```
MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised 1/8/04, K. McFadden
P1:  ATMOS USER INPUT (UNIT 24) = EBATMOSB.INP


P2:  EARLY USER INPUT (UNIT 25) = EBEARLY.INP


P3: CHRONC USER INPUT (UNIT 26) = EBCHRONC.INP


P4:  METEOROLOGY DATA (UNIT 28) = NMET96.INP


P5:   SITE DATA INPUT (UNIT 29) = NSITE.INP


P6:        LIST OUTPUT (UNIT 06) = EBOUT96B.OUT



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

RECORD
NUMBER                                        RECORD

       * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS ESBWR "ATMOS" INPUT

       * This is the ESBWR Sensitivity CASE on PLHEAT=1.0E6 Watt

       *     LAST MODIFIED by MGM  4/11/06

    1  RIATNAM1001 'IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input'

*****************************************************************************

       * GEOMETRY DATA BLOCK, LOADED BY INPGEO, STORED IN /GEOM/

       *

       * NUMBER OF RADIAL SPATIAL ELEMENTS

       *

    2  GENUMRAD001  11

       *

       *  ESBWR/NAPS

       *
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```
  3  GESPAEND001     1.61      3.22      4.83      6.44      8.05
  4  GESPAEND002     9.65     16.09     32.18     48.27     64.37
  5  GESPAEND003    80.47
     *
*******************************************************************************
     * NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/
     *
     * Number of pseudo-stable nuclides (used to truncate the decay chains)
     *
  6  ISNUMSTB001      27
     *
     * List of pseudo-stable nuclides
     *
     *                NAMSTB
     *
  7  ISNAMSTB001     I-129     (daughter of Te-129 and Te-129m)
  8  ISNAMSTB002     Xe-131m   (daughter of I-131)
  9  ISNAMSTB003     Xe-133m   (daughter of I-133)
 10  ISNAMSTB004     Xe-135m   (daughter of I-135)
 11  ISNAMSTB005     Cs-135    (daughter of Xe-135 and Xe-135m)
 12  ISNAMSTB006     Sm-147    (daughter of Pm-147)
 13  ISNAMSTB007     U-234     (daughter of Pu-238)
 14  ISNAMSTB008     U-235     (daughter of Pu-239)
 15  ISNAMSTB009     U-236     (daughter of Pu-240)
 16  ISNAMSTB010     U-237     (daughter of Pu-241)
 17  ISNAMSTB011     Np-237    (daughter of Am-241)
 18  ISNAMSTB012     Rb-87     (daughter of Kr-87)
 19  ISNAMSTB013     Ba-137m   (daughter of Cs-137)
 20  ISNAMSTB014     Rb-88     (daughter of Kr-88)
 21  ISNAMSTB015     Y-91m     (daughter of Sr-91)
 22  ISNAMSTB016     Zr-93     (daughter of Y-93)
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23  ISNAMSTB017     Nb-93m   (daughter of Zr-93)
24  ISNAMSTB018     Nb-95m   (daughter of Zr-95)
25  ISNAMSTB019     Nb-97    (daughter of Zr-97 and Nb-97m)
26  ISNAMSTB020     Nb-97m   (daughter of Zr-97)
27  ISNAMSTB021     Tc-99    (daughter of Mo-99)
28  ISNAMSTB022     Rh-103m  (daughter of Ru-103)
29  ISNAMSTB023     Rh-106   (daughter of Ru-106)
30  ISNAMSTB024    Te-131    (daughter of Te-131m)
31  ISNAMSTB025     Pr-144   (daughter of Ce-144 and Pr-144m)
32  ISNAMSTB026     Pr-144m  (daughter of Ce-144)
33  ISNAMSTB027     Pm-147   (daughter of Nd-147)
    *
    * Number of radioactive nuclides to be considered
    *
34  ISNUMISO001 60
    *
    * NUMBER OF NUCLIDE GROUPS
    *
35  ISMAXGRP001  9
    *
    * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
    *
    *               WETDEP     DRYDEP
    *
36  ISDEPFLA001    .FALSE.   .FALSE.
37  ISDEPFLA002    .TRUE.    .TRUE.
38  ISDEPFLA003    .TRUE.    .TRUE.
39  ISDEPFLA004    .TRUE.    .TRUE.
40  ISDEPFLA005    .TRUE.    .TRUE.
41  ISDEPFLA006    .TRUE.    .TRUE.
42  ISDEPFLA007    .TRUE.    .TRUE.
```

```
43  ISDEPFLA008     .TRUE.     .TRUE.
44  ISDEPFLA009     .TRUE.     .TRUE.
    *
    * NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS
    *
    *                NUCNAM     IGROUP
    *
45  ISOTPGRP001      Co-58        6
46  ISOTPGRP002      Co-60        6
47  ISOTPGRP003      Kr-85        1
48  ISOTPGRP004      Kr-85m       1
49  ISOTPGRP005      Kr-87        1
50  ISOTPGRP006      Kr-88        1
51  ISOTPGRP007      Rb-86        3
52  ISOTPGRP008      Sr-89        5
53  ISOTPGRP009      Sr-90        5
54  ISOTPGRP010      Sr-91        5
55  ISOTPGRP011      Sr-92        5
56  ISOTPGRP012      Y-90         7
57  ISOTPGRP013      Y-91         7
58  ISOTPGRP014      Y-92         7
59  ISOTPGRP015      Y-93         7
60  ISOTPGRP016      Zr-95        7
61  ISOTPGRP017      Zr-97        7
62  ISOTPGRP018      Nb-95        7
63  ISOTPGRP019      Mo-99        6
64  ISOTPGRP020      Tc-99m       6
65  ISOTPGRP021      Ru-103       6
66  ISOTPGRP022      Ru-105       6
67  ISOTPGRP023      Ru-106       6
68  ISOTPGRP024      Rh-105       6
69  ISOTPGRP025      Sb-127       4
```

70	ISOTPGRP026	Sb-129	4
71	ISOTPGRP027	Te-127	4
72	ISOTPGRP028	Te-127m	4
73	ISOTPGRP029	Te-129	4
74	ISOTPGRP030	Te-129m	4
75	ISOTPGRP031	Te-131m	4
76	ISOTPGRP032	Te-132	4
77	ISOTPGRP033	I-131	2
78	ISOTPGRP034	I-132	2
79	ISOTPGRP035	I-133	2
80	ISOTPGRP036	I-134	2
81	ISOTPGRP037	I-135	2
82	ISOTPGRP038	Xe-133	1
83	ISOTPGRP039	Xe-135	1
84	ISOTPGRP040	Cs-134	3
85	ISOTPGRP041	Cs-136	3
86	ISOTPGRP042	Cs-137	3
87	ISOTPGRP043	Ba-139	9
88	ISOTPGRP044	Ba-140	9
89	ISOTPGRP045	La-140	7
90	ISOTPGRP046	La-141	7
91	ISOTPGRP047	La-142	7
92	ISOTPGRP048	Ce-141	8
93	ISOTPGRP049	Ce-143	8
94	ISOTPGRP050	Ce-144	8
95	ISOTPGRP051	Pr-143	7
96	ISOTPGRP052	Nd-147	7
97	ISOTPGRP053	Np-239	8
98	ISOTPGRP054	Pu-238	8
99	ISOTPGRP055	Pu-239	8
100	ISOTPGRP056	Pu-240	8

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101  ISOTPGRP057     Pu-241      8
102  ISOTPGRP058     Am-241      7
103  ISOTPGRP059     Cm-242      7
104  ISOTPGRP060     Cm-244      7

*****************************************************************************
      * WET DEPOSITION DATA BLOCK, LOADED BY INPWET, STORED IN /WETCON/
      *
      * WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
      *
105  WDCWASH1001  9.5E-5   (JON HELTON AFTER JONES, 1986)
      *
      * WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
      *
106  WDCWASH2001  0.8      (JON HELTON AFTER JONES, 1986)

*****************************************************************************
      * DRY DEPOSITION DATA BLOCK, LOADED BY INPDRY, STORED IN /DRYCON/
      *
      * NUMBER OF PARTICLE SIZE GROUPS
      *
107  DDNPSGRP001   1
      *
      * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
      *
108  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)
      *
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```
109  NUM_DIST001    50
     *
     * A-stability      Distance (m)  Sigma-y (m)    Sigma-z (m)
110  A-STB/DIS01        1.000E+00     3.6580E-01     2.5000E-04  Tadmor/Gur (0.5-5
km)
111  A-STB/DIS02        1.400E+00     4.9569E-01     5.1105E-04  Tadmor/Gur (0.5-5
km)
112  A-STB/DIS03        2.000E+00     6.8408E-01     1.0905E-03  Tadmor/Gur (0.5-5
km)
113  A-STB/DIS04        3.000E+00     9.8658E-01     2.5812E-03  Tadmor/Gur (0.5-5
km)
114  A-STB/DIS05        4.000E+00     1.2793E+00     4.7568E-03  Tadmor/Gur (0.5-5
km)
115  A-STB/DIS06        5.000E+00     1.5649E+00     7.6428E-03  Tadmor/Gur (0.5-5
km)
116  A-STB/DIS07        6.000E+00     1.8450E+00     1.1259E-02  Tadmor/Gur (0.5-5
km)
117  A-STB/DIS08        8.000E+00     2.3923E+00     2.0749E-02  Tadmor/Gur (0.5-5
km)
118  A-STB/DIS09        1.000E+01     2.9265E+00     3.3338E-02  Tadmor/Gur (0.5-5
km)
119  A-STB/DIS10        1.000E+02     2.3412E+01     4.4457E+00  Tadmor/Gur (0.5-5
km)
120  A-STB/DIS11        1.400E+02     3.1726E+01     9.0879E+00  Tadmor/Gur (0.5-5
km)
121  A-STB/DIS12        2.000E+02     4.3783E+01     1.9392E+01  Tadmor/Gur (0.5-5
km)
122  A-STB/DIS13        3.000E+02     6.3144E+01     4.5901E+01  Tadmor/Gur (0.5-5
km)
123  A-STB/DIS14        4.000E+02     8.1877E+01     8.4590E+01  Tadmor/Gur (0.5-5
km)
124  A-STB/DIS15        5.000E+02     1.0016E+02     1.3591E+02  Tadmor/Gur (0.5-5
km)
125  A-STB/DIS16        6.000E+02     1.1808E+02     2.0022E+02  Tadmor/Gur (0.5-5
km)
126  A-STB/DIS17        8.000E+02     1.5312E+02     3.6898E+02  Tadmor/Gur (0.5-5
km)
127  A-STB/DIS18        1.000E+03     1.8730E+02     5.9284E+02  Tadmor/Gur (0.5-5
km)
128  A-STB/DIS19        1.400E+03     2.5381E+02     1.2119E+03  Tadmor/Gur (0.5-5
km)
129  A-STB/DIS20        2.000E+03     3.5027E+02     2.5860E+03  Tadmor/Gur (0.5-5
km)
130  A-STB/DIS21        3.000E+03     5.0516E+02     6.1210E+03  Tadmor/Gur (0.5-5
km)
131  A-STB/DIS22        4.000E+03     6.5503E+02     1.1280E+04  Tadmor/Gur (0.5-5
km)
132  A-STB/DIS23        5.000E+03     8.0128E+02     1.8124E+04  Tadmor/Gur (0.5-5
km)
133  A-STB/DIS24        6.000E+03     9.4470E+02     2.6700E+04  Tadmor/Gur (0.5-5
km)
134  A-STB/DIS25        8.000E+03     1.2250E+03     4.9205E+04  Tadmor/Gur (0.5-5
km)
135  A-STB/DIS26        1.000E+04     1.4985E+03     7.9057E+04  Tadmor/Gur (0.5-5
km)
136  A-STB/DIS27        1.400E+04     2.0305E+03     1.6161E+05  Tadmor/Gur (0.5-5
km)
137  A-STB/DIS28        2.000E+04     2.8022E+03     3.4485E+05  Tadmor/Gur (0.5-5
km)
138  A-STB/DIS29        3.000E+04     4.0414E+03     8.1625E+05  Tadmor/Gur (0.5-5
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km)					
139	A--STB/DIS30	4.000E+04	5.2404E+03	1.5042E+06	Tadmor/Gur (0.5-5
km)					
140	A--STB/DIS31	5.000E+04	6.4104E+03	2.4169E+06	Tadmor/Gur (0.5-5
km)					
141	A--STB/DIS32	6.000E+04	7.5577E+03	3.5605E+06	Tadmor/Gur (0.5-5
km)					
142	A--STB/DIS33	8.000E+04	9.8000E+03	6.5615E+06	Tadmor/Gur (0.5-5
km)					
143	A--STB/DIS34	1.000E+05	1.1988E+04	1.0542E+07	Tadmor/Gur (0.5-5
km)					
144	A--STB/DIS35	1.400E+05	1.6245E+04	2.1551E+07	Tadmor/Gur (0.5-5
km)					
145	A--STB/DIS36	2.000E+05	2.2418E+04	4.5986E+07	Tadmor/Gur (0.5-5
km)					
146	A--STB/DIS37	3.000E+05	3.2332E+04	1.0885E+08	Tadmor/Gur (0.5-5
km)					
147	A--STB/DIS38	4.000E+05	4.1924E+04	2.0059E+08	Tadmor/Gur (0.5-5
km)					
148	A--STB/DIS39	5.000E+05	5.1284E+04	3.2229E+08	Tadmor/Gur (0.5-5
km)					
149	A--STB/DIS40	6.000E+05	6.0463E+04	4.7480E+08	Tadmor/Gur (0.5-5
km)					
150	A--STB/DIS41	8.000E+05	7.8401E+04	8.7500E+08	Tadmor/Gur (0.5-5
km)					
151	A--STB/DIS42	1.000E+06	9.5906E+04	1.4059E+09	Tadmor/Gur (0.5-5
km)					
152	A--STB/DIS43	1.400E+06	1.2996E+05	2.8738E+09	Tadmor/Gur (0.5-5
km)					
153	A--STB/DIS44	2.000E+06	1.7935E+05	6.1324E+09	Tadmor/Gur (0.5-5
km)					
154	A--STB/DIS45	3.000E+06	2.5866E+05	1.4515E+10	Tadmor/Gur (0.5-5
km)					
155	A--STB/DIS46	4.000E+06	3.3540E+05	2.6750E+10	Tadmor/Gur (0.5-5
km)					
156	A--STB/DIS47	5.000E+06	4.1028E+05	4.2979E+10	Tadmor/Gur (0.5-5
km)					
157	A--STB/DIS48	6.000E+06	4.8372E+05	6.3316E+10	Tadmor/Gur (0.5-5
km)					
158	A--STB/DIS49	8.000E+06	6.2723E+05	1.1668E+11	Tadmor/Gur (0.5-5
km)					
159	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)	
160	B--STB/DIS01	1.000E+00	2.7510E-01	1.9000E-03	Tadmor/Gur (0.5-5
km)					
161	B--STB/DIS02	1.400E+00	3.7279E-01	3.2574E-03	Tadmor/Gur (0.5-5
km)					
162	B--STB/DIS03	2.000E+00	5.1446E-01	5.7681E-03	Tadmor/Gur (0.5-5
km)					
163	B--STB/DIS04	3.000E+00	7.4196E-01	1.1045E-02	Tadmor/Gur (0.5-5
km)					
164	B--STB/DIS05	4.000E+00	9.6208E-01	1.7511E-02	Tadmor/Gur (0.5-5
km)					
165	B--STB/DIS06	5.000E+00	1.1769E+00	2.5036E-02	Tadmor/Gur (0.5-5
km)					
166	B--STB/DIS07	6.000E+00	1.3875E+00	3.3530E-02	Tadmor/Gur (0.5-5
km)					
167	B--STB/DIS08	8.000E+00	1.7992E+00	5.3161E-02	Tadmor/Gur (0.5-5
km)					

168	B-STB/DIS09	1.000E+01	2.2009E+00	7.6007E-02	Tadmor/Gur (0.5-5 km)
169	B-STB/DIS10	1.000E+02	1.7607E+01	3.0406E+00	Tadmor/Gur (0.5-5 km)
170	B-STB/DIS11	1.400E+02	2.3859E+01	5.2127E+00	Tadmor/Gur (0.5-5 km)
171	B-STB/DIS12	2.000E+02	3.2927E+01	9.2307E+00	Tadmor/Gur (0.5-5 km)
172	B-STB/DIS13	3.000E+02	4.7487E+01	1.7675E+01	Tadmor/Gur (0.5-5 km)
173	B-STB/DIS14	4.000E+02	6.1576E+01	2.8023E+01	Tadmor/Gur (0.5-5 km)
174	B-STB/DIS15	5.000E+02	7.5323E+01	4.0066E+01	Tadmor/Gur (0.5-5 km)
175	B-STB/DIS16	6.000E+02	8.8805E+01	5.3657E+01	Tadmor/Gur (0.5-5 km)
176	B-STB/DIS17	8.000E+02	1.1515E+02	8.5073E+01	Tadmor/Gur (0.5-5 km)
177	B-STB/DIS18	1.000E+03	1.4086E+02	1.2163E+02	Tadmor/Gur (0.5-5 km)
178	B-STB/DIS19	1.400E+03	1.9088E+02	2.0853E+02	Tadmor/Gur (0.5-5 km)
179	B-STB/DIS20	2.000E+03	2.6342E+02	3.6926E+02	Tadmor/Gur (0.5-5 km)
180	B-STB/DIS21	3.000E+03	3.7991E+02	7.0705E+02	Tadmor/Gur (0.5-5 km)
181	B-STB/DIS22	4.000E+03	4.9262E+02	1.1210E+03	Tadmor/Gur (0.5-5 km)
182	B-STB/DIS23	5.000E+03	6.0260E+02	1.6028E+03	Tadmor/Gur (0.5-5 km)
183	B-STB/DIS24	6.000E+03	7.1046E+02	2.1465E+03	Tadmor/Gur (0.5-5 km)
184	B-STB/DIS25	8.000E+03	9.2124E+02	3.4033E+03	Tadmor/Gur (0.5-5 km)
185	B-STB/DIS26	1.000E+04	1.1269E+03	4.8658E+03	Tadmor/Gur (0.5-5 km)
186	B-STB/DIS27	1.400E+04	1.5271E+03	8.3419E+03	Tadmor/Gur (0.5-5 km)
187	B-STB/DIS28	2.000E+04	2.1074E+03	1.4772E+04	Tadmor/Gur (0.5-5 km)
188	B-STB/DIS29	3.000E+04	3.0393E+03	2.8285E+04	Tadmor/Gur (0.5-5 km)
189	B-STB/DIS30	4.000E+04	3.9410E+03	4.4845E+04	Tadmor/Gur (0.5-5 km)
190	B-STB/DIS31	5.000E+04	4.8209E+03	6.4117E+04	Tadmor/Gur (0.5-5 km)
191	B-STB/DIS32	6.000E+04	5.6838E+03	8.5868E+04	Tadmor/Gur (0.5-5 km)
192	B-STB/DIS33	8.000E+04	7.3701E+03	1.3614E+05	Tadmor/Gur (0.5-5 km)
193	B-STB/DIS34	1.000E+05	9.0155E+03	1.9465E+05	Tadmor/Gur (0.5-5 km)
194	B-STB/DIS35	1.400E+05	1.2217E+04	3.3371E+05	Tadmor/Gur (0.5-5 km)
195	B-STB/DIS36	2.000E+05	1.6860E+04	5.9093E+05	Tadmor/Gur (0.5-5 km)
196	B-STB/DIS37	3.000E+05	2.4315E+04	1.1315E+06	Tadmor/Gur (0.5-5 km)
197	B-STB/DIS38	4.000E+05	3.1529E+04	1.7940E+06	Tadmor/Gur (0.5-5 km)
198	B-STB/DIS39	5.000E+05	3.8568E+04	2.5649E+06	Tadmor/Gur (0.5-5 km)
199	B-STB/DIS40	6.000E+05	4.5471E+04	3.4350E+06	Tadmor/Gur (0.5-5

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km)
  200  B-STB/DIS41        8.000E+05     5.8962E+04     5.4462E+06  Tadmor/Gur (0.5-5
km)
  201  B-STB/DIS42        1.000E+06     7.2126E+04     7.7867E+06  Tadmor/Gur (0.5-5
km)
  202  B-STB/DIS43        1.400E+06     9.7737E+04     1.3350E+07  Tadmor/Gur (0.5-5
km)
  203  B-STB/DIS44        2.000E+06     1.3488E+05     2.3639E+07  Tadmor/Gur (0.5-5
km)
  204  B-STB/DIS45        3.000E+06     1.9453E+05     4.5264E+07  Tadmor/Gur (0.5-5
km)
  205  B-STB/DIS46        4.000E+06     2.5224E+05     7.1765E+07  Tadmor/Gur (0.5-5
km)
  206  B-STB/DIS47        5.000E+06     3.0855E+05     1.0261E+08  Tadmor/Gur (0.5-5
km)
  207  B-STB/DIS48        6.000E+06     3.6378E+05     1.3741E+08  Tadmor/Gur (0.5-5
km)
  208  B-STB/DIS49        8.000E+06     4.7171E+05     2.1787E+08  Tadmor/Gur (0.5-5
km)
  209  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)
  210  C-STB/DIS01        1.000E+00     2.0890E-01     2.0000E-01  Tadmor/Gur (0.5-5
km)
  211  C-STB/DIS02        1.400E+00     2.8308E-01     2.6660E-01  Tadmor/Gur (0.5-5
km)
  212  C-STB/DIS03        2.000E+00     3.9066E-01     3.6158E-01  Tadmor/Gur (0.5-5
km)
  213  C-STB/DIS04        3.000E+00     5.6341E-01     5.1125E-01  Tadmor/Gur (0.5-5
km)
  214  C-STB/DIS05        4.000E+00     7.3056E-01     6.5369E-01  Tadmor/Gur (0.5-5
km)
  215  C-STB/DIS06        5.000E+00     8.9367E-01     7.9097E-01  Tadmor/Gur (0.5-5
km)
  216  C-STB/DIS07        6.000E+00     1.0536E+00     9.2428E-01  Tadmor/Gur (0.5-5
km)
  217  C-STB/DIS08        8.000E+00     1.3662E+00     1.1818E+00  Tadmor/Gur (0.5-5
km)
  218  C-STB/DIS09        1.000E+01     1.6712E+00     1.4300E+00  Tadmor/Gur (0.5-5
km)
  219  C-STB/DIS10        1.000E+02     1.3370E+01     1.0224E+01  Tadmor/Gur (0.5-5
km)
  220  C-STB/DIS11        1.400E+02     1.8118E+01     1.3629E+01  Tadmor/Gur (0.5-5
km)
  221  C-STB/DIS12        2.000E+02     2.5003E+01     1.8484E+01  Tadmor/Gur (0.5-5
km)
  222  C-STB/DIS13        3.000E+02     3.6060E+01     2.6136E+01  Tadmor/Gur (0.5-5
km)
  223  C-STB/DIS14        4.000E+02     4.6758E+01     3.3417E+01  Tadmor/Gur (0.5-5
km)
  224  C-STB/DIS15        5.000E+02     5.7198E+01     4.0435E+01  Tadmor/Gur (0.5-5
km)
  225  C-STB/DIS16        6.000E+02     6.7435E+01     4.7250E+01  Tadmor/Gur (0.5-5
km)
  226  C-STB/DIS17        8.000E+02     8.7442E+01     6.0414E+01  Tadmor/Gur (0.5-5
km)
  227  C-STB/DIS18        1.000E+03     1.0696E+02     7.3102E+01  Tadmor/Gur (0.5-5
km)
  228  C-STB/DIS19        1.400E+03     1.4495E+02     9.7447E+01  Tadmor/Gur (0.5-5
km)
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229	C-STB/DIS20	2.000E+03	2.0003E+02	1.3216E+02	Tadmor/Gur (0.5-5 km)
230	C-STB/DIS21	3.000E+03	2.8849E+02	1.8687E+02	Tadmor/Gur (0.5-5 km)
231	C-STB/DIS22	4.000E+03	3.7408E+02	2.3893E+02	Tadmor/Gur (0.5-5 km)
232	C-STB/DIS23	5.000E+03	4.5759E+02	2.8911E+02	Tadmor/Gur (0.5-5 km)
233	C-STB/DIS24	6.000E+03	5.3949E+02	3.3784E+02	Tadmor/Gur (0.5-5 km)
234	C-STB/DIS25	8.000E+03	6.9955E+02	4.3196E+02	Tadmor/Gur (0.5-5 km)
235	C-STB/DIS26	1.000E+04	8.5573E+02	5.2267E+02	Tadmor/Gur (0.5-5 km)
236	C-STB/DIS27	1.400E+04	1.1596E+03	6.9673E+02	Tadmor/Gur (0.5-5 km)
237	C-STB/DIS28	2.000E+04	1.6003E+03	9.4493E+02	Tadmor/Gur (0.5-5 km)
238	C-STB/DIS29	3.000E+04	2.3080E+03	1.3361E+03	Tadmor/Gur (0.5-5 km)
239	C-STB/DIS30	4.000E+04	2.9927E+03	1.7083E+03	Tadmor/Gur (0.5-5 km)
240	C-STB/DIS31	5.000E+04	3.6608E+03	2.0671E+03	Tadmor/Gur (0.5-5 km)
241	C-STB/DIS32	6.000E+04	4.3161E+03	2.4155E+03	Tadmor/Gur (0.5-5 km)
242	C-STB/DIS33	8.000E+04	5.5965E+03	3.0884E+03	Tadmor/Gur (0.5-5 km)
243	C-STB/DIS34	1.000E+05	6.8460E+03	3.7371E+03	Tadmor/Gur (0.5-5 km)
244	C-STB/DIS35	1.400E+05	9.2770E+03	4.9816E+03	Tadmor/Gur (0.5-5 km)
245	C-STB/DIS36	2.000E+05	1.2803E+04	6.7562E+03	Tadmor/Gur (0.5-5 km)
246	C-STB/DIS37	3.000E+05	1.8464E+04	9.5529E+03	Tadmor/Gur (0.5-5 km)
247	C-STB/DIS38	4.000E+05	2.3942E+04	1.2214E+04	Tadmor/Gur (0.5-5 km)
248	C-STB/DIS39	5.000E+05	2.9287E+04	1.4780E+04	Tadmor/Gur (0.5-5 km)
249	C-STB/DIS40	6.000E+05	3.4529E+04	1.7270E+04	Tadmor/Gur (0.5-5 km)
250	C-STB/DIS41	8.000E+05	4.4773E+04	2.2082E+04	Tadmor/Gur (0.5-5 km)
251	C-STB/DIS42	1.000E+06	5.4769E+04	2.6720E+04	Tadmor/Gur (0.5-5 km)
252	C-STB/DIS43	1.400E+06	7.4218E+04	3.5618E+04	Tadmor/Gur (0.5-5 km)
253	C-STB/DIS44	2.000E+06	1.0242E+05	4.8306E+04	Tadmor/Gur (0.5-5 km)
254	C-STB/DIS45	3.000E+06	1.4772E+05	6.8302E+04	Tadmor/Gur (0.5-5 km)
255	C-STB/DIS46	4.000E+06	1.9154E+05	8.7331E+04	Tadmor/Gur (0.5-5 km)
256	C-STB/DIS47	5.000E+06	2.3430E+05	1.0567E+05	Tadmor/Gur (0.5-5 km)
257	C-STB/DIS48	6.000E+06	2.7624E+05	1.2348E+05	Tadmor/Gur (0.5-5 km)
258	C-STB/DIS49	8.000E+06	3.5819E+05	1.5788E+05	Tadmor/Gur (0.5-5 km)
259	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)	
260	D-STB/DIS01	1.000E+00	1.4740E-01	3.0000E-01	Tadmor/Gur (0.5-5 km)
261	D-STB/DIS02	1.400E+00	1.9974E-01	3.7374E-01	Tadmor/Gur (0.5-5 km)
262	D-STB/DIS03	2.000E+00	2.7565E-01	4.7180E-01	Tadmor/Gur (0.5-5 km)
263	D-STB/DIS04	3.000E+00	3.9754E-01	6.1486E-01	Tadmor/Gur (0.5-5 km)
264	D-STB/DIS05	4.000E+00	5.1549E-01	7.4197E-01	Tadmor/Gur (0.5-5 km)
265	D-STB/DIS06	5.000E+00	6.3058E-01	8.5840E-01	Tadmor/Gur (0.5-5 km)
266	D-STB/DIS07	6.000E+00	7.4344E-01	9.6696E-01	Tadmor/Gur (0.5-5 km)
267	D-STB/DIS08	8.000E+00	9.6400E-01	1.1669E+00	Tadmor/Gur (0.5-5 km)
268	D-STB/DIS09	1.000E+01	1.1792E+00	1.3500E+00	Tadmor/Gur (0.5-5 km)
269	D-STB/DIS10	1.000E+02	9.4340E+00	6.0746E+00	Tadmor/Gur (0.5-5 km)
270	D-STB/DIS11	1.400E+02	1.2784E+01	7.5678E+00	Tadmor/Gur (0.5-5 km)
271	D-STB/DIS12	2.000E+02	1.7642E+01	9.5533E+00	Tadmor/Gur (0.5-5 km)
272	D-STB/DIS13	3.000E+02	2.5444E+01	1.2450E+01	Tadmor/Gur (0.5-5 km)
273	D-STB/DIS14	4.000E+02	3.2993E+01	1.5024E+01	Tadmor/Gur (0.5-5 km)
274	D-STB/DIS15	5.000E+02	4.0359E+01	1.7382E+01	Tadmor/Gur (0.5-5 km)
275	D-STB/DIS16	6.000E+02	4.7582E+01	1.9580E+01	Tadmor/Gur (0.5-5 km)
276	D-STB/DIS17	8.000E+02	6.1699E+01	2.3628E+01	Tadmor/Gur (0.5-5 km)
277	D-STB/DIS18	1.000E+03	7.5474E+01	2.7335E+01	Tadmor/Gur (0.5-5 km)
278	D-STB/DIS19	1.400E+03	1.0227E+02	3.4054E+01	Tadmor/Gur (0.5-5 km)
279	D-STB/DIS20	2.000E+03	1.4114E+02	4.2989E+01	Tadmor/Gur (0.5-5 km)
280	D-STB/DIS21	3.000E+03	2.0356E+02	5.6024E+01	Tadmor/Gur (0.5-5 km)
281	D-STB/DIS22	4.000E+03	2.6395E+02	6.7606E+01	Tadmor/Gur (0.5-5 km)
282	D-STB/DIS23	5.000E+03	3.2288E+02	7.8215E+01	Tadmor/Gur (0.5-5 km)
283	D-STB/DIS24	6.000E+03	3.8067E+02	8.8107E+01	Tadmor/Gur (0.5-5 km)
284	D-STB/DIS25	8.000E+03	4.9360E+02	1.0632E+02	Tadmor/Gur (0.5-5 km)
285	D-STB/DIS26	1.000E+04	6.0381E+02	1.2300E+02	Tadmor/Gur (0.5-5 km)
286	D-STB/DIS27	1.400E+04	8.1821E+02	1.5324E+02	Tadmor/Gur (0.5-5 km)
287	D-STB/DIS28	2.000E+04	1.1292E+03	1.9344E+02	Tadmor/Gur (0.5-5 km)
288	D-STB/DIS29	3.000E+04	1.6285E+03	2.5210E+02	Tadmor/Gur (0.5-5 km)
289	D-STB/DIS30	4.000E+04	2.1116E+03	3.0422E+02	Tadmor/Gur (0.5-5 km)

