.9364 3.78E-02 9.86E-03 1.25E-01 1.73E-01 2.68E-01 3.09E-01 4.97E-01 3.14E-04 128
INGESTION OF LEAF VEG 0.9364 3.14E-01 8.17E-02 1.08E+00 1.46E+00 2.28E+00 2.52E+00 4.45E+00 7.86E-05 45
INGESTION OF ROOT CROPS 0.9364 7.58E-02 2.17E-02 2.34E-01 3.09E-01 4.07E-01 4.58E-01 9.33E-01 3.14E-04 128
INGESTION OF FRUITS 0.9364 7.50E-02 2.01E-02 2.54E-01 3.31E-01 5.10E-01 5.78E-01 1.00E+00 3.14E-04 128
INGESTION OF LEGUMES 0.9364 9.61E-02 2.88E-02 2.72E-01 3.70E-01 7.45E-01 8.38E-01 1.11E+00 3.14E-04 128
INGESTION OF BEEF 0.9364 4.05E-02 8.79E-03 1.19E-01 2.06E-01 4.36E-01 5.42E-01 1.09E+00 4.00E-04 137
INGESTION OF MILK 0.9364 1.78E-01 5.07E-02 5.28E-01 8.01E-01 1.16E+00 1.26E+00 3.05E+00 1.81E-05 23
INGESTION OF POULTRY 0.9364 4.72E-03 1.38E-03 1.05E-02 2.05E-02 5.00E-02 6.48E-02 2.17E-01 9.36E-05 7
INGESTION OF OTHER MEAT CROPS 0.9364 9.00E-03 3.16E-03 2.00E-02 3.47E-02 1.02E-01 1.08E-01 1.48E-01 1.11E-04 103

L-EDEWBODY POP. DOSE (Sv) 0-80.5 km
TOTAL LONG-TERM PATHWAYS DOSE 1.0000 5.55E+03 2.27E+03 1.44E+04 2.07E+04 3.09E+04 3.84E+04 9.76E+04 2.28E-04 64
LONG-TERM DIRECT EXPOSURE PATHWAYS 1.0000 4.50E+03 1.76E+03 1.23E+04 1.65E+04 2.18E+04 2.29E+04 2.98E+04 1.43E-04 86
TOTAL INGESTION PATHWAYS DOSE 1.0000 6.46E+01 3.17E+01 1.62E+02 2.16E+02 3.10E+02 3.39E+02 5.94E+02 4.58E-06 31
LONG-TERM GROUNDSHINE DOSE 1.0000 1.47E+03 5.89E+02 4.18E+03 5.60E+03 7.60E+03 8.15E+03 1.00E+04 1.03E-04 60
LONG-TERM RESUSPENSION DOSE 1.0000 3.03E+03 1.24E+03 9.17E+03 1.10E+04 1.46E+04 1.65E+04 2.51E+04 2.28E-04 64
WATER INGESTION DOSE 1.0000 1.74E+01 9.79E+00 3.42E+01 6.70E+01 1.15E+02 1.25E+02 1.92E+02 1.72E-04 28

