

Mail Envelope Properties (3899BE1F.CDF : 14 : 52731)

Subject: Appendix A to the SFP Consequence Assessment
Creation Date: Thu, Feb 3, 2000 12:42 PM
From: Jason Schaperow

Created By: TWFN_DO.TWF5_PO:JHS1

Recipients	Action	Date & Time
Post Office OWFN_DO.owf2_po GTH (George Hubbard) TME (Tanya Eaton)	Delivered	02/03 12:43 PM

Post Office TWFN_DO.twf5_po CGT CC (Charles Tinkler)	Delivered	02/03 12:42 PM
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Domain.Post Office	Delivered	Route
OWFN_DO.owf2_po	02/03 12:43 PM	OWFN_DO.owf2_po
TWFN_DO.twf5_po	02/03 12:42 PM	TWFN_DO.twf5_po

Files	Size	Date & Time
append1.wpd	123095	Tuesday, July 6, 1999 11:29 AM
MESSAGE	552	Thursday, February 3, 2000 12:42 PM

Options

Auto Delete: No
Expiration Date: None
Notify Recipients: Yes
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
Security: Standard

To Be Delivered: Immediate
Status Tracking: Delivered & Opened

*c:\jaswp\store\store7\append1.wpd 7/6/99
4:29 p.m.
(11:29 a.m.)*

Appendix A

MACCS2 Input Files for the Base Case with Radionuclide Inventories at 30 Days Following Reactor Shutdown

This appendix contains the MACCS2 input files for the Base Case with radionuclide inventories at 30 days following reactor shutdown. MACCS2 uses a total of five input files for each run. The first file (ATMOS.INP) contains the source term and atmospheric dispersion input. The second file (EARLY.INP) contains the input for emergency response and variables that are affected during the first week of the accident. The third file (CHRONC.INP) contains the input for variables that are affected after the first week of the accident. The fourth file (METSUR.INP) gives the meteorological data. For brevity, only the beginning and end of the METSUR.INP file are shown in this appendix. Finally, the fifth file (SURSIT.INP) gives the siting information, such as offsite population in each sector.

**MACCS2 Input File for the Base Case with Radionuclide
Inventories at 30 Days Following Reactor Shutdown:**

ATMOS.INP

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* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "ATMOS" INPUT
*
RIATNAM1001 'IN1A.INP, Sample Problem A--Using Table-Lookup Sigmas, ATMOS input'
*****
* GEOMETRY DATA BLOCK, LOADED BY INPGEO, STORED IN /GEOM/
*
* NUMBER OF RADIAL SPATIAL ELEMENTS
*
GENUMRAD001 26
*
* SURRY
*
GESPAEND001 .16 .52 1.21 1.61 2.13
GESPAEND002 3.22 4.02 4.83 5.63 8.05
GESPAEND003 11.27 16.09 20.92 25.75 32.19
GESPAEND004 40.23 48.28 64.37 80.47 112.65
GESPAEND005 160.93 241.14 321.87 563.27 804.67
GESPAEND006 1609.34
*****
* NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/
*
* Number of pseudo-stable nuclides (used to truncate the decay chains)
*
ISNUMSTB001 27
*
* List of pseudo-stable nuclides
*
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

	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
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

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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

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* 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 INPDY, STORED IN /DRYCON/

*
* NUMBER OF PARTICLE SIZE GROUPS
*

DDNPSGRP001 1

*
* DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
*

DDVDEPOS001 0.01 (VALUE SELECTED BY S. ACHARYA, NRC)

* 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)

*
NUM_DIST001 50
*

* A-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)	
A-STB/DIS01	1.000E+00	3.6580E-01	2.5000E-04	Tadmor/Gur (0.5-5 km)
A-STB/DIS02	1.400E+00	4.9569E-01	5.1105E-04	Tadmor/Gur (0.5-5 km)
A-STB/DIS03	2.000E+00	6.8408E-01	1.0905E-03	Tadmor/Gur (0.5-5 km)
A-STB/DIS04	3.000E+00	9.8658E-01	2.5812E-03	Tadmor/Gur (0.5-5 km)
A-STB/DIS05	4.000E+00	1.2793E+00	4.7568E-03	Tadmor/Gur (0.5-5 km)
A-STB/DIS06	5.000E+00	1.5649E+00	7.6428E-03	Tadmor/Gur (0.5-5 km)
A-STB/DIS07	6.000E+00	1.8450E+00	1.1259E-02	Tadmor/Gur (0.5-5 km)
A-STB/DIS08	8.000E+00	2.3923E+00	2.0749E-02	Tadmor/Gur (0.5-5 km)
A-STB/DIS09	1.000E+01	2.9265E+00	3.3338E-02	Tadmor/Gur (0.5-5 km)
A-STB/DIS10	1.000E+02	2.3412E+01	4.4457E+00	Tadmor/Gur (0.5-5 km)
A-STB/DIS11	1.400E+02	3.1726E+01	9.0879E+00	Tadmor/Gur (0.5-5 km)
A-STB/DIS12	2.000E+02	4.3783E+01	1.9392E+01	Tadmor/Gur (0.5-5 km)
A-STB/DIS13	3.000E+02	6.3144E+01	4.5901E+01	Tadmor/Gur (0.5-5 km)
A-STB/DIS14	4.000E+02	8.1877E+01	8.4590E+01	Tadmor/Gur (0.5-5 km)
A-STB/DIS15	5.000E+02	1.0016E+02	1.3591E+02	Tadmor/Gur (0.5-5 km)
A-STB/DIS16	6.000E+02	1.1808E+02	2.0022E+02	Tadmor/Gur (0.5-5 km)
A-STB/DIS17	8.000E+02	1.5312E+02	3.6898E+02	Tadmor/Gur (0.5-5 km)
A-STB/DIS18	1.000E+03	1.8730E+02	5.9284E+02	Tadmor/Gur (0.5-5 km)
A-STB/DIS19	1.400E+03	2.5381E+02	1.2119E+03	Tadmor/Gur (0.5-5 km)
A-STB/DIS20	2.000E+03	3.5027E+02	2.5860E+03	Tadmor/Gur (0.5-5 km)