290	D-STB/DIS31	5.000E+04	2.5831E+03	3.5196E+02	Tadmor/Gur (0.5-5 km)
291	D-STB/DIS32	6.000E+04	3.0454E+03	3.9647E+02	Tadmor/Gur (0.5-5 km)
292	D-STB/DIS33	8.000E+04	3.9489E+03	4.7843E+02	Tadmor/Gur (0.5-5 km)
293	D-STB/DIS34	1.000E+05	4.8306E+03	5.5350E+02	Tadmor/Gur (0.5-5 km)
294	D-STB/DIS35	1.400E+05	6.5458E+03	6.8956E+02	Tadmor/Gur (0.5-5 km)
295	D-STB/DIS36	2.000E+05	9.0335E+03	8.7047E+02	Tadmor/Gur (0.5-5 km)
296	D-STB/DIS37	3.000E+05	1.3028E+04	1.1344E+03	Tadmor/Gur (0.5-5 km)
297	D-STB/DIS38	4.000E+05	1.6893E+04	1.3689E+03	Tadmor/Gur (0.5-5 km)
298	D-STB/DIS39	5.000E+05	2.0665E+04	1.5838E+03	Tadmor/Gur (0.5-5 km)
299	D-STB/DIS40	6.000E+05	2.4364E+04	1.7841E+03	Tadmor/Gur (0.5-5 km)
300	D-STB/DIS41	8.000E+05	3.1592E+04	2.1529E+03	Tadmor/Gur (0.5-5 km)
301	D-STB/DIS42	1.000E+06	3.8645E+04	2.4907E+03	Tadmor/Gur (0.5-5 km)
302	D-STB/DIS43	1.400E+06	5.2368E+04	3.1029E+03	Tadmor/Gur (0.5-5 km)
303	D-STB/DIS44	2.000E+06	7.2270E+04	3.9170E+03	Tadmor/Gur (0.5-5 km)
304	D-STB/DIS45	3.000E+06	1.0423E+05	5.1048E+03	Tadmor/Gur (0.5-5 km)
305	D-STB/DIS46	4.000E+06	1.3515E+05	6.1601E+03	Tadmor/Gur (0.5-5 km)
306	D-STB/DIS47	5.000E+06	1.6532E+05	7.1267E+03	Tadmor/Gur (0.5-5 km)
307	D-STB/DIS48	6.000E+06	1.9492E+05	8.0280E+03	Tadmor/Gur (0.5-5 km)
308	D-STB/DIS49	8.000E+06	2.5274E+05	9.6877E+03	Tadmor/Gur (0.5-5 km)
309	D-STB/DIS50	1.000E+07	3.0917E+05	1.1208E+04	Tadmor/Gur (0.5-5 km)
	*				
	* E-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)	
310	E-STB/DIS01	1.000E+00	1.0460E-01	4.0000E-01	Tadmor/Gur (0.5-5 km)
311	E-STB/DIS02	1.400E+00	1.4174E-01	4.8983E-01	Tadmor/Gur (0.5-5 km)
312	E-STB/DIS03	2.000E+00	1.9561E-01	6.0717E-01	Tadmor/Gur (0.5-5 km)
313	E-STB/DIS04	3.000E+00	2.8211E-01	7.7506E-01	Tadmor/Gur (0.5-5 km)
314	E-STB/DIS05	4.000E+00	3.6581E-01	9.2164E-01	Tadmor/Gur (0.5-5 km)
315	E-STB/DIS06	5.000E+00	4.4748E-01	1.0542E+00	Tadmor/Gur (0.5-5 km)
316	E-STB/DIS07	6.000E+00	5.2757E-01	1.1765E+00	Tadmor/Gur (0.5-5 km)
317	E-STB/DIS08	8.000E+00	6.8409E-01	1.3990E+00	Tadmor/Gur (0.5-5 km)
318	E-STB/DIS09	1.000E+01	8.3682E-01	1.6001E+00	Tadmor/Gur (0.5-5 km)
319	E-STB/DIS10	1.000E+02	6.6947E+00	6.4012E+00	Tadmor/Gur (0.5-5

320	E-STB/DIS11	1.400E+02	9.0719E+00	7.8387E+00	Tadmor/Gur (0.5-5 km)
321	E-STB/DIS12	2.000E+02	1.2520E+01	9.7165E+00	Tadmor/Gur (0.5-5 km)
322	E-STB/DIS13	3.000E+02	1.8056E+01	1.2403E+01	Tadmor/Gur (0.5-5 km)
323	E-STB/DIS14	4.000E+02	2.3413E+01	1.4749E+01	Tadmor/Gur (0.5-5 km)
324	E-STB/DIS15	5.000E+02	2.8640E+01	1.6870E+01	Tadmor/Gur (0.5-5 km)
325	E-STB/DIS16	6.000E+02	3.3766E+01	1.8827E+01	Tadmor/Gur (0.5-5 km)
326	E-STB/DIS17	8.000E+02	4.3784E+01	2.2388E+01	Tadmor/Gur (0.5-5 km)
327	E-STB/DIS18	1.000E+03	5.3559E+01	2.5607E+01	Tadmor/Gur (0.5-5 km)
328	E-STB/DIS19	1.400E+03	7.2577E+01	3.1358E+01	Tadmor/Gur (0.5-5 km)
329	E-STB/DIS20	2.000E+03	1.0016E+02	3.8870E+01	Tadmor/Gur (0.5-5 km)
330	E-STB/DIS21	3.000E+03	1.4445E+02	4.9617E+01	Tadmor/Gur (0.5-5 km)
331	E-STB/DIS22	4.000E+03	1.8731E+02	5.9001E+01	Tadmor/Gur (0.5-5 km)
332	E-STB/DIS23	5.000E+03	2.2912E+02	6.7485E+01	Tadmor/Gur (0.5-5 km)
333	E-STB/DIS24	6.000E+03	2.7013E+02	7.5316E+01	Tadmor/Gur (0.5-5 km)
334	E-STB/DIS25	8.000E+03	3.5028E+02	8.9559E+01	Tadmor/Gur (0.5-5 km)
335	E-STB/DIS26	1.000E+04	4.2848E+02	1.0244E+02	Tadmor/Gur (0.5-5 km)
336	E-STB/DIS27	1.400E+04	5.8063E+02	1.2544E+02	Tadmor/Gur (0.5-5 km)
337	E-STB/DIS28	2.000E+04	8.0129E+02	1.5549E+02	Tadmor/Gur (0.5-5 km)
338	E-STB/DIS29	3.000E+04	1.1556E+03	1.9849E+02	Tadmor/Gur (0.5-5 km)
339	E-STB/DIS30	4.000E+04	1.4985E+03	2.3603E+02	Tadmor/Gur (0.5-5 km)
340	E-STB/DIS31	5.000E+04	1.8330E+03	2.6997E+02	Tadmor/Gur (0.5-5 km)
341	E-STB/DIS32	6.000E+04	2.1611E+03	3.0129E+02	Tadmor/Gur (0.5-5 km)
342	E-STB/DIS33	8.000E+04	2.8023E+03	3.5827E+02	Tadmor/Gur (0.5-5 km)
343	E-STB/DIS34	1.000E+05	3.4279E+03	4.0979E+02	Tadmor/Gur (0.5-5 km)
344	E-STB/DIS35	1.400E+05	4.6452E+03	5.0182E+02	Tadmor/Gur (0.5-5 km)
345	E-STB/DIS36	2.000E+05	6.4105E+03	6.2203E+02	Tadmor/Gur (0.5-5 km)
346	E-STB/DIS37	3.000E+05	9.2453E+03	7.9403E+02	Tadmor/Gur (0.5-5 km)
347	E-STB/DIS38	4.000E+05	1.1988E+04	9.4419E+02	Tadmor/Gur (0.5-5 km)
348	E-STB/DIS39	5.000E+05	1.4665E+04	1.0800E+03	Tadmor/Gur (0.5-5 km)
349	E-STB/DIS40	6.000E+05	1.7289E+04	1.2053E+03	Tadmor/Gur (0.5-5 km)
350	E-STB/DIS41	8.000E+05	2.2419E+04	1.4332E+03	Tadmor/Gur (0.5-5 km)

351	E-STB/DIS42	1.000E+06	2.7424E+04	1.6393E+03	Tadmor/Gur (0.5-5 km)
352	E-STB/DIS43	1.400E+06	3.7162E+04	2.0074E+03	Tadmor/Gur (0.5-5 km)
353	E-STB/DIS44	2.000E+06	5.1285E+04	2.4883E+03	Tadmor/Gur (0.5-5 km)
354	E-STB/DIS45	3.000E+06	7.3964E+04	3.1764E+03	Tadmor/Gur (0.5-5 km)
355	E-STB/DIS46	4.000E+06	9.5907E+04	3.7771E+03	Tadmor/Gur (0.5-5 km)
356	E-STB/DIS47	5.000E+06	1.1732E+05	4.3203E+03	Tadmor/Gur (0.5-5 km)
357	E-STB/DIS48	6.000E+06	1.3832E+05	4.8215E+03	Tadmor/Gur (0.5-5 km)
358	E-STB/DIS49	8.000E+06	1.7935E+05	5.7334E+03	Tadmor/Gur (0.5-5 km)
359	E-STB/DIS50	1.000E+07	2.1940E+05	6.5578E+03	Tadmor/Gur (0.5-5 km)
	*				
	* F-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)	
360	F-STB/DIS01	1.000E+00	7.2200E-02	2.0000E-01	Tadmor/Gur (0.5-5 km)
361	F-STB/DIS02	1.400E+00	9.7838E-02	2.4491E-01	Tadmor/Gur (0.5-5 km)
362	F-STB/DIS03	2.000E+00	1.3502E-01	3.0356E-01	Tadmor/Gur (0.5-5 km)
363	F-STB/DIS04	3.000E+00	1.9473E-01	3.8749E-01	Tadmor/Gur (0.5-5 km)
364	F-STB/DIS05	4.000E+00	2.5250E-01	4.6076E-01	Tadmor/Gur (0.5-5 km)
365	F-STB/DIS06	5.000E+00	3.0887E-01	5.2700E-01	Tadmor/Gur (0.5-5 km)
366	F-STB/DIS07	6.000E+00	3.6415E-01	5.8814E-01	Tadmor/Gur (0.5-5 km)
367	F-STB/DIS08	8.000E+00	4.7219E-01	6.9934E-01	Tadmor/Gur (0.5-5 km)
368	F-STB/DIS09	1.000E+01	5.7761E-01	7.9989E-01	Tadmor/Gur (0.5-5 km)
369	F-STB/DIS10	1.000E+02	4.6210E+00	3.1991E+00	Tadmor/Gur (0.5-5 km)
370	F-STB/DIS11	1.400E+02	6.2619E+00	3.9174E+00	Tadmor/Gur (0.5-5 km)
371	F-STB/DIS12	2.000E+02	8.6417E+00	4.8557E+00	Tadmor/Gur (0.5-5 km)
372	F-STB/DIS13	3.000E+02	1.2463E+01	6.1981E+00	Tadmor/Gur (0.5-5 km)
373	F-STB/DIS14	4.000E+02	1.6161E+01	7.3700E+00	Tadmor/Gur (0.5-5 km)
374	F-STB/DIS15	5.000E+02	1.9769E+01	8.4297E+00	Tadmor/Gur (0.5-5 km)
375	F-STB/DIS16	6.000E+02	2.3307E+01	9.4076E+00	Tadmor/Gur (0.5-5 km)
376	F-STB/DIS17	8.000E+02	3.0222E+01	1.1186E+01	Tadmor/Gur (0.5-5 km)
377	F-STB/DIS18	1.000E+03	3.6969E+01	1.2795E+01	Tadmor/Gur (0.5-5 km)
378	F-STB/DIS19	1.400E+03	5.0096E+01	1.5667E+01	Tadmor/Gur (0.5-5 km)
379	F-STB/DIS20	2.000E+03	6.9135E+01	1.9420E+01	Tadmor/Gur (0.5-5 km)
380	F-STB/DIS21	3.000E+03	9.9707E+01	2.4789E+01	Tadmor/Gur (0.5-5

381	F-STB/DIS22	4.000E+03	1.2929E+02	2.9476E+01	Tadmor/Gur (0.5-5 km)
382	F-STB/DIS23	5.000E+03	1.5815E+02	3.3714E+01	Tadmor/Gur (0.5-5 km)
383	F-STB/DIS24	6.000E+03	1.8646E+02	3.7625E+01	Tadmor/Gur (0.5-5 km)
384	F-STB/DIS25	8.000E+03	2.4178E+02	4.4739E+01	Tadmor/Gur (0.5-5 km)
385	F-STB/DIS26	1.000E+04	2.9576E+02	5.1172E+01	Tadmor/Gur (0.5-5 km)
386	F-STB/DIS27	1.400E+04	4.0078E+02	6.2661E+01	Tadmor/Gur (0.5-5 km)
387	F-STB/DIS28	2.000E+04	5.5309E+02	7.7669E+01	Tadmor/Gur (0.5-5 km)
388	F-STB/DIS29	3.000E+04	7.9767E+02	9.9142E+01	Tadmor/Gur (0.5-5 km)
389	F-STB/DIS30	4.000E+04	1.0343E+03	1.1789E+02	Tadmor/Gur (0.5-5 km)
390	F-STB/DIS31	5.000E+04	1.2653E+03	1.3484E+02	Tadmor/Gur (0.5-5 km)
391	F-STB/DIS32	6.000E+04	1.4917E+03	1.5048E+02	Tadmor/Gur (0.5-5 km)
392	F-STB/DIS33	8.000E+04	1.9343E+03	1.7893E+02	Tadmor/Gur (0.5-5 km)
393	F-STB/DIS34	1.000E+05	2.3661E+03	2.0466E+02	Tadmor/Gur (0.5-5 km)
394	F-STB/DIS35	1.400E+05	3.2063E+03	2.5061E+02	Tadmor/Gur (0.5-5 km)
395	F-STB/DIS36	2.000E+05	4.4248E+03	3.1063E+02	Tadmor/Gur (0.5-5 km)
396	F-STB/DIS37	3.000E+05	6.3815E+03	3.9651E+02	Tadmor/Gur (0.5-5 km)
397	F-STB/DIS38	4.000E+05	8.2748E+03	4.7149E+02	Tadmor/Gur (0.5-5 km)
398	F-STB/DIS39	5.000E+05	1.0122E+04	5.3927E+02	Tadmor/Gur (0.5-5 km)
399	F-STB/DIS40	6.000E+05	1.1934E+04	6.0183E+02	Tadmor/Gur (0.5-5 km)
400	F-STB/DIS41	8.000E+05	1.5475E+04	7.1563E+02	Tadmor/Gur (0.5-5 km)
401	F-STB/DIS42	1.000E+06	1.8929E+04	8.1852E+02	Tadmor/Gur (0.5-5 km)
402	F-STB/DIS43	1.400E+06	2.5651E+04	1.0023E+03	Tadmor/Gur (0.5-5 km)
403	F-STB/DIS44	2.000E+06	3.5400E+04	1.2424E+03	Tadmor/Gur (0.5-5 km)
404	F-STB/DIS45	3.000E+06	5.1053E+04	1.5858E+03	Tadmor/Gur (0.5-5 km)
405	F-STB/DIS46	4.000E+06	6.6200E+04	1.8857E+03	Tadmor/Gur (0.5-5 km)
406	F-STB/DIS47	5.000E+06	8.0980E+04	2.1568E+03	Tadmor/Gur (0.5-5 km)
407	F-STB/DIS48	6.000E+06	9.5474E+04	2.4070E+03	Tadmor/Gur (0.5-5 km)
408	F-STB/DIS49	8.000E+06	1.2380E+05	2.8621E+03	Tadmor/Gur (0.5-5 km)
409	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

```
      *
  410 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
      *
  411 DPZSCALE001    1.27
*************************************************************************** *
      * EXPANSION FACTOR DATA BLOCK, LOADED BY INPEXP, STORED IN /EXPAND/
      *
      * TIME BASE FOR EXPANSION FACTOR (SECONDS)
      *
  412 PMTIMBAS001    600.   (10 MINUTES)
      *
      * BREAK POINT FOR FORMULA CHANGE (SECONDS)
      *
  413 PMBRKPNT001   3600.   (1 HOUR)
      *
      * EXPONENTIAL EXPANSION FACTOR NUMBER 1
      *
  414 PMXPFAC1001      0.2
      *
      * EXPONENTIAL EXPANSION FACTOR NUMBER 2
      *
  415 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)
```

```
      *
  416 PRSCLCRW001   1.
      *
      * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
      * (USED BY FUNCTION PLMRIS)
      *
  417 PRSCLADP001   1.
      *
      * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
      * (USED BY FUNCTION PLMRIS)
      *
  418 PRSCLEFP001   1.
*******************************************************************************
      * RELEASE DATA BLOCK, LOADED BY INPREL, STORED IN /ATNAM2/, /MULREL/
*******************************************************************************
  419 RDATNAM2001 'Case 1BOC  ESBWR Specific Source Term Data Used From GE'
*******************************************************************************
      * 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
*******************************************************************************
  420 RDOALARM001      1200.
      *
      * NUMBER OF PLUME SEGMENTS THAT ARE RELEASED
      *
  421 RDNUMREL001          1
      *
      * SELECTION OF RISK DOMINANT PLUME
      *
```

```
422  RDMAXRIS001          1
     *
     * REFERENCE TIME FOR DISPERSION AND RADIOACTIVE DECAY
     *
423  RDREFTIM001       0.0
     *
     * HEAT CONTENT OF THE RELEASE SEGMENTS (W)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
424  RDPLHEAT001        1.0E+6
     *
     * HEIGHT OF THE PLUME SEGMENTS AT RELEASE (M)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
425  RDPLHITE001        49.0
     *
     * DURATION OF THE PLUME SEGMENTS (S)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
426  RDPLUDUR001     9000.
     *
     * TIME OF RELEASE FOR EACH PLUME (S AFTER SCRAM)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
427  RDPDELAY001     2100.
     *
     * Initial value of sigma-y for each plume--Note: values required for each
plume
     *
428  SIGYINIT001  9.302  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
     *
```

```
429  SIGZINIT001  23.26  23.26 (initial sigma-z, calculated for 50 meter high
bldg.)
     *
     * Building height (meters)--Note: values required for each plume
     *
430  WEBUILDH001   50.0  50.0  (Surry)
     *
     * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
     * YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
     *
431  RDPSDIST001      1.
432  RDPSDIST002      1.
433  RDPSDIST003      1.
434  RDPSDIST004      1.
435  RDPSDIST005      1.
436  RDPSDIST006      1.
437  RDPSDIST007      1.
438  RDPSDIST008      1.
439  RDPSDIST009      1.
     *
     * ESBWR CORE INVENTORY, END-OF-CYCLE
     *           SUPPLIED BY GE for ESBWR, 4/04/06
     *
     *               NUCNAM        CORINV (Bq/MWt)
     *
440  RDCORINV001      Co-58       5.10E+12
441  RDCORINV002      Co-60       4.92E+12
442  RDCORINV003      Kr-85       1.23E+13
443  RDCORINV004      Kr-85m      2.73E+14
444  RDCORINV005      Kr-87       5.27E+14
445  RDCORINV006      Kr-88       7.42E+14
446  RDCORINV007      Rb-86       2.35E+12
```

447	RDCORINV008	Sr-89	9.93E+14
448	RDCORINV009	Sr-90	9.76E+13
449	RDCORINV010	Sr-91	1.25E+15
450	RDCORINV011	Sr-92	1.34E+15
451	RDCORINV012	Y-90	1.01E+14
452	RDCORINV013	Y-91	1.27E+15
453	RDCORINV014	Y-92	1.34E+15
454	RDCORINV015	Y-93	1.55E+15
455	RDCORINV016	Zr-95	1.70E+15
456	RDCORINV017	Zr-97	1.69E+15
457	RDCORINV018	Nb-95	1.71E+15
458	RDCORINV019	Mo-99	1.89E+15
459	RDCORINV020	Tc-99m	1.68E+15
460	RDCORINV021	Ru-103	1.50E+15
461	RDCORINV022	Ru-105	1.00E+15
462	RDCORINV023	Ru-106	5.21E+14
463	RDCORINV024	Rh-105	9.10E+14
464	RDCORINV025	Sb-127	1.03E+14
465	RDCORINV026	Sb-129	3.15E+14
466	RDCORINV027	Te-127	1.05E+14
467	RDCORINV028	Te-127m	1.37E+13
468	RDCORINV029	Te-129	3.10E+14
469	RDCORINV030	Te-129m	4.60E+13
470	RDCORINV031	Te-131m	1.42E+14
471	RDCORINV032	Te-132	1.41E+15
472	RDCORINV033	I-131	9.90E+14
473	RDCORINV034	I-132	1.44E+15
474	RDCORINV035	I-133	2.04E+15
475	RDCORINV036	I-134	2.25E+15
476	RDCORINV037	I-135	1.91E+15
477	RDCORINV038	Xe-133	2.03E+15
478	RDCORINV039	Xe-135	6.72E+14

```
479  RDCORINV040      Cs-134      1.98E+14
480  RDCORINV041      Cs-136      6.89E+13
481  RDCORINV042      Cs-137      1.28E+14
482  RDCORINV043      Ba-139      1.84E+15
483  RDCORINV044      Ba-140      1.77E+15
484  RDCORINV045      La-140      1.82E+15
485  RDCORINV046      La-141      1.68E+15
486  RDCORINV047      La-142      1.62E+15
487  RDCORINV048      Ce-141      1.68E+15
488  RDCORINV049      Ce-143      1.56E+15
489  RDCORINV050      Ce-144      1.36E+15
490  RDCORINV051      Pr-143      1.53E+15
491  RDCORINV052      Nd-147      6.69E+14
492  RDCORINV053      Np-239      1.93E+16
493  RDCORINV054      Pu-238      3.34E+12
494  RDCORINV055      Pu-239      4.02E+11
495  RDCORINV056      Pu-240      5.21E+11
496  RDCORINV057      Pu-241      1.51E+14
497  RDCORINV058      Am-241      1.70E+11
498  RDCORINV059      Cm-242      4.01E+13
499  RDCORINV060      Cm-244      1.94E+12
     *
     *  SCALING FACTOR TO ADJUST THE CORE INVENTORY FOR POWER LEVEL
     * scaling factor to adjust inventory from Bq/MWt to Bq
     *          enter the total thermal power
     *
500  RDCORSCA001   4500.0  *  ESBWR power level = 4500
     *
     *
501  RDAPLFRC001   PARENT      (apply rel fracs the same as prior versions)
     *
```

```
        * SOURCE TERM NUMBER

        ****** These RELEASE FRACTIONS are for Case 1BOC
*******************************
        ******

        ******

        *

        *  ISOTOPE GROUPS:

        *

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

  502  RDRELFRC001 1.00E+00 8.50E-01 3.80E-01 9.06E-01 1.50E-02 7.20E-02 6.10E-04
3.43E-03 1.50E-02

*******************************************************************************

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

        *

        * FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN

        *

  503  OCENDAT1001  .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)

        *

  504  OCIDEBUG001  0

        *

        * NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS

        *

  505  OCNUCOUT001  Cs-137

        *

        *              NUMO

  506  TYPEONUMBER      2

        *

        *              INDREL   INDRAD

  507  TYPEOOUT001      1        9

  508  TYPEOOUT002      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.
     *
509  M1METCOD001  2
     *
     * LAST SPATIAL INTERVAL FOR MEASURED WEATHER
     *
510  M2LIMSPA001  11
     *
     * BOUNDARY WEATHER MIXING LAYER HEIGHT
     *
511  M2BNDMXH001  1000.  (METERS)
     *
     * BOUNDARY WEATHER STABILITY CLASS INDEX
     *
512  M2IBDSTB001  4      (D-STABILITY)
     *
     * BOUNDARY WEATHER RAIN RATE
     *
513  M2BNDRAN001  5.     (MM/HR)
     *
     * BOUNDARY WEATHER WIND SPEED
     *
514  M2BNDWND001  5.     (M/S)
     *
```

```
     * NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
     *
515  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).
     *
516  M4RNDSTS001  3.22  6.44  8.05  16.09  32.19
     *
     * NUMBER OF RAIN INTENSITIY BREAKPOINTS
     *
517  M4NRINTN001   3
     *
     * RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
     *
518  M4RNRATE001   2.  4.  6.
     *
     * NUMBER OF SAMPLES PER BIN
     *
519  M4NSMPLS001  4  (THIS NUMBER SHOULD BE SET TO 4 FOR RISK ASSESSMENT)
     *
     * INITIAL SEED FOR RANDOM NUMBER GENERATOR
     *
520  M4IRSEED001   79
     ******************************************************************************
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                          =  759
NUMBER OF BLANK OR COMMENT RECORDS READ         =  238
```

```
NUMBER OF TERMINATOR RECORDS                    =    1
NUMBER OF RECORDS PROCESSED                     =  520
     NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
     NUMBER OF PROCESSED RECORDS SORTED         =  520
*******************************************************************************
****************


Decay Chain #  Ba-139

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

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

Decay Chain #  Ce-144

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

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

Decay Chain #  Co-58

Decay Chain #  Co-60

Decay Chain #  Cs-134

Decay Chain #  Cs-136

Decay Chain #  Cs-137

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

Decay Chain #  I-134

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

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

Decay Chain #  Kr-87

Decay Chain #  Kr-88

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

Decay Chain #  La-142

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

Decay Chain #  Nd-147

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

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

Decay Chain #  Rb-86

Decay Chain #  Ru-103

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

Decay Chain #  Ru-106

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

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

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

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

Decay Chain #  Sr-89

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

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

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

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

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

Decay Chain #  Y-93

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

Decay Chain #  Zr-97

Using new table-lookup scheme for sigma-y/sigma-z


RELEASED INVENTORY OF ALL PLUMES
Co-58       1.65E+15
Co-60       1.59E+15
Kr-85       5.54E+16
Kr-85m      1.12E+18
Kr-87       1.73E+18
Kr-88       2.90E+18
```

Rb-86	4.01E+15
Sr-89	6.70E+16
Sr-90	6.59E+15
Sr-91	8.09E+16
Sr-92	7.79E+16
Y-90	3.17E+14
Y-91	3.50E+15
Y-92	1.23E+16
Y-93	4.09E+15
Zr-95	4.67E+15
Zr-97	4.53E+15
Nb-95	4.69E+15
Mo-99	6.09E+17
Tc-99m	5.44E+17
Ru-103	4.86E+17
Ru-105	2.96E+17
Ru-106	1.69E+17
Rh-105	2.95E+17
Sb-127	4.18E+17
Sb-129	1.17E+18
Te-127	4.27E+17
Te-127m	5.59E+16
Te-129	1.21E+18
Te-129m	1.88E+17
Te-131m	5.71E+17
Te-132	5.72E+18
I-131	3.78E+18
I-132	5.54E+18
I-133	7.65E+18
I-134	5.43E+18
I-135	6.87E+18
Xe-133	9.13E+18
Xe-135	3.15E+18
Cs-134	3.39E+17
Cs-136	1.18E+17
Cs-137	2.19E+17
Ba-139	9.26E+16
Ba-140	1.19E+17
La-140	6.14E+15
La-141	4.16E+15
La-142	3.42E+15
Ce-141	2.59E+16
Ce-143	2.38E+16
Ce-144	2.10E+16
Pr-143	4.22E+15
Nd-147	1.83E+15
Np-239	2.96E+17
Pu-238	5.16E+13
Pu-239	6.21E+12
Pu-240	8.04E+12
Pu-241	2.33E+15
Am-241	4.67E+11
Cm-242	1.10E+14
Cm-244	5.33E+12

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

```
     METEOROLOGICAL DATA FILE CONTAINS  675 HOURS OF OBSERVED RAIN DATA.
            ACCUMULATED RAIN MEASUREMENTS TOTALED  47.26 INCHES FOR THE YEAR.
            CONSTANT LID HEIGHTS (M) FOR 4 SEASONS =     900   1500   1400   1000
            NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S
NUMTRI=          123
```

```
                                        * * * * METEOROLOGICAL BIN SUMMARY * * * *
  BIN PRIORITIES
    RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
                INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5
INTERVAL ENDPOINTS ARE    3   6   8  16  32
                RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY
BREAKPOINTS ARE          2.0  4.0  6.0
    S   V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED
INTERVAL V
                STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
                WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3
(2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

                                                                  WIND DIRECTION
  METBIN     1      2      3      4      5      6      7      8      9     10     11     12
13     14     15     16  TOTAL    PER CENT

 1 B    3  0.111 0.074 0.016 0.042 0.058 0.111 0.143 0.032 0.016 0.021 0.011 0.021
0.048 0.111 0.132 0.053  189      2.1575
 2 B    4  0.108 0.143 0.066 0.090 0.152 0.158 0.151 0.059 0.016 0.001 0.000 0.001
0.004 0.007 0.009 0.032  677      7.7283
 3 D    1  0.037 0.061 0.037 0.024 0.024 0.037 0.049 0.061 0.049 0.122 0.122 0.122
0.146 0.024 0.061 0.024   82      0.9361
 4 D    2  0.019 0.049 0.040 0.032 0.023 0.019 0.056 0.067 0.083 0.081 0.098 0.088
0.118 0.156 0.046 0.025  569      6.4954
 5 D    3  0.042 0.098 0.056 0.025 0.020 0.025 0.055 0.096 0.080 0.122 0.082 0.073
0.068 0.072 0.061 0.022  833      9.5091
 6 D    4  0.071 0.114 0.071 0.034 0.014 0.022 0.042 0.087 0.116 0.092 0.070 0.070
0.050 0.055 0.055 0.038 1393     15.9018
 7 D    5  0.077 0.133 0.124 0.053 0.034 0.039 0.076 0.099 0.169 0.068 0.029 0.014
0.015 0.020 0.028 0.022  646      7.3744
 8 D    6  0.031 0.144 0.131 0.025 0.056 0.158 0.125 0.164 0.128 0.008 0.003 0.014
0.003 0.000 0.000 0.011  360      4.1096
 9 E    1  0.033 0.055 0.033 0.066 0.011 0.055 0.088 0.099 0.132 0.077 0.077 0.110
0.066 0.033 0.055 0.011   91      1.0388
10 E    2  0.046 0.109 0.074 0.056 0.061 0.069 0.089 0.142 0.087 0.041 0.051 0.043
0.046 0.041 0.025 0.020  393      4.4863
11 E    3  0.083 0.135 0.111 0.069 0.055 0.055 0.123 0.066 0.038 0.021 0.026 0.014
0.045 0.050 0.052 0.057  422      4.8174
12 E    4  0.176 0.222 0.125 0.067 0.072 0.089 0.034 0.013 0.022 0.009 0.014 0.016
0.011 0.012 0.046 0.072 1230     14.0411
13 F    1  0.100 0.086 0.071 0.057 0.029 0.086 0.071 0.057 0.057 0.086 0.057 0.057
0.071 0.057 0.029 0.029   70      0.7991
14 F    2  0.079 0.070 0.102 0.121 0.079 0.098 0.079 0.037 0.028 0.042 0.047 0.014
0.037 0.023 0.102 0.042  215      2.4543
15 F    3  0.062 0.086 0.095 0.136 0.140 0.091 0.103 0.070 0.021 0.008 0.008 0.029
0.012 0.012 0.025 0.103  243      2.7740
16 F    4  0.117 0.164 0.128 0.075 0.110 0.128 0.114 0.021 0.025 0.007 0.007 0.004
0.011 0.011 0.025 0.053  281      3.2078
17 R1   3  0.090 0.081 0.049 0.041 0.022 0.018 0.049 0.098 0.116 0.079 0.092 0.053
0.041 0.059 0.059 0.053  509      5.8105
18 R1   6  0.067 0.000 0.067 0.133 0.000 0.067 0.067 0.067 0.000 0.067 0.067 0.133
0.067 0.067 0.133 0.000   15      0.1712
19 R1   8  0.045 0.091 0.045 0.000 0.045 0.091 0.045 0.045 0.091 0.091 0.091 0.045
0.136 0.000 0.091 0.045   22      0.2511
20 R1  16  0.093 0.093 0.019 0.019 0.009 0.037 0.065 0.037 0.075 0.065 0.075 0.103
0.121 0.065 0.075 0.047  107      1.2215
21 R1  32  0.089 0.101 0.073 0.056 0.006 0.017 0.050 0.034 0.084 0.067 0.073 0.089
0.073 0.078 0.073 0.039  179      2.0434
22 R2   3  0.115 0.031 0.031 0.042 0.031 0.042 0.031 0.104 0.094 0.125 0.063 0.094
0.063 0.052 0.010 0.073   96      1.0959
```

