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* Identifies this MACCS calculation

RIATNAM1001 'ATMOS INPUT FOR IPEC CALCULATIONS'

* NUMRAD, Number of Radial Spatial Elements

GENUMRAD001 15

* SPAEND, Spatial Endpoint Distances (km)

GESPAEND001	0.3219
GESPAEND002	1.6093
GESPAEND003	3.2187
GESPAEND004	4.828
GESPAEND005	6.4374
GESPAEND006	8.0467
GESPAEND007	9.6561
GESPAEND008	11.2654
GESPAEND009	12.8748
GESPAEND010	14.4841
GESPAEND011	16.0935
GESPAEND012	32.1869
GESPAEND013	48.2804
GESPAEND014	64.3739
GESPAEND015	80.4674

* NUMCOR, Number of angular compass directions

GENUMCOR001 16

* NUMISO, Number of Nuclides

ISNUMISO001 60

* MAXGRP, Number of Element Groups

ISMAXGRP001 9

* WETDEP, DRYDEP, Wet and Dry Deposition Flags for Each Nuclide Group

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.

* NUMSTB_ZERO = 0

ISNUMSTB001 0

* NUMSTB, Number of Pseudostable Radionuclides

ISNUMSTB001 27

* NAMSTB, List of Pseudostable Radionuclides

ISNAMSTB001	I-129
ISNAMSTB002	Xe-131m
ISNAMSTB003	Xe-133m
ISNAMSTB004	Xe-135m
ISNAMSTB005	Cs-135
ISNAMSTB006	Sm-147
ISNAMSTB007	U-234
ISNAMSTB008	U-235
ISNAMSTB009	U-236
ISNAMSTB010	U-237
ISNAMSTB011	Np-237

ISNAMSTB012	Rb-87
ISNAMSTB013	Ba-137m
ISNAMSTB014	Rb-88
ISNAMSTB015	Y-91m
ISNAMSTB016	Zr-93
ISNAMSTB017	Nb-93m
ISNAMSTB018	Nb-95m
ISNAMSTB019	Nb-97
ISNAMSTB020	Nb-97m
ISNAMSTB021	Tc-99
ISNAMSTB022	Rh-103m
ISNAMSTB023	Rh-106
ISNAMSTB024	Te-131
ISNAMSTB025	Pr-144
ISNAMSTB026	Pr-144m
ISNAMSTB027	Pm-147

*

* NUCNAM, IGROUP, Chemical group associated with each nuclide

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
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

*

* CWASH1, washout Coefficient Number One, Linear Factor

WDCWASH1001 9.5E-5

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* CWASH2, washout Coefficient Number Two, Exponential Factor

WDCWASH2001 0.8

*

* NPSGRP, Number of Particle Size Groups

DDNPSGRP001 1

*

* VDEPOS, Dry Deposition Velocities for Each Particle Size Group (m/sec)

DDVDEPOS001 0.01

*

* CYSIGA, Dispersion function parameter

DPCYSIGA001 0.3658

DPCYSIGA002 0.2751

DPCYSIGA003 0.2089

DPCYSIGA004 0.1474

DPCYSIGA005 0.1046

DPCYSIGA006 0.0722

*

* CYSIGB, Dispersion function parameter

DPCYSIGB001 0.9031

DPCYSIGB002 0.9031

DPCYSIGB003 0.9031

DPCYSIGB004 0.9031

DPCYSIGB005 0.9031

DPCYSIGB006 0.9031

*

* CZSIGA, Dispersion function parameter

DPCZSIGA001 2.5E-4

DPCZSIGA002 1.9E-3

DPCZSIGA003 0.2

DPCZSIGA004 0.3

DPCZSIGA005 0.4

DPCZSIGA006 0.2

*

* CZSIGB, Dispersion function parameter

DPCZSIGB001 2.125

DPCZSIGB002 1.6021

DPCZSIGB003 0.8543

DPCZSIGB004 0.6532

DPCZSIGB005 0.6021

DPCZSIGB006 0.6020

*

* YSCALE, linear scaling factor for sigma-y

DPYSCALE001 1.