A-STB/DIS21	3.000E+03	5.0516E+02	6.1210E+03	Tadmor/Gur	(0.5-5 km)
A-STB/DIS22	4.000E+03	6.5503E+02	1.1280E+04	Tadmor/Gur	(0.5-5 km)
A-STB/DIS23	5.000E+03	8.0128E+02	1.8124E+04	Tadmor/Gur	(0.5-5 km)
A-STB/DIS24	6.000E+03	9.4470E+02	2.6700E+04	Tadmor/Gur	(0.5-5 km)
A-STB/DIS25	8.000E+03	1.2250E+03	4.9205E+04	Tadmor/Gur	(0.5-5 km)
A-STB/DIS26	1.000E+04	1.4985E+03	7.9057E+04	Tadmor/Gur	(0.5-5 km)
A-STB/DIS27	1.400E+04	2.0305E+03	1.6161E+05	Tadmor/Gur	(0.5-5 km)
A-STB/DIS28	2.000E+04	2.8022E+03	3.4485E+05	Tadmor/Gur	(0.5-5 km)
A-STB/DIS29	3.000E+04	4.0414E+03	8.1625E+05	Tadmor/Gur	(0.5-5 km)
A-STB/DIS30	4.000E+04	5.2404E+03	1.5042E+06	Tadmor/Gur	(0.5-5 km)
A-STB/DIS31	5.000E+04	6.4104E+03	2.4169E+06	Tadmor/Gur	(0.5-5 km)
A-STB/DIS32	6.000E+04	7.5577E+03	3.5605E+06	Tadmor/Gur	(0.5-5 km)
A-STB/DIS33	8.000E+04	9.8000E+03	6.5615E+06	Tadmor/Gur	(0.5-5 km)
A-STB/DIS34	1.000E+05	1.1988E+04	1.0542E+07	Tadmor/Gur	(0.5-5 km)
A-STB/DIS35	1.400E+05	1.6245E+04	2.1551E+07	Tadmor/Gur	(0.5-5 km)
A-STB/DIS36	2.000E+05	2.2418E+04	4.5986E+07	Tadmor/Gur	(0.5-5 km)
A-STB/DIS37	3.000E+05	3.2332E+04	1.0885E+08	Tadmor/Gur	(0.5-5 km)
A-STB/DIS38	4.000E+05	4.1924E+04	2.0059E+08	Tadmor/Gur	(0.5-5 km)
A-STB/DIS39	5.000E+05	5.1284E+04	3.2229E+08	Tadmor/Gur	(0.5-5 km)
A-STB/DIS40	6.000E+05	6.0463E+04	4.7480E+08	Tadmor/Gur	(0.5-5 km)
A-STB/DIS41	8.000E+05	7.8401E+04	8.7500E+08	Tadmor/Gur	(0.5-5 km)
A-STB/DIS42	1.000E+06	9.5906E+04	1.4059E+09	Tadmor/Gur	(0.5-5 km)
A-STB/DIS43	1.400E+06	1.2996E+05	2.8738E+09	Tadmor/Gur	(0.5-5 km)
A-STB/DIS44	2.000E+06	1.7935E+05	6.1324E+09	Tadmor/Gur	(0.5-5 km)
A-STB/DIS45	3.000E+06	2.5866E+05	1.4515E+10	Tadmor/Gur	(0.5-5 km)
A-STB/DIS46	4.000E+06	3.3540E+05	2.6750E+10	Tadmor/Gur	(0.5-5 km)
A-STB/DIS47	5.000E+06	4.1028E+05	4.2979E+10	Tadmor/Gur	(0.5-5 km)
A-STB/DIS48	6.000E+06	4.8372E+05	6.3316E+10	Tadmor/Gur	(0.5-5 km)
A-STB/DIS49	8.000E+06	6.2723E+05	1.1668E+11	Tadmor/Gur	(0.5-5 km)
A-STB/DIS50	1.000E+07	7.6726E+05	1.8747E+11	Tadmor/Gur	(0.5-5 km)

*

* B-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)		
B-STB/DIS01	1.000E+00	2.7510E-01	1.9000E-03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS02	1.400E+00	3.7279E-01	3.2574E-03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS03	2.000E+00	5.1446E-01	5.7681E-03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS04	3.000E+00	7.4196E-01	1.1045E-02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS05	4.000E+00	9.6208E-01	1.7511E-02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS06	5.000E+00	1.1769E+00	2.5036E-02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS07	6.000E+00	1.3875E+00	3.3530E-02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS08	8.000E+00	1.7992E+00	5.3161E-02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS09	1.000E+01	2.2009E+00	7.6007E-02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS10	1.000E+02	1.7607E+01	3.0406E+00	Tadmor/Gur	(0.5-5 km)
B-STB/DIS11	1.400E+02	2.3859E+01	5.2127E+00	Tadmor/Gur	(0.5-5 km)
B-STB/DIS12	2.000E+02	3.2927E+01	9.2307E+00	Tadmor/Gur	(0.5-5 km)
B-STB/DIS13	3.000E+02	4.7487E+01	1.7675E+01	Tadmor/Gur	(0.5-5 km)
B-STB/DIS14	4.000E+02	6.1576E+01	2.8023E+01	Tadmor/Gur	(0.5-5 km)
B-STB/DIS15	5.000E+02	7.5323E+01	4.0066E+01	Tadmor/Gur	(0.5-5 km)
B-STB/DIS16	6.000E+02	8.8805E+01	5.3657E+01	Tadmor/Gur	(0.5-5 km)
B-STB/DIS17	8.000E+02	1.1515E+02	8.5073E+01	Tadmor/Gur	(0.5-5 km)
B-STB/DIS18	1.000E+03	1.4086E+02	1.2163E+02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS19	1.400E+03	1.9088E+02	2.0853E+02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS20	2.000E+03	2.6342E+02	3.6926E+02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS21	3.000E+03	3.7991E+02	7.0705E+02	Tadmor/Gur	(0.5-5 km)
B-STB/DIS22	4.000E+03	4.9262E+02	1.1210E+03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS23	5.000E+03	6.0260E+02	1.6028E+03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS24	6.000E+03	7.1046E+02	2.1465E+03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS25	8.000E+03	9.2124E+02	3.4033E+03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS26	1.000E+04	1.1269E+03	4.8658E+03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS27	1.400E+04	1.5271E+03	8.3419E+03	Tadmor/Gur	(0.5-5 km)
B-STB/DIS28	2.000E+04	2.1074E+03	1.4772E+04	Tadmor/Gur	(0.5-5 km)
B-STB/DIS29	3.000E+04	3.0393E+03	2.8285E+04	Tadmor/Gur	(0.5-5 km)
B-STB/DIS30	4.000E+04	3.9410E+03	4.4845E+04	Tadmor/Gur	(0.5-5 km)
B-STB/DIS31	5.000E+04	4.8209E+03	6.4117E+04	Tadmor/Gur	(0.5-5 km)
B-STB/DIS32	6.000E+04	5.6838E+03	8.5868E+04	Tadmor/Gur	(0.5-5 km)

B-STB/DIS33	8.000E+04	7.3701E+03	1.3614E+05	Tadmor/Gur	(0.5-5 km)
B-STB/DIS34	1.000E+05	9.0155E+03	1.9465E+05	Tadmor/Gur	(0.5-5 km)
B-STB/DIS35	1.400E+05	1.2217E+04	3.3371E+05	Tadmor/Gur	(0.5-5 km)
B-STB/DIS36	2.000E+05	1.6860E+04	5.9093E+05	Tadmor/Gur	(0.5-5 km)
B-STB/DIS37	3.000E+05	2.4315E+04	1.1315E+06	Tadmor/Gur	(0.5-5 km)
B-STB/DIS38	4.000E+05	3.1529E+04	1.7940E+06	Tadmor/Gur	(0.5-5 km)
B-STB/DIS39	5.000E+05	3.8568E+04	2.5649E+06	Tadmor/Gur	(0.5-5 km)
B-STB/DIS40	6.000E+05	4.5471E+04	3.4350E+06	Tadmor/Gur	(0.5-5 km)
B-STB/DIS41	8.000E+05	5.8962E+04	5.4462E+06	Tadmor/Gur	(0.5-5 km)
B-STB/DIS42	1.000E+06	7.2126E+04	7.7867E+06	Tadmor/Gur	(0.5-5 km)
B-STB/DIS43	1.400E+06	9.7737E+04	1.3350E+07	Tadmor/Gur	(0.5-5 km)
B-STB/DIS44	2.000E+06	1.3488E+05	2.3639E+07	Tadmor/Gur	(0.5-5 km)
B-STB/DIS45	3.000E+06	1.9453E+05	4.5264E+07	Tadmor/Gur	(0.5-5 km)
B-STB/DIS46	4.000E+06	2.5224E+05	7.1765E+07	Tadmor/Gur	(0.5-5 km)
B-STB/DIS47	5.000E+06	3.0855E+05	1.0261E+08	Tadmor/Gur	(0.5-5 km)
B-STB/DIS48	6.000E+06	3.6378E+05	1.3741E+08	Tadmor/Gur	(0.5-5 km)
B-STB/DIS49	8.000E+06	4.7171E+05	2.1787E+08	Tadmor/Gur	(0.5-5 km)
B-STB/DIS50	1.000E+07	5.7702E+05	3.1150E+08	Tadmor/Gur	(0.5-5 km)