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23 R2  6  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 1.000 0.000 0.000
0.000 0.000 0.000 0.000    1      0.0114
24 R2  8  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.500 0.000 0.500 0.000 0.000
0.000 0.000 0.000 0.000    2      0.0228
25 R2 16  0.000 0.167 0.083 0.000 0.083 0.000 0.083 0.000 0.167 0.083 0.167 0.000
0.000 0.083 0.000 0.083   12      0.1370
26 R2 32  0.056 0.000 0.056 0.000 0.111 0.000 0.056 0.167 0.056 0.111 0.000 0.056
0.167 0.056 0.056 0.056   18      0.2055
27 R3  3  0.071 0.143 0.036 0.071 0.000 0.036 0.036 0.000 0.071 0.214 0.071 0.036
0.107 0.000 0.036 0.071   28      0.3196
30 R3 16  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.500 0.000 0.500 0.000    2      0.0228
31 R3 32  0.400 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.000 0.400 0.000 0.200    5      0.0571
32 R4  3  0.140 0.070 0.116 0.000 0.023 0.023 0.023 0.047 0.116 0.023 0.116 0.116
0.070 0.047 0.023 0.047   43      0.4909
33 R4  6  0.000 0.000 0.000 0.000 0.000 1.000 0.000 0.000 0.000 0.000 0.000 0.000
0.000 0.000 0.000 0.000    1      0.0114
34 R4  8  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 1.000
0.000 0.000 0.000 0.000    1      0.0114
35 R4 16  0.100 0.000 0.000 0.100 0.000 0.100 0.000 0.000 0.000 0.000 0.000 0.100
0.300 0.100 0.100 0.100   10      0.1142
36 R4 32  0.400 0.000 0.067 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
0.067 0.200 0.067 0.200   15      0.1712
37 ALL    0.086 0.122 0.082 0.053 0.051 0.063 0.072 0.072 0.076 0.055 0.047 0.043
0.043 0.046 0.046 0.042 8760
```

* * * * METEOROLOGICAL BIN SUMMARY * * * *

BIN PRIORITIES

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

INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 6 8 16 32

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

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

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

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

METBIN		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL	PER CENT
		WIND DIRECTION																	
1 B	3	21	14	3	8	11	21	27	6	3	4	2	4	9	21	25	10	189	2.1575
2 B	4	73	97	45	61	103	107	102	40	11	1	0	1	3	5	6	22	677	7.7283
3 D	1	3	5	3	2	2	3	4	5	4	10	10	10	12	2	5	2	82	0.9361
4 D	2	11	28	23	18	13	11	32	38	47	46	56	50	67	39	26	14	569	6.4954
5 D	3	35	82	47	21	17	21	46	80	67	102	68	61	57	60	51	18	833	9.5091
6 D	4	99	159	99	48	20	30	58	121	161	128	98	98	69	76	76	53	1393	15.9018
7 D	5	50	86	80	34	22	25	49	64	109	44	19	9	10	13	18	14	646	7.3744
8 D	6	11	52	47	9	20	57	45	59	46	3	1	5	1	0	0	4	360	4.1096
9 E	1	3	5	3	6	1	5	8	9	12	7	7	10	6	3	5	1	91	1.0388
10 E	2	18	43	29	22	24	27	35	56	34	16	20	17	18	16	10			

```
   8  393      4.4863
11 E   3    35   57   47   29   23   23   52   28   16    9   11    6   19   21   22
  24  422      4.8174
12 E   4   217  273  154   82   88  109   42   16   27   11   17   20   13   15   57
  89 1230     14.0411
13 F   1     7    6    5    4    2    6    5    4    4    6    4    4    5    4    2
   2   70      0.7991
14 F   2    17   15   22   26   17   21   17    8    6    9   10    3    8    5   22
   9  215      2.4543
15 F   3    15   21   23   33   34   22   25   17    5    2    2    7    3    3    6
  25  243      2.7740
16 F   4    33   46   36   21   31   36   32    6    7    2    2    1    3    3    7
  15  281      3.2078
17 R1  3    46   41   25   21   11    9   25   50   59   40   47   27   21   30   30
  27  509      5.8105
18 R1  6     1    0    1    2    0    1    1    1    0    1    1    2    1    1    2
   0   15      0.1712
19 R1  8     1    2    1    0    1    2    1    1    2    2    2    1    3    0    2
   1   22      0.2511
20 R1 16    10   10    2    2    1    4    7    4    8    7    8   11   13    7    8
   5  107      1.2215
21 R1 32    16   18   13   10    1    3    9    6   15   12   13   16   13   14   13
   7  179      2.0434
22 R2  3    11    3    3    4    3    4    3   10    9   12    6    9    6    5    1
   7   96      1.0959
23 R2  6     0    0    0    0    0    0    0    0    0    1    0    0    0    0    0
   0    1      0.0114
24 R2  8     0    0    0    0    0    0    0    1    0    1    0    0    0    0    0
   0    2      0.0228
25 R2 16     0    2    1    0    1    0    1    0    2    1    2    0    0    1    0
   1   12      0.1370
26 R2 32     1    0    1    0    2    0    1    3    1    2    0    1    3    1    1
   1   18      0.2055
27 R3  3     2    4    1    2    0    1    1    0    2    6    2    1    3    0    1
   2   28      0.3196
28 R3  6     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
   0    0      0.0000
29 R3  8     0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
   0    0      0.0000
30 R3 16     0    0    0    0    0    0    0    0    0    0    0    0    1    0    1
   0    2      0.0228
31 R3 32     2    0    0    0    0    0    0    0    0    0    0    0    0    2    0
   1    5      0.0571
32 R4  3     6    3    5    0    1    1    1    2    5    1    5    5    3    2    1
   2   43      0.4909
33 R4  6     0    0    0    0    0    1    0    0    0    0    0    0    0    0    0
   0    1      0.0114
34 R4  8     0    0    0    0    0    0    0    0    0    0    0    1    0    0    0
   0    1      0.0114
35 R4 16     1    0    0    1    0    1    0    0    0    0    0    1    3    1    1
   1   10      0.1142
36 R4 32     6    0    1    0    0    0    0    0    0    0    0    0    1    3    1
   3   15      0.1712


              * * * * SUMMARIES * * * *

   R       103   83   54   42   21   27   50   78  103   86   86   75   71   67   62
 58 1066    12.1690
   B        94  111   48   69  114  128  129   46   14    5    2    5   12   26   31
 32  866     9.8858
   D       209  412  299  132   94  147  234  367  434  333  252  233  216  240  176
105 3883    44.3265
```

```
   E      273  378  233  139  136  164  137  109   89   43   55   53   56   55   94
122 2136   24.3836
   F       72   88   86   84   84   85   79   35   22   19   18   15   19   15   37
 51  809    9.2352
     1     13   17   11   12    5   15   17   18   20   23   21   25   23   10   12
  6  248    2.8311
     2     48   88   74   66   55   67   97  104   87   75   86   71   98  118   66
 33 1233   14.0753
     3    104  171  120   91   84   78  137  129   91  113   83   76   83   96   96
 74 1626   18.5616
     4    346  423  214  140  142  150  165  156  187  140  114  120   85   96  133
160 2771   31.6324
     5    117  211  169   99   89   83  102   72  117   46   22    9   13   14   30
 23 1216   13.8813
     6     20   79   78   16   53  131   61   78   57    3    1    5    1    2    1
 14  600    6.8493
```

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

BIN	DIRECTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
1	0.111	0.074	0.016	0.042	0.058	0.111	0.143	0.032	0.016	0.021	0.011	0.021	0.048	0.111	0.132	0.053	1.000000
2	0.108	0.143	0.066	0.090	0.152	0.158	0.151	0.059	0.016	0.001	0.000	0.001	0.004	0.007	0.009	0.032	1.000000
3	0.037	0.061	0.037	0.024	0.024	0.037	0.049	0.061	0.049	0.122	0.122	0.122	0.146	0.024	0.061	0.024	1.000000
4	0.019	0.049	0.040	0.032	0.023	0.019	0.056	0.067	0.083	0.081	0.098	0.088	0.118	0.156	0.046	0.025	1.000000
5	0.042	0.098	0.056	0.025	0.020	0.025	0.055	0.096	0.080	0.122	0.082	0.073	0.068	0.072	0.061	0.022	1.000000
6	0.071	0.114	0.071	0.034	0.014	0.022	0.042	0.087	0.116	0.092	0.070	0.070	0.050	0.055	0.055	0.038	1.000000
7	0.077	0.133	0.124	0.053	0.034	0.039	0.076	0.099	0.169	0.068	0.029	0.014	0.015	0.020	0.028	0.022	1.000000
8	0.031	0.144	0.131	0.025	0.056	0.158	0.125	0.164	0.128	0.008	0.003	0.014	0.003	0.000	0.000	0.011	1.000000
9	0.033	0.055	0.033	0.066	0.011	0.055	0.088	0.099	0.132	0.077	0.077	0.110	0.066	0.033	0.055	0.011	1.000000
10	0.046	0.109	0.074	0.056	0.061	0.069	0.089	0.142	0.087	0.041	0.051	0.043	0.046	0.041	0.025	0.020	1.000000
11	0.083	0.135	0.111	0.069	0.055	0.055	0.123	0.066	0.038	0.021	0.026	0.014	0.045	0.050	0.052	0.057	1.000000
12	0.176	0.222	0.125	0.067	0.072	0.089	0.034	0.013	0.022	0.009	0.014	0.016	0.011	0.012	0.046	0.072	1.000000
13	0.100	0.086	0.071	0.057	0.029	0.086	0.071	0.057	0.057	0.086	0.057	0.057	0.071	0.057	0.029	0.029	1.000000
14	0.079	0.070	0.102	0.121	0.079	0.098	0.079	0.037	0.028	0.042	0.047	0.014	0.037	0.023	0.102	0.042	1.000000
15	0.062	0.086	0.095	0.136	0.140	0.091	0.103	0.070	0.021	0.008	0.008	0.029	0.012	0.012	0.025	0.103	1.000000
16	0.117	0.164	0.128	0.075	0.110	0.128	0.114	0.021	0.025	0.007	0.007	0.004	0.011	0.011	0.025	0.053	1.000000
17	0.097	0.078	0.051	0.039	0.020	0.025	0.047	0.073	0.097	0.081	0.081	0.070	0.067	0.063	0.058	0.054	1.000000
18	0.097	0.078	0.051	0.039	0.020	0.025	0.047	0.073	0.097	0.081	0.081	0.070	0.067	0.063	0.058	0.054	1.000000
19	0.097	0.078	0.051	0.039	0.020	0.025	0.047	0.073	0.097	0.081	0.081	0.070	0.067	0.063	0.058	0.054	1.000000
20	0.097	0.078	0.051	0.039	0.020	0.025	0.047	0.073	0.097	0.081	0.081	0.070	0.067	0.063	0.058	0.054	1.000000

```
   21  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   22  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   23  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   24  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   25  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   26  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   27  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   28  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   29  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   30  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   31  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   32  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   33  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   34  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   35  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   36  0.097  0.078  0.051  0.039  0.020  0.025  0.047  0.073  0.097  0.081  0.081
0.070  0.067  0.063  0.058  0.054  1.000000
   37  0.086  0.122  0.082  0.053  0.051  0.063  0.072  0.072  0.076  0.055  0.047
0.043  0.043  0.046  0.046  0.042  1.000000


******** BEGINNING OF CHANGE CASE   1 USER INPUT ********
       ****** 10 ESBWR STACKED CASES BEGIN
HERE*************************************
       ******************************************************************************

       *

       * ESBWR Source Term data

       *


*==============================================================================

  521  RDATNAM2001     'Case 2BYP'

********   RECORD NUMBER   521 REPLACES RECORD NUMBER   419   ********
  522  RDOALARM001     1200.0      (time to reach general emergency condition, sec)

********   RECORD NUMBER   522 REPLACES RECORD NUMBER   420   ********
  523  RDPDELAY001     1800.0      (time of release after scram, sec)

********   RECORD NUMBER   523 REPLACES RECORD NUMBER   427   ********
  524  RDPLUDUR001     7800.0      (release duration, sec)

********   RECORD NUMBER   524 REPLACES RECORD NUMBER   426   ********
  525  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)
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********   RECORD NUMBER   525 REPLACES RECORD NUMBER   424   ********
  526  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   526 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  527  RDRELFRC001   9.80E-01 4.30E-01 3.70E-01 7.42E-01 1.60E-02 1.20E-01 5.30E-04
3.32E-03 2.90E-02
********   RECORD NUMBER   527 REPLACES RECORD NUMBER   502   ********
       .

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

USER INPUT PROCESSING SUMMARY - CHANGE CASE   1
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       2.75E+15
Co-60       2.66E+15
Kr-85       5.42E+16
Kr-85m      1.11E+18
Kr-87       1.77E+18
Kr-88       2.90E+18
Rb-86       3.91E+15
Sr-89       7.15E+16
Sr-90       7.03E+15
Sr-91       8.68E+16
Sr-92       8.49E+16
Y-90        2.78E+14
Y-91        3.04E+15
Y-92        1.13E+16
Y-93        3.57E+15
Zr-95       4.05E+15
Zr-97       3.95E+15
Nb-95       4.08E+15
Mo-99       1.02E+18
Tc-99m      9.06E+17
Ru-103      8.10E+17
Ru-105      4.99E+17
Ru-106      2.81E+17
Rh-105      4.92E+17
Sb-127      3.43E+17
Sb-129      9.71E+17
Te-127      3.50E+17
Te-127m     4.57E+16
Te-129      9.95E+17
Te-129m     1.54E+17
Te-131m     4.69E+17
```

```
Te-132      4.69E+18
I-131       1.91E+18
I-132       3.05E+18
I-133       3.88E+18
I-134       2.93E+18
I-135       3.51E+18
Xe-133      8.94E+18
Xe-135      2.97E+18
Cs-134      3.30E+17
Cs-136      1.15E+17
Cs-137      2.13E+17
Ba-139      1.87E+17
Ba-140      2.31E+17
La-140      6.28E+15
La-141      3.67E+15
La-142      3.09E+15
Ce-141      2.51E+16
Ce-143      2.31E+16
Ce-144      2.03E+16
Pr-143      3.67E+15
Nd-147      1.59E+15
Np-239      2.87E+17
Pu-238      4.99E+13
Pu-239      6.01E+12
Pu-240      7.78E+12
Pu-241      2.26E+15
Am-241      4.06E+11
Cm-242      9.56E+13
Cm-244      4.63E+12

******** BEGINNING OF CHANGE CASE   2 USER INPUT ********

*==============================================================================

  528  RDATNAM2001     'Case 3CCID'

********   RECORD NUMBER   528 REPLACES RECORD NUMBER   419   ********
  529  RDOALARM001     21100.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   529 REPLACES RECORD NUMBER   420   ********
  530  RDPDELAY001     53100.0     (time of release after scram, sec)

********   RECORD NUMBER   530 REPLACES RECORD NUMBER   427   ********
  531  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   531 REPLACES RECORD NUMBER   426   ********
  532  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   532 REPLACES RECORD NUMBER   424   ********
  533  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   533 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

```
  534  RDRELFRC001   9.20E-01 5.30E-01 3.20E-01 5.95E-01 2.30E-06 5.10E-06 1.40E-07
1.40E-06 2.20E-05
********   RECORD NUMBER   534 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   2 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   2
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
*****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       1.16E+11
Co-60       1.13E+11
Kr-85       5.09E+16
Kr-85m      1.15E+17
Kr-87       7.03E+14
Kr-88       8.39E+16
Rb-86       3.31E+15
Sr-89       1.02E+13
Sr-90       1.01E+12
Sr-91       4.41E+12
Sr-92       3.19E+11
Y-90        2.03E+11
Y-91        8.19E+11
Y-92        1.53E+12
Y-93        3.55E+11
Zr-95       1.06E+12
Zr-97       5.81E+11
Nb-95       1.08E+12
Mo-99       3.72E+13
Tc-99m      3.52E+13
Ru-103      3.41E+13
Ru-105      2.29E+12
Ru-106      1.19E+13
Rh-105      1.78E+13
Sb-127      2.47E+17
Sb-129      7.91E+16
Te-127      2.60E+17
Te-127m     3.67E+16
Te-129      1.64E+17
Te-129m     1.23E+17
Te-131m     2.70E+17
Te-132      3.31E+18
I-131       2.25E+18
I-132       3.41E+18
I-133       2.98E+18
I-134       4.62E+13
I-135       9.70E+17
Xe-133      8.04E+18
Xe-135      2.05E+18
Cs-134      2.85E+17
Cs-136      9.60E+16
Cs-137      1.84E+17
Ba-139      1.09E+11
Ba-140      1.69E+14
La-140      3.95E+13
La-141      7.85E+10
```

```
La-142      1.35E+09
Ce-141      1.05E+13
Ce-143      7.21E+12
Ce-144      8.56E+12
Pr-143      1.20E+12
Nd-147      4.05E+11
Np-239      1.01E+14
Pu-238      2.10E+10
Pu-239      2.54E+09
Pu-240      3.28E+09
Pu-241      9.51E+11
Am-241      1.10E+08
Cm-242      2.52E+10
Cm-244      1.22E+09

******** BEGINNING OF CHANGE CASE   3 USER INPUT ********

*==============================================================================

  535  RDATNAM2001     'Case 4CCIW'

********   RECORD NUMBER   535 REPLACES RECORD NUMBER   419   ********
  536  RDOALARM001     24000.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   536 REPLACES RECORD NUMBER   420   ********
  537  RDPDELAY001     90400.0     (time of release after scram, sec)

********   RECORD NUMBER   537 REPLACES RECORD NUMBER   427   ********
  538  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   538 REPLACES RECORD NUMBER   426   ********
  539  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   539 REPLACES RECORD NUMBER   424   ********
  540  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   540 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1       2       3       4       5       6       7       8       9

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

  541  RDRELFRC001   1.00E+00 7.30E-05 7.90E-03 1.54E-02 8.20E-08 5.90E-08 1.10E-08
7.49E-08 6.00E-08
********   RECORD NUMBER   541 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   3 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   3
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
******************************************************************************
****************
```

RELEASED INVENTORY OF ALL PLUMES

Co-58	1.34E+09
Co-60	1.31E+09
Kr-85	5.54E+16
Kr-85m	2.52E+16
Kr-87	2.70E+12
Kr-88	7.28E+15
Rb-86	8.04E+13
Sr-89	3.61E+11
Sr-90	3.60E+10
Sr-91	7.38E+10
Sr-92	8.03E+08
Y-90	1.24E+10
Y-91	6.32E+10
Y-92	9.68E+09
Y-93	1.37E+10
Zr-95	8.32E+10
Zr-97	2.99E+10
Nb-95	8.46E+10
Mo-99	3.85E+11
Tc-99m	3.69E+11
Ru-103	3.91E+11
Ru-105	5.27E+09
Ru-106	1.38E+11
Rh-105	1.70E+11
Sb-127	5.91E+15
Sb-129	3.88E+14
Te-127	6.32E+15
Te-127m	9.51E+14
Te-129	2.46E+15
Te-129m	3.15E+15
Te-131m	5.51E+15
Te-132	7.82E+16
I-131	7.96E+14
I-132	8.05E+16
I-133	2.90E+14
I-134	1.76E+06
I-135	4.51E+13
Xe-133	7.96E+18
Xe-135	4.46E+17
Cs-134	7.03E+15
Cs-136	2.32E+15
Cs-137	4.55E+15
Ba-139	1.63E+06
Ba-140	4.51E+11
La-140	2.21E+11
La-141	9.92E+08
La-142	1.00E+06
Ce-141	5.54E+11
Ce-143	3.10E+11
Ce-144	4.57E+11
Pr-143	9.30E+10
Nd-147	3.10E+10
Np-239	4.78E+12
Pu-238	1.13E+09
Pu-239	1.36E+08
Pu-240	1.76E+08
Pu-241	5.09E+10
Am-241	8.65E+06
Cm-242	1.98E+09
Cm-244	9.60E+07

```
******** BEGINNING OF CHANGE CASE   4 USER INPUT ********

*==============================================================================

  542  RDATNAM2001     'Case 5DCH'

********   RECORD NUMBER   542 REPLACES RECORD NUMBER   419   ********
  543  RDOALARM001     16300.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   543 REPLACES RECORD NUMBER   420   ********
  544  RDPDELAY001     63000.0     (time of release after scram, sec)

********   RECORD NUMBER   544 REPLACES RECORD NUMBER   427   ********
  545  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   545 REPLACES RECORD NUMBER   426   ********
  546  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   546 REPLACES RECORD NUMBER   424   ********
  547  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   547 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1       2       3       4       5       6       7       8       9

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

  548  RDRELFRC001   9.00E-01 8.00E-01 1.50E-01 4.90E-01 3.20E-04 2.70E-04 3.20E-04
3.20E-04 3.20E-04
********   RECORD NUMBER   548 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   4 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   4
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
*****************



RELEASED INVENTORY OF ALL PLUMES
Co-58       6.15E+12
Co-60       5.98E+12
Kr-85       4.98E+16
Kr-85m      7.37E+16
Kr-87       1.54E+14
Kr-88       4.20E+16
Rb-86       1.54E+15
Sr-89       1.42E+15
Sr-90       1.41E+14
Sr-91       5.02E+14
Sr-92       2.20E+13
Y-90        1.45E+14
Y-91        1.82E+15
```

```
Y-92        1.96E+14
Y-93        6.72E+14
Zr-95       2.43E+15
Zr-97       1.19E+15
Nb-95       2.46E+15
Mo-99       1.91E+15
Tc-99m      1.82E+15
Ru-103      1.80E+15
Ru-105      7.91E+13
Ru-106      6.32E+14
Rh-105      8.97E+14
Sb-127      1.99E+17
Sb-129      4.19E+16
Te-127      2.10E+17
Te-127m     3.02E+16
Te-129      1.10E+17
Te-129m     1.01E+17
Te-131m     2.09E+17
Te-132      2.66E+18
I-131       3.36E+18
I-132       2.75E+18
I-133       4.10E+18
I-134       7.93E+12
I-135       1.10E+18
Xe-133      7.96E+18
Xe-135      2.32E+18
Cs-134      1.34E+17
Cs-136      4.47E+16
Cs-137      8.64E+16
Ba-139      3.99E+11
Ba-140      2.45E+15
La-140      2.59E+15
La-141      1.10E+14
La-142      8.93E+11
Ce-141      2.39E+15
Ce-143      1.56E+15
Ce-144      1.95E+15
Pr-143      2.19E+15
Nd-147      9.20E+14
Np-239      2.24E+16
Pu-238      4.81E+12
Pu-239      5.80E+11
Pu-240      7.50E+11
Pu-241      2.17E+14
Am-241      2.45E+11
Cm-242      5.76E+13
Cm-244      2.79E+12

******** BEGINNING OF CHANGE CASE   5 USER INPUT ********

*==============================================================================

  549  RDATNAM2001     'Case 6EVE'

********   RECORD NUMBER   549 REPLACES RECORD NUMBER   419   ********
  550  RDOALARM001     22400.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   550 REPLACES RECORD NUMBER   420   ********
  551  RDPDELAY001     22500.0     (time of release after scram, sec)

********   RECORD NUMBER   551 REPLACES RECORD NUMBER   427   ********
  552  RDPLUDUR001     36000.0     (release duration, sec)
```

```
********   RECORD NUMBER   552 REPLACES RECORD NUMBER   426   ********
  553  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   553 REPLACES RECORD NUMBER   424   ********
  554  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   554 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  555  RDRELFRC001   8.40E-01 2.50E-01 3.40E-01 6.90E-01 1.30E-02 1.10E-04 8.20E-04
6.25E-03 5.70E-03
********   RECORD NUMBER   555 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   5 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   5
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************


RELEASED INVENTORY OF ALL PLUMES
Co-58       2.52E+12
Co-60       2.44E+12
Kr-85       4.65E+16
Kr-85m      3.92E+17
Kr-87       6.60E+16
Kr-88       6.10E+17
Rb-86       3.56E+15
Sr-89       5.79E+16
Sr-90       5.71E+15
Sr-91       4.63E+16
Sr-92       1.58E+16
Y-90        7.22E+14
Y-91        4.75E+15
Y-92        2.50E+16
Y-93        3.72E+15
Zr-95       6.26E+15
Zr-97       4.83E+15
Nb-95       6.31E+15
Mo-99       8.76E+14
Tc-99m      8.10E+14
Ru-103      7.39E+14
Ru-105      1.87E+14
Ru-106      2.58E+14
Rh-105      4.35E+14
Sb-127      3.05E+17
Sb-129      3.59E+17
Te-127      3.16E+17
Te-127m     4.26E+16
```

```
Te-129      4.69E+17
Te-129m     1.43E+17
Te-131m     3.82E+17
Te-132      4.14E+18
I-131       1.10E+18
I-132       3.83E+18
I-133       1.86E+18
I-134       1.81E+16
I-135       1.12E+18
Xe-133      7.48E+18
Xe-135      2.07E+18
Cs-134      3.03E+17
Cs-136      1.04E+17
Cs-137      1.96E+17
Ba-139      2.04E+15
Ba-140      4.48E+16
La-140      1.06E+16
La-141      2.06E+15
La-142      3.60E+14
Ce-141      4.70E+16
Ce-143      3.85E+16
Ce-144      3.82E+16
Pr-143      6.11E+15
Nd-147      2.43E+15
Np-239      5.03E+17
Pu-238      9.39E+13
Pu-239      1.13E+13
Pu-240      1.47E+13
Pu-241      4.25E+15
Am-241      6.32E+11
Cm-242      1.48E+14
Cm-244      7.16E+12

******** BEGINNING OF CHANGE CASE   6 USER INPUT ********

*==========================================================================

  556  RDATNAM2001     'Case 7FR'

********   RECORD NUMBER   556 REPLACES RECORD NUMBER   419   ********
  557  RDOALARM001     9800.0      (time to reach general emergency condition, sec)

********   RECORD NUMBER   557 REPLACES RECORD NUMBER   420   ********
  558  RDPDELAY001     102600.0    (time of release after scram, sec)

********   RECORD NUMBER   558 REPLACES RECORD NUMBER   427   ********
  559  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   559 REPLACES RECORD NUMBER   426   ********
  560  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   560 REPLACES RECORD NUMBER   424   ********
  561  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   561 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

```
  562  RDRELFRC001   1.00E+00 9.80E-06 4.60E-05 2.53E-03 1.10E-08 1.90E-07 4.10E-10
1.51E-09 3.20E-08
********   RECORD NUMBER   562 REPLACES RECORD NUMBER   502   ********
```

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE 6 USER INPUT ********

```
USER INPUT PROCESSING SUMMARY - CHANGE CASE   6
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************
```

RELEASED INVENTORY OF ALL PLUMES

Co-58	4.31E+09
Co-60	4.20E+09
Kr-85	5.54E+16
Kr-85m	1.49E+16
Kr-87	4.25E+11
Kr-88	3.18E+15
Rb-86	4.65E+11
Sr-89	4.84E+10
Sr-90	4.83E+09
Sr-91	7.73E+09
Sr-92	4.53E+07
Y-90	1.42E+09
Y-91	2.46E+09
Y-92	6.78E+08
Y-93	4.04E+08
Zr-95	3.10E+09
Zr-97	9.69E+08
Nb-95	3.15E+09
Mo-99	1.20E+12
Tc-99m	1.15E+12
Ru-103	1.26E+12
Ru-105	9.99E+09
Ru-106	4.44E+11
Rh-105	5.14E+11
Sb-127	9.47E+14
Sb-129	3.70E+13
Te-127	1.02E+15
Te-127m	1.56E+14
Te-129	3.75E+14
Te-129m	5.15E+14
Te-131m	8.37E+14
Te-132	1.25E+16
I-131	1.29E+14
I-132	1.28E+16
I-133	3.48E+13
I-134	1.62E+04
I-135	4.24E+12
Xe-133	7.81E+18
Xe-135	3.44E+17
Cs-134	4.09E+13
Cs-136	1.34E+13
Cs-137	2.65E+13
Ba-139	1.58E+05
Ba-140	2.39E+11
La-140	9.75E+10

```
La-141      2.03E+07
La-142      8.14E+03
Ce-141      1.11E+10
Ce-143      5.83E+09
Ce-144      9.21E+09
Pr-143      3.12E+09
Nd-147      1.15E+09
Np-239      9.25E+10
Pu-238      2.27E+07
Pu-239      2.74E+06
Pu-240      3.54E+06
Pu-241      1.03E+09
Am-241      3.19E+05
Cm-242      7.36E+07
Cm-244      3.58E+06

******** BEGINNING OF CHANGE CASE   7 USER INPUT ********

*==========================================================================

  563  RDATNAM2001     'Case 8-OPVB'

********   RECORD NUMBER   563 REPLACES RECORD NUMBER   419   ********
  564  RDOALARM001     16500.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   564 REPLACES RECORD NUMBER   420   ********
  565  RDPDELAY001     65300.0     (time of release after scram, sec)

********   RECORD NUMBER   565 REPLACES RECORD NUMBER   427   ********
  566  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   566 REPLACES RECORD NUMBER   426   ********
  567  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   567 REPLACES RECORD NUMBER   424   ********
  568  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   568 REPLACES RECORD NUMBER   425   ********
      *                              release fractions by group

      *              1      2      3      4      5      6      7      8      9

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

  569  RDRELFRC001   9.90E-01 2.80E-01 3.40E-02 1.10E-01 1.70E-03 1.20E-04 1.50E-04
3.11E-04 8.70E-04
********   RECORD NUMBER   569 REPLACES RECORD NUMBER   502   ********
      .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   7 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   7
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*****************************************************************************
****************
```

RELEASED INVENTORY OF ALL PLUMES

Co-58	2.73E+12
Co-60	2.66E+12
Kr-85	5.48E+16
Kr-85m	7.35E+16
Kr-87	1.19E+14
Kr-88	3.95E+16
Rb-86	3.50E+14
Sr-89	7.52E+15
Sr-90	7.47E+14
Sr-91	2.55E+15
Sr-92	9.91E+13
Y-90	1.89E+14
Y-91	8.70E+14
Y-92	6.62E+14
Y-93	3.01E+14
Zr-95	1.14E+15
Zr-97	5.42E+14
Nb-95	1.15E+15
Mo-99	8.44E+14
Tc-99m	8.04E+14
Ru-103	7.99E+14
Ru-105	3.18E+13
Ru-106	2.81E+14
Rh-105	3.94E+14
Sb-127	4.45E+16
Sb-129	8.49E+15
Te-127	4.71E+16
Te-127m	6.79E+15
Te-129	2.37E+16
Te-129m	2.26E+16
Te-131m	4.62E+16
Te-132	5.94E+17
I-131	1.17E+18
I-132	6.17E+17
I-133	1.40E+18
I-134	1.68E+12
I-135	3.59E+17
Xe-133	8.36E+18
Xe-135	1.30E+18
Cs-134	3.03E+16
Cs-136	1.01E+16
Cs-137	1.96E+16
Ba-139	7.87E+11
Ba-140	6.65E+15
La-140	2.72E+15
La-141	4.63E+13
La-142	3.14E+11
Ce-141	2.32E+15
Ce-143	1.49E+15
Ce-144	1.90E+15
Pr-143	1.06E+15
Nd-147	4.31E+14
Np-239	2.16E+16
Pu-238	4.67E+12
Pu-239	5.64E+11
Pu-240	7.29E+11
Pu-241	2.11E+14
Am-241	1.15E+11
Cm-242	2.70E+13
Cm-244	1.31E+12