*

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* ZSCALE, linear scaling factor for sigma-z
DPZSCALE001      1.27
*
* DISPM - dispersion long-range model
DPDISPM001      LRDIST
*
* MNDMOD, plume meander model
PMMNDMOD001      OLD
*
* TIMBAS, time base expansion factor (sec)
PMTIMBAS001      600.
*
* BRKPNT, breakpoint for formula change (sec)
PMBRKPNT001      3600.
*
* XPFAC1, Expansion factor 1
PMXPFAC1001      0.2
*
* XPFAC2, Expansion factor 2
PMXPFAC2001      0.25
*
* SCLCRW, scaling factor for entrainment of buoyant plume
PRSCLCRW001      1.
*
* SCLADP, scaling factor for the a-d stability plume rise formula
PRSCLADP001      1.
*
* SCLEFP, scaling factor for the e-f stability plume rise formula
PRSCLEFP001      1.
*
* BUILDH, building height (meters)
WEBUILDH001      66.8
*
* SIGYINIT, initial value of sigma-y for each of the plumes (meters)
SIGYINIT001      9.9
*
* SIGZINIT, initial value of sigma-z for each of the plumes (meters)
SIGZINIT001      31.1
*
* ATNAM2, specific descriptive text describing this particular source term
RDATNAM2001      NCF
*
* OALARM, time after accident initiation that off-site alarm is initiated (sec)
RDOALARM001      1.66E+04
*
* NUMREL, number of plumes
RDNUMREL001      1
*
* MAXRIS, selection of risk-dominant plume segment
RDMAXRIS001      1
*
* REFTIM, representative time point for dispersion and radioactive decay
RDREFTIM001      0.5
*
* PLM_HEAT, plume rise model legacy heat
RDPLMOD001      HEAT
*
* PLHEAT, heat content of each release segment (watts)
RDPLHEAT001      9.20E+05
*
* BRGSMD, Briggs plume rise model
RDBRGSMD001      ORIGINAL
*

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* PLHITE, height of each plume segment at release (meters)
RDPLHITE001 30.

*

* PLUDUR, duration of each plume segment (sec)
RDPLUDUR001 8.64E+04

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* PDELAY, time of release for each plume from xxxx (sec)
RDPDELAY001 0.00E+00

*

* PSDIST, particle size distribution of each element group
RDPSDIST001 1.

RDPSDIST002 1.

RDPSDIST003 1.

RDPSDIST004 1.

RDPSDIST005 1.

RDPSDIST006 1.

RDPSDIST007 1.

RDPSDIST008 1.

RDPSDIST009 1.

*

* CORINV, inventory of each radionuclide present in the facility at the time of accident initiation (becquerels)