*

* C-stability

	Distance (m)	Sigma-y (m)	Sigma-z (m)		
C-STB/DIS01	1.000E+00	2.0890E-01	2.0000E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS02	1.400E+00	2.8308E-01	2.6660E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS03	2.000E+00	3.9066E-01	3.6158E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS04	3.000E+00	5.6341E-01	5.1125E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS05	4.000E+00	7.3056E-01	6.5369E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS06	5.000E+00	8.9367E-01	7.9097E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS07	6.000E+00	1.0536E+00	9.2428E-01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS08	8.000E+00	1.3662E+00	1.1818E+00	Tadmor/Gur	(0.5-5 km)
C-STB/DIS09	1.000E+01	1.6712E+00	1.4300E+00	Tadmor/Gur	(0.5-5 km)
C-STB/DIS10	1.000E+02	1.3370E+01	1.0224E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS11	1.400E+02	1.8118E+01	1.3629E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS12	2.000E+02	2.5003E+01	1.8484E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS13	3.000E+02	3.6060E+01	2.6136E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS14	4.000E+02	4.6758E+01	3.3417E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS15	5.000E+02	5.7198E+01	4.0435E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS16	6.000E+02	6.7435E+01	4.7250E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS17	8.000E+02	8.7442E+01	6.0414E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS18	1.000E+03	1.0696E+02	7.3102E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS19	1.400E+03	1.4495E+02	9.7447E+01	Tadmor/Gur	(0.5-5 km)
C-STB/DIS20	2.000E+03	2.0003E+02	1.3216E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS21	3.000E+03	2.8849E+02	1.8687E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS22	4.000E+03	3.7408E+02	2.3893E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS23	5.000E+03	4.5759E+02	2.8911E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS24	6.000E+03	5.3949E+02	3.3784E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS25	8.000E+03	6.9955E+02	4.3196E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS26	1.000E+04	8.5573E+02	5.2267E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS27	1.400E+04	1.1596E+03	6.9673E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS28	2.000E+04	1.6003E+03	9.4493E+02	Tadmor/Gur	(0.5-5 km)
C-STB/DIS29	3.000E+04	2.3080E+03	1.3361E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS30	4.000E+04	2.9927E+03	1.7083E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS31	5.000E+04	3.6608E+03	2.0671E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS32	6.000E+04	4.3161E+03	2.4155E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS33	8.000E+04	5.5965E+03	3.0884E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS34	1.000E+05	6.8460E+03	3.7371E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS35	1.400E+05	9.2770E+03	4.9816E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS36	2.000E+05	1.2803E+04	6.7562E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS37	3.000E+05	1.8464E+04	9.5529E+03	Tadmor/Gur	(0.5-5 km)
C-STB/DIS38	4.000E+05	2.3942E+04	1.2214E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS39	5.000E+05	2.9287E+04	1.4780E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS40	6.000E+05	3.4529E+04	1.7270E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS41	8.000E+05	4.4773E+04	2.2082E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS42	1.000E+06	5.4769E+04	2.6720E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS43	1.400E+06	7.4218E+04	3.5618E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS44	2.000E+06	1.0242E+05	4.8306E+04	Tadmor/Gur	(0.5-5 km)

C-STB/DIS45	3.000E+06	1.4772E+05	6.8302E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS46	4.000E+06	1.9154E+05	8.7331E+04	Tadmor/Gur	(0.5-5 km)
C-STB/DIS47	5.000E+06	2.3430E+05	1.0567E+05	Tadmor/Gur	(0.5-5 km)
C-STB/DIS48	6.000E+06	2.7624E+05	1.2348E+05	Tadmor/Gur	(0.5-5 km)
C-STB/DIS49	8.000E+06	3.5819E+05	1.5788E+05	Tadmor/Gur	(0.5-5 km)
C-STB/DIS50	1.000E+07	4.3817E+05	1.9104E+05	Tadmor/Gur	(0.5-5 km)

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* D-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)		
D-STB/DIS01	1.000E+00	1.4740E-01	3.0000E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS02	1.400E+00	1.9974E-01	3.7374E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS03	2.000E+00	2.7565E-01	4.7180E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS04	3.000E+00	3.9754E-01	6.1486E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS05	4.000E+00	5.1549E-01	7.4197E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS06	5.000E+00	6.3058E-01	8.5840E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS07	6.000E+00	7.4344E-01	9.6696E-01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS08	8.000E+00	9.6400E-01	1.1669E+00	Tadmor/Gur	(0.5-5 km)
D-STB/DIS09	1.000E+01	1.1792E+00	1.3500E+00	Tadmor/Gur	(0.5-5 km)
D-STB/DIS10	1.000E+02	9.4340E+00	6.0746E+00	Tadmor/Gur	(0.5-5 km)
D-STB/DIS11	1.400E+02	1.2784E+01	7.5678E+00	Tadmor/Gur	(0.5-5 km)
D-STB/DIS12	2.000E+02	1.7642E+01	9.5533E+00	Tadmor/Gur	(0.5-5 km)
D-STB/DIS13	3.000E+02	2.5444E+01	1.2450E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS14	4.000E+02	3.2993E+01	1.5024E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS15	5.000E+02	4.0359E+01	1.7382E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS16	6.000E+02	4.7582E+01	1.9580E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS17	8.000E+02	6.1699E+01	2.3628E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS18	1.000E+03	7.5474E+01	2.7335E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS19	1.400E+03	1.0227E+02	3.4054E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS20	2.000E+03	1.4114E+02	4.2989E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS21	3.000E+03	2.0356E+02	5.6024E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS22	4.000E+03	2.6395E+02	6.7606E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS23	5.000E+03	3.2288E+02	7.8215E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS24	6.000E+03	3.8067E+02	8.8107E+01	Tadmor/Gur	(0.5-5 km)
D-STB/DIS25	8.000E+03	4.9360E+02	1.0632E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS26	1.000E+04	6.0381E+02	1.2300E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS27	1.400E+04	8.1821E+02	1.5324E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS28	2.000E+04	1.1292E+03	1.9344E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS29	3.000E+04	1.6285E+03	2.5210E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS30	4.000E+04	2.1116E+03	3.0422E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS31	5.000E+04	2.5831E+03	3.5196E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS32	6.000E+04	3.0454E+03	3.9647E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS33	8.000E+04	3.9489E+03	4.7843E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS34	1.000E+05	4.8306E+03	5.5350E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS35	1.400E+05	6.5458E+03	6.8956E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS36	2.000E+05	9.0335E+03	8.7047E+02	Tadmor/Gur	(0.5-5 km)
D-STB/DIS37	3.000E+05	1.3028E+04	1.1344E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS38	4.000E+05	1.6893E+04	1.3689E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS39	5.000E+05	2.0665E+04	1.5838E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS40	6.000E+05	2.4364E+04	1.7841E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS41	8.000E+05	3.1592E+04	2.1529E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS42	1.000E+06	3.8645E+04	2.4907E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS43	1.400E+06	5.2368E+04	3.1029E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS44	2.000E+06	7.2270E+04	3.9170E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS45	3.000E+06	1.0423E+05	5.1048E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS46	4.000E+06	1.3515E+05	6.1601E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS47	5.000E+06	1.6532E+05	7.1267E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS48	6.000E+06	1.9492E+05	8.0280E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS49	8.000E+06	2.5274E+05	9.6877E+03	Tadmor/Gur	(0.5-5 km)
D-STB/DIS50	1.000E+07	3.0917E+05	1.1208E+04	Tadmor/Gur	(0.5-5 km)