```
******** BEGINNING OF CHANGE CASE   8 USER INPUT ********

*==============================================================================

  570  RDATNAM2001     'Case 9-OPW1'

********   RECORD NUMBER   570 REPLACES RECORD NUMBER   419   ********
  571  RDOALARM001     16600.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   571 REPLACES RECORD NUMBER   420   ********
  572  RDPDELAY001     91500.0     (time of release after scram, sec)

********   RECORD NUMBER   572 REPLACES RECORD NUMBER   427   ********
  573  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   573 REPLACES RECORD NUMBER   426   ********
  574  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   574 REPLACES RECORD NUMBER   424   ********
  575  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   575 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1       2       3       4       5       6       7       8       9

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

  576  RDRELFRC001   9.90E-01 6.00E-01 1.40E-01 3.70E-01 1.60E-03 4.30E-07 5.80E-06
1.81E-04 7.50E-04
********   RECORD NUMBER   576 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   8 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   8
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       9.77E+09
Co-60       9.52E+09
Kr-85       5.48E+16
Kr-85m      2.38E+16
Kr-87       2.26E+12
Kr-88       6.69E+15
Rb-86       1.42E+15
Sr-89       7.05E+15
Sr-90       7.03E+14
Sr-91       1.41E+15
Sr-92       1.45E+13
Y-90        1.71E+14
Y-91        5.42E+13
Y-92        1.70E+14
Y-93        7.07E+12
Zr-95       4.39E+13
```

```
Zr-97       1.56E+13
Nb-95       4.46E+13
Mo-99       2.80E+12
Tc-99m      2.68E+12
Ru-103      2.85E+12
Ru-105      3.66E+10
Ru-106      1.01E+12
Rh-105      1.23E+12
Sb-127      1.42E+17
Sb-129      8.88E+15
Te-127      1.52E+17
Te-127m     2.28E+16
Te-129      5.86E+16
Te-129m     7.55E+16
Te-131m     1.31E+17
Te-132      1.87E+18
I-131       2.45E+18
I-132       1.93E+18
I-133       2.36E+18
I-134       1.14E+10
I-135       3.59E+17
Xe-133      8.33E+18
Xe-135      1.30E+18
Cs-134      1.25E+17
Cs-136      4.10E+16
Cs-137      8.06E+16
Ba-139      1.75E+10
Ba-140      5.64E+15
La-140      2.08E+15
La-141      4.96E+11
La-142      4.60E+08
Ce-141      1.34E+15
Ce-143      7.45E+14
Ce-144      1.10E+15
Pr-143      8.96E+13
Nd-147      1.63E+13
Np-239      1.15E+16
Pu-238      2.72E+12
Pu-239      3.29E+11
Pu-240      4.24E+11
Pu-241      1.23E+14
Am-241      5.01E+09
Cm-242      1.04E+12
Cm-244      5.06E+10

******** BEGINNING OF CHANGE CASE   9 USER INPUT ********

*==============================================================================

  577  RDATNAM2001     'Case 10-OPW2'

********   RECORD NUMBER   577 REPLACES RECORD NUMBER   419   ********
  578  RDOALARM001     17600.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   578 REPLACES RECORD NUMBER   420   ********
  579  RDPDELAY001     146900.0    (time of release after scram, sec)

********   RECORD NUMBER   579 REPLACES RECORD NUMBER   427   ********
  580  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   580 REPLACES RECORD NUMBER   426   ********
  581  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)
```

```
********   RECORD NUMBER   581 REPLACES RECORD NUMBER   424   ********
  582  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   582 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1       2       3       4       5       6       7       8       9

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

  583  RDRELFRC001   9.90E-01 3.80E-02 4.30E-02 1.57E-01 1.20E-03 2.00E-07 3.90E-06
1.40E-04 5.70E-04
********   RECORD NUMBER   583 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   9 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   9
NUMBER OF RECORDS CHANGED                =    7
NUMBER OF RECORDS ADDED                  =    0
*****************************************************************************************
*****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       4.51E+09
Co-60       4.43E+09
Kr-85       5.48E+16
Kr-85m      2.20E+15
Kr-87       5.14E+08
Kr-88       1.56E+14
Rb-86       4.27E+14
Sr-89       5.24E+15
Sr-90       5.27E+14
Sr-91       3.44E+14
Sr-92       2.12E+11
Y-90        1.89E+14
Y-91        3.99E+13
Y-92        7.32E+12
Y-93        1.65E+12
Zr-95       2.93E+13
Zr-97       5.56E+12
Nb-95       3.00E+13
Mo-99       1.11E+12
Tc-99m      1.07E+12
Ru-103      1.31E+12
Ru-105      1.54E+09
Ru-106      4.67E+11
Rh-105      4.26E+11
Sb-127      5.36E+16
Sb-129      3.19E+14
Te-127      5.85E+16
Te-127m     9.69E+15
Te-129      2.09E+16
Te-129m     3.16E+16
Te-131m     3.91E+16
Te-132      6.94E+17
I-131       1.53E+17
```

```
I-132       7.15E+17
I-133       8.95E+16
I-134       3.74E+03
I-135       4.53E+15
Xe-133      7.26E+18
Xe-135      1.56E+17
Cs-134      3.83E+16
Cs-136      1.22E+16
Cs-137      2.48E+16
Ba-139      5.78E+06
Ba-140      4.14E+15
La-140      2.19E+15
La-141      2.21E+10
La-142      3.06E+05
Ce-141      1.02E+15
Ce-143      4.17E+14
Ce-144      8.53E+14
Pr-143      7.92E+13
Nd-147      1.05E+13
Np-239      7.37E+15
Pu-238      2.10E+12
Pu-239      2.55E+11
Pu-240      3.28E+11
Pu-241      9.51E+13
Am-241      3.69E+09
Cm-242      6.99E+11
Cm-244      3.40E+10

******** BEGINNING OF CHANGE CASE  10 USER INPUT ********

*==============================================================================

  584  RDATNAM2001     'Case 11TSL'

********   RECORD NUMBER   584 REPLACES RECORD NUMBER   419   ********
  585  RDOALARM001     21000.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   585 REPLACES RECORD NUMBER   420   ********
  586  RDPDELAY001     1100.0      (time of release after scram, sec)

********   RECORD NUMBER   586 REPLACES RECORD NUMBER   427   ********
  587  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   587 REPLACES RECORD NUMBER   426   ********
  588  RDPLHEAT001     1.0E+6      (sensible heat rate, watt)

********   RECORD NUMBER   588 REPLACES RECORD NUMBER   424   ********
  589  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   589 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  590  RDRELFRC001   2.00E-03 1.50E-04 5.50E-05 2.15E-04 2.10E-06 3.90E-05 7.30E-08
2.00E-07 7.70E-06
********   RECORD NUMBER   590 REPLACES RECORD NUMBER   502   ********
       .
```

```
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE  10 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE  10
NUMBER OF RECORDS CHANGED                =    7
NUMBER OF RECORDS ADDED                  =    0
*****************************************************************************************
*****************
```

RELEASED INVENTORY OF ALL PLUMES

Co-58	8.95E+11
Co-60	8.63E+11
Kr-85	1.11E+14
Kr-85m	2.34E+15
Kr-87	4.02E+15
Kr-88	6.20E+15
Rb-86	5.81E+11
Sr-89	9.38E+12
Sr-90	9.22E+11
Sr-91	1.16E+13
Sr-92	1.17E+13
Y-90	3.61E+10
Y-91	4.18E+11
Y-92	1.12E+12
Y-93	4.99E+11
Zr-95	5.58E+11
Zr-97	5.48E+11
Nb-95	5.62E+11
Mo-99	3.31E+14
Tc-99m	2.95E+14
Ru-103	2.63E+14
Ru-105	1.67E+14
Ru-106	9.14E+13
Rh-105	1.60E+14
Sb-127	9.94E+13
Sb-129	2.90E+14
Te-127	1.01E+14
Te-127m	1.33E+13
Te-129	2.93E+14
Te-129m	4.45E+13
Te-131m	1.36E+14
Te-132	1.36E+15
I-131	6.68E+14
I-132	1.01E+15
I-133	1.36E+15
I-134	1.19E+15
I-135	1.25E+15
Xe-133	1.82E+16
Xe-135	5.93E+15
Cs-134	4.90E+13
Cs-136	1.70E+13
Cs-137	3.17E+13
Ba-139	5.47E+13
Ba-140	6.13E+13
La-140	9.16E+11
La-141	5.23E+11
La-142	4.64E+11
Ce-141	1.51E+12
Ce-143	1.40E+12
Ce-144	1.22E+12

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Pr-143      5.03E+11
Nd-147      2.20E+11
Np-239      1.73E+13
Pu-238      3.01E+09
Pu-239      3.62E+08
Pu-240      4.69E+08
Pu-241      1.36E+11
Am-241      5.59E+07
Cm-242      1.32E+10
Cm-244      6.37E+08


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

RECORD
NUMBER                                        RECORD

       * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "EARLY" INPUT FILE

       * BASE CASE using EZDLTSHL = 7200 seconds and 95% Evacuation

       * Last Modified by MGM 04/10/06

    1  MIEANAM1001 'NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input'

    2  DCF_FILE001 'DOSDATA.INP'  (DCF file of MACCS 1.5.11.1)

       *

       *              ORGNAM          ORGFLG

       *

    3  MIORGDEF001  'A-SKIN'         .TRUE.

    4  MIORGDEF002  'A-RED MARR'     .TRUE.

    5  MIORGDEF003  'A-LUNGS'        .TRUE.

    6  MIORGDEF004  'A-THYROIDH'     .TRUE.

    7  MIORGDEF005  'A-STOMACH'      .TRUE.

    8  MIORGDEF006  'A-LOWER LI'     .FALSE.  (does not contribute to early
fatalities)
    9  MIORGDEF007  'L-EDEWBODY'     .TRUE.

   10  MIORGDEF008  'L-RED MARR'     .TRUE.

   11  MIORGDEF009  'L-BONE SUR'     .TRUE.

   12  MIORGDEF010  'L-BREAST'       .TRUE.

   13  MIORGDEF011  'L-LUNGS'        .TRUE.

   14  MIORGDEF012  'L-THYROID'      .TRUE.

   15  MIORGDEF013  'L-LOWER LI'     .TRUE.
```

```
16  MIORGDEF014  'L-BLAD WAL'    .TRUE.
17  MIORGDEF015  'L-LIVER'       .FALSE.
18  MIORGDEF016  'L-THYROIDH'    .TRUE.
    *
    * FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
    *
19  MIENDAT2001  .FALSE.    (SET THIS VALUE TO .TRUE. TO SKIP CHRONC)
    *
    * DISPERSION MODEL OPTION CODE:  1  *  STRAIGHT LINE
    *                                2  *  WIND-SHIFT WITH ROTATION
    *                                3  *  WIND-SHIFT WITHOUT ROTATION
    *
20  MIIPLUME001  2
    *
    * NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
    *
21  MINUMFIN001  7    (3, 5 OR 7 ALLOWED)
    *
    * LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO
    *
22  MIIPRINT001  0
    *
    * LOGICAL FLAG SIGNIFYING THAT THE BREAKDOWN OF RISK BY WEATHER CATEGORY
    * BIN ARE TO BE PRESENTED TO SHOW THEIR RELATIVE CONTRIBUTION TO THE MEAN
    *
    *              RISBIN
    *
23  MIRISCAT001   .FALSE.
    *
    * FLAG INDICATING IF WIND-ROSES FROM ATMOS ARE TO BE OVERRIDDEN
    *
24  MIOVRRID001  .FALSE.  (USE THE WIND ROSE CALCULATED FOR EACH WEATHER BIN)
```

```
*****************************************************************************
      * POPULATION DISTRIBUTION DATA BLOCK, LOADED BY INPOPU, STORED IN /POPDAT/
      *
   25 PDPOPFLG001  FILE
      *
      *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 ACTIVTY:
      *
      * ACTIVITY TYPE:
      *     1 - EVACUEES WHILE MOVING
      *     2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
      *     3 - SHELTERED ACTIVITY
      *
      * CLOUD SHIELDING FACTOR
      *
      *    SITE        GG   PB   SEQ  SUR  ZION
      *    SHELTERING  0.7  0.5  0.65 0.6  0.5
      *
      *            EVACUEES  NORMAL  SHELTER
      *
   26 SECSFACT001      1.     0.75     0.6   *  SURRY SHELTERING VALUE
      *
      * PROTECTION FACTOR FOR INHALATION
      *
```

```
27  SEPROTIN001      1.      0.41      0.33  * VALUES FOR NORMAL ACTIVITY AND
    *                                          SHELTERING SELECTED BY NRC STAFF
    *
    * BREATHING RATE (CUBIC METERS PER SECOND)
    *
28  SEBRRATE001  2.66E-4  2.66E-4  2.66E-4
    *
    * SKIN PROTECTION FACTOR
    *
29  SESKPFAC001  1.0      0.41     0.33    * VALUES FOR NORMAL ACTIVITY AND
    *                                         SHELTERING SELECTED BY NRC STAFF
    *
    * GROUND SHIELDING FACTOR
    *
    *    SITE         GG   PB   SEQ  SUR  ZION
    *    SHELTERING  0.25 0.1  0.2  0.2  0.1
    *
30  SEGSHFAC001      0.5    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.
    *
31  SERESCON001   1.E-4     (RESUSPENSION IS TURNED ON)
    *
    * RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
    *
32  SERESHAF001   1.82E5    (2.11 DAYS)
```

```
*****************************************************************************
     * EVACUATION ZONE DATA BLOCK, LOADED BY EVNETW, STORED IN /NETWOR/, /EOPTIO/
     *
     * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
     *
 33  EZEANAM2001  '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'
     *
 34  EZWTNAME001  'PEOPLE'
     *
     * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO FOR EVACUATION
     *
 35  EZWTFRAC001  0.95   (95% of the people within 10 miles evacuate)
     *
     * LAST RING IN THE MOVEMENT ZONE
     *
 36  EZLASMOV001     8    (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)
 37  TRAVELPOINT   'BOUNDARY'    (functionality derived from MACCS circa 1984)
     *
     * RADIAL EVACUATION SPEED (M/S) or (4 mph) Contains Three Phases
     *  3 Phases: (Initial)  (Middle)    (Late)
 38  EZESPEED001    1.8        1.8        1.8          (NAPS)
 39  EZEVATYP001     'RADIAL'
 40  EZDURBEG001    86400.0
 41  EZDURMID001    0.0
```

```
42  EZREFPNT001     'ALARM'
43  EZNUMEVA001      7
44  EZDLTSHL001   7200.  7200.  7200.  7200.  7200.  7200.
45  EZDLTSHL002   7200.  7200.  7200.  7200.  7200.  7200.
46  EZDLTEVA001      0.     0.     0.     0.     0.     0.
47  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)
    *
48  SRENDEMP001  604800.   (ONE WEEK)
    *
    * CRITICAL ORGAN FOR RELOCATION DECISIONS
    *
49  SRCRIORG001 'L-EDEWBODY'
    *
    * HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
    *
50  SRTIMHOT001  43200.    (ONE-HALF DAY)
    *
    * NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
    *
51  SRTIMNRM001  86400.    (ONE DAY)
    *
    * HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
    *
52  SRDOSHOT001  0.5    (50 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
    *
    * NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
```

```
*
53  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
*
54  EFNUMEFA001   2
*
*            ORGNAM        EFFACA   EFFACB   EFFTHR
*
55  EFATAGRP001 'A-RED MARR'      3.8      5.0    1.5
56  EFATAGRP002 'A-LUNGS'        10.0      7.0    5.0
*******************************************************************************
* EARLY INJURY MODEL PARAMETERS, LOADED BY INEINJ, STORED IN /EINJUR/
*
* NUMBER OF EARLY INJURY EFFECTS
*
57  EINUMEIN001  7
*
*            EINAME            ORGNAM    EISUSC EITHRE EIFACA EIFACB
*
58  EINJUGRP001 'PRODROMAL VOMIT' 'A-STOMACH'  1.     .5     2.     3.
59  EINJUGRP002 'DIARRHEA'        'A-STOMACH'  1.     1.     3.     2.5
60  EINJUGRP003 'PNEUMONITIS'     'A-LUNGS'    1.     5.    10.     7.
61  EINJUGRP004 'SKIN ERYTHEMA'   'A-SKIN'     1.     3.     6.     5.
62  EINJUGRP005 'TRANSEPIDERMAL'  'A-SKIN'     1.    10.    20.     5.
63  EINJUGRP006 'THYROIDITIS'     'A-THYROIDH' 1.    40.   240.     2.
64  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
     *
 65  LCNUMACA001   7
     *
     * THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
     *
 66  LCDDTHRE001   0.2  (LOWEST DOSE FOR WHICH DDREFA WILL BE APPLIED)
     *
     * DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (Sv)
     *
 67  LCACTHRE001   0.0  (LINEAR-QUADRATIC MODEL IS NOT BEING USED)
     *
     *            ACNAME     ORGNAM  ACSUSC DOSEFA DOSEFB CFRISK   CIRISK  DDREFA
     *
 68  LCANCERS001 'LEUKEMIA' 'L-RED MARR'  1.0   1.0   0.0   9.70E-3   0.0     2.0
 69  LCANCERS002 'BONE'     'L-BONE SUR'  1.0   1.0   0.0   9.00E-4   0.0     2.0
 70  LCANCERS003 'BREAST'   'L-BREAST'    1.0   1.0   0.0   5.40E-3   1.7E-2  1.0
 71  LCANCERS004 'LUNG'     'L-LUNGS'     1.0   1.0   0.0   1.55E-2   0.0     2.0
 72  LCANCERS005 'THYROID'  'L-THYROIDH'  1.0   1.0   0.0   7.20E-4   7.2E-3  1.0
 73  LCANCERS006 'GI'       'L-LOWER LI'  1.0   1.0   0.0   3.36E-2   0.0     2.0
 74  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
     *
 75  TYPE1NUMBER    27
     *
```

76	TYPE1OUT001	'ERL FAT/TOTAL'	1	7	NOCCDF (0 TO 10 MILES)
77	TYPE1OUT002	'ERL INJ/PRODROMAL VOMIT'	1	7	NOCCDF
78	TYPE1OUT003	'ERL INJ/DIARRHEA'	1	7	
79	TYPE1OUT004	'ERL INJ/PNEUMONITIS'	1	7	
80	TYPE1OUT005	'ERL INJ/THYROIDITIS'	1	7	
81	TYPE1OUT006	'ERL INJ/HYPOTHYROIDISM'	1	7	
82	TYPE1OUT007	'ERL INJ/SKIN ERYTHEMA'	1	7	
83	TYPE1OUT008	'ERL INJ/TRANSEPIDERMAL'	1	7	
84	TYPE1OUT009	'CAN FAT/TOTAL'	1	7	NOCCDF
85	TYPE1OUT010	'CAN FAT/LUNG'	1	11	(0 TO 50 MILES)
86	TYPE1OUT011	'CAN FAT/THYROID'	1	11	
87	TYPE1OUT012	'CAN FAT/BREAST'	1	11	
88	TYPE1OUT013	'CAN FAT/GI'	1	11	
89	TYPE1OUT014	'CAN FAT/LEUKEMIA'	1	11	
90	TYPE1OUT015	'CAN FAT/BONE'	1	11	
91	TYPE1OUT016	'CAN FAT/OTHER'	1	11	
92	TYPE1OUT017	'CAN INJ/THYROID'	1	11	
93	TYPE1OUT018	'CAN INJ/BREAST'	1	11	
94	TYPE1OUT019	'CAN FAT/TOTAL'	1	11	(0 TO 50 MILES)
95	TYPE1OUT020	'ERL FAT/TOTAL'	1	11	
96	TYPE1OUT021	'ERL INJ/PRODROMAL VOMIT'	1	11	
97	TYPE1OUT022	'ERL INJ/DIARRHEA'	1	11	
98	TYPE1OUT023	'ERL INJ/PNEUMONITIS'	1	11	
99	TYPE1OUT024	'ERL INJ/THYROIDITIS'	1	11	
100	TYPE1OUT025	'ERL INJ/HYPOTHYROIDISM'	1	11	
101	TYPE1OUT026	'ERL INJ/SKIN ERYTHEMA'	1	11	
102	TYPE1OUT027	'ERL INJ/TRANSEPIDERMAL'	1	11	

```
*******************************************************************************
      * 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
      *
  103 TYPE2NUMBER  1
      *
      *            FATALITY RISK THRESHOLD
      *
  104 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
      *
  105 TYPE3NUMBER  4
      *
      *               ORGAN NAME   DOSE THRESHOLD (SV)
      *
  106 TYPE3OUT001    'A-RED MARR'        1.5
  107 TYPE3OUT002    'A-LUNGS'           5.0
  108 TYPE3OUT003    'L-EDEWBODY'        2.0
  109 TYPE3OUT004    'L-EDEWBODY'        0.25
*******************************************************************************
      * 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
      *
  110 TYPE4NUMBER  5
      *
      *            RADIAL INDEX   TYPE OF EFFECT
      *
  111 TYPE4OUT001       1         'ERL FAT/TOTAL'
  112 TYPE4OUT002       2         'ERL FAT/TOTAL'
  113 TYPE4OUT003       3         'ERL FAT/TOTAL'
  114 TYPE4OUT004       4         'ERL FAT/TOTAL'
  115 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
      *
  116 TYPE5NUMBER     2
      *
      *             ORGAN      I1DIS5     I2DIS5
      *
  117 TYPE5OUT001 'L-EDEWBODY'      1         7          (0-10 MILES)
  118 TYPE5OUT002 'L-EDEWBODY'      1         11    NOCCDF  (0-50 MILES)
*******************************************************************************
      * RESULT 6 OPTIONS BLOCK, LOADED BY INOUT6, STORED IN /INOUT6/
      *
      * CENTERLINE DOSE TO AN ORGAN VS DIST BY PATHWAY, PATHWAY NAMES ARE AS
FOLLOWS:
      *
```

```
*  PATHWAY NAME:
*    'CLD'     - CLOUDSHINE
*    'GRD'     - GROUNDSHINE
*    'INH ACU' - "ACUTE DOSE EQUIVALENT" FROM DIRECT INHALATION OF THE CLOUD
*    'INH LIF' - "LIFETIME DOSE COMMITMENT" FROM DIRECT INHALATION OF THE
CLOUD
*    'RES ACU' - "ACUTE DOSE EQUIVALENT" FROM RESUSPENSION INHALATION
*    'RES LIF' - "LIFETIME DOSE COMMITMENT" FROM RESUSPENSION INHALATION
*    'TOT ACU' - "ACUTE DOSE EQUIVALENT" FROM ALL PATHWAYS
*    'TOT LIF' - "LIFETIME DOSE COMMITMENT" FROM ALL PATHWAYS
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
 119  TYPE6NUMBER     0
*
*              ORGNAM        PATHNM      I1DIS6   I2DIS6
*
*TYPE6OUT001  'A-RED MARR'    'TOT ACU'      1       11     (0-50 MILES)
*TYPE6OUT002  'A-LUNGS'       'TOT ACU'      1       11     (0-50 MILES)
*TYPE6OUT003  'L-EDEWBODY'    'TOT LIF'      1       11     (0-50 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
*
 120  TYPE7NUMBER   0
*
*                    NAME           I1DIS7       I2DIS7
*
*TYPE7OUT001     'ERL FAT/TOTAL'        1           11       (0-50 MILES)
```

```
*******************************************************************************
       * RESULT 8 OPTIONS BLOCK, LOADED BY INOUT8, STORED IN /INOUT8/
       *
       * POPULATION WEIGHTED FATALITY RISK BETWEEN 2 DISTANCES
       *
       * NUMBER OF DESIRED RESULTS OF THIS TYPE
       *
  121  TYPE8NUMBER   2
       *
       *                NAME       I1DIS8  I2DIS8
       *
  122  TYPE8OUT001 'ERL FAT/TOTAL'   1       2     NOCCDF  (0-EXCL ZONE + 1 MI)
  123  TYPE8OUT002 'CAN FAT/TOTAL'   1       7     NOCCDF  (0-10 MILES)

*******************************************************************************
       * RESULT A OPTIONS BLOCK, LOADED BY INOUTA, STORED IN /INOUTA/
       *
       * peak dose to a given organ
       *
       *            NUMA
  124  TYPEANUMBER   1
       *
       *              ORGNAM    I1DISA  I2DISA
  125  TYPEAOUT001 'L-EDEWBODY'  1       11
       .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                          =  385
NUMBER OF BLANK OR COMMENT RECORDS READ         =  259
NUMBER OF TERMINATOR RECORDS                    =    1
NUMBER OF RECORDS PROCESSED                     =  125
     NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
     NUMBER OF PROCESSED RECORDS SORTED         =  125
*******************************************************************************
****************
```

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

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


USING THE FOLLOWING SITE DATA FILE:

 SECPOP90 V2.3 MACCS Site Data File for North Anna
 Lat: 38d 3'48'' Long:  77d 47'13'' LAST MODIFIED  12-17-1999
  11 SPATIAL INTERVALS
  16 WIND DIRECTIONS
   7 CROP CATEGORIES
   4 WATER PATHWAY ISOTOPES
   1 WATERSHEDS
  80 ECONOMIC REGIONS
 SPATIAL DISTANCES     KILOMETERS
      1.61      3.22      4.83      6.44      8.05      9.65     16.09     32.18
     48.27     64.37     80.47
 POPULATION
        0.       46.      118.      146.      184.      118.      575.     9413.
     6143.    21240.    50387.
        2.       44.       70.      192.      248.      168.     1320.     9192.
    12963.    30219.   211772.
        2.       36.       52.      112.      120.      164.     1186.    46762.
   109366.    45870.    94562.
        0.       18.      124.       48.       76.      242.     1410.     7010.
     8060.    13313.    20186.
        0.       20.      134.       50.       40.      146.     1278.     7379.
     5592.     1986.     4563.
        2.        8.       20.      116.      162.      102.     1042.     6880.
     6707.     5912.     9060.
        0.       19.       86.       10.       12.       55.      645.     3676.
    23788.    72630.    93953.
        3.       55.       32.       30.       44.       29.     1098.     6211.
    18766.   540546.   478477.
        0.       46.       22.       33.       44.       46.      695.     5427.
    14467.    24696.    41914.
        0.       11.       12.       59.       72.      128.      484.     3710.
     6963.     6727.     7333.
        0.        4.       15.       59.       95.      181.     1133.     3207.
     3407.     6302.     4671.
        0.       21.       46.       34.       69.      233.     1296.     5060.
```

```
     7737.     10450.      9498.
        0.        34.        26.        26.        32.        34.       482.      3193.
     5315.    128151.     25521.
        0.        33.        87.        58.        32.       149.       567.      3101.
     9823.     21412.     11862.
        1.        39.        58.       102.        79.       242.       555.      3785.
    14054.     14311.      3690.
        0.        34.        76.        16.        30.        58.       870.      5690.
    10949.     30925.     11980.
LAND FRACTION
0.00 0.97 0.97 0.97 0.97 0.97 0.97 0.99 1.00 1.00 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.98 0.98 0.97
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.91 0.78
0.00 0.97 0.97 0.97 0.00 0.97 0.97 0.98 0.98 0.96 0.90
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.99 0.99 0.95 0.90
0.00 0.97 0.97 0.97 0.97 0.97 0.97 0.99 0.99 0.97 0.95
0.97 0.00 0.97 0.97 0.97 0.97 0.99 1.00 1.00 0.99 0.98
0.97 0.97 0.97 0.97 0.97 0.97 0.97 1.00 0.99 0.97 0.97
0.00 0.97 0.00 0.97 0.97 0.97 0.97 0.98 0.98 0.99 0.98
0.97 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.98 0.99 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.98 0.99 0.99 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.99 0.99 0.99
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.98 1.00 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.99 1.00 1.00 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.98 1.00 1.00 1.00 1.00
0.00 0.97 0.97 0.97 0.00 0.97 0.97 0.99 1.00 1.00 1.00
REGION INDEX
1 2 2 2 2 2 2 3 4 5 6
1 2 2 2 2 2 2 7 8 910
1 2 2 2 2 2 211121314
1 2 2 2 2 2 215161718
1 2 2 2 2 2 219202122
1 2 2 2 2 2 223242526
1272829303132333435 36
1272727272727373839 40
1272727272727414243 44
1272727272727454647 48
1272727272727495051 52
1272727272727535455 56
1272727272727575859 60
1272727276162636465 66
1676869707172737475 76
1 2 2 2 2 2 277787980
WATERSHED INDEX
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
CROP SEASON AND SHARE
  1 PASTURE                 90. 270.   0.41
  2 STORED FORAGE          150. 240.   0.13
```

