```
************************************************************************
********
* FILE NAME:   CLINATMB.INP
*
* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'ATMOS INPUT FOR CLINTON ABWR MODEL 1 PLUME'
*
*  BASE CASE
*
* G.A.TEAGARDEN (ERIN ENGINEERING) 6/16/2004
*
************************************************************************
********
* GEOMETRY DATA BLOCK
*********************
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001  9
*
* SPATIAL ENDPOINT DISTANCES IN MILES    (MATCHES SITE FILE)
*
*         END001  1.2    2.5    3.7    5.0    6.2
*         END002   10     25     37     50
*
* SPATIAL ENDPOINT DISTANCES IN KILOMETERS
*
GESPAEND001      2.0       4.0       6.0       8.0      10.0
GESPAEND002     16.0      40.0      60.0      80.0
************************************************************************
********
* NUCLIDE DATA BLOCK
********************
* Number of pseudo-stable nuclides (used to truncate the decay chains)
* User's Guide p. 5-7
ISNUMSTB001      27
*
* List of pseudo-stable nuclides, User's Guide p. 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)
```

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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
*  ALL NUCLIDE GROUPS EXCEPT NOBLE GAS ARE ASSUMED SUBJECT
*  TO BOTH WET AND DRY DEPOSITION. (CONSISTENT WITH USERS GUIDE)
*
*              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)
* (User's Guide p. 5-8)
*               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
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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
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
**************************
* 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)
*
* ABOVE VALUES SAME AS USERS GUIDE.
*
*************************************************************************
********
* DRY DEPOSITION DATA BLOCK
**************************
* NUMBER OF PARTICLE SIZE GROUPS
*
DDNPSGRP001   1
*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*  (SEE LETTER M. A. CUNNINGHAM TO F.T. HARPER AUG 7 1990 NRC PDR)
```

```
DDVDEPOS001   0.01   (VALUE SELECTED BY S. ACHARYA, NRC)
*
**********************************************************************
********
* DISPERSION PARAMETER DATA BLOCK
********************************
* THE POWER-LAW MODEL IS USED, THEREFORE NUM_DIST IS SET TO ZERO
* OR DELETE THE FOLLOWING CARD.
*
NUM_DIST001   0
*
* POWER-LAW FUNCTION IS OF FORM:  SIGMA = A * X ** B
*
* Tadmor and Gur Parameterization for Distance Range 0.5 to 5.0 km
* as taken from Atmospheric Motion and Air Pollution (Dobbins 1979).
* (User's Guide p. 5-11, Same as NUREG-1150 only in different spacing)
* 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         2.5E-4       1.9E-3       0.2         0.3
0.4        0.2
DPCZSIGB001         2.125        1.6021       0.8543      0.6532
0.6021     0.6020
*
*  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  (VALUE INTENDED TO BE USED WITH TADMOR AND GUR
PARAMATERS)
*
* ABOVE VALUES CONSISTENT WITH USERS'GUIDE.
*
**********************************************************************
****** *
* PLUME MEANDER EXPANSION FACTOR DATA BLOCK
*******************************************
* TIME BASE FOR EXPANSION FACTOR (SECONDS)
*
PMTIMBAS001    600.   (10 MINUTES)
*
* BREAK POINT FOR FORMULA CHANGE (SECONDS)
*
PMBRKPNT001   3600.   (1 HOUR, NUREG/CR-4551)
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 1
*
PMXPFAC1001      0.2  (NUREG/CR-4551)
*
* EXPONENTIAL EXPANSION FACTOR NUMBER 2
*
PMXPFAC2001      0.25  (NUREG/CR-4551)
*
```