	PROB NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH	PEAK CONS	PEAK PROB	PEAK TRIAL
L-EDEWBODY POP. DOSE (Sv) 0-80.5 km										
POP.-DEPENDENT DECONTAMINATION DOSE	0.9982	9.65E+02	2.60E+02	2.19E+03	3.83E+03	1.25E+04	1.96E+04	6.90E+04	2.28E-04	64
FARM-DEPENDENT DECONTAMINATION DOSE	1.0000	1.38E+01	2.41E+00	4.18E+01	6.67E+01	1.26E+02	1.67E+02	2.88E+02	1.47E-04	14
INGESTION OF GRAINS	1.0000	2.54E+00	6.51E-01	7.76E+00	1.02E+01	1.76E+01	2.03E+01	2.97E+01	4.58E-06	31
INGESTION OF LEAF VEG	1.0000	2.19E+01	5.36E+00	7.22E+01	9.37E+01	1.40E+02	1.65E+02	2.57E+02	4.58E-06	31
INGESTION OF ROOT CROPS	1.0000	4.09E+00	1.73E+00	1.11E+01	1.43E+01	2.64E+01	3.08E+01	4.88E+01	4.58E-06	31
INGESTION OF FRUITS	1.0000	4.99E+00	1.43E+00	1.39E+01	2.01E+01	3.12E+01	3.62E+01	5.86E+01	4.58E-06	31
INGESTION OF LEGUMES	1.0000	4.33E+00	2.27E+00	1.08E+01	1.42E+01	2.63E+01	3.07E+01	5.22E+01	4.58E-06	31
INGESTION OF BEEF	1.0000	1.60E+00	6.69E-01	5.07E+00	6.36E+00	9.61E+00	1.13E+01	2.86E+01	1.11E-04	6
INGESTION OF MILK	1.0000	7.32E+00	2.79E+00	1.84E+01	2.88E+01	5.82E+01	7.03E+01	1.24E+02	1.81E-05	31
INGESTION OF POULTRY	1.0000	1.58E-01	8.86E-02	3.49E-01	4.58E-01	9.57E-01	1.22E+00	5.03E+00	1.11E-04	6
INGESTION OF OTHER MEAT CROPS	1.0000	2.95E-01	1.92E-01	6.62E-01	8.74E-01	1.30E+00	1.50E+00	2.75E+00	8.14E-06	132
ECONOMIC COST MEASURES ($) 0-80.5 km										
TOTAL ECONOMIC COSTS	1.0000	2.58E+09	9.05E+08	6.91E+09	1.21E+10	2.21E+10	2.55E+10	3.51E+10	2.28E-04	64
POP.-DEPENDENT COSTS	0.9982	2.53E+09	8.66E+08	6.91E+09	1.21E+10	2.20E+10	2.52E+10	3.50E+10	2.28E-04	64
FARM-DEPENDENT COSTS	1.0000	5.52E+07	3.37E+07	1.24E+08	1.70E+08	2.97E+08	3.22E+08	4.66E+08	1.47E-04	14
POP.-DEPENDENT DECONTAMINATION COST	0.9982	8.69E+08	2.91E+08	2.36E+09	3.89E+09	8.15E+09	9.27E+09	1.36E+10	4.85E-04	12
FARM-DEPENDENT DECONTAMINATION COST	1.0000	4.09E+07	2.43E+07	9.40E+07	1.29E+08	2.26E+08	2.57E+08	3.85E+08	2.00E-04	12
POP.-DEPENDENT INTERDICTION COST	0.9982	1.66E+09	5.75E+08	4.48E+09	8.32E+09	1.24E+10	1.41E+10	2.35E+10	2.28E-04	64
FARM-DEPENDENT INTERDICTION COST	1.0000	6.78E+06	2.77E+06	1.76E+07	3.43E+07	5.28E+07	5.54E+07	7.09E+07	1.47E-04	56
POP.-DEPENDENT CONDEMNATION COST	0.0004	1.68E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.40E+06	1.42E-04	28
FARM-DEPENDENT CONDEMNATION COST	0.9506	2.29E+06	8.41E+04	3.84E+06	1.10E+07	3.72E+07	6.12E+07	2.69E+08	4.00E-04	64
EMERGENCY PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
INTERMEDIATE PHASE COST	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
MILK DISPOSAL COST	0.9809	7.53E+03	3.35E+02	4.09E+03	1.63E+04	7.69E+04	3.57E+05	2.61E+06	2.85E-04	64
CROP DISPOSAL COST	0.9817	5.16E+06	3.12E+04	1.12E+07	3.49E+07	7.30E+07	8.19E+07	9.45E+07	2.08E-03	56