```
  3 GRAINS                150. 240.   0.21
  4 GRN LEAFY VEGETABLES  150. 240.   0.002
  5 OTHER FOOD CROPS      150. 240.   0.004
  6 LEGUMES AND SEEDS     150. 240.   0.15
  7 ROOTS AND TUBERS      150. 240.   0.003
WATERSHED DEFINITION                 1111111111222222222233333333334444444444
  1 Sr-89                                5.0E-6    0.0
  2 Sr-90                                5.0E-6    0.0
  3 Cs-134                               5.0E-6    0.0
  4 Cs-137                               5.0E-6    0.0
REGIONAL ECONOMIC DATA
  1 EXCLUSION       0.237 .196      301.      5682.   121231.
  2 REGION_02       0.187 .362      315.      9617.   131822.
  3 REGION_03       0.359 .213      510.      7306.   136163.
  4 REGION_04       0.495 .244      499.      7434.   151560.
  5 REGION_05       0.547 .239      484.      9041.   178741.
  6 REGION_06       0.543 .228      500.      9873.   187870.
  7 REGION_07       0.187 .365      313.      9662.   131866.
  8 REGION_08       0.257 .142      336.     10497.   162264.
  9 REGION_09       0.303 .106      376.     11381.   179934.
 10 REGION_10       0.174 .242      644.     13466.   163079.
 11 REGION_11       0.187 .365      313.      9662.   131866.
 12 REGION_12       0.117 .074      238.     10404.   157487.
 13 REGION_13       0.144 .004      311.     11315.   165761.
 14 REGION_14       0.184 .067      529.     10960.   155691.
 15 REGION_15       0.182 .294      353.      8663.   130899.
 16 REGION_16       0.184 .081      406.      6872.   136128.
 17 REGION_17       0.280 .000      361.      5453.   137948.
 18 REGION_18       0.309 .000      481.      6253.   140558.
 19 REGION_19       0.167 .059      484.      5363.   127707.
 20 REGION_20       0.163 .000      517.      4526.   126897.
 21 REGION_21       0.260 .000      469.      4221.   129440.
 22 REGION_22       0.381 .000      565.      4386.   132106.
 23 REGION_23       0.163 .000      517.      4526.   126897.
 24 REGION_24       0.164 .000      518.      4548.   127178.
 25 REGION_25       0.260 .078      486.      4205.   129697.
 26 REGION_26       0.302 .044      465.      3836.   126644.
 27 REGION_27       0.248 .158      298.      4765.   118786.
 28 REGION_28       0.248 .158      298.      4765.   118782.
 29 REGION_29       0.248 .158      298.      4765.   118782.
 30 REGION_30       0.232 .211      302.      6029.   122159.
 31 REGION_31       0.216 .267      306.      7356.   125704.
 32 REGION_32       0.297 .101      574.      6813.   151359.
 33 REGION_33       0.312 .059      706.      7498.   165179.
 34 REGION_34       0.292 .051      681.      7106.   160138.
 35 REGION_35       0.317 .087      663.      6931.   161577.
 36 REGION_36       0.259 .063      667.      6932.   166318.
 37 REGION_37       0.322 .068      705.      7632.   166437.
 38 REGION_38       0.291 .047      725.      7761.   174110.
 39 REGION_39       0.133 .001      713.      6710.   178269.
 40 REGION_40       0.088 .000      812.      6938.   166779.
 41 REGION_41       0.262 .140      377.      5319.   127984.
 42 REGION_42       0.270 .065      431.      6431.   174439.
 43 REGION_43       0.238 .380      461.      6866.   149780.
 44 REGION_44       0.157 .080     1147.      7335.   147445.
 45 REGION_45       0.249 .136      307.      4962.   128258.
 46 REGION_46       0.257 .041      362.      6189.   182163.
 47 REGION_47       0.272 .334      526.      5967.   140373.
 48 REGION_48       0.318 .174     1251.      4528.   120349.
 49 REGION_49       0.251 .116      314.      5126.   136469.
 50 REGION_50       0.285 .002      334.      5071.   156279.
 51 REGION_51       0.299 .030      649.      3521.   109866.
 52 REGION_52       0.234 .017      695.      3155.   104004.
```

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  53 REGION_53      0.248 .157      298.     4764.   118781.
  54 REGION_54      0.309 .024      268.     3850.   118092.
  55 REGION_55      0.335 .023      276.     5205.   130383.
  56 REGION_56      0.326 .053      375.     6965.   142491.
  57 REGION_57      0.248 .158      298.     4765.   118782.
  58 REGION_58      0.302 .120      301.     6453.   136149.
  59 REGION_59      0.346 .073      286.     8218.   158406.
  60 REGION_60      0.371 .079      308.     8830.   160018.
  61 REGION_61      0.248 .158      298.     4765.   118782.
  62 REGION_62      0.228 .231      306.     6526.   123614.
  63 REGION_63      0.389 .133      515.     5491.   131831.
  64 REGION_64      0.459 .140      581.     6067.   137365.
  65 REGION_65      0.398 .219      377.     6412.   122434.
  66 REGION_66      0.367 .161     1395.     7574.   127782.
  67 REGION_67      0.220 .252      305.     7004.   124763.
  68 REGION_68      0.187 .365      313.     9662.   131866.
  69 REGION_69      0.248 .158      298.     4765.   118782.
  70 REGION_70      0.187 .365      313.     9662.   131866.
  71 REGION_71      0.187 .365      313.     9662.   131866.
  72 REGION_72      0.238 .320      371.     8964.   133138.
  73 REGION_73      0.464 .121      630.     5877.   138768.
  74 REGION_74      0.477 .262      479.     6073.   125842.
  75 REGION_75      0.484 .312      418.     5941.   117144.
  76 REGION_76      0.431 .183     1413.     6654.   120587.
  77 REGION_77      0.458 .126      623.     5956.   138624.
  78 REGION_78      0.469 .252      501.     6668.   138080.
  79 REGION_79      0.469 .279      454.     6978.   138495.
  80 REGION_80      0.438 .040      234.     8887.   155434.
END
POPULATION

>>The Record Identifier TYPEBNUMBER was not found:
>>Type B results not being generated


******** BEGINNING OF CHANGE CASE   1 USER INPUT ********

*******************************************************************************

       *********** BEGINNING OF CHANGE CASE 1 USER INPUT
******************************

*******************************************************************************

       * EMERGENCY RESPONSE SCENARIO NUMBER 2

       *

       * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED

       *

  126  EZEANAM2001  'NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE'

********   RECORD NUMBER   126 REPLACES RECORD NUMBER    33   ********
       *

       * THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS

       *

       * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO FOR EVACUATION
```

```
        *
  127   EZWTFRAC001  0.05   (5% of the people DO NOT evacuate)
********   RECORD NUMBER   127 REPLACES RECORD NUMBER    35   ********
        *
        * LAST RING IN THE MOVEMENT ZONE
        *
  128   EZLASMOV001     0    (A ZERO TURNS OFF THE EVACUATION MODEL)
********   RECORD NUMBER   128 REPLACES RECORD NUMBER    36   ********
        *

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

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


NO EVACUATION REQUESTED


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

RECORD
NUMBER                                   RECORD

        * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "CHRONC" INPUT FILE

        * BASE CASE Using revised Economic data CHEVACST =40, CHRELCST = 40

        * CHDBCST = 42000, CHPOPCST = 7300, CHVALWF = 6979, CHVALWNF = 141206

        *    LAST MODIFIED by MGM  04/10/06

    1   CHCHNAME001 'NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model'

*******************************************************************************

        * EMERGENCY RESPONSE COST DATA BLOCK

        *

        * DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)

        *

    2   CHEVACST001  40.00   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
```

```
      *
      * DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)
      *
    3 CHRELCST001  40.00   (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.
      *
    4 DUR_INTPHAS   0.0    (in seconds)   (no intermediate phase)
      *
      * LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
      * PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
      *
    5 CHTMPACT001   1.58E8             (5 YEARS)
      *
      * DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv)
      *
    6 CHDSCRTI001   1.0E5              (NO INTERMEDIATE PHASE RELOCATION)
      *
      * DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv)
      *
    7 CHDSCRLT001    0.04
      *
      * CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
      *
    8 CHCRTOCR001 'L-EDEWBODY'
      *
      * Long Term Exposure Period    Previously permanently set to:
```

```
        *    one million years = 3.15 E13 seconds
        *    MACCS2 allowable range is 3.15E7 to 1.E10
        *
    9   CHEXPTIM001    1.E10

*****************************************************************************
        * DECONTAMINATION PLAN DATA BLOCK
        *
        * NUMBER OF LEVELS OF DECONTAMINATION
        *
   10   CHLVLDEC001  2
        *
        * DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
        *  (SECONDS)
        *
   11   CHTIMDEC001   5.184E6  1.0368E7    (60, 120 DAYS)
        *
        * DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF
DECONTAMINATION
        *
   12   CHDSRFCT001   3.      15.
        *
        * COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
        *  FOR THE VARIOUS LEVELS OF DECONTAMINATION
        *
   13   CHCDFRM0001   658.1   1463.
        *
        * COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
        *  FOR THE VARIOUS LEVELS OF DECONTAMINATION
        *
   14   CHCDNFRM001   3510.   9360.
        *
        * FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
```

```
     *  FOR THE VARIOUS DECONTAMINATION LEVELS
     *
 15  CHFRFDL0001  .3      .35
     *
     * FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
     *  FOR THE VARIOUS DECONTAMINATION LEVELS
     *
 16  CHFRNFDL001  .7      .5
     *
     * FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
     *  FOR THE VARIOUS DECONTAMINATION LEVELS
     *
 17  CHTFWKF0001  .10     .33
     *
     * FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS
     *  FOR THE VARIOUS DECONTAMINATION LEVELS
     *
 18  CHTFWKNF001  .33     .33
     *
     * AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
     *
 19  CHDLBCST001   42000.
*******************************************************************************
     * INTERDICTION COST DATA BLOCK
     *
     * DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
     *
 20  CHDPRATE001    .20   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
     *
     * INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER
YEAR)
     * THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION
```

```
     *
21   CHDSRATE001     .12    (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
     *
     * POPULATION RELOCATION COST (DOLLARS/PERSON):
     *  ALTERNATIVE HOUSING, MOVING COSTS, AND LOST INCOME FOR PEOPLE IN
     *  AREAS WHICH REQUIRE DECONTAMINATION, INTERDICTION, OR CONDEMNATION
     *
22   CHPOPCST001    7300.
*******************************************************************************
     * GROUNDSHINE WEATHERING DEFINITION DATA BLOCK
     *
     * NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
     *
23   CHNGWTRM001    2
     *
     * GROUNDSHINE WEATHERING COEFFICIENTS
     *
24   CHGWCOEF001    0.5     0.5            (JON HELTON)
     *
     * HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
     *
25   CHTGWHLF001    1.6E7   2.8E9          (JON HELTON)
*******************************************************************************
     * RESUSPENSION WEATHERING DEFINITION DATA BLOCK
     *
     * NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
     *
26   CHNRWTRM001     3
     *
     * RESUSPENSION CONCENTRATION COEFFICIENTS    (/ METER)
     *  RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
```

```
      *
   27 CHRWCOEF001  1.0E-5   1.0E-7   1.0E-9  (VALUES HERE SELECTED BY JON HELTON)
      *
      * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
      *
   28 CHTRWHLF001  1.6E7    1.6E8    1.6E9   (6 MONTHS, 5 YEARS, 50 YEARS)
*******************************************************************************
      * SITE REGION DESCRIPTION DATA BLOCK
      *
      * FRACTION OF AREA THAT IS LAND IN THE REGION
      *
   29 CHFRACLD001   0.95   (ROUGH GUESS VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
      *
   30 CHFRCFRM001   0.382  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
      *  (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN
FARMS)
      *
   31 CHFRMPRD001   371.0  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
      *  (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME
CONSUMPTION)
      *
   32 CHDPFRCT001   0.198  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
      *  (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 100 MILES)
      *
   33 CHVALWF0001   6979.  *  NAPS
```

```
     *
     * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
     *
34   CHFRFIM0001   0.25  *  SURRY/NAPS
     *
     * 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
     *
35   CHVALWNF001  141206.  *  NAPS
     *
     * FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
     *
36   CHFRNFIM001   0.8
     ******************************************************************************
37   CHFDPATH001 'NEW'
     *
     * name of the COMIDA2 binary output file
     *
38   BIN_FILE001 '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)
39  DOSEMILK001    0.025          0.075
40  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 critera, GCMAXR, used for NUREG-1150 wre based on
* an ingestion dose integrated from zero to infinity.  It is not possible to
* translate those parameter values into corresponding annual dose limits, as
is
* required by the COMIDA2-based food model.  The "total" dose limits used in
* NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, are
used
* here as annual dose limits for interdiction of food production in years the
* years subsequent to the accident.
*
*              effective     thyroid  (doses in sieverts)
41  DOSELONG001    0.005          0.015
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
42  CHNUMWPI001    4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
*  FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
```

```
      *
      *                          INITIAL     ANNUAL    INGESTION FACTOR
      *              WATER       WASHOFF     WASHOFF    ((Bq INGESTED)/
      *             NUCLIDE      FRACTION     RATE       (Bq IN WATER))
      *
      *              NAMWPI       WSHFRI      WSHRTA         WINGF
   43 CHWTRISO001    Sr-89        0.01        0.004          5.0E-6
   44 CHWTRISO002    Sr-90        0.01        0.004          5.0E-6
   45 CHWTRISO003    Cs-134       0.005       0.001          5.0E-6
   46 CHWTRISO004    Cs-137       0.005       0.001          5.0E-6

*******************************************************************************
      * SPECIAL OPTIONS DATA BLOCK
      *
      * DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING
ON!!
      *          KSWDSC
      *
   47 CHKSWTCH001   0

*******************************************************************************
      * DEFINE THE TYPE 9 RESULTS
      *
      * LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
      *
      * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
      * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
      *
   48 TYPE9NUMBER   1      (UP TO 10 ALLOWED)
      *
      *              ORGNAM        INNER      OUTER
      *
   49 TYPE9OUT001   'L-EDEWBODY'      1          11    (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
        *
   50   TYP10NUMBER   1      (UP TO 10 ALLOWED)
        *
        *              INNER      OUTER
        *
   51   TYP10OUT001      1          11    (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.
        *
   52   TYP11FLAG11  .FALSE.

*******************************************************************************
        * IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF
IMPACTS
        *
        * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
        * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
        *
   53   TYP12NUMBER   1      (UP TO 10 ALLOWED)
        *
        *              INNER      OUTER
        *
   54   TYP12OUT001      1          11    (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
        *
   55   TYP13NUMBER   0   (UP TO 10 ALLOWED)
        *
        * IRAD13 is the radial spatial interval at which results are requested
        *
        * ORGN13 is the name of the organ for which results are requested
        *  (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')
        *
        .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                          =  304
NUMBER OF BLANK OR COMMENT RECORDS READ         =  248
NUMBER OF TERMINATOR RECORDS                    =    1
NUMBER OF RECORDS PROCESSED                     =   55
     NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
     NUMBER OF PROCESSED RECORDS SORTED         =   55
*****************************************************************************************
****************

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

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

Seven new organs added with MACCS Version 1.5.11.1

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

 7 CANCER EFFECTS ARE DEFINED IN THE MODEL.
    INDEX  CANCER EFFECT                    ORGAN        ALPHA        BETA      CFRISK
   CIRISK
       1                          LEUKEMIA     L-RED MARR   1.000E+00  0.000E+00
9.700E-03  0.000E+00
       2                          BONE         L-BONE SUR   1.000E+00  0.000E+00
```

```
9.000E-04  0.000E+00
       3                    BREAST       L-BREAST     1.000E+00  0.000E+00
5.400E-03  1.700E-02
       4                    LUNG         L-LUNGS      1.000E+00  0.000E+00
1.550E-02  0.000E+00
       5                    THYROID      L-THYROIDH   1.000E+00  0.000E+00
7.200E-04  7.200E-03
       6                    GI           L-LOWER LI   1.000E+00  0.000E+00
3.360E-02  0.000E+00
       7                    OTHER        L-EDEWBODY   1.000E+00  0.000E+00
2.760E-02  0.000E+00

  TIME OF HOTSPOT RELOCATION IS 4.3200E+04.
  TIME OF NORMAL RETURN IS  8.640E+04 AND THE EMERGENCY PHASE ENDS AT  6.048E+05.


GROUNDSHINE SHIELDING FACTOR   = 0.330

RESUSPENSION PROTECTION FACTOR = 0.410

BREATHING RATE (CUBIC M/S) =   2.660E-04

  DISPERSION MODEL FLAG IS  2

  WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER
 BIN     1      2      3      4      5      6      7      8      9     10     11
12     13     14     15     16
    1 0.1111 0.0741 0.0159 0.0423 0.0582 0.1111 0.1429 0.0317 0.0159 0.0212 0.0106
0.0212 0.0476 0.1111 0.1323 0.0529
    2 0.1078 0.1433 0.0665 0.0901 0.1521 0.1581 0.1507 0.0591 0.0162 0.0015 0.0000
0.0015 0.0044 0.0074 0.0089 0.0325
    3 0.0366 0.0610 0.0366 0.0244 0.0244 0.0366 0.0488 0.0610 0.0488 0.1220 0.1220
0.1220 0.1463 0.0244 0.0610 0.0244
    4 0.0193 0.0492 0.0404 0.0316 0.0228 0.0193 0.0562 0.0668 0.0826 0.0808 0.0984
0.0879 0.1178 0.1564 0.0457 0.0246
    5 0.0420 0.0984 0.0564 0.0252 0.0204 0.0252 0.0552 0.0960 0.0804 0.1224 0.0816
0.0732 0.0684 0.0720 0.0612 0.0216
    6 0.0711 0.1141 0.0711 0.0345 0.0144 0.0215 0.0416 0.0869 0.1156 0.0919 0.0704
0.0704 0.0495 0.0546 0.0546 0.0380
    7 0.0774 0.1331 0.1238 0.0526 0.0341 0.0387 0.0759 0.0991 0.1687 0.0681 0.0294
0.0139 0.0155 0.0201 0.0279 0.0217
    8 0.0306 0.1444 0.1306 0.0250 0.0556 0.1583 0.1250 0.1639 0.1278 0.0083 0.0028
0.0139 0.0028 0.0000 0.0000 0.0111
    9 0.0330 0.0549 0.0330 0.0659 0.0110 0.0549 0.0879 0.0989 0.1319 0.0769 0.0769
0.1099 0.0659 0.0330 0.0549 0.0110
   10 0.0458 0.1094 0.0738 0.0560 0.0611 0.0687 0.0891 0.1425 0.0865 0.0407 0.0509
0.0433 0.0458 0.0407 0.0254 0.0204
   11 0.0829 0.1351 0.1114 0.0687 0.0545 0.0545 0.1232 0.0664 0.0379 0.0213 0.0261
0.0142 0.0450 0.0498 0.0521 0.0569
   12 0.1764 0.2220 0.1252 0.0667 0.0715 0.0886 0.0341 0.0130 0.0220 0.0089 0.0138
0.0163 0.0106 0.0122 0.0463 0.0724
   13 0.1000 0.0857 0.0714 0.0571 0.0286 0.0857 0.0714 0.0571 0.0571 0.0857 0.0571
0.0571 0.0714 0.0571 0.0286 0.0286
   14 0.0791 0.0698 0.1023 0.1209 0.0791 0.0977 0.0791 0.0372 0.0279 0.0419 0.0465
0.0140 0.0372 0.0233 0.1023 0.0419
   15 0.0617 0.0864 0.0947 0.1358 0.1399 0.0905 0.1029 0.0700 0.0206 0.0082 0.0082
0.0288 0.0123 0.0123 0.0247 0.1029
   16 0.1174 0.1637 0.1281 0.0747 0.1103 0.1281 0.1139 0.0214 0.0249 0.0071 0.0071
0.0036 0.0107 0.0107 0.0249 0.0534
   17 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   18 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
```

```
   19 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   20 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   21 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   22 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   23 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   24 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   25 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   26 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   27 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   28 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   29 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   30 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   31 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   32 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   33 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   34 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   35 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   36 0.0966 0.0779 0.0507 0.0394 0.0197 0.0253 0.0469 0.0732 0.0966 0.0807 0.0807
0.0704 0.0666 0.0629 0.0582 0.0544
   37 0.0857 0.1224 0.0822 0.0532 0.0513 0.0629 0.0718 0.0725 0.0756 0.0555 0.0471
0.0435 0.0427 0.0460 0.0457 0.0420
   38 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
   39 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
   40 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
   41 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000


Processing a Site Data File with Header:  SECPOP90 V2.3 MACCS Site Data File for
North Anna
  Lat: 38d 3'48'' Long:  77d 47'13'' LAST MODIFIED  12-17-1999

 THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO  394 RESULTS

YOU HAVE REQUESTED  52 RESULTS FROM "EARLY" COMPOSED OF:

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

YOU HAVE REQUESTED   38 RESULTS FROM "CHRONC" COMPOSED OF:

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


     TRIAL        DAY       HOUR        BIN     PRBMET
         1        156         19         32   1.23E-03
For Julian Day 156, selecting COMIDA2 results # 4 of 9
         2        159          3         12   3.51E-02
For Julian Day 159, selecting COMIDA2 results # 4 of 9
         3        159         15          2   1.93E-02
For Julian Day 159, selecting COMIDA2 results # 4 of 9
         4        161          9         21   5.11E-03
For Julian Day 161, selecting COMIDA2 results # 4 of 9
         5        161         17         36   4.28E-04
For Julian Day 161, selecting COMIDA2 results # 4 of 9
         6        167         17          4   1.62E-02
For Julian Day 167, selecting COMIDA2 results # 5 of 9
         7        168          9          3   2.34E-03
For Julian Day 168, selecting COMIDA2 results # 5 of 9
         8        170         16         35   2.85E-04
For Julian Day 170, selecting COMIDA2 results # 5 of 9
         9        171          6         10   1.12E-02
For Julian Day 171, selecting COMIDA2 results # 5 of 9
        10        171         10          1   5.39E-03
For Julian Day 171, selecting COMIDA2 results # 5 of 9
        11        171         23          9   2.60E-03
For Julian Day 171, selecting COMIDA2 results # 5 of 9
        12        175         23          6   3.98E-02
For Julian Day 175, selecting COMIDA2 results # 5 of 9
        13        191         23         11   1.20E-02
For Julian Day 191, selecting COMIDA2 results # 5 of 9
        14        194         15          7   1.84E-02
For Julian Day 194, selecting COMIDA2 results # 6 of 9
        15        197         17         32   1.23E-03
For Julian Day 197, selecting COMIDA2 results # 6 of 9
        16        200         19         25   3.42E-04
For Julian Day 200, selecting COMIDA2 results # 6 of 9
        17        207         12         36   4.28E-04
For Julian Day 207, selecting COMIDA2 results # 6 of 9
        18        207         13         35   2.85E-04
For Julian Day 207, selecting COMIDA2 results # 6 of 9
        19        207         18         35   2.85E-04
For Julian Day 207, selecting COMIDA2 results # 6 of 9
        20        207         20         33   1.14E-04
For Julian Day 207, selecting COMIDA2 results # 6 of 9
        21        208         23         15   6.93E-03
For Julian Day 208, selecting COMIDA2 results # 6 of 9
        22        210         22         18   4.28E-04
For Julian Day 210, selecting COMIDA2 results # 6 of 9
        23        211          4         22   2.74E-03
For Julian Day 211, selecting COMIDA2 results # 6 of 9
        24        211          8         26   5.14E-04
For Julian Day 211, selecting COMIDA2 results # 6 of 9
        25        211          9         25   3.42E-04
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For Julian Day 211, selecting COMIDA2 results # 6 of 9
        26        211        10        24   1.14E-04
For Julian Day 211, selecting COMIDA2 results # 6 of 9
        27        212        13         1   5.39E-03
For Julian Day 212, selecting COMIDA2 results # 6 of 9
        28        214         9         5   2.38E-02
For Julian Day 214, selecting COMIDA2 results # 6 of 9
        29        219        18        20   3.05E-03
For Julian Day 219, selecting COMIDA2 results # 6 of 9
        30        235         8         3   2.34E-03
For Julian Day 235, selecting COMIDA2 results # 7 of 9
        31        238        22        13   2.00E-03
For Julian Day 238, selecting COMIDA2 results # 7 of 9
        32        239        13         1   5.39E-03
For Julian Day 239, selecting COMIDA2 results # 7 of 9
        33        240        13        36   4.28E-04
For Julian Day 240, selecting COMIDA2 results # 7 of 9
        34        240        16        34   1.14E-04
For Julian Day 240, selecting COMIDA2 results # 7 of 9
        35        242         1         9   2.60E-03
For Julian Day 242, selecting COMIDA2 results # 7 of 9
        36        246        20        14   6.14E-03
For Julian Day 246, selecting COMIDA2 results # 7 of 9
        37        248         7        31   1.43E-04
For Julian Day 248, selecting COMIDA2 results # 7 of 9
        38        248         8        30   1.14E-04
For Julian Day 248, selecting COMIDA2 results # 7 of 9
        39        248        16        32   1.23E-03
For Julian Day 248, selecting COMIDA2 results # 7 of 9
        40        250         3        27   7.99E-04
For Julian Day 250, selecting COMIDA2 results # 7 of 9