```
*  ABOVE FACTORS FROM USERS' GUIDE.
*
**********************************************************************
********
* PLUME RISE DATA BLOCK
**********************
*  THE FOLLOWING SCALING FACTORS COULD BE USED TO MODIFY THE MACCS
METHOD OF
*  PERFORMING PLUME RISE CALCS.
*
* SCALING FACTOR FOR THE CRITICAL WIND SPEED FOR ENTRAINMENT OF A
BOUYANT PLUME
* (USED BY FUNCTION CAUGHT)
*
PRSCLCRW001   1.  (NUREG/CR-4551)
*
* SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLADP001   1.  (NUREG/CR-4551)
*
* SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
* (USED BY FUNCTION PLMRIS)
*
PRSCLEFP001   1.  (NUREG/CR-4551)
*
*  ABOVE VALUES CONSISTENT WITH USERS' GUIDE.
*
**********************************************************************
********
* WAKE EFFECTS DATA BLOCK
************************
*
*    ESP CONTAINMENT STRUCTURE
*     CB height = 76.1 m (ESP SSAR,Table 1.4-1 Plant Parameter Envelope,
234 feet)
*     CB cross sectional area = 2069 m x m (ESP SSAR,Section 2.3.4.3)
*     CB width = 45.5 m (Assumed building to be a square, normally
average width and length))
*
* Initial value of sigma-y for each plume
*
SIGYINIT001  10.6 *(initial sigma-y = W/4.3 = 45.5/4.3 [User's Guide p.
5-22])
*
* Initial value of sigma-z for each plume
*
SIGZINIT001  35.4 *(initial sigma-z = H/2.15=76.1/2.15 [User's Guide p.
5-22])
*
* Building height (meters)
*
WEBUILDH001   76.1 *(Height of CB, from ESP)
*
**********************************************************************
****
* RELEASE DATA BLOCK
********************
* PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
* YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
```