AFFECTED AREA/POPULATION 0-80.5 km

FARM DECONTAMINATION (HECTARES) 1.0000 2.92E+04 2.06E+04 6.72E+04 8.42E+04 1.12E+05 1.21E+05 1.71E+05 2.00E-04 12

POP. DECONTAMINATION (INDIVIDUALS) 0.9982 9.94E+04 3.39E+04 2.77E+05 5.29E+05 7.21E+05 7.66E+05 9.38E+05 4.85E-04 12

FARM INTERDICTION (HECTARES) 1.0000 3.20E+04 2.18E+04 7.57E+04 9.49E+04 1.16E+05 1.24E+05 1.71E+05 2.00E-04 12

POP. INTERDICTION (INDIVIDUALS) 0.9982 9.94E+04 3.39E+04 2.77E+05 5.29E+05 7.21E+05 7.66E+05 9.38E+05 4.85E-04 12

FARM CONDEMNATION (HECTARES) 0.9506 1.09E+03 3.46E+01 1.40E+03 5.63E+03 1.69E+04 2.53E+04 9.94E+04 5.42E-04 64

POP. CONDEMNATION (INDIVIDUALS) 0.0004 1.87E-02 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 6.90E+01 1.55E-04 28

MILK DISPOSAL AREA (HECTARES) 0.9809 1.11E+03 3.78E+01 1.72E+03 5.67E+03 1.69E+04 2.53E+04 9.94E+04 5.42E-04 64

CROP DISPOSAL AREA (HECTARES) 0.9817 1.23E+04 7.85E+01 3.71E+04 8.41E+04 1.13E+05 1.21E+05 1.67E+05 1.47E-04 56

SOURCE TERM 6 OF 6:
CFL

RESULT NAME = PEAK DOSE FOUND ON SPATIAL GRID (Sv)
L-EDEWBODY 0-1.6 km

PEOPLE FRACTION = 0.9500 0.0500

OVERALL		EMER. RESP. # 1		EMER. RESP. # 2		CHRONC RESULTS	
X	PROB>=X	X	PROB>=X	X	PROB>=X	X	PROB>=X
1.00E-08	1.00E+00	1.00E-11	1.00E+00	1.00E-08	1.00E+00	1.00E-08	9.98E-01
2.00E-08	1.00E+00	2.00E-11	1.00E+00	2.00E-08	1.00E+00	2.00E-08	9.98E-01
3.00E-08	1.00E+00	3.00E-11	1.00E+00	3.00E-08	1.00E+00	3.00E-08	9.98E-01
5.00E-08	1.00E+00	5.00E-11	1.00E+00	5.00E-08	1.00E+00	5.00E-08	9.98E-01
7.00E-08	1.00E+00	7.00E-11	1.00E+00	7.00E-08	1.00E+00	7.00E-08	9.98E-01
1.00E-07	1.00E+00	1.00E-10	1.00E+00	1.00E-07	1.00E+00	1.00E-07	9.98E-01
2.00E-07	1.00E+00	2.00E-10	1.00E+00	2.00E-07	1.00E+00	2.00E-07	9.98E-01
3.00E-07	1.00E+00	3.00E-10	1.00E+00	3.00E-07	1.00E+00	3.00E-07	9.98E-01
5.00E-07	1.00E+00	5.00E-10	1.00E+00	5.00E-07	1.00E+00	5.00E-07	9.98E-01
7.00E-07	1.00E+00	7.00E-10	1.00E+00	7.00E-07	1.00E+00	7.00E-07	9.98E-01
1.00E-06	1.00E+00	1.00E-09	1.00E+00	1.00E-06	1.00E+00	1.00E-06	9.98E-01
2.00E-06	1.00E+00	2.00E-09	1.00E+00	2.00E-06	1.00E+00	2.00E-06	9.98E-01
3.00E-06	1.00E+00	3.00E-09	1.00E+00	3.00E-06	1.00E+00	3.00E-06	9.98E-01
5.00E-06	1.00E+00	5.00E-09	1.00E+00	5.00E-06	1.00E+00	5.00E-06	9.98E-01