        41        254        17        19   6.28E-04
For Julian Day 254, selecting COMIDA2 results # 7 of 9
        42        255         6        17   1.45E-02
For Julian Day 255, selecting COMIDA2 results # 7 of 9
        43        257         4        25   3.42E-04
For Julian Day 257, selecting COMIDA2 results # 8 of 9
        44        259        20        16   8.02E-03
For Julian Day 259, selecting COMIDA2 results # 8 of 9
        45        260         1        10   1.12E-02
For Julian Day 260, selecting COMIDA2 results # 8 of 9
        46        260         8        19   6.28E-04
For Julian Day 260, selecting COMIDA2 results # 8 of 9
        47        261        12        26   5.14E-04
For Julian Day 261, selecting COMIDA2 results # 8 of 9
        48        272        17        36   4.28E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9
        49        272        19        35   2.85E-04
For Julian Day 272, selecting COMIDA2 results # 8 of 9
        50        274        18        11   1.20E-02
For Julian Day 274, selecting COMIDA2 results # 8 of 9

     TRIAL        DAY       HOUR        BIN     PRBMET
        51        276         2        18   4.28E-04
For Julian Day 276, selecting COMIDA2 results # 8 of 9
        52        283        19        27   7.99E-04
For Julian Day 283, selecting COMIDA2 results # 8 of 9
        53        286         3         4   1.62E-02
For Julian Day 286, selecting COMIDA2 results # 8 of 9
        54        290         8         5   2.38E-02
For Julian Day 290, selecting COMIDA2 results # 9 of 9
        55        292        18        22   2.74E-03
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For Julian Day 292, selecting COMIDA2 results # 9 of 9
        56        295        11         1   5.39E-03
For Julian Day 295, selecting COMIDA2 results # 9 of 9
        57        298        14         2   1.93E-02
For Julian Day 298, selecting COMIDA2 results # 9 of 9
        58        303         4        11   1.20E-02
For Julian Day 303, selecting COMIDA2 results # 9 of 9
        59        305         3        15   6.93E-03
For Julian Day 305, selecting COMIDA2 results # 9 of 9
        60        306         3        14   6.14E-03
For Julian Day 306, selecting COMIDA2 results # 9 of 9
        61        313        20        17   1.45E-02
For Julian Day 313, selecting COMIDA2 results # 9 of 9
        62        314        21         7   1.84E-02
For Julian Day 314, selecting COMIDA2 results # 9 of 9
        63        318        17         3   2.34E-03
For Julian Day 318, selecting COMIDA2 results # 9 of 9
        64        320         9         6   3.98E-02
For Julian Day 320, selecting COMIDA2 results # 9 of 9
        65        321        23        13   2.00E-03
For Julian Day 321, selecting COMIDA2 results # 9 of 9
        66        322         6         9   2.60E-03
For Julian Day 322, selecting COMIDA2 results # 9 of 9
        67        329        22        16   8.02E-03
For Julian Day 329, selecting COMIDA2 results # 9 of 9
        68        330        16        21   5.11E-03
For Julian Day 330, selecting COMIDA2 results # 9 of 9
        69        331        18         8   1.03E-02
For Julian Day 331, selecting COMIDA2 results # 9 of 9
        70        334         1        10   1.12E-02
For Julian Day 334, selecting COMIDA2 results # 1 of 9
        71        335        24        18   4.28E-04
For Julian Day 335, selecting COMIDA2 results # 1 of 9
        72        336        22        12   3.51E-02
For Julian Day 336, selecting COMIDA2 results # 1 of 9
        73        342        12        22   2.74E-03
For Julian Day 342, selecting COMIDA2 results # 1 of 9
        74        345         5         4   1.62E-02
For Julian Day 345, selecting COMIDA2 results # 1 of 9
        75        347        13        20   3.05E-03
For Julian Day 347, selecting COMIDA2 results # 1 of 9
        76        348         2        26   5.14E-04
For Julian Day 348, selecting COMIDA2 results # 1 of 9
        77        348         4        24   1.14E-04
For Julian Day 348, selecting COMIDA2 results # 1 of 9
        78        348         8        27   7.99E-04
For Julian Day 348, selecting COMIDA2 results # 1 of 9
        79        351         3         5   2.38E-02
For Julian Day 351, selecting COMIDA2 results # 1 of 9
        80        352         6        18   4.28E-04
For Julian Day 352, selecting COMIDA2 results # 1 of 9
        81        355        13         2   1.93E-02
For Julian Day 355, selecting COMIDA2 results # 1 of 9
        82          2        18        23   1.14E-04
For Julian Day   2, selecting COMIDA2 results # 1 of 9
        83          8        17         8   1.03E-02
For Julian Day   8, selecting COMIDA2 results # 1 of 9
        84         15         5        16   8.02E-03
For Julian Day  15, selecting COMIDA2 results # 1 of 9
        85         15         8        13   2.00E-03
For Julian Day  15, selecting COMIDA2 results # 1 of 9
        86         15        17         7   1.84E-02
For Julian Day  15, selecting COMIDA2 results # 1 of 9
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         87          22          13           3   2.34E-03
For Julian Day  22, selecting COMIDA2 results # 1 of 9
         88          30           8           9   2.60E-03
For Julian Day  30, selecting COMIDA2 results # 1 of 9
         89          37           5          14   6.14E-03
For Julian Day  37, selecting COMIDA2 results # 2 of 9
         90          40           3          12   3.51E-02
For Julian Day  40, selecting COMIDA2 results # 2 of 9
         91          47           5          20   3.05E-03
For Julian Day  47, selecting COMIDA2 results # 2 of 9
         92          48          17           6   3.98E-02
For Julian Day  48, selecting COMIDA2 results # 2 of 9
         93          51          20          21   5.11E-03
For Julian Day  51, selecting COMIDA2 results # 2 of 9
         94          51          22          19   6.28E-04
For Julian Day  51, selecting COMIDA2 results # 2 of 9
         95          52           9          19   6.28E-04
For Julian Day  52, selecting COMIDA2 results # 2 of 9
         96          53          21          17   1.45E-02
For Julian Day  53, selecting COMIDA2 results # 2 of 9
         97          54           5          11   1.20E-02
For Julian Day  54, selecting COMIDA2 results # 2 of 9
         98          56          23          15   6.93E-03
For Julian Day  56, selecting COMIDA2 results # 2 of 9
         99          58          17           6   3.98E-02
For Julian Day  58, selecting COMIDA2 results # 2 of 9
        100          67          17           8   1.03E-02
For Julian Day  67, selecting COMIDA2 results # 2 of 9


      TRIAL         DAY        HOUR         BIN      PRBMET
        101          67          23          21   5.11E-03
For Julian Day  67, selecting COMIDA2 results # 2 of 9
        102          76          23          31   1.43E-04
For Julian Day  76, selecting COMIDA2 results # 2 of 9
        103          76          24          30   1.14E-04
For Julian Day  76, selecting COMIDA2 results # 2 of 9
        104          79          14          32   1.23E-03
For Julian Day  79, selecting COMIDA2 results # 2 of 9
        105          83          20          16   8.02E-03
For Julian Day  83, selecting COMIDA2 results # 2 of 9
        106          88          13          22   2.74E-03
For Julian Day  88, selecting COMIDA2 results # 2 of 9
        107          94           3          14   6.14E-03
For Julian Day  94, selecting COMIDA2 results # 3 of 9
        108          97          12           5   2.38E-02
For Julian Day  97, selecting COMIDA2 results # 3 of 9
        109         102          10           2   1.93E-02
For Julian Day 102, selecting COMIDA2 results # 3 of 9
        110         106          18          25   3.42E-04
For Julian Day 106, selecting COMIDA2 results # 3 of 9
        111         107           1          20   3.05E-03
For Julian Day 107, selecting COMIDA2 results # 3 of 9
        112         113          21          12   3.51E-02
For Julian Day 113, selecting COMIDA2 results # 3 of 9
        113         115          21          15   6.93E-03
For Julian Day 115, selecting COMIDA2 results # 3 of 9
        114         116          24           8   1.03E-02
For Julian Day 116, selecting COMIDA2 results # 3 of 9
        115         121           5          31   1.43E-04
For Julian Day 121, selecting COMIDA2 results # 3 of 9
        116         121           6          27   7.99E-04
For Julian Day 121, selecting COMIDA2 results # 3 of 9
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        117        123         8          4   1.62E-02
For Julian Day 123, selecting COMIDA2 results # 3 of 9
        118        125         8         17   1.45E-02
For Julian Day 125, selecting COMIDA2 results # 3 of 9
        119        125        21         31   1.43E-04
For Julian Day 125, selecting COMIDA2 results # 3 of 9
        120        136        11          7   1.84E-02
For Julian Day 136, selecting COMIDA2 results # 3 of 9
        121        139         3         10   1.12E-02
For Julian Day 139, selecting COMIDA2 results # 4 of 9
        122        143        21         13   2.00E-03
For Julian Day 143, selecting COMIDA2 results # 4 of 9
        123        148        19         26   5.14E-04
For Julian Day 148, selecting COMIDA2 results # 4 of 9
For Julian Day 156, selecting COMIDA2 results # 4 of 9
For Julian Day 159, selecting COMIDA2 results # 4 of 9
For Julian Day 159, selecting COMIDA2 results # 4 of 9
For Julian Day 161, selecting COMIDA2 results # 4 of 9
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For Julian Day 175, selecting COMIDA2 results # 5 of 9
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For Julian Day 274, selecting COMIDA2 results # 8 of 9
For Julian Day 276, selecting COMIDA2 results # 8 of 9
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For Julian Day 102, selecting COMIDA2 results # 3 of 9
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For Julian Day 115, selecting COMIDA2 results # 3 of 9
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For Julian Day 286, selecting COMIDA2 results # 8 of 9
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▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

                                                PROB                                QUANTILES
                          PEAK       PEAK   PEAK
                                            NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB   TRIAL
Source Term 1: Plume 1, at 32.2-48.3 km
 Cs-137   Center Air Conc. (Bq-s/m3)     1.0000  8.71E+09  7.63E+09  1.58E+10
2.01E+10  2.86E+10 NOT-FOUND  3.97E+10  8.02E-03  105
 Cs-137   Ground Air Conc. (Bq-s/m3)     1.0000  8.82E+09  7.77E+09  1.58E+10
2.01E+10  2.86E+10 NOT-FOUND  4.15E+10  8.02E-03  105
 Cs-137   Center Ground Conc. (Bq/m2)   1.0000  1.01E+08  8.91E+07  2.01E+08
2.24E+08  2.90E+08 NOT-FOUND  4.12E+08  8.02E-03  105
 Total    Center Ground Conc. (Bq/m2)   1.0000  1.54E+10  1.24E+10  3.02E+10
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3.47E+10  4.78E+10 NOT-FOUND  6.46E+10  8.02E-03  105
 Ground-Level Dilution, X/Q (s/m3)      1.0000  9.06E-08  6.26E-08  2.05E-07
3.24E-07  4.61E-07 NOT-FOUND  5.74E-07  6.93E-03   98
 Cs-137   Adjusted Source, Q (Bq)       1.0000  1.29E+17  1.12E+17  1.87E+17
2.02E+17  2.09E+17  2.12E+17  2.15E+17  2.34E-03   87
 Plume Sigma-y (m)                      1.0000  4.25E+03  3.45E+03  6.78E+03
9.01E+03 NOT-FOUND NOT-FOUND  1.04E+04  3.86E-02   81
 Plume Sigma-z (m)                      1.0000  3.95E+02  3.49E+02  5.63E+02
7.05E+02  1.31E+03  1.63E+03  2.31E+03  2.60E-03   35
 Plume Height  (m)                      1.0000  6.56E+01  3.42E+01  4.63E+01
1.04E+02  5.70E+02  6.28E+02  6.98E+02  2.34E-03   87
 Plume Arrival Time (s)                 1.0000  1.60E+04  1.38E+04  2.61E+04
3.03E+04  3.59E+04  3.86E+04  4.25E+04  2.00E-03   65

Source Term 1: Plume 1, at 48.3-64.4 km
 Cs-137   Center Air Conc. (Bq-s/m3)    1.0000  4.07E+09  3.42E+09  7.03E+09
9.25E+09  1.82E+10 NOT-FOUND  2.25E+10  8.02E-03  105
 Cs-137   Ground Air Conc. (Bq-s/m3)    1.0000  4.09E+09  3.40E+09  7.11E+09
9.28E+09  1.82E+10 NOT-FOUND  2.32E+10  8.02E-03  105
 Cs-137   Center Ground Conc. (Bq/m2)   1.0000  5.73E+07  4.08E+07  1.17E+08
1.41E+08  2.16E+08 NOT-FOUND  2.30E+08  8.02E-03  105
 Total    Center Ground Conc. (Bq/m2)   1.0000  8.40E+09  6.07E+09  1.89E+10
2.27E+10  3.19E+10 NOT-FOUND  3.35E+10  8.02E-03  105
 Ground-Level Dilution, X/Q (s/m3)      1.0000  4.72E-08  3.39E-08  1.07E-07
1.62E-07  2.71E-07 NOT-FOUND  2.86E-07  8.02E-03  105
 Cs-137   Adjusted Source, Q (Bq)       1.0000  1.17E+17  1.07E+17  1.62E+17
1.93E+17  2.06E+17  2.08E+17  2.11E+17  2.34E-03   87
 Plume Sigma-y (m)                      1.0000  5.83E+03  5.28E+03  9.63E+03
1.14E+04 NOT-FOUND NOT-FOUND  1.40E+04  1.93E-02  109
 Plume Sigma-z (m)                      1.0000  4.75E+02  3.68E+02  6.10E+02
1.04E+03  1.45E+03  1.68E+03  1.93E+03  2.60E-03   11
 Plume Height  (m)                      1.0000  6.56E+01  3.42E+01  4.63E+01
1.04E+02  5.70E+02  6.28E+02  6.98E+02  2.34E-03   87
 Plume Arrival Time (s)                 1.0000  2.12E+04  1.94E+04  3.33E+04
3.70E+04  4.70E+04  5.16E+04  5.57E+04  2.60E-03   35
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

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


FRACTION OF THE PEOPLE

                ------
    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
               0.950

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
               0.050

AND THEN MERGING THE 2 RESULTS ABOVE WITH THE SINGLE SET OF RESULTS FROM "CHRONC"
DESCRIBED BELOW:
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COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

11-APR-05 11:10:35 PAGE 1

		PEAK CONS	PROB PEAK	NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.9287	4.67E+01	2.37E+01	1.18E+02	1.68E+02	2.90E+02	3.28E+02	4.81E+02	4.28E-04 89
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9973	1.34E+02	9.47E+01	3.14E+02	4.24E+02	6.28E+02	7.07E+02	8.57E+02	5.99E-04 113
ERL INJ/DIARRHEA	0-16.1 km	0.9675	7.76E+01	5.08E+01	1.81E+02	2.57E+02	3.95E+02	4.58E+02	5.97E+02	5.99E-04 113
ERL INJ/PNEUMONITIS	0-16.1 km	0.9062	3.59E+01	1.31E+01	1.03E+02	1.44E+02	2.58E+02	3.06E+02	4.39E+02	4.28E-04 89
ERL INJ/THYROIDITIS	0-16.1 km	0.9059	1.99E+01	8.31E+00	5.49E+01	8.11E+01	1.43E+02	1.77E+02	2.15E+02	5.99E-04 113
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9983	2.14E+02	1.60E+02	4.54E+02	5.77E+02	7.96E+02	8.76E+02	1.09E+03	5.99E-04 113
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9977	1.28E+03	1.12E+03	2.02E+03	2.08E+03	2.23E+03	2.30E+03	2.57E+03	4.00E-04 10
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9930	1.04E+03	1.00E+03	1.93E+03	2.01E+03	2.05E+03	2.06E+03	2.17E+03	3.33E-05 80
CAN FAT/TOTAL	0-16.1 km	1.0000	6.92E+02	5.99E+02	1.19E+03	1.43E+03	2.07E+03	2.20E+03	2.49E+03	1.31E-03 84
CAN FAT/LUNG	0-80.5 km	1.0000	1.72E+03	1.09E+03	3.88E+03	5.57E+03	8.94E+03	1.04E+04	1.61E+04	1.71E-04 105
CAN FAT/THYROID	0-80.5 km	1.0000	2.76E+02	1.76E+02	6.45E+02	8.91E+02	1.22E+03	1.35E+03	2.59E+03	1.71E-04 105
CAN FAT/BREAST	0-80.5 km	1.0000	3.09E+02	1.83E+02	6.60E+02	1.01E+03	1.57E+03	1.89E+03	2.33E+03	4.57E-04 72
CAN FAT/GI	0-80.5 km	1.0000	1.06E+03	6.88E+02	2.29E+03	3.14E+03	5.07E+03	6.59E+03	8.83E+03	1.71E-04 105
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	2.95E+02	1.84E+02	6.30E+02	8.37E+02	1.47E+03	1.87E+03	2.31E+03	1.71E-04 105
CAN FAT/BONE	0-80.5 km	1.0000	5.94E+01	3.82E+01	1.24E+02	1.81E+02	2.88E+02	3.22E+02	5.17E+02	1.71E-04 105
CAN FAT/OTHER	0-80.5 km	1.0000	1.62E+03	1.04E+03	3.58E+03	5.00E+03	8.22E+03	1.02E+04	1.44E+04	1.71E-04 105
CAN INJ/THYROID	0-80.5 km	1.0000	2.76E+03	1.76E+03	6.45E+03	8.91E+03	1.22E+04	1.35E+04	2.59E+04	1.71E-04 105
CAN INJ/BREAST	0-80.5 km	1.0000	9.73E+02	5.52E+02	2.08E+03	3.12E+03	4.99E+03	6.41E+03	7.34E+03	4.57E-04 72
CAN FAT/TOTAL	0-80.5 km	1.0000	5.34E+03	3.46E+03	1.15E+04	1.56E+04	2.67E+04	3.10E+04	4.68E+04	1.71E-04 105
ERL FAT/TOTAL	0-80.5 km	0.9287	4.79E+01	2.37E+01	1.21E+02	1.74E+02	3.06E+02	3.43E+02	4.84E+02	5.99E-04 113
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.9973	1.84E+02	1.02E+02	4.08E+02	6.47E+02	1.33E+03	1.75E+03	5.51E+03	1.03E-03 84
ERL INJ/DIARRHEA	0-80.5 km	0.9675	9.02E+01	5.20E+01	1.98E+02	3.14E+02	6.27E+02	8.26E+02	2.10E+03	1.03E-03 84
ERL INJ/PNEUMONITIS	0-80.5 km	0.9062	3.59E+01	1.31E+01	1.03E+02	1.44E+02	2.58E+02	3.06E+02	4.39E+02	4.28E-04 89
ERL INJ/THYROIDITIS	0-80.5 km	0.9059	1.99E+01	8.31E+00	5.49E+01	8.11E+01	1.43E+02	1.77E+02	2.15E+02	5.99E-04 113
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.9983	3.78E+02	2.54E+02	7.97E+02	1.10E+03	2.33E+03	2.95E+03	5.14E+03	1.71E-04 105
ERL INJ/SKIN ERYTHEMA	0-80.5 km	0.9977	2.49E+04	1.24E+04	5.75E+04	1.07E+05	1.68E+05	2.06E+05	6.92E+05	1.71E-04 105

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 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.9930  4.96E+03  2.67E+03  9.61E+03
1.64E+04  4.29E+04  5.31E+04  1.21E+05  1.03E-03  105

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9590  6.84E+00  5.71E+00  8.38E+00
9.58E+00 NOT-FOUND NOT-FOUND  3.22E+01  3.19E-02   65

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.9287  1.90E+02  9.98E+01  3.43E+02
5.65E+02  1.52E+03  2.16E+03  7.18E+03  6.56E-04  113
□11-APR-06  11:10:35     PAGE   2            PROB                              QUANTILES
                              PEAK       PEAK  PEAK
                                            NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.9062  9.93E+01  6.56E+01  2.37E+02
3.57E+02  5.75E+02  6.47E+02  7.17E+02  1.85E-03   89
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9939  1.92E+03  1.14E+03  3.75E+03
5.50E+03  2.18E+04  2.40E+04  3.73E+04  1.03E-03  105
 EARLY dose L-EDEWBODY > 0.250 Sv          1.0000  3.73E+04  1.59E+04  1.03E+05
1.41E+05  3.14E+05  3.37E+05  4.74E+05  1.71E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.9590  5.96E-02  5.72E-02  7.30E-02
7.57E-02  8.24E-02  8.55E-02  9.94E-02  2.85E-04   18
 ERL FAT/TOTAL                1.6-3.2 km  0.8801  3.50E-02  3.34E-02  5.26E-02
5.40E-02  5.72E-02  5.87E-02  6.43E-02  4.28E-04   71
 ERL FAT/TOTAL                3.2-4.8 km  0.8557  1.55E-02  5.74E-03  5.08E-02
5.41E-02 NOT-FOUND NOT-FOUND  6.20E-02  1.12E-02    9
 ERL FAT/TOTAL                4.8-6.4 km  0.8557  5.72E-03  1.10E-03  1.64E-02
3.70E-02  5.79E-02 NOT-FOUND  6.11E-02  6.14E-03   60
 ERL FAT/TOTAL                6.4-8.1 km  0.8151  2.13E-03  1.88E-04  2.93E-03
1.45E-02  3.47E-02 NOT-FOUND  3.91E-02  6.14E-03   89

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.07E+04  9.06E+03  2.03E+04
2.51E+04  3.41E+04  3.71E+04  4.83E+04  5.99E-04  113
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  8.84E+04  5.55E+04  1.85E+05
2.76E+05  4.46E+05  5.10E+05  6.63E+05  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.9286  3.81E-02  3.03E-02  8.08E-02
9.17E-02  1.03E-01  1.06E-01  1.23E-01  3.13E-05   71
 CAN FAT/TOTAL                 0-16.1 km  1.0000  2.90E-02  2.37E-02  5.77E-02
7.24E-02  9.72E-02  1.05E-01  1.19E-01  1.31E-03   84

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  1.23E+02  1.01E+02  2.47E+02
3.05E+02 NOT-FOUND NOT-FOUND  3.68E+02  1.12E-02    9
 L-EDEWBODY                   1.6-3.2 km  1.0000  4.80E+01  3.73E+01  9.99E+01
1.15E+02  1.61E+02 NOT-FOUND  1.78E+02  6.14E-03   89
 L-EDEWBODY                   3.2-4.8 km  1.0000  2.67E+01  2.09E+01  5.69E+01
7.49E+01  1.05E+02 NOT-FOUND  1.09E+02  6.14E-03   89
 L-EDEWBODY                   4.8-6.4 km  1.0000  1.67E+01  1.29E+01  3.33E+01
4.43E+01  6.30E+01 NOT-FOUND  6.86E+01  6.14E-03   60
 L-EDEWBODY                   6.4-8.1 km  1.0000  1.08E+01  8.57E+00  1.97E+01
3.14E+01  4.03E+01 NOT-FOUND  4.35E+01  6.14E-03   89
 L-EDEWBODY                   8.1-9.7 km  1.0000  7.64E+00  6.13E+00  1.57E+01
2.12E+01  2.81E+01 NOT-FOUND  3.08E+01  6.93E-03  113
 L-EDEWBODY                  9.7-16.1 km  1.0000  3.81E+00  3.31E+00  7.65E+00
1.01E+01  1.33E+01 NOT-FOUND  1.39E+01  8.02E-03   44
 L-EDEWBODY                 16.1-32.2 km  1.0000  1.92E+00  1.33E+00  3.85E+00
5.02E+00  8.24E+00 NOT-FOUND  9.00E+00  8.02E-03   84
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 L-EDEWBODY                    32.2-48.3 km  1.0000  7.93E-01  7.24E-01  1.17E+00
1.36E+00  1.91E+00 NOT-FOUND  2.88E+00  8.02E-03  105
 L-EDEWBODY                    48.3-64.4 km  1.0000  4.45E-01  3.87E-01  6.57E-01
7.71E-01  1.46E+00 NOT-FOUND  1.75E+00  8.02E-03  105
 L-EDEWBODY                    64.4-80.5 km  1.0000  3.32E-01  3.02E-01  5.75E-01
6.92E-01  8.12E-01 NOT-FOUND  8.30E-01  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE   3            PROB                                QUANTILES
                          PEAK        PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS        PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                     0-16.1 km  0.9005  4.27E+01  1.94E+01  1.12E+02
1.63E+02  2.90E+02  3.28E+02  4.80E+02  4.28E-04   89
 ERL INJ/PRODROMAL VOMIT           0-16.1 km  0.9714  1.26E+02  8.30E+01  2.98E+02
4.20E+02  6.29E+02  7.07E+02  8.53E+02  5.99E-04  113
 ERL INJ/DIARRHEA                  0-16.1 km  0.9167  7.23E+01  4.57E+01  1.69E+02
2.48E+02  3.87E+02  4.47E+02  5.92E+02  5.99E-04  113
 ERL INJ/PNEUMONITIS               0-16.1 km  0.8795  3.48E+01  1.20E+01  1.00E+02
1.42E+02  2.57E+02  3.06E+02  4.46E+02  4.28E-04   89
 ERL INJ/THYROIDITIS               0-16.1 km  0.8951  2.01E+01  8.42E+00  5.51E+01
8.10E+01  1.44E+02  1.77E+02  2.22E+02  5.99E-04  113
 ERL INJ/HYPOTHYROIDISM            0-16.1 km  0.9983  2.16E+02  1.60E+02  4.58E+02
5.85E+02  8.02E+02  8.79E+02  1.12E+03  5.99E-04  113
 ERL INJ/SKIN ERYTHEMA             0-16.1 km  0.9977  1.26E+03  1.11E+03  2.02E+03
2.08E+03  2.22E+03  2.29E+03  2.55E+03  4.00E-04   10
 ERL INJ/TRANSEPIDERMAL            0-16.1 km  0.9930  1.02E+03  1.00E+03  1.87E+03
2.01E+03  2.04E+03  2.05E+03  2.14E+03  3.33E-05   80
 CAN FAT/TOTAL                     0-16.1 km  1.0000  5.99E+02  4.98E+02  1.12E+03
1.37E+03  2.06E+03  2.22E+03  2.54E+03  1.31E-03   84
 CAN FAT/LUNG                      0-80.5 km  1.0000  1.46E+03  9.04E+02  3.49E+03
5.08E+03  7.42E+03  8.66E+03  1.45E+04  1.71E-04  105
 CAN FAT/THYROID                   0-80.5 km  1.0000  2.48E+02  1.47E+02  5.75E+02
7.84E+02  1.13E+03  1.25E+03  2.40E+03  1.71E-04  105
 CAN FAT/BREAST                    0-80.5 km  1.0000  1.01E+02  5.58E+01  2.28E+02
3.05E+02  5.52E+02  6.55E+02  8.51E+02  1.83E-03  120
 CAN FAT/GI                        0-80.5 km  1.0000  5.50E+02  3.51E+02  1.18E+03
1.64E+03  2.87E+03  3.22E+03  5.67E+03  1.71E-04  105
 CAN FAT/LEUKEMIA                  0-80.5 km  1.0000  1.28E+02  7.90E+01  2.98E+02
3.69E+02  7.02E+02  7.46E+02  1.28E+03  1.71E-04  105
 CAN FAT/BONE                      0-80.5 km  1.0000  4.10E+01  2.57E+01  1.01E+02
1.27E+02  2.05E+02  2.22E+02  4.10E+02  1.71E-04  105
 CAN FAT/OTHER                     0-80.5 km  1.0000  1.09E+03  7.01E+02  2.51E+03
3.50E+03  5.66E+03  6.55E+03  1.10E+04  1.71E-04  105
 CAN INJ/THYROID                   0-80.5 km  1.0000  2.48E+03  1.47E+03  5.75E+03
7.84E+03  1.13E+04  1.25E+04  2.40E+04  1.71E-04  105
 CAN INJ/BREAST                    0-80.5 km  1.0000  3.17E+02  1.75E+02  7.44E+02
9.67E+02  1.68E+03  2.09E+03  2.68E+03  1.83E-03  120
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 CAN FAT/TOTAL                  0-80.5 km  1.0000  3.62E+03  2.27E+03  8.58E+03
1.17E+04  2.00E+04  2.15E+04  3.59E+04  1.71E-04  105
 ERL FAT/TOTAL                  0-80.5 km  0.9005  4.39E+01  1.94E+01  1.14E+02
1.69E+02  3.05E+02  3.37E+02  4.80E+02  4.28E-04   89
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.9714  1.77E+02  9.00E+01  4.02E+02
6.46E+02  1.33E+03  1.75E+03  5.51E+03  1.03E-03   84
 ERL INJ/DIARRHEA               0-80.5 km  0.9167  8.49E+01  4.74E+01  1.84E+02
3.06E+02  6.26E+02  8.26E+02  2.10E+03  1.03E-03   84
 ERL INJ/PNEUMONITIS            0-80.5 km  0.8795  3.48E+01  1.20E+01  1.00E+02
1.42E+02  2.57E+02  3.06E+02  4.46E+02  4.28E-04   89
 ERL INJ/THYROIDITIS            0-80.5 km  0.8951  2.01E+01  8.42E+00  5.51E+01
8.10E+01  1.44E+02  1.77E+02  2.22E+02  5.99E-04  113
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9983  3.80E+02  2.56E+02  8.25E+02
1.16E+03  2.30E+03  2.94E+03  5.15E+03  1.71E-04  105
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9977  2.49E+04  1.23E+04  5.75E+04
1.07E+05  1.68E+05  2.06E+05  6.92E+05  1.71E-04  105
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9930  4.95E+03  2.64E+03  9.61E+03
1.64E+04  4.29E+04  5.31E+04  1.21E+05  1.03E-03  105

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9334  6.58E+00  5.42E+00  8.38E+00
9.58E+00 NOT-FOUND NOT-FOUND  3.22E+01  3.19E-02   65

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.9005  1.79E+02  8.89E+01  3.30E+02
5.41E+02  1.51E+03  2.16E+03  7.17E+03  1.68E-03   84
 EARLY dose A-LUNGS > 5.00 Sv              0.8795  9.72E+01  6.27E+01  2.36E+02
3.57E+02  5.73E+02  6.47E+02  7.24E+02  3.17E-03   44
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9803  1.92E+03  1.14E+03  3.74E+03
5.50E+03  2.18E+04  2.40E+04  3.73E+04  1.03E-03  105
 EARLY dose L-EDEWBODY > 0.250 Sv          1.0000  3.73E+04  1.59E+04  1.03E+05
1.41E+05  3.14E+05  3.37E+05  4.74E+05  1.71E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.9334  5.83E-02  5.64E-02  7.22E-02
7.45E-02  8.02E-02  8.28E-02  9.85E-02  1.14E-04   20
 ERL FAT/TOTAL                 1.6-3.2 km  0.8557  3.42E-02  3.28E-02 NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  6.25E-02  1.37E-01    9
 ERL FAT/TOTAL                 3.2-4.8 km  0.7935  1.47E-02  3.59E-03  5.10E-02
5.53E-02 NOT-FOUND NOT-FOUND  6.25E-02  1.74E-02   60
 ERL FAT/TOTAL                 4.8-6.4 km  0.6148  5.06E-03  1.22E-04  1.08E-02
3.70E-02  5.88E-02 NOT-FOUND  6.24E-02  6.14E-03   60
□11-APR-06  11:10:35    PAGE   4          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.2535  1.72E-03  0.00E+00  1.75E-03
1.22E-02  3.50E-02 NOT-FOUND  3.97E-02  6.14E-03   89

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  8.68E+03  7.00E+03  1.77E+04
2.30E+04  3.30E+04  3.62E+04  4.81E+04  5.99E-04  113
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  4.98E+04  3.21E+04  1.09E+05
1.41E+05  2.14E+05  2.29E+05  4.17E+05  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.9005  3.72E-02  2.85E-02  8.06E-02
9.16E-02 NOT-FOUND NOT-FOUND  1.21E-01  1.16E-02    9
 CAN FAT/TOTAL                  0-16.1 km  1.0000  2.90E-02  2.37E-02  5.84E-02
7.36E-02  1.01E-01  1.08E-01  1.23E-01  1.31E-03   84

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
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 L-EDEWBODY                    0-1.6 km  1.0000  1.21E+02  1.01E+02  2.40E+02
3.01E+02 NOT-FOUND NOT-FOUND  3.62E+02  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  4.73E+01  3.57E+01  9.99E+01
1.15E+02  1.60E+02 NOT-FOUND  1.77E+02  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  2.63E+01  2.08E+01  5.72E+01