```
*
RDPSDIST001      1.
RDPSDIST002      1.
RDPSDIST003      1.
RDPSDIST004      1.
RDPSDIST005      1.
RDPSDIST006      1.
RDPSDIST007      1.
RDPSDIST008      1.
RDPSDIST009      1.
*
* core concentration at end of cycle
* based on GE14, exposure 35 GWd/MT, 4.6% enrich, 128kg U
*
*               NUCNAM        CORINV (Bq/MWt)
*
RDCORINV001     Co-58         5.10E+12
RDCORINV002     Co-60         4.92E+12
RDCORINV003     Kr-85         1.23E+13
RDCORINV004     Kr-85m        2.73E+14
RDCORINV005     Kr-87         5.27E+14
RDCORINV006     Kr-88         7.42E+14
RDCORINV007     Rb-86         2.35E+12
RDCORINV008     Sr-89         9.93E+14
RDCORINV009     Sr-90         9.76E+13
RDCORINV010     Sr-91         1.25E+15
RDCORINV011     Sr-92         1.34E+15
RDCORINV012     Y-90          1.01E+14
RDCORINV013     Y-91          1.27E+15
RDCORINV014     Y-92          1.34E+15
RDCORINV015     Y-93          1.55E+15
RDCORINV016     Zr-95         1.70E+15
RDCORINV017     Zr-97         1.69E+15
RDCORINV018     Nb-95         1.71E+15
RDCORINV019     Mo-99         1.89E+15
RDCORINV020     Tc-99m        1.68E+15
RDCORINV021     Ru-103        1.50E+15
RDCORINV022     Ru-105        1.00E+15
RDCORINV023     Ru-106        5.21E+14
RDCORINV024     Rh-105        9.10E+14
RDCORINV025     Sb-127        1.03E+14
RDCORINV026     Sb-129        3.15E+14
RDCORINV027     Te-127        1.05E+14
RDCORINV028     Te-127m       1.37E+13
RDCORINV029     Te-129        3.10E+14
RDCORINV030     Te-129m       4.60E+13
RDCORINV031     Te-131m       1.42E+14
RDCORINV032     Te-132        1.41E+15
RDCORINV033     I-131         9.90E+14
RDCORINV034     I-132         1.44E+15
RDCORINV035     I-133         2.04E+15
RDCORINV036     I-134         2.25E+15
RDCORINV037     I-135         1.91E+15
RDCORINV038     Xe-133        2.03E+15
RDCORINV039     Xe-135        2.72E+14
RDCORINV040     Cs-134        1.98E+14
RDCORINV041     Cs-136        6.89E+13
RDCORINV042     Cs-137        1.28E+14
RDCORINV043     Ba-139        1.84E+15
RDCORINV044     Ba-140        1.77E+15
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RDCORINV045     La-140        1.82E+15
RDCORINV046     La-141        1.68E+15
RDCORINV047     La-142        1.62E+15
RDCORINV048     Ce-141        1.68E+15
RDCORINV049     Ce-143        1.56E+15
RDCORINV050     Ce-144        1.36E+15
RDCORINV051     Pr-143        1.53E+15
RDCORINV052     Nd-147        6.69E+14
RDCORINV053     Np-239        1.93E+16
RDCORINV054     Pu-238        3.34E+12
RDCORINV055     Pu-239        4.02E+11
RDCORINV056     Pu-240        5.21E+11
RDCORINV057     Pu-241        1.51E+14
RDCORINV058     Am-241        1.70E+11
RDCORINV059     Cm-242        4.01E+13
RDCORINV060     Cm-244        1.94E+12
*
*  SCALING FACTOR TO ADJUST THE CORE INVENTORY FOR POWER LEVEL
*
*     SCALING FACTOR TO CONVERT INVENTORY FROM Bq/MWt TO Bq
*
*         REACTOR             GE BASE   CLINTON ESP SSAR, Section 1.3.1
*         TYPE                  ABWR    ABWR
*         POWER LEVEL (MWTH)    3926    3926
*         SCALING FACTOR        3926    3926
*
RDCORSCA001   3926.  *  BASE ABWR POWER LEVEL = 3926
*
RDAPLFRC001   PARENT      (apply rel fracs the same as prior versions)
*
************************************************************************
********
* OUTPUT CONTROL DATA BLOCK
**************************
*
* 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 (NOT USED IF DEBUG=0)
*
*              NUM0               NO TABLES OUTPUT=0
TYPE0NUMBER      0
*
*              INDREL   INDRAD
* TYPE0OUT001      1        4
* TYPE0OUT002      1        9         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   9       (ADJUSTED FOR SL RADIAL INTVL)
*
* BOUNDARY WEATHER MIXING LAYER HEIGHT
*
M2BNDMXH001  1000.  (METERS, NUREG-1150)
*
* BOUNDARY WEATHER STABILITY CLASS INDEX
*
M2IBDSTB001  4      (D-STABILITY)
*
* BOUNDARY WEATHER RAIN RATE
*
M2BNDRAN001  0.     (MM/HR, NUREG-1150)
*
* BOUNDARY WEATHER WIND SPEED
*
M2BNDWND001  5.0     (M/S)
*
* NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
*
M4NRNINT001    5
*
* 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).
*
*             1.2    5.0    10.0   25.0   50.0   MILES
*
M4RNDSTS001   2.0    8.0    16.0   40.0   80.0   KM
*
* NUMBER OF RAIN INTENSITIY BREAKPOINTS
*
M4NRINTN001   3
*
* RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
*
M4RNRATE001   2.  4.  6.
*
* NUMBER OF WEATHER SAMPLES PER BIN
*  (NUREG-4551 used 4, more samples are preferred, but increase
*   computing time. 12 judged a good compromise for current PCs)
*
M4NSMPLS001  12  (4 MINIMUM, 24 MAXIMUM)
*
* INITIAL SEED FOR RANDOM NUMBER GENERATOR FOR WEATHER SAMPLING
*
M4IRSEED001   79
********************* RELEASE DATA BLOCK *************
*
*  MACCS Categories  Xe/Kr   I    Cs     Te      Sr    Ru     La    Ce
Ba
```