7.00E-06	1.00E+00	7.00E-09	1.00E+00	7.00E-06	1.00E+00	7.00E-06	9.98E-01
1.00E-05	1.00E+00	1.00E-08	1.00E+00	1.00E-05	1.00E+00	1.00E-05	9.98E-01
2.00E-05	1.00E+00	2.00E-08	1.00E+00	2.00E-05	1.00E+00	2.00E-05	9.98E-01
3.00E-05	1.00E+00	3.00E-08	1.00E+00	3.00E-05	1.00E+00	3.00E-05	9.98E-01
5.00E-05	1.00E+00	5.00E-08	1.00E+00	5.00E-05	1.00E+00	5.00E-05	9.98E-01
7.00E-05	1.00E+00	7.00E-08	1.00E+00	7.00E-05	1.00E+00	7.00E-05	9.98E-01
1.00E-04	1.00E+00	1.00E-07	1.00E+00	1.00E-04	1.00E+00	1.00E-04	9.98E-01
2.00E-04	1.00E+00	2.00E-07	1.00E+00	2.00E-04	1.00E+00	2.00E-04	9.98E-01
3.00E-04	1.00E+00	3.00E-07	1.00E+00	3.00E-04	1.00E+00	3.00E-04	9.98E-01
5.00E-04	1.00E+00	5.00E-07	1.00E+00	5.00E-04	1.00E+00	5.00E-04	9.98E-01
7.00E-04	1.00E+00	7.00E-07	1.00E+00	7.00E-04	1.00E+00	7.00E-04	9.98E-01
1.00E-03	1.00E+00	1.00E-06	1.00E+00	1.00E-03	1.00E+00	1.00E-03	9.98E-01
2.00E-03	1.00E+00	2.00E-06	1.00E+00	2.00E-03	1.00E+00	2.00E-03	9.98E-01
3.00E-03	1.00E+00	3.00E-06	1.00E+00	3.00E-03	1.00E+00	3.00E-03	9.98E-01
5.00E-03	9.98E-01	5.00E-06	1.00E+00	5.00E-03	9.82E-01	5.00E-03	9.98E-01
7.00E-03	9.98E-01	7.00E-06	1.00E+00	7.00E-03	9.82E-01	7.00E-03	9.98E-01
1.00E-02	9.98E-01	1.00E-05	1.00E+00	1.00E-02	9.82E-01	1.00E-02	9.98E-01
2.00E-02	9.98E-01	2.00E-05	9.98E-01	2.00E-02	9.53E-01	2.00E-02	9.98E-01
3.00E-02	9.98E-01	3.00E-05	9.72E-01	3.00E-02	8.37E-01	3.00E-02	9.98E-01
5.00E-02	6.82E-01	5.00E-05	9.23E-01	5.00E-02	5.14E-01	5.00E-02	2.36E-01
6.57E-02	1.57E-03	7.00E-05	9.21E-01	7.00E-02	3.60E-01	5.55E-02	1.31E-03
N.D.	N.D.	1.00E-04	9.21E-01	1.00E-01	1.45E-01	N.D.	N.D.
N.D.	N.D.	2.00E-04	8.86E-01	2.00E-01	2.10E-02	N.D.	N.D.
N.D.	N.D.	3.00E-04	8.11E-01	2.36E-01	1.57E-03	N.D.	N.D.
N.D.	N.D.	5.00E-04	7.61E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	7.00E-04	7.24E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	1.00E-03	6.59E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	2.00E-03	5.14E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	3.00E-03	3.74E-01	N.D.	N.D.	N.D.	N.D.

N.D.	N.D.	5.00E-03	1.34E-01	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	7.00E-03	2.78E-02	N.D.	N.D.	N.D.	N.D.
N.D.	N.D.	9.86E-03	2.48E-03	N.D.	N.D.	N.D.	N.D.