RDCORINV001 Co-58 3.04E+16

RDCORINV002 Co-60 2.32E+16

RDCORINV003 Kr-85 3.84E+16

RDCORINV004 Kr-85m 8.48E+17

RDCORINV005 Kr-87 1.63E+18

RDCORINV006 Kr-88 2.29E+18

RDCORINV007 Rb-86 8.31E+15

RDCORINV008 Sr-89 3.08E+18

RDCORINV009 Sr-90 3.05E+17

RDCORINV010 Sr-91 3.87E+18

RDCORINV011 Sr-92 4.19E+18

RDCORINV012 Y-90 3.18E+17

RDCORINV013 Y-91 3.98E+18

RDCORINV014 Y-92 4.19E+18

RDCORINV015 Y-93 4.85E+18

RDCORINV016 Zr-95 5.38E+18

RDCORINV017 Zr-97 5.41E+18

RDCORINV018 Nb-95 5.45E+18

RDCORINV019 Mo-99 6.11E+18

RDCORINV020 Tc-99m 5.34E+18

RDCORINV021 Ru-103 4.89E+18

RDCORINV022 Ru-105 3.36E+18

RDCORINV023 Ru-106 1.71E+18

RDCORINV024 Rh-105 3.09E+18

RDCORINV025 Sb-127 3.47E+17

RDCORINV026 Sb-129 1.04E+18

RDCORINV027 Te-127 3.43E+17

RDCORINV028 Te-127m 4.50E+16

RDCORINV029 Te-129 1.02E+18

RDCORINV030 Te-129m 1.50E+17

RDCORINV031 Te-131m 4.64E+17

RDCORINV032 Te-132 4.57E+18

RDCORINV033 I-131 3.20E+18

RDCORINV034 I-132 4.64E+18

RDCORINV035 I-133 6.56E+18

RDCORINV036 I-134 7.19E+18

RDCORINV037 I-135 6.11E+18

RDCORINV038 Xe-133 6.28E+18

RDCORINV039 Xe-135 1.67E+18

RDCORINV040 Cs-134 7.19E+17

RDCORINV041 Cs-136 2.10E+17

RDCORINV042	Cs-137	4.15E+17
RDCORINV043	Ba-139	5.83E+18
RDCORINV044	Ba-140	5.62E+18
RDCORINV045	La-140	6.04E+18
RDCORINV046	La-141	5.34E+18
RDCORINV047	La-142	5.17E+18
RDCORINV048	Ce-141	5.31E+18
RDCORINV049	Ce-143	4.96E+18
RDCORINV050	Ce-144	4.19E+18
RDCORINV051	Pr-143	4.78E+18
RDCORINV052	Nd-147	2.13E+18
RDCORINV053	Np-239	6.56E+19
RDCORINV054	Pu-238	1.44E+16
RDCORINV055	Pu-239	1.22E+15
RDCORINV056	Pu-240	1.83E+15
RDCORINV057	Pu-241	4.12E+17
RDCORINV058	Am-241	4.92E+14
RDCORINV059	Cm-242	1.23E+17
RDCORINV060	Cm-244	1.33E+16

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* CORSCA, scaling factor to adjust the core inventory

RDCORSCA001 1.0

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* APLFRC, Specifies how release fractions are applied to daughter ingrowth products

RDAPLFRC001 PARENT

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* GRPNAM, user assigned name of each chemical group. May have been imported from Me1MACCS

*ISGRPNAM001 Xe/Kr

*ISGRPNAM002 I

*ISGRPNAM003 Cs

*ISGRPNAM004 Te

*ISGRPNAM005 Sr

*ISGRPNAM006 Ru

*ISGRPNAM007 La

*ISGRPNAM008 Ce

*ISGRPNAM009 Ba

*

* RELFRC, release fractions for each of the plume segments for each chemical group

RDRELFRC001 9.3E-05 3.9E-06 1.6E-06 1.2E-06 3.7E-08 2.4E-07 2.1E-09 1.8E-08
1.1E-07

*

* ENDAT1, flag indicating whether only atmos is run

OCENDAT1001 .FALSE.

*

* IDEBUG, specifies set of debug results to report

OCIDEBUG001 0

*

* NUCOUT, name of the nuclide to be listed on the dispersion listings

OCNUCOUT001 Cs-137

*

* METCOD, meteorological sampling option code

M1METCOD001 2

*

* LIMSPA, last spatial interval for measured weather

M2LIMSPA001 15

*

* BNDMXH, boundary weather mixing layer height (meters)

M2BNDMXH001 1000.

*

* IBDSTB, boundary weather stability class index

M2IBDSTB001 4

*

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* BNDRAN, boundary weather rain rate (mm/hr)
M2BNDRAN001      0.
*
* BNDWND, boundary weather wind speed (m/sec)
M2BNDWND001      5.
*
* MAXHGT, if equal DAY_AND_NIGHT, then time of sunrise/sunset is used to calculate
max mixing height. DAY_ONLY uses MACCS2 1.12 model
M1MAXHGT001      DAY_ONLY
*
* NRNINT, number of rain distance intervals for binning
M4NRNINT001      6
*
* RNDSTS, endpoints of the rain distance intervals (km)
M4RNDSTS001      3.23
M4RNDSTS002      6.45
M4RNDSTS003      11.29
M4RNDSTS004      16.13
M4RNDSTS005      32.26
M4RNDSTS006      64.52
*
* NRINTN, number of rain intensity breakpoints
M4NRINTN001      3
*
* RNRATE, rain intensity breakpoints for weather binning (mm/hr)
M4RNRATE001      2.
M4RNRATE002      4.
M4RNRATE003      6.
*
* NSMPLS_BIN, number of samples per bin
M4NSMPLS001      4
*
* IRSEED, initial seed for random number generator
M4IRSEED001      79
*
* ATMOS_ZERO = 0
TYPE0NUMBER      0
*
* NUM_DIST2, used for Dispersion Power Law (always 0)
NUM_DIST001      0
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