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* E-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)		
E-STB/DIS01	1.000E+00	1.0460E-01	4.0000E-01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS02	1.400E+00	1.4174E-01	4.8983E-01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS03	2.000E+00	1.9561E-01	6.0717E-01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS04	3.000E+00	2.8211E-01	7.7506E-01	Tadmor/Gur	(0.5-5 km)

E-STB/DIS05	4.000E+00	3.6581E-01	9.2164E-01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS06	5.000E+00	4.4748E-01	1.0542E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS07	6.000E+00	5.2757E-01	1.1765E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS08	8.000E+00	6.8409E-01	1.3990E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS09	1.000E+01	8.3682E-01	1.6001E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS10	1.000E+02	6.6947E+00	6.4012E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS11	1.400E+02	9.0719E+00	7.8387E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS12	2.000E+02	1.2520E+01	9.7165E+00	Tadmor/Gur	(0.5-5 km)
E-STB/DIS13	3.000E+02	1.8056E+01	1.2403E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS14	4.000E+02	2.3413E+01	1.4749E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS15	5.000E+02	2.8640E+01	1.6870E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS16	6.000E+02	3.3766E+01	1.8827E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS17	8.000E+02	4.3784E+01	2.2388E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS18	1.000E+03	5.3559E+01	2.5607E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS19	1.400E+03	7.2577E+01	3.1358E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS20	2.000E+03	1.0016E+02	3.8870E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS21	3.000E+03	1.4445E+02	4.9617E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS22	4.000E+03	1.8731E+02	5.9001E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS23	5.000E+03	2.2912E+02	6.7485E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS24	6.000E+03	2.7013E+02	7.5316E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS25	8.000E+03	3.5028E+02	8.9559E+01	Tadmor/Gur	(0.5-5 km)
E-STB/DIS26	1.000E+04	4.2848E+02	1.0244E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS27	1.400E+04	5.8063E+02	1.2544E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS28	2.000E+04	8.0129E+02	1.5549E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS29	3.000E+04	1.1556E+03	1.9849E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS30	4.000E+04	1.4985E+03	2.3603E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS31	5.000E+04	1.8330E+03	2.6997E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS32	6.000E+04	2.1611E+03	3.0129E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS33	8.000E+04	2.8023E+03	3.5827E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS34	1.000E+05	3.4279E+03	4.0979E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS35	1.400E+05	4.6452E+03	5.0182E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS36	2.000E+05	6.4105E+03	6.2203E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS37	3.000E+05	9.2453E+03	7.9403E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS38	4.000E+05	1.1988E+04	9.4419E+02	Tadmor/Gur	(0.5-5 km)
E-STB/DIS39	5.000E+05	1.4665E+04	1.0800E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS40	6.000E+05	1.7289E+04	1.2053E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS41	8.000E+05	2.2419E+04	1.4332E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS42	1.000E+06	2.7424E+04	1.6393E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS43	1.400E+06	3.7162E+04	2.0074E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS44	2.000E+06	5.1285E+04	2.4883E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS45	3.000E+06	7.3964E+04	3.1764E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS46	4.000E+06	9.5907E+04	3.7771E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS47	5.000E+06	1.1732E+05	4.3203E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS48	6.000E+06	1.3832E+05	4.8215E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS49	8.000E+06	1.7935E+05	5.7334E+03	Tadmor/Gur	(0.5-5 km)
E-STB/DIS50	1.000E+07	2.1940E+05	6.5578E+03	Tadmor/Gur	(0.5-5 km)

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* F-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)		
F-STB/DIS01	1.000E+00	7.2200E-02	2.0000E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS02	1.400E+00	9.7838E-02	2.4491E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS03	2.000E+00	1.3502E-01	3.0356E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS04	3.000E+00	1.9473E-01	3.8749E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS05	4.000E+00	2.5250E-01	4.6076E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS06	5.000E+00	3.0887E-01	5.2700E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS07	6.000E+00	3.6415E-01	5.8814E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS08	8.000E+00	4.7219E-01	6.9934E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS09	1.000E+01	5.7761E-01	7.9989E-01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS10	1.000E+02	4.6210E+00	3.1991E+00	Tadmor/Gur	(0.5-5 km)
F-STB/DIS11	1.400E+02	6.2619E+00	3.9174E+00	Tadmor/Gur	(0.5-5 km)
F-STB/DIS12	2.000E+02	8.6417E+00	4.8557E+00	Tadmor/Gur	(0.5-5 km)
F-STB/DIS13	3.000E+02	1.2463E+01	6.1981E+00	Tadmor/Gur	(0.5-5 km)
F-STB/DIS14	4.000E+02	1.6161E+01	7.3700E+00	Tadmor/Gur	(0.5-5 km)
F-STB/DIS15	5.000E+02	1.9769E+01	8.4297E+00	Tadmor/Gur	(0.5-5 km)
F-STB/DIS16	6.000E+02	2.3307E+01	9.4076E+00	Tadmor/Gur	(0.5-5 km)

F-STB/DIS17	8.000E+02	3.0222E+01	1.1186E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS18	1.000E+03	3.6969E+01	1.2795E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS19	1.400E+03	5.0096E+01	1.5667E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS20	2.000E+03	6.9135E+01	1.9420E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS21	3.000E+03	9.9707E+01	2.4789E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS22	4.000E+03	1.2929E+02	2.9476E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS23	5.000E+03	1.5815E+02	3.3714E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS24	6.000E+03	1.8646E+02	3.7625E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS25	8.000E+03	2.4178E+02	4.4739E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS26	1.000E+04	2.9576E+02	5.1172E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS27	1.400E+04	4.0078E+02	6.2661E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS28	2.000E+04	5.5309E+02	7.7669E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS29	3.000E+04	7.9767E+02	9.9142E+01	Tadmor/Gur	(0.5-5 km)
F-STB/DIS30	4.000E+04	1.0343E+03	1.1789E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS31	5.000E+04	1.2653E+03	1.3484E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS32	6.000E+04	1.4917E+03	1.5048E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS33	8.000E+04	1.9343E+03	1.7893E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS34	1.000E+05	2.3661E+03	2.0466E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS35	1.400E+05	3.2063E+03	2.5061E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS36	2.000E+05	4.4248E+03	3.1063E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS37	3.000E+05	6.3815E+03	3.9651E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS38	4.000E+05	8.2748E+03	4.7149E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS39	5.000E+05	1.0122E+04	5.3927E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS40	6.000E+05	1.1934E+04	6.0183E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS41	8.000E+05	1.5475E+04	7.1563E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS42	1.000E+06	1.8929E+04	8.1852E+02	Tadmor/Gur	(0.5-5 km)
F-STB/DIS43	1.400E+06	2.5651E+04	1.0023E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS44	2.000E+06	3.5400E+04	1.2424E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS45	3.000E+06	5.1053E+04	1.5858E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS46	4.000E+06	6.6200E+04	1.8857E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS47	5.000E+06	8.0980E+04	2.1568E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS48	6.000E+06	9.5474E+04	2.4070E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS49	8.000E+06	1.2380E+05	2.8621E+03	Tadmor/Gur	(0.5-5 km)
F-STB/DIS50	1.000E+07	1.5144E+05	3.2736E+03	Tadmor/Gur	(0.5-5 km)