7.49E+01  1.04E+02 NOT-FOUND  1.08E+02  6.14E-03   89
 L-EDEWBODY                  4.8-6.4 km  0.9914  1.63E+01  1.29E+01  3.17E+01
4.37E+01  6.25E+01 NOT-FOUND  6.79E+01  6.14E-03   60
 L-EDEWBODY                  6.4-8.1 km  0.9888  1.05E+01  8.43E+00  1.97E+01
3.14E+01  4.02E+01 NOT-FOUND  4.34E+01  6.14E-03   89
 L-EDEWBODY                  8.1-9.7 km  0.9691  7.36E+00  6.12E+00  1.51E+01
2.12E+01  2.81E+01 NOT-FOUND  3.05E+01  6.93E-03  113
 L-EDEWBODY                 9.7-16.1 km  0.9264  3.63E+00  3.28E+00  7.54E+00
1.01E+01  1.33E+01 NOT-FOUND  1.38E+01  8.02E-03   84
 L-EDEWBODY                16.1-32.2 km  1.0000  1.87E+00  1.31E+00  3.85E+00
5.02E+00  8.24E+00 NOT-FOUND  9.00E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  6.54E-01  5.74E-01  1.13E+00
1.32E+00  1.90E+00 NOT-FOUND  2.88E+00  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  3.32E-01  2.74E-01  5.45E-01
6.29E-01  1.35E+00 NOT-FOUND  1.56E+00  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  2.37E-01  2.06E-01  3.92E-01
5.08E-01  6.73E-01 NOT-FOUND  6.99E-01  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35     PAGE   5          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.9287  1.24E+02  8.98E+01  2.91E+02
3.67E+02  5.54E+02  6.23E+02  8.30E+02  1.63E-03   50
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.9887  2.78E+02  2.37E+02  5.65E+02
6.85E+02  8.62E+02  9.48E+02  1.30E+03  2.22E-05   19
 ERL INJ/DIARRHEA              0-16.1 km  0.9675  1.80E+02  1.32E+02  3.81E+02
4.92E+02  6.70E+02  7.69E+02  9.69E+02  1.63E-03   50
 ERL INJ/PNEUMONITIS           0-16.1 km  0.9062  5.85E+01  3.56E+01  1.40E+02
2.05E+02  3.17E+02  3.45E+02  4.66E+02  4.28E-04   60
 ERL INJ/THYROIDITIS           0-16.1 km  0.9059  1.52E+01  7.01E+00  3.99E+01
5.71E+01  9.35E+01  1.06E+02  1.46E+02  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9815  1.71E+02  1.39E+02  3.27E+02
3.91E+02  5.56E+02  6.23E+02  7.60E+02  1.63E-03   50
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9930  1.75E+03  1.46E+03  2.52E+03
2.89E+03  3.33E+03  3.50E+03  5.34E+03  2.17E-05   33
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.9767  1.36E+03  1.21E+03  2.07E+03
2.15E+03  2.35E+03  2.44E+03  3.45E+03  3.18E-05   95
 CAN FAT/TOTAL                 0-16.1 km  1.0000  3.99E+02  3.57E+02  6.70E+02
7.52E+02  9.35E+02  1.00E+03  1.04E+03  1.43E-04   88
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.36E+03  7.97E+02  3.34E+03
4.82E+03  7.35E+03  8.62E+03  1.41E+04  1.71E-04  105
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 CAN FAT/THYROID                0-80.5 km  1.0000  2.28E+02  1.32E+02  5.55E+02
7.74E+02  1.12E+03  1.24E+03  2.34E+03  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  1.03E+02  5.77E+01  2.32E+02
3.07E+02  5.52E+02  6.55E+02  8.53E+02  1.83E-03  120
 CAN FAT/GI                     0-80.5 km  1.0000  5.32E+02  3.35E+02  1.18E+03
1.64E+03  2.87E+03  3.22E+03  5.56E+03  1.71E-04  105
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  1.27E+02  7.81E+01  2.96E+02
3.72E+02  7.02E+02  7.46E+02  1.26E+03  1.71E-04  105
 CAN FAT/BONE                   0-80.5 km  1.0000  3.87E+01  2.31E+01  9.53E+01
1.25E+02  2.05E+02  2.22E+02  4.01E+02  1.71E-04  105
 CAN FAT/OTHER                  0-80.5 km  1.0000  1.03E+03  6.21E+02  2.35E+03
3.32E+03  5.46E+03  6.21E+03  1.08E+04  1.71E-04  105
 CAN INJ/THYROID                0-80.5 km  1.0000  2.28E+03  1.32E+03  5.55E+03
7.74E+03  1.12E+04  1.24E+04  2.34E+04  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  3.23E+02  1.80E+02  7.54E+02
9.95E+02  1.69E+03  2.09E+03  2.68E+03  1.83E-03  120
 CAN FAT/TOTAL                  0-80.5 km  1.0000  3.42E+03  2.09E+03  8.30E+03
1.12E+04  1.84E+04  2.09E+04  3.51E+04  1.71E-04  105
 ERL FAT/TOTAL                  0-80.5 km  0.9287  1.25E+02  8.99E+01  2.97E+02
3.74E+02  5.60E+02  6.26E+02  8.30E+02  1.63E-03   50
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.9887  3.29E+02  2.47E+02  6.80E+02
8.96E+02  1.53E+03  1.91E+03  5.51E+03  1.03E-03   84
 ERL INJ/DIARRHEA               0-80.5 km  0.9675  1.93E+02  1.33E+02  4.13E+02
5.44E+02  8.21E+02  9.40E+02  2.18E+03  1.03E-03   84
 ERL INJ/PNEUMONITIS            0-80.5 km  0.9062  5.85E+01  3.56E+01  1.40E+02
2.05E+02  3.17E+02  3.45E+02  4.66E+02  4.28E-04   60
 ERL INJ/THYROIDITIS            0-80.5 km  0.9059  1.52E+01  7.01E+00  3.99E+01
5.71E+01  9.35E+01  1.06E+02  1.46E+02  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9815  3.35E+02  2.28E+02  6.63E+02
9.52E+02  2.16E+03  2.88E+03  4.87E+03  1.71E-04  105
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9953  2.54E+04  1.26E+04  5.76E+04
1.07E+05  1.68E+05  2.15E+05  6.92E+05  1.71E-04  105
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9767  5.28E+03  3.01E+03  9.64E+03
1.66E+04  4.33E+04  5.31E+04  1.21E+05  1.03E-03  105

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9590  1.18E+01  9.54E+00  1.49E+01
1.78E+01 NOT-FOUND NOT-FOUND  3.22E+01  3.19E-02   65

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.9287  4.09E+02  3.01E+02  8.16E+02
1.04E+03  1.79E+03  2.46E+03  7.55E+03  6.56E-04   98
 EARLY dose A-LUNGS > 5.00 Sv              0.9062  1.39E+02  9.73E+01  3.21E+02
4.11E+02  6.70E+02  8.00E+02  1.04E+03  4.28E-04   60
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9795  1.83E+03  1.03E+03  3.82E+03
5.42E+03  2.18E+04  2.40E+04  3.65E+04  1.03E-03  105
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9988  3.75E+04  1.60E+04  1.03E+05
1.41E+05  3.14E+05  3.37E+05  4.73E+05  1.71E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.9590  8.43E-02  8.53E-02  1.17E-01
1.27E-01  1.55E-01 NOT-FOUND  1.68E-01  5.39E-03   27
 ERL FAT/TOTAL                1.6-3.2 km  0.8801  5.01E-02  5.16E-02  7.22E-02
7.51E-02  8.21E-02  8.53E-02  1.08E-01  2.85E-04   18
 ERL FAT/TOTAL                3.2-4.8 km  0.8557  3.16E-02  3.09E-02  5.15E-02
5.48E-02  6.34E-02  6.74E-02  7.98E-02  2.85E-04   18
 ERL FAT/TOTAL                4.8-6.4 km  0.8557  1.82E-02  1.42E-02  3.64E-02
4.16E-02  5.23E-02  5.49E-02  6.70E-02  2.85E-04   19
011-APR-06  11:10:35    PAGE   6          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
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 ERL FAT/TOTAL                 6.4-8.1 km  0.8151  1.00E-02  4.51E-03  2.87E-02
3.16E-02  3.64E-02  3.87E-02  5.96E-02  2.85E-04   19

POPULATION DOSE (SV)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  8.16E+03  6.91E+03  1.50E+04
1.96E+04  2.63E+04  2.97E+04  3.60E+04  4.28E-04   60
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  4.93E+04  3.16E+04  1.09E+05
1.41E+05  2.14E+05  2.30E+05  4.08E+05  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.9286  5.52E-02  5.43E-02  1.02E-01
1.06E-01  1.17E-01  1.22E-01  1.71E-01  2.09E-05   18
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.94E-02  1.76E-02  3.11E-02
3.29E-02  3.75E-02  3.97E-02  5.06E-02  1.43E-04   88

PEAK DOSE FOUND ON SPATIAL GRID (SV)
 L-EDEWBODY                   0-1.6 km  1.0000  1.65E+02  1.32E+02  3.06E+02
3.22E+02  3.61E+02  3.80E+02  4.98E+02  1.14E-04   20
 L-EDEWBODY                 1.6-3.2 km  1.0000  5.92E+01  5.11E+01  1.10E+02
1.27E+02  1.79E+02 NOT-FOUND  1.98E+02  6.14E-03   89
 L-EDEWBODY                 3.2-4.8 km  1.0000  3.27E+01  2.45E+01  7.27E+01
8.57E+01  1.11E+02  1.19E+02  1.31E+02  2.00E-03  122
 L-EDEWBODY                 4.8-6.4 km  1.0000  2.16E+01  1.42E+01  5.10E+01
7.06E+01  8.13E+01 NOT-FOUND  8.48E+01  6.14E-03   36
 L-EDEWBODY                 6.4-8.1 km  1.0000  1.49E+01  1.10E+01  3.24E+01
4.23E+01  6.31E+01 NOT-FOUND  6.95E+01  6.14E-03   60
 L-EDEWBODY                 8.1-9.7 km  1.0000  1.13E+01  7.66E+00  2.63E+01
3.58E+01  5.32E+01 NOT-FOUND  5.50E+01  6.93E-03   98
 L-EDEWBODY                9.7-16.1 km  1.0000  5.92E+00  4.40E+00  1.20E+01
1.77E+01  2.33E+01  2.51E+01  2.78E+01  2.00E-03   65
 L-EDEWBODY               16.1-32.2 km  1.0000  1.87E+00  1.31E+00  3.85E+00
5.02E+00  8.24E+00 NOT-FOUND  9.00E+00  8.02E-03   84
 L-EDEWBODY               32.2-48.3 km  1.0000  6.54E-01  5.74E-01  1.13E+00
1.32E+00  1.90E+00 NOT-FOUND  2.88E+00  8.02E-03  105
 L-EDEWBODY               48.3-64.4 km  1.0000  3.32E-01  2.74E-01  5.45E-01
6.29E-01  1.35E+00 NOT-FOUND  1.56E+00  8.02E-03  105
 L-EDEWBODY               64.4-80.5 km  1.0000  2.37E-01  2.06E-01  3.92E-01
5.08E-01  6.73E-01 NOT-FOUND  6.99E-01  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE   7          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.04E+02  6.95E+01  2.23E+02
3.06E+02  4.54E+02  5.20E+02  1.05E+03  1.19E-04   39
 CAN FAT/LUNG                 0-80.5 km  1.0000  2.66E+02  1.57E+02  6.00E+02
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8.76E+02  1.23E+03  1.36E+03  1.94E+03  4.57E-04   72
 CAN FAT/THYROID              0-80.5 km  1.0000  2.86E+01  1.65E+01  6.40E+01
9.66E+01  1.54E+02  1.87E+02  2.26E+02  4.57E-04   72
 CAN FAT/BREAST               0-80.5 km  1.0000  2.08E+02  1.20E+02  4.57E+02
7.03E+02  1.04E+03  1.15E+03  1.65E+03  4.57E-04   72
 CAN FAT/GI                   0-80.5 km  1.0000  5.10E+02  3.15E+02  1.14E+03
1.66E+03  2.66E+03  3.04E+03  3.82E+03  4.57E-04   72
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  1.67E+02  1.02E+02  3.64E+02
5.24E+02  8.38E+02  9.61E+02  1.24E+03  4.57E-04   72
 CAN FAT/BONE                 0-80.5 km  1.0000  1.85E+01  1.14E+01  3.90E+01
5.63E+01  8.99E+01  1.02E+02  1.29E+02  4.57E-04   72
 CAN FAT/OTHER                0-80.5 km  1.0000  5.33E+02  3.09E+02  1.21E+03
1.76E+03  2.85E+03  3.16E+03  4.10E+03  4.57E-04   72
 CAN INJ/THYROID              0-80.5 km  1.0000  2.86E+02  1.65E+02  6.40E+02
9.66E+02  1.54E+03  1.87E+03  2.26E+03  4.57E-04   72
 CAN INJ/BREAST               0-80.5 km  1.0000  6.56E+02  3.77E+02  1.46E+03
2.09E+03  3.71E+03  4.62E+03  5.19E+03  4.57E-04   72
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.73E+03  1.03E+03  3.78E+03
5.32E+03  8.86E+03  1.02E+04  1.31E+04  4.57E-04   72

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  2.05E+03  1.37E+03  4.37E+03
5.78E+03  8.74E+03  1.01E+04  2.04E+04  1.19E-04   39
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  3.86E+04  2.29E+04  8.33E+04
1.11E+05  1.92E+05  2.16E+05  2.97E+05  4.57E-04   72

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                0-16.1 km  0.8333  3.96E-04  3.46E-04  8.77E-04
1.04E-03  1.22E-03  1.31E-03  1.94E-03  8.56E-05   10

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.1087  1.38E-02  0.00E+00  2.67E-03
1.13E-01  1.69E-01 NOT-FOUND  1.97E-01  5.39E-03   56
 L-EDEWBODY                  1.6-3.2 km  0.1911  2.70E-02  0.00E+00  1.14E-01
1.43E-01 NOT-FOUND NOT-FOUND  1.96E-01  1.93E-02    3
 L-EDEWBODY                  3.2-4.8 km  0.4042  5.94E-02  0.00E+00  1.14E-01
1.23E-01  1.44E-01  1.55E-01  1.99E-01  4.28E-04   17
 L-EDEWBODY                  4.8-6.4 km  0.3698  6.03E-02  0.00E+00  1.19E-01
1.31E-01  1.64E-01  1.80E-01  1.97E-01  2.60E-03   88
 L-EDEWBODY                  6.4-8.1 km  0.5663  8.80E-02  1.01E-01  1.18E-01
1.26E-01  1.47E-01  1.57E-01  1.99E-01  4.28E-04   80
 L-EDEWBODY                  8.1-9.7 km  0.5807  7.99E-02  1.01E-01  1.25E-01
1.37E-01  1.70E-01  1.86E-01  1.99E-01  3.05E-03  111
 L-EDEWBODY                 9.7-16.1 km  0.6054  6.47E-02  7.55E-02  1.22E-01
1.37E-01  1.78E-01 NOT-FOUND  1.97E-01  5.39E-03   27
 L-EDEWBODY                16.1-32.2 km  0.6012  5.02E-02  2.34E-02  1.09E-01
1.16E-01  1.34E-01  1.42E-01  1.99E-01  1.14E-04   20
 L-EDEWBODY                32.2-48.3 km  0.9330  1.39E-01  1.07E-01  1.33E-01
1.46E-01  1.82E-01 NOT-FOUND  1.99E-01  5.11E-03    4
 L-EDEWBODY                48.3-64.4 km  0.9949  1.13E-01  1.09E-01  1.53E-01
1.77E-01 NOT-FOUND NOT-FOUND  1.91E-01  3.51E-02   72
 L-EDEWBODY                64.4-80.5 km  1.0000  9.49E-02  9.50E-02  1.37E-01
1.58E-01 NOT-FOUND NOT-FOUND  1.93E-01  1.84E-02   14

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  3.86E+04  2.29E+04  8.33E+04
1.11E+05  1.92E+05  2.16E+05  2.97E+05  4.57E-04   72
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  2.90E+04  1.64E+04  7.21E+04
1.01E+05  1.25E+05  1.37E+05  1.88E+05  4.57E-04   72
 TOTAL INGESTION PATHWAYS DOSE           1.0000  2.75E+03  2.20E+03  5.08E+03
6.41E+03  1.01E+04  1.12E+04  2.06E+04  1.19E-04   39
 LONG-TERM GROUNDSHINE DOSE              1.0000  2.85E+04  1.62E+04  7.18E+04
1.01E+05  1.25E+05  1.37E+05  1.88E+05  4.57E-04   72
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 LONG-TERM RESUSPENSION DOSE                1.0000  4.47E+02  2.23E+02  1.15E+03
1.62E+03  2.23E+03  2.38E+03  2.50E+03  2.91E-03    3
 WATER INGESTION DOSE                       1.0000  2.36E+03  1.74E+03  4.86E+03
6.20E+03  8.94E+03  1.02E+04  2.03E+04  1.19E-04   39
 POP.-DEPENDENT DECONTAMINATION DOSE        1.0000  6.75E+03  2.81E+03  1.65E+04
2.52E+04  5.57E+04  8.04E+04  1.07E+05  4.57E-04   72
011-APR-06  11:10:35    PAGE   8          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE        1.0000  1.55E+02  1.26E+02  2.61E+02
3.29E+02  5.36E+02  6.04E+02  6.67E+02  2.83E-03   99
 INGESTION OF GRAINS                        1.0000  8.71E+00  7.58E+00  1.33E+01
1.60E+01  2.14E+01  2.28E+01  4.15E+01  6.68E-05   39
 INGESTION OF LEAF VEG                      1.0000  6.24E+01  5.53E+01  1.04E+02
1.17E+02  1.52E+02  1.70E+02  1.87E+02  2.83E-03   99
 INGESTION OF ROOT CROPS                    1.0000  3.75E+01  3.33E+01  6.21E+01
7.36E+01  1.00E+02  1.09E+02  1.17E+02  2.83E-03   99
 INGESTION OF FRUITS                        1.0000  5.07E+01  4.21E+01  8.42E+01
1.01E+02  1.30E+02  1.45E+02  2.01E+02  6.28E-04   57
 INGESTION OF LEGUMES                       1.0000  7.50E+01  6.58E+01  1.17E+02
1.34E+02  1.86E+02  2.09E+02  2.26E+02  2.83E-03   99
 INGESTION OF BEEF                          1.0000  6.59E+01  2.60E+01  1.71E+02
2.69E+02  5.18E+02  5.82E+02  7.41E+02  6.21E-06  103
 INGESTION OF MILK                          1.0000  6.41E+01  2.90E+01  1.73E+02
2.58E+02  3.73E+02  4.19E+02  8.08E+02  6.21E-06  103
 INGESTION OF POULTRY                       1.0000  1.61E+01  7.87E+00  4.21E+01
5.64E+01  7.95E+01  8.77E+01  1.37E+02  2.33E-05   51
 INGESTION OF OTHER MEAT CROPS              1.0000  1.05E+01  2.19E+00  3.97E+01
5.35E+01  7.21E+01  7.72E+01  1.14E+02  5.71E-05   63

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                       1.0000  1.43E+10  7.11E+09  3.35E+10
4.50E+10  1.01E+11  1.32E+11  1.94E+11  1.83E-03  120
 POP.-DEPENDENT COSTS                       1.0000  1.41E+10  6.58E+09  3.35E+10
4.49E+10  1.01E+11  1.32E+11  1.94E+11  1.83E-03  120
 FARM-DEPENDENT COSTS                       1.0000  2.69E+08  2.43E+08  4.30E+08
5.10E+08  6.33E+08  6.94E+08  8.29E+08  4.00E-04  120
 POP.-DEPENDENT DECONTAMINATION COST        1.0000  2.12E+09  9.76E+08  5.34E+09
8.18E+09  1.07E+10  1.12E+10  1.24E+10  1.14E-03   81
 FARM-DEPENDENT DECONTAMINATION COST        1.0000  6.81E+07  5.85E+07  1.12E+08
1.32E+08  1.90E+08  2.10E+08  2.60E+08  6.28E-04   81
 POP.-DEPENDENT INTERDICTION COST           1.0000  9.53E+09  4.43E+09  2.30E+10
3.28E+10  7.52E+10  9.28E+10  1.23E+11  4.57E-04   72
 FARM-DEPENDENT INTERDICTION COST           1.0000  1.29E+08  1.08E+08  2.16E+08
2.51E+08  3.13E+08  3.26E+08  3.76E+08  4.00E-04   14
 POP.-DEPENDENT CONDEMNATION COST           0.9767  2.35E+09  9.37E+08  3.93E+09
5.88E+09  2.54E+10  3.96E+10  1.84E+11  1.83E-03  120
 FARM-DEPENDENT CONDEMNATION COST           0.9767  3.84E+07  3.12E+07  6.85E+07
1.11E+08  1.83E+08  2.21E+08  4.26E+08  1.43E-03  120
 EMERGENCY PHASE COST                       1.0000  4.09E+07  1.76E+07  8.61E+07
2.01E+08  2.42E+08  2.63E+08  2.96E+08  1.83E-03  120
 INTERMEDIATE PHASE COST                    0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                         1.0000  1.28E+06  8.04E+05  2.87E+06
3.77E+06  5.13E+06  5.24E+06  5.37E+06  2.20E-03   10
 CROP DISPOSAL COST                         1.0000  3.24E+07  2.79E+07  6.04E+07
6.98E+07  7.72E+07  8.05E+07  8.76E+07  1.26E-03   10

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)            1.0000  5.44E+04  4.55E+04  9.35E+04
1.06E+05  1.28E+05  1.39E+05  1.79E+05  6.28E-04   81
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 POP. DECONTAMINATION (INDIVIDUALS)      1.0000  2.66E+05  1.35E+05  1.00E+06
1.05E+06  1.16E+06  1.21E+06  1.33E+06  1.14E-03   81
 FARM INTERDICTION (HECTARES)            1.0000  6.46E+04  5.76E+04  1.05E+05
1.13E+05  1.34E+05  1.44E+05  1.79E+05  6.28E-04  109
 POP. INTERDICTION (INDIVIDUALS)         1.0000  2.66E+05  1.35E+05  1.00E+06
1.05E+06  1.16E+06  1.21E+06  1.33E+06  1.14E-03   81
 FARM CONDEMNATION (HECTARES)            0.9767  5.56E+03  5.05E+03  1.04E+04
1.36E+04  2.28E+04  2.65E+04  4.48E+04  1.43E-03  120
 POP. CONDEMNATION (INDIVIDUALS)         0.9767  1.52E+04  6.50E+03  2.54E+04
3.78E+04  1.50E+05  2.49E+05  1.02E+06  1.83E-03  120
 MILK DISPOSAL AREA (HECTARES)           1.0000  6.99E+04  6.36E+04  1.08E+05
1.19E+05  1.47E+05  1.61E+05  1.79E+05  2.20E-03   10
 CROP DISPOSAL AREA (HECTARES)           1.0000  7.02E+04  6.43E+04  1.09E+05
1.19E+05  1.47E+05  1.61E+05  1.79E+05  2.20E-03   10
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 CAN FAT/TOTAL                  0-16.1 km  1.0000  8.56E+02  7.36E+02  1.60E+03
2.05E+03  2.66E+03  2.98E+03  3.23E+03  1.31E-03   44
 CAN FAT/LUNG                   0-80.5 km  1.0000  2.32E+03  1.42E+03  5.36E+03
7.56E+03  1.08E+04  1.20E+04  2.14E+04  1.71E-04  105
 CAN FAT/THYROID                0-80.5 km  1.0000  1.85E+02  1.18E+02  4.13E+02
5.91E+02  9.46E+02  1.07E+03  1.66E+03  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  2.88E+02  1.69E+02  6.01E+02
1.02E+03  1.45E+03  1.68E+03  2.56E+03  1.83E-03   14
 CAN FAT/GI                     0-80.5 km  1.0000  1.05E+03  6.73E+02  2.28E+03
3.20E+03  5.02E+03  5.37E+03  8.80E+03  1.71E-04  105
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  2.72E+02  1.66E+02  5.70E+02
7.95E+02  1.28E+03  1.55E+03  2.11E+03  1.71E-04  105
 CAN FAT/BONE                   0-80.5 km  1.0000  5.64E+01  3.69E+01  1.19E+02
1.66E+02  2.89E+02  3.22E+02  4.87E+02  1.71E-04  105
 CAN FAT/OTHER                  0-80.5 km  1.0000  1.49E+03  9.49E+02  3.32E+03
4.70E+03  7.07E+03  7.59E+03  1.31E+04  1.71E-04  105
 CAN INJ/THYROID                0-80.5 km  1.0000  1.85E+03  1.18E+03  4.13E+03
5.91E+03  9.46E+03  1.07E+04  1.66E+04  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  9.05E+02  5.09E+02  1.87E+03
3.13E+03  4.93E+03  5.70E+03  8.06E+03  1.83E-03   14
 CAN FAT/TOTAL                  0-80.5 km  1.0000  5.66E+03  3.64E+03  1.20E+04
1.72E+04  2.95E+04  3.25E+04  4.95E+04  1.71E-04  105
 ERL FAT/TOTAL                  0-80.5 km  0.9185  3.84E+01  1.43E+01  1.06E+02
1.52E+02  2.66E+02  3.13E+02  4.91E+02  4.28E-04   89
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.9851  1.18E+02  6.51E+01  2.77E+02
4.05E+02  7.85E+02  9.90E+02  2.77E+03  1.03E-03   84
 ERL INJ/DIARRHEA               0-80.5 km  0.9288  5.91E+01  3.06E+01  1.36E+02
2.15E+02  4.00E+02  5.00E+02  1.12E+03  1.03E-03   84
 ERL INJ/PNEUMONITIS            0-80.5 km  0.8951  3.28E+01  8.73E+00  9.48E+01
1.42E+02  2.60E+02  3.07E+02  4.65E+02  4.28E-04   89
 ERL INJ/THYROIDITIS            0-80.5 km  0.8825  1.04E+01  3.23E+00  3.00E+01
4.55E+01  8.62E+01  1.02E+02  1.40E+02  4.28E-04   89
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9940  2.22E+02  1.40E+02  5.05E+02
6.79E+02  1.26E+03  1.61E+03  2.65E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9977  1.69E+04  1.00E+04  3.45E+04
7.17E+04  1.28E+05  1.49E+05  5.42E+05  1.71E-04  105
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9930  3.36E+03  1.52E+03  7.41E+03
1.08E+04  3.37E+04  3.83E+04  1.01E+05  1.03E-03  105

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9374  5.70E+00  5.20E+00  7.43E+00
8.06E+00  9.74E+00 NOT-FOUND  3.22E+01  8.02E-03   84

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.9185  1.19E+02  7.17E+01  2.58E+02
3.85E+02  7.09E+02  1.07E+03  7.07E+03  1.03E-03   84
011-APR-06  11:10:35     PAGE  10          PROB                          QUANTILES
                            PEAK      PEAK  PEAK
                                         NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.8951  8.87E+01  5.12E+01  2.22E+02
3.45E+02  5.75E+02  6.61E+02  7.14E+02  2.45E-03   89
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9828  1.81E+03  1.08E+03  3.54E+03
5.34E+03  2.17E+04  2.39E+04  3.73E+04  1.03E-03  105
 EARLY dose L-EDEWBODY > 0.250 Sv          1.0000  3.12E+04  1.35E+04  8.19E+04
1.22E+05  3.28E+05 NOT-FOUND  4.58E+05  5.74E-03   79

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.9374  5.66E-02  5.43E-02  7.06E-02
7.26E-02  7.74E-02  7.96E-02  9.27E-02  1.14E-04   20
 ERL FAT/TOTAL                1.6-3.2 km  0.8742  2.98E-02  2.46E-02  5.22E-02
5.36E-02  5.68E-02  5.83E-02  6.38E-02  4.28E-04   71
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 ERL FAT/TOTAL                 3.2-4.8 km  0.8557  1.28E-02  3.33E-03  4.99E-02
5.34E-02 NOT-FOUND NOT-FOUND  6.17E-02  1.12E-02    9
 ERL FAT/TOTAL                 4.8-6.4 km  0.8146  4.75E-03  2.77E-04  1.11E-02
3.84E-02  5.74E-02 NOT-FOUND  6.05E-02  6.14E-03   60
 ERL FAT/TOTAL                 6.4-8.1 km  0.7542  1.70E-03  4.49E-05  1.84E-03
1.06E-02  3.59E-02 NOT-FOUND  4.15E-02  6.14E-03   89

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  1.07E+04  8.82E+03  2.05E+04
2.57E+04  3.56E+04  3.94E+04  5.38E+04  4.28E-04   89
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  8.28E+04  5.20E+04  1.73E+05
2.56E+05  4.29E+05  5.03E+05  6.12E+05  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.9185  3.24E-02  2.11E-02  7.75E-02
8.74E-02  1.03E-01  1.05E-01  1.23E-01  3.13E-05   71
 CAN FAT/TOTAL                 0-16.1 km  1.0000  3.70E-02  3.06E-02  7.53E-02
9.67E-02  1.20E-01  1.31E-01  1.54E-01  1.31E-03   44

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  1.27E+02  1.01E+02  2.50E+02
3.07E+02 NOT-FOUND NOT-FOUND  3.94E+02  1.12E-02    9
 L-EDEWBODY                    1.6-3.2 km  1.0000  4.91E+01  3.76E+01  1.00E+02
1.17E+02  1.67E+02 NOT-FOUND  1.86E+02  6.14E-03   89
 L-EDEWBODY                    3.2-4.8 km  1.0000  2.74E+01  2.10E+01  5.83E+01
7.82E+01  1.09E+02 NOT-FOUND  1.14E+02  6.14E-03   89
 L-EDEWBODY                    4.8-6.4 km  1.0000  1.71E+01  1.25E+01  3.40E+01
4.77E+01  7.07E+01 NOT-FOUND  7.25E+01  6.14E-03   89
 L-EDEWBODY                    6.4-8.1 km  1.0000  1.10E+01  8.32E+00  2.24E+01
3.13E+01  4.35E+01 NOT-FOUND  4.81E+01  6.14E-03   89
 L-EDEWBODY                    8.1-9.7 km  1.0000  7.82E+00  6.13E+00  1.67E+01
2.25E+01  3.16E+01 NOT-FOUND  3.30E+01  6.14E-03   89
 L-EDEWBODY                   9.7-16.1 km  1.0000  3.89E+00  3.34E+00  8.06E+00
1.04E+01  1.45E+01 NOT-FOUND  1.52E+01  8.02E-03   44
 L-EDEWBODY                  16.1-32.2 km  1.0000  1.69E+00  1.22E+00  3.46E+00
4.33E+00  7.57E+00 NOT-FOUND  7.91E+00  8.02E-03   84
 L-EDEWBODY                  32.2-48.3 km  1.0000  7.18E-01  6.69E-01  1.17E+00
1.35E+00  1.91E+00 NOT-FOUND  2.53E+00  8.02E-03  105
 L-EDEWBODY                  48.3-64.4 km  1.0000  4.11E-01  3.57E-01  5.94E-01
6.75E-01  1.36E+00 NOT-FOUND  1.58E+00  8.02E-03  105
 L-EDEWBODY                  64.4-80.5 km  1.0000  3.15E-01  2.85E-01  4.99E-01
6.85E-01  7.50E-01 NOT-FOUND  7.58E-01  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  2 OF 11:
    Case 2BYP

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  11          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
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 ERL FAT/TOTAL                  0-16.1 km  0.8873  3.61E+01  1.20E+01  1.03E+02
1.49E+02  2.66E+02  3.14E+02  4.99E+02  4.28E-04   89
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.9525  9.32E+01  5.82E+01  2.24E+02
3.25E+02  5.42E+02  6.13E+02  7.73E+02  5.99E-04  113
 ERL INJ/DIARRHEA               0-16.1 km  0.9012  5.13E+01  2.80E+01  1.24E+02
1.96E+02  3.16E+02  3.53E+02  4.98E+02  5.99E-04  113
 ERL INJ/PNEUMONITIS            0-16.1 km  0.8665  3.25E+01  7.72E+00  9.39E+01
1.43E+02  2.60E+02  3.07E+02  4.78E+02  4.28E-04   89
 ERL INJ/THYROIDITIS            0-16.1 km  0.8789  1.06E+01  3.27E+00  3.05E+01
4.69E+01  8.70E+01  1.02E+02  1.44E+02  4.28E-04   89
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  0.9940  1.54E+02  1.14E+02  3.27E+02
4.40E+02  6.57E+02  7.28E+02  9.04E+02  5.99E-04  113
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  0.9977  1.21E+03  1.09E+03  2.01E+03
2.06E+03  2.18E+03  2.24E+03  2.30E+03  2.34E-03   54
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.9928  9.82E+02  9.42E+02  1.80E+03
2.01E+03  2.03E+03  2.04E+03  2.12E+03  3.33E-05   80
 CAN FAT/TOTAL                  0-16.1 km  1.0000  7.70E+02  6.21E+02  1.53E+03
2.03E+03  2.70E+03  3.02E+03  3.29E+03  1.31E-03   44
 CAN FAT/LUNG                   0-80.5 km  1.0000  2.06E+03  1.27E+03  5.09E+03
7.07E+03  1.01E+04  1.13E+04  1.98E+04  1.71E-04  105
 CAN FAT/THYROID                0-80.5 km  1.0000  1.58E+02  1.02E+02  3.64E+02
5.18E+02  7.27E+02  7.76E+02  1.47E+03  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  8.34E+01  4.65E+01  1.98E+02
2.64E+02  4.39E+02  5.12E+02  6.99E+02  1.71E-04   56
 CAN FAT/GI                     0-80.5 km  1.0000  5.47E+02  3.58E+02  1.18E+03
1.62E+03  2.67E+03  3.10E+03  5.64E+03  1.71E-04  105
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  1.08E+02  6.85E+01  2.39E+02
3.27E+02  5.20E+02  5.77E+02  1.08E+03  1.71E-04  105
 CAN FAT/BONE                   0-80.5 km  1.0000  3.83E+01  2.43E+01  9.28E+01
1.21E+02  2.00E+02  2.18E+02  3.80E+02  1.71E-04  105
 CAN FAT/OTHER                  0-80.5 km  1.0000  9.68E+02  6.24E+02  2.32E+03
3.15E+03  5.01E+03  5.36E+03  9.69E+03  1.71E-04  105
 CAN INJ/THYROID                0-80.5 km  1.0000  1.58E+03  1.02E+03  3.64E+03
5.18E+03  7.27E+03  7.76E+03  1.47E+04  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  2.62E+02  1.42E+02  6.20E+02
8.51E+02  1.17E+03  1.28E+03  2.20E+03  1.71E-04   56
 CAN FAT/TOTAL                  0-80.5 km  1.0000  3.96E+03  2.51E+03  9.38E+03
1.21E+04  2.00E+04  2.18E+04  3.86E+04  1.71E-04  105
 ERL FAT/TOTAL                  0-80.5 km  0.8873  3.63E+01  1.20E+01  1.03E+02
1.49E+02  2.66E+02  3.14E+02  4.99E+02  4.28E-04   89
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.9525  1.13E+02  6.02E+01  2.65E+02
3.99E+02  7.85E+02  9.90E+02  2.77E+03  1.03E-03   84
 ERL INJ/DIARRHEA               0-80.5 km  0.9012  5.58E+01  2.81E+01  1.30E+02
2.13E+02  3.98E+02  5.00E+02  1.12E+03  1.03E-03   84
 ERL INJ/PNEUMONITIS            0-80.5 km  0.8665  3.25E+01  7.72E+00  9.39E+01
1.43E+02  2.60E+02  3.07E+02  4.78E+02  4.28E-04   89
 ERL INJ/THYROIDITIS            0-80.5 km  0.8789  1.06E+01  3.27E+00  3.05E+01
4.69E+01  8.70E+01  1.02E+02  1.44E+02  4.28E-04   89
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9940  2.24E+02  1.40E+02  5.13E+02
6.93E+02  1.28E+03  1.62E+03  2.67E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9977  1.69E+04  1.00E+04  3.45E+04
7.17E+04  1.28E+05  1.49E+05  5.42E+05  1.71E-04  105
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9928  3.35E+03  1.49E+03  7.39E+03