Successful completion of MACCS2 was achieved!
This job required a total of 37.812 CPU seconds

Input processing required 0.270 CPU seconds
Simulation required 36.812 CPU seconds
Output processing required 0.730 CPU seconds

```
SECPOP2000 V3.12  MACCS2 Site Data File for Vogtle + transients projected to year 2040
Lat: 33d 8'31'' Long:  81d45'45'' Population multiplier: 1.0000   10/06/2006
 10 SPATIAL INTERVALS
 16 WIND DIRECTIONS
  7 CROP CATEGORIES
  4 WATER PATHWAY ISOTOPES
  1 WATERSHEDS
 97 ECONOMIC REGIONS
SPATIAL DISTANCES     KILOMETERS
   1.6093    3.2187    4.8280    6.4374    8.0467   16.0935   32.1869   48.2804
  64.3739   80.4674
POPULATION
       0.       69.        0.        0.        0.        0.     8727.    92192.
   28873.    22032.
       0.        0.        0.        0.        0.        0.     4594.    14508.
    7731.    13488.
       0.        0.        0.        0.        0.        0.        0.     9309.
    5508.    10769.
       0.        0.        0.        0.        0.        0.      774.    13423.
   12596.    11961.
       0.        0.        0.        0.        0.       13.      735.     3547.
    1805.     3263.
       0.        0.        0.       22.        1.      346.      249.     6077.
    7848.    12492.
       0.        0.        0.       19.       17.      281.      336.      344.
     869.    11149.
       0.        0.       34.        0.        0.      991.      881.     7749.
    3263.     7071.
       0.        0.        0.        0.       25.      315.     2322.     1938.
    4168.    69610.
       0.        0.        0.        0.        3.       58.      609.     5337.
    2694.     9893.
       0.        7.        0.        7.        1.      193.      859.      737.
    2006.     7607.
       0.        0.       19.       79.       22.      763.     9211.      797.
    5609.     5525.
       0.        0.       70.        9.        4.      392.     4333.     1613.
    4660.     3290.
       0.        0.       90.        0.       86.      226.     4262.    10681.
   12014.    22397.
       0.       50.        0.      156.      122.      156.    12373.   142545.
  353009.    27595.
       0.        0.        0.        0.        0.       91.     4875.   140058.
   60057.    10509.
LAND FRACTION
0.00 0.00 1.00 0.00 0.00 1.00 1.00 1.00 1.00 1.00
0.00 0.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00
1.00 0.00 0.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00
1.00 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 1.00
1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 1.00
1.00 1.00 1.00 1.00 1.00 1.00 0.99 1.00 1.00 1.00
1.00 1.00 1.00 1.00 1.00 1.00 0.22 0.53 1.00 1.00
1.00 0.00 1.00 0.00 0.00 1.00 0.20 0.00 0.00 0.68
1.00 1.00 0.00 0.00 1.00 1.00 0.51 0.02 0.30 0.94
1.00 1.00 0.00 0.00 1.00 1.00 0.55 0.20 0.40 0.98
1.00 1.00 0.00 1.00 1.00 1.00 0.96 0.46 0.87 0.97
1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.78
1.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.97
0.00 0.00 1.00 1.00 1.00 1.00 0.64 0.37 0.49 0.16
0.00 1.00 0.00 1.00 1.00 0.94 0.12 0.00 0.91 0.90
```