```
*
**********
********************** RELEASE DATA BLOCK *************
*
* Source term data is taken from Dominion Model for ABWR 1 plume,
4/14/2004
*
* SOURCE TERM NUMBER 0
*
RDATNAM2001     'ABWR CASE 0 Specific data used from GE SSAR'
RDOALARM001     6120.       *time of site general emergency declaration=
1.7 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     36000.      *Plume duration =10 hours
RDPDELAY001     9720.       *plume segments start at 2.7 hours after
scram
*
*                Xe/Kr    I       Cs      Te      Sr      Ru      La
Ce      Ba
RDRELFRC001     4.4E-2  2.3E-5  2.3E-5  5.3E-6  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 1
*
RDATNAM2001     'ABWR CASE 1'
RDOALARM001     69120.      *time of site general emergency declaration=
19.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     3600.       *Plume duration =1 hours
RDPDELAY001     72000.      *plume segments start at 20 hours after
scram
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo     La
Ce      Ba
RDRELFRC001     1.0E+0  1.5E-7  1.3E-5  3.1E-4  6.3E-6  2.4E-11  7.9E-8
7.9E-8  6.3E-6
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 2
*
RDATNAM2001     'ABWR CASE 2'
RDOALARM001     65520.      *time of site general emergency declaration=
18.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     3600.       *Plume duration =1 hours
RDPDELAY001     68400.      *plume segments start at 19 hours after
scram
```

```
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  5.0E-6  5.0E-6  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 3
*
RDATNAM2001     'ABWR CASE 3'
RDOALARM001     177120.     *time of site general emergency declaration=
49.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     36000.      *Plume duration =10 hours
RDPDELAY001     180000.     *plume segments start at 50 hours after
scram
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  2.8E-4  2.2E-3  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 4
*
RDATNAM2001     'ABWR CASE 4'
RDOALARM001     69120.      *time of site general emergency declaration=
19.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     3600.       *Plume duration =1 hour
RDPDELAY001     72000.      *plume segments start at 20 hours after
scram
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  1.6E-3  1.6E-3  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 5
*
RDATNAM2001     'ABWR CASE 5'
RDOALARM001     65520.      *time of site general emergency declaration=
18.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     3600.       *Plume duration =1 hour
RDPDELAY001     68400.      *plume segments start at 19 hours after
scram
```

```
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  6.0E-3  5.3E-4  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 6
*
RDATNAM2001     'ABWR CASE 6'
RDOALARM001     65520.      *time of site general emergency declaration=
18.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     36000.      *Plume duration =10 hours
RDPDELAY001     68400.      *plume segments start at 19 hours after
scram
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  3.1E-2  7.7E-2  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 7
*
RDATNAM2001     'ABWR CASE 7'
RDOALARM001     69120.      *time of site general emergency declaration=
19.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     36000.      *Plume duration =10 hours
RDPDELAY001     72000.      *plume segments start at 16, 18, and 26
hours after scram
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  8.9E-2  9.9E-2  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 8
*
RDATNAM2001     'ABWR CASE 8'
RDOALARM001     4320.       *time of site general emergency declaration=
1.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on leading edge
RDPLHEAT001     4.19E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     36000.      *Plume duration =10 hours
RDPDELAY001     7200.       *plume segments start at 2 hours after scram
*
```

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*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  1.9E-1  2.5E-1  0.0E+0  0.0E+0  0.0E+0  0.0E+0
0.0E+0  0.0E+0
.
********************** RELEASE DATA BLOCK *************
* SOURCE TERM NUMBER 9
*
RDATNAM2001     'ABWR CASE 9'
RDOALARM001     43920.      *time of site general emergency declaration=
12.2 hours
RDNUMREL001     1           *one plume segment
RDMAXRIS001     1           *first plume segment carries greatest risk
RDREFTIM001     0.0         *plume segment decay based on laeding edge
RDPLHEAT001     1.38E+6     *buoyant plume rise heat rate, watts
RDPLHITE001     37.7        *Release height of each plume
RDPLUDUR001     36000.      *Plume duration =10 hours
RDPDELAY001     84960.      *plume segments start at 23.6 hours after
scram
*
*                Xe/Kr   I-Br    Cs-Rb   Te-Sb    Sr     Co-Mo    La
Ce      Ba
RDRELFRC001     1.0E+0  3.7E-1  3.6E-1  1.1E-3  9.3E-3  9.2E-8  2.8E-3
2.8E-3  9.3E-3
.
```