* 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 600. (10 MINUTES)

* BREAK POINT FOR FORMULA CHANGE (SECONDS)

PMBRPNT001 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)
*
PRSCLDAP001 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/
*
RDATNAM2001 'SECOND DRAFT 1150, WORST CASE SOURCE TERM FOR EARLY FATALITIES'
*
* TIME AFTER ACCIDENT INITIATION WHEN THE ACCIDENT REACHES GENERAL EMERGENCY
* CONDITIONS (AS DEFINED IN NUREG-0654), OR WHEN PLANT PERSONNEL CAN RELIABLY
* PREDICT THAT GENERAL EMERGENCY CONDITIONS WILL BE ATTAINED
*
RDOALARM001 1300.
*
* NUMBER OF PLUME SEGMENTS THAT ARE RELEASED
*
RDNUMREL001 1
*
* SELECTION OF RISK DOMINANT PLUME
*
RDMAXRIS001 1
*
* REFERENCE TIME FOR DISPERSION AND RADIOACTIVE DECAY
*
RDREFTIM001 0.00
*
* HEAT CONTENT OF THE RELEASE SEGMENTS (W)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPLHEAT001 3.7E+6
*
* HEIGHT OF THE PLUME SEGMENTS AT RELEASE (M)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPLHITE001 0.
*
* DURATION OF THE PLUME SEGMENTS (S)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPLUDUR001 1800.
*
* TIME OF RELEASE FOR EACH PLUME (S AFTER SCRAM)
* A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
*
RDPDELAY001 3700.
*
* Initial value of sigma-y for each plume--Note: values required for each plume
*
SIGYINIT001 9.302 (initial sigma-y, calculated for 40 meter wide bldg.)
*
* Initial value of sigma-z for each plume--Note: values required for each plume
*

```

SIGZINIT001 23.26 (initial sigma-z, calculated for 50 meter high bldg.)

*

* Building height (meters)--Note: values required for each plume

*

WEBUILDH001 50.0 (Surry)

*

* 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.

*

* Millstone 1 spent fuel pool inventory

* - spent fuel pool contains 11 batches of spent fuel plus rest of last core

* - inventory reflects 30 days of radioactive decay since last batch

* was put in pool

* - inventory is based on inventories in NUREG/CR-4982, July 1987

* - Millstone 1 has a power of 2011 MWt

*

*

	NUCNAM	CORINV (Bq)
RDCORINV001	Co-58	2.430E+15
RDCORINV002	Co-60	1.690E+16
RDCORINV003	Kr-85	6.300E+16
RDCORINV004	Kr-85m	0.000E+00
RDCORINV005	Kr-87	0.000E+00
RDCORINV006	Kr-88	0.000E+00
RDCORINV007	Rb-86	7.570E+14
RDCORINV008	Sr-89	1.150E+18
RDCORINV009	Sr-90	6.110E+17
RDCORINV010	Sr-91	0.000E+00
RDCORINV011	Sr-92	0.000E+00
RDCORINV012	Y-90	6.190E+17
RDCORINV013	Y-91	1.570E+18
RDCORINV014	Y-92	0.000E+00
RDCORINV015	Y-93	0.000E+00
RDCORINV016	Zr-95	2.330E+18
RDCORINV017	Zr-97	0.000E+00
RDCORINV018	Nb-95	2.390E+18
RDCORINV019	Mo-99	1.470E+15
RDCORINV020	Tc-99m	1.290E+15
RDCORINV021	Ru-103	1.530E+18
RDCORINV022	Ru-105	0.000E+00
RDCORINV023	Ru-106	1.090E+18
RDCORINV024	Rh-105	0.000E+00
RDCORINV025	Sb-127	7.740E+14
RDCORINV026	Sb-129	0.000E+00
RDCORINV027	Te-127	2.050E+16
RDCORINV028	Te-127m	2.050E+16
RDCORINV029	Te-129	4.480E+16
RDCORINV030	Te-129m	4.460E+16
RDCORINV031	Te-131m	0.000E+00
RDCORINV032	Te-132	3.750E+15
RDCORINV033	I-131	1.300E+17
RDCORINV034	I-132	3.810E+15
RDCORINV035	I-133	0.000E+00
RDCORINV036	I-134	0.000E+00

```

RDCORINV037      I-135          0.000E+00
RDCORINV038      Xe-133          6.600E+16
RDCORINV039      Xe-135          0.000E+00
RDCORINV040      Cs-134          3.810E+17
RDCORINV041      Cs-136          1.610E+16
RDCORINV042      Cs-137          8.580E+17
RDCORINV043      Ba-139          0.000E+00
RDCORINV044      Ba-140          6.100E+17
RDCORINV045      La-140          6.230E+17
RDCORINV046      La-141          0.000E+00
RDCORINV047      La-142          0.000E+00
RDCORINV048      Ce-141          1.550E+18
RDCORINV049      Ce-143          0.000E+00
RDCORINV050      Ce-144          2.350E+18
RDCORINV051      Pr-143          5.910E+17
RDCORINV052      Nd-147          1.770E+17
RDCORINV053      Np-239          6.470E+15
RDCORINV054      Pu-238          1.760E+16
RDCORINV055      Pu-239          3.870E+15
RDCORINV056      Pu-240          5.400E+15
RDCORINV057      Pu-241          9.470E+17
RDCORINV058      Am-241          1.080E+16
RDCORINV059      Cm-242          7.320E+16
RDCORINV060      Cm-244          8.700E+15

```

```

*
* SCALING FACTOR TO ADJUST THE CORE INVENTORY FOR POWER LEVEL
*

```

```

RDCORSCA001      1.711 * convert from Millstone to Susquehanna
*                  by multiplying by ratio of powers
*                  (3441Mwt/2011Mwt)
*

```

```

RDAPLFRFC001     PARENT          (apply rel fracs the same as prior versions)
*

```

```

* RELEASE FRACTIONS FOR ISOTOPE GROUPS IN RELEASE
*

```

```

* ISOTOPE GROUPS:
*

```

```

*           XE/KR      I      CS      TE      SR      RU      LA      CE      BA
*

```

```

RDRELFRFC001 1.0E+0 1.0E+0 1.0E+0 2.0E-2 2.0E-3 2.0E-5 1.0E-6 1.0E-6 2.0E-3
*****

```

```

* OUTPUT CONTROL DATA BLOCK, LOADED BY INPOPT, STORED IN /STOPME/, /ATMPT/
*

```

```

* 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
TYPE0NUMBER      2
*

```

```

*           INDREL      INDRAD
TYPE0OUT001        1          9

```

```

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 25

* BOUNDARY WEATHER MIXING LAYER HEIGHT
*

M2BNDMXH001 1000. (METERS)

* BOUNDARY WEATHER STABILITY CLASS INDEX
*

M2IBDSTB001 4 (D-STABILITY)

* BOUNDARY WEATHER RAIN RATE
*

M2BNDRAN001 5. (MM/HR)

* BOUNDARY WEATHER WIND SPEED
*

M2BNDWND001 5. (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 THE ARRAY SPAEND (10 % ERROR IS ALLOWED).
*

M4RNDSTS001 3.22 5.63 11.27 20.92 32.19

* NUMBER OF RAIN INTENSITY 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 4 FOR RISK ASSESSMENT)
*

* INITIAL SEED FOR RANDOM NUMBER GENERATOR
*

M4IRSEED001 79

.