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0.00 0.00 0.00 0.00 0.00 0.99 0.87 0.65 0.97 1.00
REGION INDEX
1 2 2 2 2 3 4 5 6 7
1 8 8 8 8 910111213
1141414141516171819
1202020202122232425
1262626262728293031
1323232323334353637
1383838383940414243
1444444444546474849
1505050505152535455
1565656565758596061
1626262626364656667
1686868686970717273
1747474747576777879
1808080808182838485
1868686868788899091
1929292929394959697
WATERSHED INDEX
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1
CROP SEASON AND SHARE
  1 PASTURE               90. 270.  0.4100
  2 STORED FORAGE        150. 240.  0.1300
  3 GRAINS               150. 240.  0.2100
  4 GRN LEAFY VEGETABLES 150. 240.  0.0020
  5 OTHER FOOD CROPS     150. 240.  0.0040
  6 LEGUMES AND SEEDS    150. 240.  0.1500
  7 ROOTS AND TUBERS     150. 240.  0.0030
WATERSHED DEFINITION  -- INITIAL AND ANNUAL WASHOFF AND INGESTION FACTORS
  1 Sr-89                          5.00E-06       0.0
  2 Sr-90                          5.00E-06       0.0
  3 Cs-134                         5.00E-06       0.0
  4 Cs-137                         5.00E-06       0.0
REGIONAL ECONOMIC DATA
  1 EXCLUSION      .007 0.157     803.0    2607.0   98793.0
  2 REGION_02      .237 0.003     258.0    1766.0   66077.0
  3 REGION_03      .221 0.046      29.0    1402.0  105865.0
  4 REGION_04      .221 0.046      29.0    1402.0  105865.0
  5 REGION_05      .221 0.046      29.0    1402.0  105864.8
  6 REGION_06      .315 0.040      28.7    1230.0  103527.2
  7 REGION_07      .674 0.085     174.1    1085.3   91291.7
  8 REGION_08      .000 0.000       0.0       0.0       0.0
  9 REGION_09      .000 0.000       0.0       0.0       0.0
 10 REGION_10      .221 0.046      29.0    1402.0  105865.0
 11 REGION_11      .221 0.046      29.0    1402.0  105865.0
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12	REGION_12	.221	0.046	29.0	1402.0	105865.1
13	REGION_13	.282	0.101	23.1	1204.3	93124.5
14	REGION_14	.000	0.000	0.0	0.0	0.0
15	REGION_15	.000	0.000	0.0	0.0	0.0
16	REGION_16	.000	0.000	0.0	0.0	0.0
17	REGION_17	.231	0.019	172.9	1630.7	80863.0
18	REGION_18	.260	0.019	97.6	1687.1	84900.2
19	REGION_19	.319	0.052	29.0	1617.0	81491.9
20	REGION_20	.237	0.003	258.0	1766.0	66077.0
21	REGION_21	.000	0.000	0.0	0.0	0.0
22	REGION_22	.237	0.003	258.0	1766.0	66077.0
23	REGION_23	.237	0.003	258.0	1766.0	66077.0
24	REGION_24	.327	0.003	512.2	2893.6	77218.1
25	REGION_25	.353	0.001	249.2	2546.5	78217.5
26	REGION_26	.000	0.000	0.0	0.0	0.0
27	REGION_27	.237	0.003	258.0	1766.0	66077.0
28	REGION_28	.121	0.001	194.1	4401.7	167153.4
29	REGION_29	.182	0.002	227.4	3029.2	114518.5
30	REGION_30	.300	0.002	581.4	4224.1	118841.5
31	REGION_31	.530	0.052	722.0	3346.9	87094.0
32	REGION_32	.007	0.157	803.0	2607.0	98793.0
33	REGION_33	.024	0.146	763.8	2549.9	96570.1
34	REGION_34	.039	0.006	172.9	6068.0	231078.5
35	REGION_35	.041	0.000	150.0	6224.0	237037.0
36	REGION_36	.449	0.226	184.5	3639.2	161059.3
37	REGION_37	.941	0.422	292.2	850.6	79541.0
38	REGION_38	.007	0.157	803.0	2607.0	98793.0
39	REGION_39	.007	0.157	803.0	2607.0	98793.0
40	REGION_40	.002	0.032	167.5	607.7	23041.7
41	REGION_41	.022	0.000	80.1	3324.3	126602.4
42	REGION_42	.531	0.271	191.3	3119.2	145745.5
43	REGION_43	.883	0.454	212.5	764.6	79208.3
44	REGION_44	.007	0.157	803.0	2607.0	98793.0
45	REGION_45	.007	0.157	803.0	2607.0	98793.0
46	REGION_46	.001	0.031	160.0	519.3	19679.2
47	REGION_47	.000	0.000	0.0	0.0	0.0
48	REGION_48	.000	0.000	0.1	0.4	38.3
49	REGION_49	.223	0.102	326.2	3223.3	66617.3
50	REGION_50	.007	0.157	803.0	2607.0	98793.0
51	REGION_51	.007	0.157	803.0	2607.0	98793.0
52	REGION_52	.004	0.074	22064.3	31003.7	86462.8
53	REGION_53	.000	0.000	12190.9	16738.5	22444.5
54	REGION_54	.042	0.040	1054.1	2435.5	30845.5
55	REGION_55	.130	0.126	721.5	4081.1	91723.7
56	REGION_56	.007	0.157	803.0	2607.0	98793.0
57	REGION_57	.007	0.157	803.0	2607.0	98793.0
58	REGION_58	.004	0.069	58695.7	81248.0	150545.7
59	REGION_59	.001	0.000	103548.0	142175.0	190641.0
60	REGION_60	.037	0.018	76868.6	106091.4	165842.0
61	REGION_61	.375	0.050	401.9	2280.5	93625.5
62	REGION_62	.007	0.157	803.0	2607.0	98793.0
63	REGION_63	.007	0.157	803.0	2607.0	98793.0
64	REGION_64	.007	0.150	5468.0	8943.9	102963.3
65	REGION_65	.003	0.051	70501.7	97285.2	161099.6
66	REGION_66	.086	0.046	14708.4	21184.8	108138.2
67	REGION_67	.149	0.006	150.6	1234.1	93323.7
68	REGION_68	.007	0.157	803.0	2607.0	98793.0
69	REGION_69	.007	0.157	803.0	2607.0	98793.0
70	REGION_70	.007	0.157	803.0	2607.0	98793.0
71	REGION_71	.007	0.157	803.0	2607.0	98793.0

72	REGION_72	.056	0.520	1371.3	2197.8	94741.5
73	REGION_73	.085	0.482	1189.0	1682.9	73792.6
74	REGION_74	.007	0.157	803.0	2607.0	98793.0
75	REGION_75	.007	0.157	803.0	2607.0	98793.0
76	REGION_76	.007	0.157	803.0	2607.0	98793.0
77	REGION_77	.016	0.229	917.0	2535.3	98037.5
78	REGION_78	.071	0.677	1634.9	2083.8	93281.6
79	REGION_79	.130	0.488	2130.9	5974.9	102372.4
80	REGION_80	.007	0.157	803.0	2607.0	98793.0
81	REGION_81	.007	0.157	803.0	2607.0	98793.0
82	REGION_82	.005	0.100	511.3	1660.1	62910.9
83	REGION_83	.003	0.059	297.4	963.1	36509.4
84	REGION_84	.035	0.193	486.9	1303.4	44153.0
85	REGION_85	.043	0.010	522.4	2406.6	21257.0
86	REGION_86	.007	0.157	803.0	2607.0	98793.0
87	REGION_87	.010	0.146	742.0	2427.5	92737.6
88	REGION_88	.001	0.019	98.2	320.7	12223.4
89	REGION_89	.000	0.000	0.0	0.0	0.0
90	REGION_90	.080	0.000	101.6	3040.6	78775.6
91	REGION_91	.083	0.000	98.0	2932.1	77936.1
92	REGION_92	.000	0.000	0.0	0.0	0.0
93	REGION_93	.219	0.045	28.7	1389.6	104928.5
94	REGION_94	.193	0.040	25.4	1227.3	92673.2
95	REGION_95	.144	0.030	18.9	911.7	68843.6
96	REGION_96	.718	0.007	32.3	556.3	88492.0
97	REGION_97	.858	0.000	23.3	156.6	88921.0