* 4/14/99: J. Schaperow commented out source term number 2 of 2.*

***** RELEASE DATA BLOCK *****

* SOURCE TERM NUMBER 2 OF 2

*

*RDATNAM2001 'RELEASE FRACTIONS OF SOURCE TERM 1 REDUCED BY A FACTOR OF TEN'

*

* XE/KR I CS TE SR RU LA CE BA

*

*RDRELFRC001 1.0E-1 6.8E-2 6.4E-2 1.7E-2 4.2E-4 2.3E-4 1.6E-5 4.0E-5 6.3E-4

*RDRELFRC002 4.3E-4 9.5E-4 2.4E-4 1.4E-2 6.8E-3 4.7E-5 6.8E-4 7.1E-4 5.4E-3

*

**MACCS2 Input File for the Base Case with Radionuclide
Inventories at 30 Days Following Reactor Shutdown:**

EARLY.INP

```

* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "EARLY" INPUT FILE
*
MIEANAM1001 'IN2A.INP, Sample Problem A of NUREG/CR-4691, Vol. 1, EARLY input'
DCF_FILE001 '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 2
*
* 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
*
*PDPOPFLG001 UNIFORM
*PDIBEGIN001 1 (SPATIAL INTERVAL AT WHICH POPULATION BEGINS)
*PDPOPDEN001 50. (POPULATION DENSITY (PEOPLE PER SQUARE KILOMETER))
*****
* SHIELDING AND EXPOSURE FACTORS, LOADED BY INDFAC, STORED IN /EADFAC/
*
* THREE VALUES OF EACH PROTECTION FACTOR ARE SUPPLIED,

```

```

* ONE FOR EACH TYPE OF ACTIVITY:
*
* 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      1.      0.75      0.6  * SURRY SHELTERING VALUE
*
* PROTECTION FACTOR FOR INHALATION
*
SEPROTIN001      1.      0.41      0.33 * VALUES FOR NORMAL ACTIVITY AND
*           SHELTERING SELECTED BY NRC STAFF
*
* BREATHING RATE (CUBIC METERS PER SECOND)
*
SEBRRATE001  2.66E-4  2.66E-4  2.66E-4
*
* 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      0.5      0.33      0.2  * VALUE FOR NORMAL ACTIVITY SELECTED BY
*           NRC STAFF
*
* 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  'EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE'
*
* 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 0.995
*
* LAST RING IN THE MOVEMENT ZONE
*
EZLASM0V001 15 (EVACUEES DISAPPEAR AFTER TRAVELING TO 20 MILES)
*
* Flag defining the time at which evacuees "enter" the destination element
*
*TRAVELPOINT 'CENTERPOINT' (new option implemented at MACCS2 v. 1.11f)
TRAVELPOINT 'BOUNDARY' (functionality derived from MACCS circa 1984)
*
* RADIAL EVACUATION SPEED (M/S)
*
EZESPEED001 1.8 1.8 1.8 (SURRY)
EZEVATYP001 'RADIAL'
EZDURBEG001 86400.0
EZDURMID001 0.0
EZREFPNT001 'ALARM'
EZNUMEVA001 12
EZDLTSHL001 7200. 7200. 7200. 7200. 7200. 7200.
EZDLTSHL002 7200. 7200. 7200. 7200. 7200. 7200.
EZDLTEVA001 0. 0. 0. 0. 0. 0.
EZDLTEVA002 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 604800. (ONE WEEK)
*
* CRITICAL ORGAN FOR RELOCATION DECISIONS
*
SRCRIORG001 'L-EDEWBODY'
*
* HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
*
SRTIMHOT001 43200. (ONE-HALF DAY)
*
* NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
*
SRTIMNRM001 86400. (ONE DAY)
*
* HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
*
SRDOSHOT001 0.5 (50 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
*
* NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
*
SRDOSNRM001 0.25 (25 REM DOSE TO WHOLE BODY IN 1 WEEK 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

*

EINUM EIN001 7

*

	EINAME	ORGNAM	EISUSC	EITHRE	EIFACA	EIFACB
--	--------	--------	--------	--------	--------	--------

*

EINJUGRP001	'PRODRIMAL 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 7

*

* 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	'LEUKEMIA'	'L-RED MARR'	1.0	1.0	0.0	9.70E-3	0.0	2.0
LCANCERS002	'BONE'	'L-BONE SUR'	1.0	1.0	0.0	9.00E-4	0.0	2.0
LCANCERS003	'BREAST'	'L-BREAST'	1.0	1.0	0.0	5.40E-3	1.7E-2	1.0
LCANCERS004	'LUNG'	'L-LUNGS'	1.0	1.0	0.0	1.55E-2	0.0	2.0
LCANCERS005	'THYROID'	'L-THYROIDH'	1.0	1.0	0.0	7.20E-4	7.2E-3	1.0
LCANCERS006	'GI'	'L-LOWER LI'	1.0	1.0	0.0	3.36E-2	0.0	2.0
LCANCERS007	'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 32

*

TYPE1OUT001	'ERL FAT/TOTAL'		1	26				NOCDF (0 TO 1000 MILES)
TYPE1OUT002	'ERL INJ/PRODRIMAL VOMIT'		1	26				NOCDF
TYPE1OUT003	'ERL INJ/DIARRHEA'		1	26				
TYPE1OUT004	'ERL INJ/PNEUMONITIS'		1	26				
TYPE1OUT005	'ERL INJ/THYROIDITIS'		1	26				
TYPE1OUT006	'ERL INJ/HYPOTHYROIDISM'		1	26				
TYPE1OUT007	'ERL INJ/SKIN ERYTHEMA'		1	26				
TYPE1OUT008	'ERL INJ/TRANSEPIDERMAL'		1	26				
TYPE1OUT009	'CAN FAT/TOTAL'		1	26				NOCDF
TYPE1OUT010	'CAN FAT/LUNG'		1	26				
TYPE1OUT011	'CAN FAT/THYROID'		1	26				
TYPE1OUT012	'CAN FAT/BREAST'		1	26				
TYPE1OUT013	'CAN FAT/GI'		1	26				
TYPE1OUT014	'CAN FAT/LEUKEMIA'		1	26				
TYPE1OUT015	'CAN FAT/BONE'		1	26				
TYPE1OUT016	'CAN FAT/OTHER'		1	26				
TYPE1OUT017	'CAN INJ/THYROID'		1	26				
TYPE1OUT018	'CAN INJ/BREAST'		1	26				
TYPE1OUT019	'CAN FAT/TOTAL'		1	19				CCDF (0 TO 50 MILES)

```

TYPE1OUT020 'ERL FAT/TOTAL' 1 12 (0 TO 10 MILES)
TYPE1OUT021 'ERL INJ/PRODRIMAL VOMIT' 1 12
TYPE1OUT022 'ERL INJ/DIARRHEA' 1 12
TYPE1OUT023 'ERL INJ/PNEUMONITIS' 1 12
TYPE1OUT024 'ERL INJ/THYROIDITIS' 1 12
TYPE1OUT025 'ERL INJ/HYPOTHYROIDISM' 1 12
TYPE1OUT026 'ERL INJ/SKIN ERYTHEMA' 1 12
TYPE1OUT027 'ERL INJ/TRANSEPIDERMAL' 1 12
TYPE1OUT028 'CAN FAT/TOTAL' 1 12
TYPE1OUT029 'ERL FAT/TOTAL' 1 21 (0 TO 100 MILES)
TYPE1OUT030 'ERL FAT/TOTAL' 1 25 (0 TO 500 MILES)
TYPE1OUT031 'CAN FAT/TOTAL' 1 21 (0 TO 100 MILES)
TYPE1OUT032 'CAN FAT/TOTAL' 1 25 (0 TO 500 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 1
*
* 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 3
*
* 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 5
*
* RADIAL INDEX TYPE OF EFFECT
*
TYPE4OUT001 1 'ERL FAT/TOTAL'
TYPE4OUT002 2 'ERL FAT/TOTAL'
TYPE4OUT003 3 'ERL FAT/TOTAL'
TYPE4OUT004 4 'ERL FAT/TOTAL'
TYPE4OUT005 5 '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 5

	ORGAN	I1DIS5	I2DIS5	
TYPE5OUT001	'L-EDEWBODY'	1	12	(0-10 MILES)
TYPE5OUT002	'L-EDEWBODY'	1	19	NOCCDF (0-50 MILES)
TYPE5OUT003	'L-EDEWBODY'	1	26	NOCCDF (0-1000 MILES)
TYPE5OUT004	'L-EDEWBODY'	1	21	(0-100 MILES)
TYPE5OUT005	'L-EDEWBODY'	1	25	(0-500 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	19	(0-50 MILES)
*TYPE7OUT002	'CAN FAT/TOTAL'	1	26	(0-1000 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 2

	NAME	I1DIS8	I2DIS8	
TYPE8OUT001	'ERL FAT/TOTAL'	1	5	NOCCDF (0-EXCL ZONE + 1 MI)
TYPE8OUT002	'CAN FAT/TOTAL'	1	12	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      26
.
*****
* 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, RELOCATION MODELS APPLY EVERYWHERE'
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO
*
EZWTFRAC001 0.005
*
* LAST RING IN THE MOVEMENT ZONE
*
EZLASMOV001  0  (A ZERO TURNS OFF THE EVACUATION MODEL)
.

```


**MACCS2 Input File for the Base Case with Radionuclide
Inventories at 30 Days Following Reactor Shutdown:**

CHRONC.INP

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* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS "CHRONC" INPUT FILE
*
CHCHNAME001 'IN3A_N.INP, Sample Problem A, "New" COMIDA2-Based Food Model'
*****
* EMERGENCY RESPONSE COST DATA BLOCK
*
* DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)
*
CHEVACST001 27.00 (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
*
* DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)
*
CHRELCST001 27.00 (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
*
CHDSRFACT001 3. 15.
*
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
* FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
CHCDFRM0001 562.5 1250.

```

```

*
* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
* FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
CHCDNFRM001  3000.  8000.
*
* 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.
*****
* 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.
*****
* 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)
*
CHDPPRCT001   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 100 MILES)
*
CHVALWF0001   2613.  * SURRY
*
* 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   84000. * SURRY
*
* FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
CHFRNFIM001   0.8
*****
CHFDPATH001  'NEW'
*
* name of the COMIDA2 binary output file
*
BIN_FILE001  'SAMP_A.BIN'  (revised data file of 8/12/95)
*
* 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.

	effective	thyroid (doses in sieverts)
DOSEMILK001	0.025	0.075
DOSEOTHR001	0.025	0.075

* 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 criteria, GCMAXR, used for NUREG-1150 were 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

	WATER NUCLIDE	INITIAL WASHOFF FRACTION	ANNUAL WASHOFF RATE	INGESTION FACTOR ((Bq INGESTED)/ (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      26      (0-1000 MILES)
TYPE9OUT002  'L-EDEWBODY'      1      19      (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  2      (UP TO 10 ALLOWED)
*
*          INNER      OUTER
*
TYP10OUT001  1      26      (0-1000 MILES)
TYP10OUT002  1      19      (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  .TRUE.
*****
* 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  2      (UP TO 10 ALLOWED)
*
*          INNER      OUTER
*
TYP12OUT001  1      26      (0-1000 MILES)
TYP12OUT002  1      19      (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  20     (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  8     EFFECTIVE
TYP13OUT005 10     EFFECTIVE
TYP13OUT006 12     EFFECTIVE
TYP13OUT007 14     EFFECTIVE
TYP13OUT008 16     EFFECTIVE
TYP13OUT009 18     EFFECTIVE
TYP13OUT010 20     EFFECTIVE
TYP13OUT011  2     THYROID
TYP13OUT012  4     THYROID
TYP13OUT013  6     THYROID
TYP13OUT014  8     THYROID

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TYP13OUT015	10	THYROID
TYP13OUT016	12	THYROID
TYP13OUT017	14	THYROID
TYP13OUT018	16	THYROID
TYP13OUT019	18	THYROID
TYP13OUT020	20	THYROID

**MACCS2 Input File for the Base Case with Radionuclide
Inventories at 30 Days Following Reactor Shutdown:**

METSUR.INP

SURRY MET, NRC-12/12/88, CREATED 12/22/88
MACCS FORMAT--NUREG-1150

1	1	16	146	0
1	2	1	146	0
1	3	16	126	0
1	4	1	96	0
1	5	4	146	0
1	6	4	126	0
1	7	16	86	0
1	8	1	126	0
1	9	2	126	0
1	10	4	154	0
1	11	1	194	0
1	12	13	245	0
1	13	13	254	0
1	14	15	251	0
1	15	15	241	0
1	16	15	173	0
1	17	15	135	0
1	18	15	96	0
1	19	14	146	0
1	20	15	156	0
1	21	16	136	0
1	22	16	146	0
1	23	16	156	0
1	24	1	146	0
2	1	16	146	0
2	2	1	146	0
2	3	16	126	0
2	4	1	96	0
2	5	4	146	0
2	6	4	126	0
2	7	16	86	0
2	8	1	126	0
2	9	2	126	0
2	10	4	154	0
2	11	1	194	0
2	12	13	245	0
2	13	13	254	0
2	14	15	251	0
2	15	15	241	0
2	16	15	173	0
2	17	15	135	0
2	18	15	96	0
2	19	14	146	0
2	20	15	156	0
2	21	16	136	0
2	22	16	146	0
2	23	16	156	0
2	24	1	146	0
3	1	16	176	0
3	2	16	146	0
362	2	10	265	0
362	3	10	265	0
362	4	9	235	0
362	5	8	245	0
362	6	9	255	0
362	7	8	245	0
362	8	8	265	0
362	9	8	304	0
362	10	9	342	0

362	11	9	451	0
362	12	9	421	0
362	13	9	381	0
362	14	9	351	0
362	15	8	301	0
362	16	9	283	0
362	17	9	225	0
362	18	9	255	0
362	19	9	265	0
362	20	9	215	0
362	21	9	155	0
362	22	9	145	0
362	23	9	146	0
362	24	9	146	0
363	1	9	136	0
363	2	9	146	0
363	3	9	136	0
363	4	8	116	0
363	5	7	126	0
363	6	9	86	0
363	7	9	86	0
363	8	9	136	0
363	9	9	95	0
363	10	9	114	0
363	11	10	173	0
363	12	13	162	0
363	13	10	153	0
363	14	13	114	0
363	15	11	124	0
363	16	13	84	0
363	17	14	55	0
363	18	14	76	0
363	19	14	86	0
363	20	14	66	0
363	21	14	76	0
363	22	14	56	0
363	23	13	56	0
363	24	12	56	0
364	1	12	56	0
364	2	11	56	0
364	3	6	96	0
364	4	7	96	0
364	5	8	96	0
364	6	5	116	0
364	7	7	195	0
364	8	6	195	0
364	9	8	184	0
364	10	7	222	0
364	11	6	271	0
364	12	6	291	0
364	13	6	331	0
364	14	6	321	0
364	15	6	381	0
364	16	7	384	0
364	17	6	404	0
364	18	7	414	0
364	19	7	324	0
364	20	7	235	0
364	21	6	165	0
364	22	7	195	0
364	23	7	265	0
364	24	8	385	0
365	1	8	385	0
365	2	8	325	0

365	3	7	185	0
365	4	7	195	0
365	5	6	185	0
365	6	4	156	0
365	7	5	126	0
365	8	5	156	0
365	9	5	175	0
365	10	7	302	0
365	11	8	321	0
365	12	9	461	0
365	13	9	361	0
365	14	9	331	0
365	15	7	164	0
365	16	4	94	0
365	17	8	55	0
365	18	13	165	0
365	19	13	155	0
365	20	14	86	0
365	21	14	56	0
365	22	12	96	0
365	23	13	96	0
365	24	13	96	0

10.54	18.90	19.24	14.12
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**MACCS2 Input File for the Base Case with Radionuclide
Inventories at 30 Days Following Reactor Shutdown:**

SURSIT.INP

MACCS SITE DATA FILE FOR SURRY (JLS, 11/10/88)

SECPOP POP DISTRIBUTION FROM 1980 CENSUS DATA ALTERED USING 0-10 MI NRC DATA

26 SPATIAL INTERVALS

16 WIND DIRECTIONS

7 CROP CATEGORIES

4 WATER PATHWAY ISOTOPES

2 WATERSHEDS

59 ECONOMIC REGIONS

SPATIAL DISTANCES

0.16	0.52	1.21	1.61	2.13	3.22	4.02	4.83
5.63	8.05	11.27	16.09	20.92	25.75	32.19	40.23
48.28	64.37	80.47	112.65	160.93	241.14	321.87	563.27
804.67	1609.34						
POPULATION							
0.	0.	0.	0.	0.	0.	4.	5.
6.	25.	3341.	7107.	2173.	0.	1305.	474.
2252.	2945.	5403.	20169.	112004.	3431358.	1355700.	2742710.
2487346.	104331.						
0.	0.	0.	0.	1.	2.	9.	13.
15.	63.	1667.	3550.	1330.	1072.	3198.	2425.
515.	9469.	5317.	7120.	13586.	198785.	1058744.	20508438.
3290082.	830354.						
0.	0.	0.	0.	0.	0.	5.	6.
8.	31.	822.	1752.	4543.	1713.	1597.	2296.
6535.	1775.	0.	8555.	48596.	119411.	233382.	3003954.
7620063.	1169436.						
0.	0.	0.	0.	0.	0.	1.	1.
2.	11.	543.	1157.	3820.	1621.	3364.	0.
0.	129.	6679.	11858.	0.	0.	0.	0.
0.	0.						
0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	4798.	10202.	10348.	10480.	9570.	0.
0.	2317.	1756.	0.	0.	0.	0.	0.
0.	0.						
0.	0.	0.	0.	0.	0.	1.	1.
1.	7.	8316.	17684.	16340.	30419.	39474.	74998.
24195.	80412.	57477.	0.	0.	0.	0.	0.
0.	0.						
0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	1722.	6433.	36763.	20632.
126203.	372471.	68327.	8599.	6339.	1057.	0.	0.
0.	0.						
0.	0.	0.	0.	0.	0.	2.	2.
3.	13.	127.	273.	1649.	4571.	3441.	7838.
11747.	19019.	3360.	36387.	10447.	12402.	0.	0.
0.	0.						
0.	0.	5.	4.	8.	23.	14.	20.
23.	93.	301.	650.	0.	0.	1264.	4065.
1106.	14665.	4071.	18006.	37417.	89072.	81626.	0.
0.	0.						
0.	0.	0.	0.	0.	0.	19.	25.
29.	117.	45.	105.	0.	510.	951.	1521.
1223.	17636.	4926.	30765.	53265.	289674.	216165.	479431.
280809.	8801784.						
0.	0.	0.	0.	1.	2.	14.	20.
23.	93.	155.	338.	125.	1079.	0.	1355.
2765.	154.	5296.	21409.	62228.	523803.	479588.	1538059.
1526840.	3099458.						
0.	0.	0.	0.	1.	2.	14.	20.
23.	93.	110.	240.	1056.	0.	50.	1396.
915.	3153.	4132.	16295.	35596.	239712.	709522.	2845970.
3957581.	10560254.						
0.	0.	0.	0.	0.	0.	25.	33.
38.	154.	30.	70.	450.	0.	980.	517.

34 OKLA	.751	.060	204.	1508.	67000.
35 OREG	.292	.111	236.	1203.	73000.
36 PA	.303	.447	855.	2534.	78000.
37 R.I.	.108	.213	1062.	6438.	80000.
38 S.C.	.290	.084	472.	1843.	62000.
39 S.DAK	.915	.091	145.	587.	65000.
40 TENN	.509	.153	360.	1850.	66000.
41 TEX	.816	.064	164.	1492.	74000.
42 UTAH	.225	.259	123.	1286.	60000.
43 VT	.286	.789	628.	1472.	73000.
44 VA	.382	.198	371.	2075.	84000.
45 WASH	.377	.154	476.	1948.	82000.
46 W.VA	.246	.224	150.	1728.	58000.
47 WIS	.517	.591	723.	1751.	76000.
48 WYO	.561	.028	43.	380.	70000.
49 BRIT COL	.377	.154	476.	1948.	60000.
50 OCEAN	.000	.000	0.	0.	0.
51 SASKAT	.657	.030	61.	563.	60000.
52 MANITOBA	.924	.048	164.	948.	60000.
53 ONTARIO	.597	.223	516.	2111.	60000.
54 QUEBEC	.310	.589	711.	1378.	60000.
55 NOVA SCOT	.079	.260	662.	1133.	60000.
56 BAJA CAL	.330	.144	1022.	4394.	10000.
57 SONORA	.516	.104	110.	682.	10000.
58 CHIHUAHUA	.590	.144	53.	473.	10000.
59 COAHUILA	.816	.064	164.	1492.	10000.

END