1.07E+04  3.37E+04  3.83E+04  1.01E+05  1.03E-03  105

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9117  5.49E+00  4.92E+00  7.43E+00
8.06E+00  9.74E+00 NOT-FOUND  3.22E+01  8.02E-03   84

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.8873  1.12E+02  6.47E+01  2.37E+02
3.72E+02  7.09E+02  1.07E+03  7.07E+03  1.03E-03   84
 EARLY dose A-LUNGS > 5.00 Sv              0.8665  8.81E+01  5.00E+01  2.19E+02
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3.51E+02  5.80E+02  6.63E+02  7.24E+02  3.77E-03   44
 EARLY dose L-EDEWBODY > 2.00 Sv        0.9828  1.82E+03  1.08E+03  3.54E+03
5.34E+03  2.17E+04  2.39E+04  3.73E+04  1.03E-03  105
 EARLY dose L-EDEWBODY > 0.250 Sv       1.0000  3.11E+04  1.35E+04  8.19E+04
1.22E+05  3.28E+05 NOT-FOUND  4.58E+05  5.74E-03   79

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.9117  5.56E-02  5.41E-02  7.04E-02
7.23E-02  7.69E-02  7.90E-02  9.14E-02  1.14E-04   20
 ERL FAT/TOTAL               1.6-3.2 km  0.8455  2.92E-02  2.46E-02 NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  6.25E-02  1.15E-01    9
 ERL FAT/TOTAL               3.2-4.8 km  0.7904  1.23E-02  1.27E-03  4.99E-02
5.56E-02 NOT-FOUND NOT-FOUND  6.25E-02  2.35E-02   36
 ERL FAT/TOTAL               4.8-6.4 km  0.4918  4.42E-03  0.00E+00  1.11E-02
3.84E-02  5.86E-02 NOT-FOUND  6.22E-02  6.14E-03   60
11-APR-06  11:10:35    PAGE  12          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.1657  1.49E-03  0.00E+00  6.72E-04
1.06E-02  3.63E-02 NOT-FOUND  4.23E-02  6.14E-03   89

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  8.79E+03  6.89E+03  1.82E+04
2.41E+04  3.51E+04  3.91E+04  5.40E+04  4.28E-04   89
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  4.47E+04  2.84E+04  1.01E+05
1.25E+05  2.01E+05  2.19E+05  3.65E+05  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8873  3.17E-02  1.89E-02  7.74E-02
8.74E-02 NOT-FOUND NOT-FOUND  1.21E-01  1.04E-02    9
 CAN FAT/TOTAL               0-16.1 km  1.0000  3.73E-02  3.06E-02  7.72E-02
1.00E-01  1.23E-01  1.35E-01  1.59E-01  1.31E-03   44

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.26E+02  1.01E+02  2.50E+02
3.07E+02 NOT-FOUND NOT-FOUND  3.93E+02  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  4.90E+01  3.74E+01  1.00E+02
1.17E+02  1.68E+02 NOT-FOUND  1.87E+02  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  2.73E+01  2.09E+01  5.83E+01
7.82E+01  1.09E+02 NOT-FOUND  1.14E+02  6.14E-03   89
 L-EDEWBODY                  4.8-6.4 km  0.9914  1.69E+01  1.25E+01  3.50E+01
4.79E+01  7.08E+01 NOT-FOUND  7.29E+01  6.14E-03   89
 L-EDEWBODY                  6.4-8.1 km  0.9914  1.08E+01  8.06E+00  2.24E+01
3.13E+01  4.38E+01 NOT-FOUND  4.85E+01  6.14E-03   89
 L-EDEWBODY                  8.1-9.7 km  0.9753  7.63E+00  6.12E+00  1.54E+01
2.21E+01  3.17E+01 NOT-FOUND  3.32E+01  6.14E-03   89
 L-EDEWBODY                 9.7-16.1 km  0.9376  3.76E+00  3.29E+00  8.06E+00
1.04E+01  1.45E+01 NOT-FOUND  1.52E+01  8.02E-03   44
 L-EDEWBODY                16.1-32.2 km  1.0000  1.64E+00  1.20E+00  3.46E+00
4.33E+00  7.57E+00 NOT-FOUND  7.91E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  5.83E-01  4.85E-01  1.02E+00
1.22E+00  1.89E+00 NOT-FOUND  2.53E+00  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  2.94E-01  2.45E-01  4.04E-01
4.77E-01  1.25E+00 NOT-FOUND  1.39E+00  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  2.22E-01  1.92E-01  3.61E-01
4.90E-01  6.12E-01 NOT-FOUND  6.30E-01  8.02E-03  105
  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input
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SOURCE TERM 2 OF 11:
Case 2BYP

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

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE

11-APR-05 11:10:35 PAGE 13

	PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.9185	7.83E+01	5.02E+01	1.92E+02	2.62E+02	3.92E+02	4.53E+02	6.05E+02
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9776	1.87E+02	1.35E+02	4.04E+02	5.18E+02	6.99E+02	8.02E+02	1.14E+03
ERL INJ/DIARRHEA	0-16.1 km	0.9282	1.17E+02	8.30E+01	2.71E+02	3.42E+02	5.15E+02	5.80E+02	8.00E+02
ERL INJ/PNEUMONITIS	0-16.1 km	0.8951	3.88E+01	2.03E+01	1.01E+02	1.33E+02	2.24E+02	2.56E+02	3.54E+02
ERL INJ/THYROIDITIS	0-16.1 km	0.8825	6.15E+00	2.31E+00	1.78E+01	2.62E+01	4.18E+01	4.97E+01	6.47E+01
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9808	1.06E+02	8.79E+01	2.14E+02	2.63E+02	3.65E+02	4.11E+02	4.97E+02
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9930	1.58E+03	1.35E+03	2.34E+03	2.63E+03	3.16E+03	3.29E+03	4.23E+03
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9767	1.22E+03	1.14E+03	2.04E+03	2.12E+03	2.31E+03	2.39E+03	2.89E+03
CAN FAT/TOTAL	0-16.1 km	1.0000	4.70E+02	4.24E+02	7.92E+02	9.04E+02	1.12E+03	1.21E+03	1.37E+03
CAN FAT/LUNG	0-80.5 km	1.0000	1.88E+03	1.12E+03	4.76E+03	6.50E+03	1.03E+04	1.15E+04	1.92E+04
CAN FAT/THYROID	0-80.5 km	1.0000	1.43E+02	8.64E+01	3.51E+02	5.15E+02	7.23E+02	7.73E+02	1.43E+03
CAN FAT/BREAST	0-80.5 km	1.0000	8.44E+01	4.68E+01	2.01E+02	2.63E+02	4.38E+02	5.12E+02	7.00E+02
CAN FAT/GI	0-80.5 km	1.0000	5.14E+02	3.30E+02	1.17E+03	1.60E+03	2.67E+03	3.10E+03	5.49E+03
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.05E+02	6.52E+01	2.37E+02	3.26E+02	5.10E+02	5.45E+02	1.06E+03
CAN FAT/BONE	0-80.5 km	1.0000	3.55E+01	2.15E+01	8.51E+01	1.17E+02	2.00E+02	2.18E+02	3.69E+02
CAN FAT/OTHER	0-80.5 km	1.0000	9.00E+02	5.54E+02	2.23E+03	3.11E+03	5.01E+03	5.36E+03	9.44E+03
CAN INJ/THYROID	0-80.5 km	1.0000	1.43E+03	8.64E+02	3.51E+03	5.15E+03	7.23E+03	7.73E+03	1.43E+04
CAN INJ/BREAST	0-80.5 km	1.0000	2.66E+02	1.44E+02	6.27E+02	8.52E+02	1.17E+03	1.28E+03	2.20E+03
CAN FAT/TOTAL	0-80.5 km	1.0000	3.67E+03	2.21E+03	9.20E+03	1.21E+04	2.00E+04	2.18E+04	3.75E+04
ERL FAT/TOTAL	0-80.5 km	0.9185	7.85E+01	5.02E+01	1.93E+02	2.63E+02	3.92E+02	4.53E+02	6.05E+02
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.9776	2.07E+02	1.38E+02	4.58E+02	5.90E+02	9.45E+02	1.24E+03	2.79E+03
ERL INJ/DIARRHEA	0-80.5 km	0.9282	1.22E+02	8.33E+01	2.82E+02	3.64E+02	5.77E+02	6.71E+02	1.16E+03
ERL INJ/PNEUMONITIS	0-80.5 km	0.8951	3.88E+01	2.03E+01	1.01E+02	1.33E+02	2.24E+02	2.56E+02	3.54E+02
ERL INJ/THYROIDITIS	0-80.5 km	0.8825	6.15E+00	2.31E+00	1.78E+01				

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2.62E+01  4.18E+01  4.97E+01  6.47E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9808  1.76E+02  1.18E+02  3.67E+02
4.95E+02  1.17E+03  1.56E+03  2.34E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9953  1.73E+04  1.03E+04  3.49E+04
7.44E+04  1.28E+05  1.49E+05  5.42E+05  1.71E-04  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9767  3.59E+03  1.93E+03  7.32E+03
1.08E+04  3.37E+04  3.83E+04  1.00E+05  1.03E-03  105

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.9374  9.57E+00  8.04E+00  1.21E+01
1.39E+01  1.91E+01 NOT-FOUND  3.22E+01  8.02E-03   84

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.9185  2.40E+02  1.58E+02  5.31E+02
7.10E+02  1.06E+03  1.29E+03  7.08E+03  1.03E-03   84
 EARLY dose A-LUNGS > 5.00 Sv             0.8951  1.00E+02  6.61E+01  2.42E+02
3.38E+02  5.51E+02  6.83E+02  9.71E+02  1.63E-03   50
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9667  1.61E+03  8.10E+02  3.43E+03
4.97E+03  2.17E+04  2.39E+04  3.65E+04  1.03E-03  105
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9988  3.13E+04  1.35E+04  8.19E+04
1.22E+05  3.28E+05 NOT-FOUND  4.58E+05  5.74E-03   79

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.9374  7.50E-02  7.47E-02  1.09E-01
1.22E-01 NOT-FOUND NOT-FOUND  1.47E-01  1.45E-02   61
 ERL FAT/TOTAL               1.6-3.2 km  0.8742  4.08E-02  3.90E-02  6.40E-02
7.09E-02  7.71E-02  8.00E-02  9.74E-02  1.14E-04   20
 ERL FAT/TOTAL               3.2-4.8 km  0.8557  2.16E-02  2.14E-02  3.90E-02
4.49E-02  5.29E-02  5.48E-02  6.64E-02  1.14E-04   20
 ERL FAT/TOTAL               4.8-6.4 km  0.8146  1.11E-02  4.55E-03  2.86E-02
3.18E-02  3.78E-02  4.06E-02  5.22E-02  2.85E-04   19
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                                  PROB                                  QUANTILES
                        PEAK      PEAK  PEAK
                                  NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.7542  5.81E-03  6.66E-04  2.07E-02
2.33E-02  3.07E-02  3.34E-02  4.77E-02  2.85E-04   19

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  6.86E+03  5.81E+03  1.23E+04
1.50E+04  2.13E+04  2.30E+04  3.06E+04  4.28E-04   60
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  4.28E+04  2.62E+04  9.72E+04
1.22E+05  2.00E+05  2.15E+05  3.55E+05  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.9185  4.50E-02  4.20E-02  8.58E-02
1.00E-01  1.09E-01  1.13E-01  1.59E-01  8.35E-06   20
 CAN FAT/TOTAL               0-16.1 km  1.0000  2.28E-02  2.10E-02  3.66E-02
4.24E-02  5.46E-02  5.88E-02  6.64E-02  1.63E-03   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  1.41E+02  1.07E+02  2.88E+02
3.09E+02  3.35E+02  3.47E+02  4.20E+02  1.14E-04   20
 L-EDEWBODY                 1.6-3.2 km  1.0000  5.08E+01  4.32E+01  1.04E+02
1.18E+02  1.57E+02 NOT-FOUND  1.71E+02  6.14E-03   89
 L-EDEWBODY                 3.2-4.8 km  1.0000  2.81E+01  2.16E+01  5.94E+01
7.32E+01  1.04E+02  1.08E+02  1.14E+02  2.00E-03  122
 L-EDEWBODY                 4.8-6.4 km  1.0000  1.86E+01  1.31E+01  4.14E+01
5.52E+01  7.25E+01 NOT-FOUND  7.39E+01  6.14E-03   36
 L-EDEWBODY                 6.4-8.1 km  1.0000  1.29E+01  9.46E+00  3.04E+01
3.70E+01  5.53E+01 NOT-FOUND  6.05E+01  6.14E-03   60
 L-EDEWBODY                 8.1-9.7 km  1.0000  9.82E+00  6.49E+00  2.33E+01
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3.21E+01  4.46E+01 NOT-FOUND  4.80E+01  6.93E-03   98
 L-EDEWBODY                 9.7-16.1 km  1.0000  5.14E+00  3.87E+00  1.08E+01
1.49E+01  2.17E+01  2.30E+01  2.48E+01  2.00E-03   65
 L-EDEWBODY                16.1-32.2 km  1.0000  1.64E+00  1.20E+00  3.46E+00
4.33E+00  7.57E+00 NOT-FOUND  7.91E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  5.83E-01  4.85E-01  1.02E+00
1.22E+00  1.89E+00 NOT-FOUND  2.53E+00  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  2.94E-01  2.45E-01  4.04E-01
4.77E-01  1.25E+00 NOT-FOUND  1.39E+00  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  2.22E-01  1.92E-01  3.61E-01
4.90E-01  6.12E-01 NOT-FOUND  6.30E-01  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  2 OF 11:
    Case 2BYP

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE  15          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.01E+02  6.72E+01  2.21E+02
3.02E+02  4.53E+02  5.20E+02  1.10E+03  1.10E-05   20
 CAN FAT/LUNG                  0-80.5 km  1.0000  2.66E+02  1.54E+02  6.14E+02
9.04E+02  1.37E+03  1.60E+03  2.35E+03  1.83E-03   14
 CAN FAT/THYROID               0-80.5 km  1.0000  2.79E+01  1.56E+01  6.13E+01
9.47E+01  1.66E+02  2.07E+02  2.71E+02  1.83E-03   14
 CAN FAT/BREAST                0-80.5 km  1.0000  2.04E+02  1.14E+02  4.35E+02
7.14E+02  1.11E+03  1.41E+03  1.97E+03  1.83E-03   14
 CAN FAT/GI                    0-80.5 km  1.0000  5.02E+02  3.05E+02  1.07E+03
1.55E+03  2.78E+03  3.40E+03  4.58E+03  1.83E-03   14
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.64E+02  9.84E+01  3.58E+02
5.28E+02  8.72E+02  1.06E+03  1.49E+03  1.83E-03   14
 CAN FAT/BONE                  0-80.5 km  1.0000  1.82E+01  1.10E+01  3.85E+01
5.80E+01  9.41E+01  1.14E+02  1.56E+02  1.83E-03   14
 CAN FAT/OTHER                 0-80.5 km  1.0000  5.26E+02  3.03E+02  1.18E+03
1.77E+03  3.00E+03  3.68E+03  4.95E+03  1.83E-03   14
 CAN INJ/THYROID               0-80.5 km  1.0000  2.79E+02  1.56E+02  6.13E+02
9.47E+02  1.66E+03  2.07E+03  2.71E+03  1.83E-03   14
 CAN INJ/BREAST                0-80.5 km  1.0000  6.43E+02  3.61E+02  1.42E+03
2.10E+03  3.45E+03  4.11E+03  6.21E+03  1.83E-03   14
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.71E+03  9.98E+02  3.73E+03
5.44E+03  9.34E+03  1.15E+04  1.58E+04  1.83E-03   14

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  2.00E+03  1.31E+03  4.24E+03
5.70E+03  8.75E+03  1.02E+04  2.13E+04  1.10E-05   20
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  3.81E+04  2.19E+04  8.22E+04
1.12E+05  2.02E+05  2.43E+05  3.59E+05  1.83E-03   14

POPULATION WEIGHTED RISK
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 CAN FAT/TOTAL                    0-16.1 km  0.7635  3.67E-04  3.28E-04  8.30E-04
1.04E-03  1.21E-03  1.29E-03  1.91E-03  8.56E-05   10

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                        0-1.6 km  0.0894  1.01E-02  0.00E+00  0.00E+00
1.07E-01  1.70E-01 NOT-FOUND  1.98E-01  5.82E-03   10
 L-EDEWBODY                      1.6-3.2 km  0.2644  3.95E-02  0.00E+00  1.13E-01
1.25E-01  1.59E-01  1.76E-01  1.94E-01  2.60E-03   66
 L-EDEWBODY                      3.2-4.8 km  0.1772  2.57E-02  0.00E+00  1.13E-01
1.41E-01 NOT-FOUND NOT-FOUND  1.93E-01  1.84E-02  120
 L-EDEWBODY                      4.8-6.4 km  0.4136  6.63E-02  0.00E+00  1.21E-01
1.33E-01  1.66E-01  1.83E-01  1.95E-01  3.05E-03   91
 L-EDEWBODY                      6.4-8.1 km  0.5682  8.41E-02  1.01E-01  1.15E-01
1.22E-01  1.39E-01  1.47E-01  1.97E-01  1.43E-04  102
 L-EDEWBODY                      8.1-9.7 km  0.5892  7.44E-02  1.01E-01  1.28E-01
1.42E-01  1.80E-01 NOT-FOUND  1.97E-01  5.39E-03   10
 L-EDEWBODY                     9.7-16.1 km  0.6046  6.08E-02  7.01E-02  1.20E-01
1.35E-01  1.77E-01 NOT-FOUND  1.96E-01  5.39E-03   27
 L-EDEWBODY                    16.1-32.2 km  0.6008  5.18E-02  2.33E-02  1.11E-01
1.20E-01  1.44E-01  1.56E-01  1.97E-01  6.28E-04   95
 L-EDEWBODY                    32.2-48.3 km  0.9184  1.35E-01  1.07E-01  1.34E-01
1.47E-01  1.84E-01 NOT-FOUND  1.97E-01  6.14E-03   89
 L-EDEWBODY                    48.3-64.4 km  0.9949  1.17E-01  1.08E-01  1.44E-01
1.63E-01 NOT-FOUND NOT-FOUND  1.94E-01  1.84E-02  120
 L-EDEWBODY                    64.4-80.5 km  1.0000  9.36E-02  9.45E-02  1.39E-01
1.60E-01 NOT-FOUND NOT-FOUND  1.98E-01  1.84E-02   14

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  3.81E+04  2.19E+04  8.22E+04
1.12E+05  2.02E+05  2.43E+05  3.59E+05  1.83E-03   14
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  2.78E+04  1.51E+04  7.02E+04
1.03E+05  1.42E+05  1.63E+05  2.18E+05  1.83E-03   14
 TOTAL INGESTION PATHWAYS DOSE            1.0000  2.77E+03  2.21E+03  5.13E+03
6.43E+03  1.00E+04  1.12E+04  2.14E+04  1.19E-04   39
 LONG-TERM GROUNDSHINE DOSE               1.0000  2.73E+04  1.48E+04  6.85E+04
1.02E+05  1.41E+05  1.63E+05  2.18E+05  1.83E-03   14
 LONG-TERM RESUSPENSION DOSE              1.0000  5.10E+02  2.41E+02  1.43E+03
2.06E+03  2.52E+03  2.74E+03  3.39E+03  9.13E-04   74
 WATER INGESTION DOSE                     1.0000  2.31E+03  1.69E+03  4.78E+03
6.12E+03  8.98E+03  1.03E+04  2.13E+04  1.10E-05   20
 POP.-DEPENDENT DECONTAMINATION DOSE      1.0000  7.38E+03  2.97E+03  1.74E+04
2.95E+04  6.73E+04  8.22E+04  1.38E+05  1.83E-03   14
11-APR-06  11:10:35    PAGE  16          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE      1.0000  1.64E+02  1.31E+02  2.71E+02
3.41E+02  5.39E+02  6.04E+02  6.63E+02  2.83E-03   99
 INGESTION OF GRAINS                      1.0000  8.75E+00  7.68E+00  1.35E+01
1.63E+01  2.21E+01  2.39E+01  6.00E+01  6.21E-06   26
 INGESTION OF LEAF VEG                    1.0000  6.64E+01  5.85E+01  1.09E+02
1.23E+02  1.65E+02  1.87E+02  2.07E+02  2.83E-03   99
 INGESTION OF ROOT CROPS                  1.0000  3.85E+01  3.40E+01  6.30E+01
7.44E+01  1.01E+02  1.15E+02  1.27E+02  2.83E-03   99
 INGESTION OF FRUITS                      1.0000  4.92E+01  4.03E+01  8.24E+01
9.88E+01  1.28E+02  1.43E+02  1.97E+02  6.28E-04   57
 INGESTION OF LEGUMES                     1.0000  7.96E+01  7.16E+01  1.26E+02
1.50E+02  2.13E+02  2.32E+02  2.50E+02  2.83E-03   99
 INGESTION OF BEEF                        1.0000  9.31E+01  2.57E+01  2.92E+02
4.28E+02  7.09E+02  8.04E+02  1.03E+03  1.51E-03   92
 INGESTION OF MILK                        1.0000  8.53E+01  2.91E+01  2.45E+02
3.61E+02  6.39E+02  7.43E+02  1.16E+03  6.85E-04   97
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 INGESTION OF POULTRY                    1.0000  2.22E+01  7.63E+00  7.03E+01
8.63E+01  1.10E+02  1.17E+02  1.78E+02  4.35E-05   78
 INGESTION OF OTHER MEAT CROPS           1.0000  1.18E+01  2.30E+00  4.20E+01
5.50E+01  7.46E+01  7.98E+01  1.20E+02  4.35E-05   78

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    1.0000  1.41E+10  6.97E+09  3.35E+10
4.50E+10  1.01E+11  1.25E+11  1.71E+11  1.83E-03  120
 POP.-DEPENDENT COSTS                    1.0000  1.38E+10  6.46E+09  3.35E+10
4.50E+10  1.01E+11  1.25E+11  1.71E+11  1.83E-03  120
 FARM-DEPENDENT COSTS                    1.0000  2.58E+08  2.28E+08  4.09E+08
4.90E+08  6.27E+08  6.94E+08  8.25E+08  4.00E-04  120
 POP.-DEPENDENT DECONTAMINATION COST     1.0000  2.12E+09  9.62E+08  5.50E+09
8.23E+09  1.07E+10  1.12E+10  1.24E+10  1.14E-03   81
 FARM-DEPENDENT DECONTAMINATION COST     1.0000  6.72E+07  5.72E+07  1.12E+08
1.32E+08  1.90E+08  2.10E+08  2.60E+08  6.28E-04   81
 POP.-DEPENDENT INTERDICTION COST        1.0000  9.81E+09  4.34E+09  2.35E+10
3.39E+10  8.06E+10  1.04E+11  1.44E+11  1.83E-03   14
 FARM-DEPENDENT INTERDICTION COST        1.0000  1.24E+08  1.03E+08  2.13E+08
2.51E+08  3.16E+08  3.30E+08  3.87E+08  4.00E-04   14
 POP.-DEPENDENT CONDEMNATION COST        0.9767  1.84E+09  9.02E+08  3.31E+09
5.55E+09  2.21E+10  2.91E+10  1.02E+11  3.74E-04   68
 FARM-DEPENDENT CONDEMNATION COST        0.9767  3.65E+07  3.10E+07  6.49E+07
1.04E+08  1.54E+08  1.82E+08  2.56E+08  1.43E-03   14
 EMERGENCY PHASE COST                    1.0000  3.71E+07  1.53E+07  8.10E+07
1.60E+08  2.35E+08  2.53E+08  2.74E+08  2.28E-03   79
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      1.0000  1.17E+06  7.22E+05  2.65E+06
3.47E+06  5.08E+06  5.16E+06  5.37E+06  9.13E-04   10
 CROP DISPOSAL COST                      1.0000  2.98E+07  2.44E+07  5.78E+07
6.68E+07  7.60E+07  7.91E+07  8.76E+07  8.85E-04   10

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         1.0000  5.33E+04  4.40E+04  9.31E+04
1.06E+05  1.28E+05  1.39E+05  1.79E+05  6.28E-04   81
 POP. DECONTAMINATION (INDIVIDUALS)      1.0000  2.62E+05  1.28E+05  1.00E+06
1.05E+06  1.16E+06  1.21E+06  1.33E+06  1.14E-03   81
 FARM INTERDICTION (HECTARES)            1.0000  6.29E+04  5.48E+04  1.05E+05
1.13E+05  1.34E+05  1.44E+05  1.79E+05  6.28E-04  109
 POP. INTERDICTION (INDIVIDUALS)         1.0000  2.62E+05  1.28E+05  1.00E+06
1.05E+06  1.16E+06  1.21E+06  1.33E+06  1.14E-03   81
 FARM CONDEMNATION (HECTARES)            0.9767  5.30E+03  5.00E+03  9.80E+03
1.24E+04  2.02E+04  2.14E+04  3.46E+04  2.49E-05   33
 POP. CONDEMNATION (INDIVIDUALS)         0.9767  1.24E+04  6.18E+03  2.17E+04
3.51E+04  1.18E+05  1.90E+05  5.48E+05  3.74E-04   68
 MILK DISPOSAL AREA (HECTARES)           1.0000  6.39E+04  5.35E+04  1.05E+05
1.13E+05  1.36E+05  1.47E+05  1.79E+05  9.13E-04   10
 CROP DISPOSAL AREA (HECTARES)           1.0000  6.44E+04  5.47E+04  1.05E+05
1.13E+05  1.36E+05  1.47E+05  1.79E+05  9.13E-04   10
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COHCRT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

11-APR-06 11:10:35 PAGE 17

		PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.8807	6.78E-01	1.52E-01	2.20E+00	3.05E+00	5.14E+00	6.19E+00	8.34E+00	1.23E-03 45
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9156	2.62E+00	1.38E+00	6.71E+00	9.43E+00	1.37E+01	1.58E+01	2.16E+01	1.23E-03 45
ERL INJ/DIARRHEA	0-16.1 km	0.8957	1.36E+00	6.03E-01	3.73E+00	5.30E+00	8.27E+00	9.71E+00	1.32E+01	1.23E-03 45
ERL INJ/PNEUMONITIS	0-16.1 km	0.6906	1.30E-01	7.69E-03	3.97E-01	7.90E-01	1.23E+00	1.38E+00	2.04E+00	4.85E-04 89
ERL INJ/THYROIDITIS	0-16.1 km	0.7787	8.34E-02	1.51E-02	2.60E-01	3.92E-01	7.05E-01	8.25E-01	1.05E+00	4.28E-04 60
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9741	3.32E+00	2.53E+00	7.35E+00	9.24E+00	1.20E+01	1.32E+01	1.82E+01	4.28E-04 60
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9767	9.15E+01	8.91E+01	1.13E+02	1.20E+02	1.37E+02	1.46E+02	2.44E+02	3.18E-05 95
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9550	4.68E+01	4.06E+01	9.56E+01	1.04E+02	1.16E+02	1.22E+02	1.62E+02	8.56E-05 88
CAN FAT/TOTAL	0-16.1 km	1.0000	9.65E+01	7.70E+01	1.77E+02	2.23E+02	3.12E+02	3.32E+02	5.24E+02	2.76E-05 19
CAN FAT/LUNG	0-80.5 km	1.0000	4.37E+02	2.89E+02	8.63E+02	1.09E+03	1.70E+03	2.01E+03	2.25E+03	1.71E-04 44
CAN FAT/THYROID	0-80.5 km	1.0000	1.43E+02	9.01E+01	3.18E+02	4.62E+02	7.26E+02	7.66E+02	1.17E+03	1.71E-04 105
CAN FAT/BREAST	0-80.5 km	1.0000	3.27E+02	2.21E+02	6.39E+02	1.00E+03	1.31E+03	1.47E+03	1.74E+03	1.83E-03 120
CAN FAT/GI	0-80.5 km	1.0000	8.28E+02	5.66E+02	1.67E+03	2.30E+03	3.22E+03	3.37E+03	4.19E+03	1.71E-04 44
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	2.51E+02	1.65E+02	4.81E+02	7.48E+02	1.10E+03	1.18E+03	1.31E+03	1.83E-03 120
CAN FAT/BONE	0-80.5 km	1.0000	2.60E+01	1.72E+01	5.06E+01	7.67E+01	1.12E+02	1.21E+02	1.35E+02	1.83E-03 120
CAN FAT/OTHER	0-80.5 km	1.0000	9.90E+02	6.58E+02	1.88E+03	2.91E+03	4.17E+03	4.83E+03	5.73E+03	1.71E-04 44
CAN INJ/THYROID	0-80.5 km	1.0000	1.43E+03	9.01E+02	3.18E+03	4.62E+03	7.26E+03	7.66E+03	1.17E+04	1.71E-04 105
CAN INJ/BREAST	0-80.5 km	1.0000	1.03E+03	6.77E+02	2.06E+03	3.05E+03	4.18E+03	4.80E+03	5.46E+03	1.83E-03 120
CAN FAT/TOTAL	0-80.5 km	1.0000	3.00E+03	1.97E+03	6.00E+03	8.89E+03	1.13E+04	1.21E+04	1.62E+04	1.71E-04 44
ERL FAT/TOTAL	0-80.5 km	0.8807	6.78E-01	1.52E-01	2.20E+00	3.05E+00	5.14E+00	6.19E+00	8.34E+00	1.23E-03 45
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.9156	2.81E+00	1.38E+00	6.95E+00	1.01E+01	1.69E+01	2.07E+01	9.81E+01	1.03E-03 84
ERL INJ/DIARRHEA	0-80.5 km	0.8957	1.36E+00	6.03E-01	3.73E+00					

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5.30E+00  8.27E+00  9.71E+00  1.32E+01  1.23E-03   45
 ERL INJ/PNEUMONITIS          0-80.5 km  0.6906  1.30E-01  7.69E-03  3.97E-01
7.90E-01  1.23E+00  1.38E+00  2.04E+00  4.85E-04   89
 ERL INJ/THYROIDITIS          0-80.5 km  0.7787  8.34E-02  1.51E-02  2.60E-01
3.92E-01  7.05E-01  8.25E-01  1.05E+00  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9741  2.34E+01  2.61E+00  6.09E+01
9.33E+01  3.45E+02  4.73E+02  1.07E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9767  4.70E+03  1.56E+03  1.03E+04
1.58E+04  5.30E+04  6.78E+04  1.61E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9550  4.22E+02  4.24E+01  5.88E+02
1.61E+03  6.62E+03  9.35E+03  4.64E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8912  2.35E-01  2.11E-01  3.66E-01
4.19E-01 NOT-FOUND NOT-FOUND  8.05E-01  2.02E-02   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8807  3.40E+00  1.96E+00  8.37E+00
1.18E+01  2.07E+01  2.24E+01  3.00E+01  4.28E-04   60
11-APR-06  11:10:35    PAGE  18          PROB                          QUANTILES
                         PEAK       PEAK  PEAK
                                      NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.6906  7.31E-01  1.15E-01  2.48E+00
3.41E+00  5.66E+00  7.19E+00  9.71E+00  1.23E-03   45
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9118  4.07E+01  1.17E+01  3.85E+01
5.25E+01  1.00E+03  1.31E+03  6.75E+03  6.56E-04   98
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9901  5.54E+03  3.03E+03  9.59E+03
2.52E+04  4.79E+04  7.22E+04  8.98E+04  3.42E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.8912  3.14E-03  3.17E-03  5.03E-03
5.30E-03  5.96E-03  6.27E-03  8.06E-03  2.85E-04   18
 ERL FAT/TOTAL              1.6-3.2 km  0.8100  7.09E-04  2.48E-04  2.13E-03
2.46E-03  3.12E-03  3.25E-03  3.86E-03  2.85E-04   19
 ERL FAT/TOTAL              3.2-4.8 km  0.5467  1.79E-04  5.17E-06  7.14E-04
1.04E-03  1.27E-03  1.38E-03  1.54E-03  2.00E-03  122
 ERL FAT/TOTAL              4.8-6.4 km  0.2761  6.36E-05  0.00E+00  1.17E-04
5.39E-04 NOT-FOUND NOT-FOUND  1.15E-03  1.12E-02   45
 ERL FAT/TOTAL              6.4-8.1 km  0.2040  1.47E-05  0.00E+00  2.14E-05
7.94E-05  3.64E-04 NOT-FOUND  4.33E-04  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  1.96E+03  1.50E+03  3.60E+03
4.69E+03  6.55E+03  7.17E+03  1.07E+04  2.76E-05   19
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  6.71E+04  4.42E+04  1.49E+05
2.06E+05  3.06E+05  3.14E+05  3.57E+05  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.8807  8.07E-04  2.82E-04  2.42E-03
3.19E-03  4.58E-03  5.09E-03  6.86E-03  2.09E-05   19
 CAN FAT/TOTAL               0-16.1 km  1.0000  1.03E-03  9.70E-04  1.28E-03
1.42E-03  1.83E-03  2.01E-03  2.44E-03  2.02E-05   47

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  2.05E+00  1.59E+00  3.76E+00
4.68E+00 NOT-FOUND NOT-FOUND  6.05E+00  1.12E-02    9
 L-EDEWBODY                 1.6-3.2 km  1.0000  7.55E-01  5.83E-01  1.41E+00
1.78E+00  2.34E+00 NOT-FOUND  2.48E+00  6.14E-03   89
 L-EDEWBODY                 3.2-4.8 km  1.0000  4.22E-01  3.15E-01  8.45E-01
1.02E+00  1.32E+00  1.47E+00  1.69E+00  2.00E-03  122
 L-EDEWBODY                 4.8-6.4 km  1.0000  3.19E-01  2.52E-01  5.85E-01
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7.83E-01  1.05E+00 NOT-FOUND  1.09E+00  6.14E-03   36
 L-EDEWBODY                  6.4-8.1 km  1.0000  2.66E-01  2.29E-01  4.91E-01
5.92E-01  8.09E-01 NOT-FOUND  8.70E-01  6.14E-03   60
 L-EDEWBODY                  8.1-9.7 km  1.0000  2.45E-01  2.22E-01  3.84E-01
4.65E-01  6.48E-01 NOT-FOUND  6.95E-01  6.93E-03   98
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.90E-01  1.58E-01  2.39E-01
2.64E-01 NOT-FOUND NOT-FOUND  4.68E-01  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  5.85E-01  5.05E-01  1.06E+00
1.33E+00  2.22E+00 NOT-FOUND  2.35E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  3.33E-01  3.18E-01  4.80E-01
5.34E-01  6.51E-01 NOT-FOUND  6.69E-01  8.02E-03   84
 L-EDEWBODY                48.3-64.4 km  1.0000  2.54E-01  2.40E-01  3.51E-01
3.87E-01  4.85E-01 NOT-FOUND  5.23E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  2.04E-01  2.02E-01  2.74E-01
3.04E-01  3.39E-01  3.54E-01  3.66E-01  3.05E-03   75
 DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  3 OF 11:
    Case 3CCID

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  19          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.51E+02  8.85E+01  3.33E+02
5.39E+02  7.50E+02  7.90E+02  9.99E+02  2.23E-04   29
 CAN FAT/THYROID               0-80.5 km  1.0000  1.09E+02  6.37E+01  2.61E+02
3.97E+02  6.05E+02  6.79E+02  1.01E+03  1.71E-04  105
 CAN FAT/BREAST                0-80.5 km  1.0000  8.84E+01  4.90E+01  1.79E+02
3.20E+02  5.27E+02  5.54E+02  7.06E+02  2.00E-04   55
 CAN FAT/GI                    0-80.5 km  1.0000  2.58E+02  1.49E+02  5.36E+02
9.59E+02  1.19E+03  1.28E+03  1.80E+03  2.23E-04   29
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  6.95E+01  3.94E+01  1.58E+02
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2.36E+02  4.21E+02  5.01E+02  5.24E+02  2.00E-04   55
 CAN FAT/BONE                0-80.5 km  1.0000  7.46E+00  4.21E+00  1.67E+01
2.59E+01  4.36E+01  5.06E+01  6.21E+01  2.00E-04   55
 CAN FAT/OTHER               0-80.5 km  1.0000  3.95E+02  2.27E+02  9.09E+02
1.26E+03  2.09E+03  2.23E+03  3.21E+03  2.23E-04   29
 CAN INJ/THYROID             0-80.5 km  1.0000  1.09E+03  6.37E+02  2.61E+03
3.97E+03  6.05E+03  6.79E+03  1.01E+04  1.71E-04  105
 CAN INJ/BREAST              0-80.5 km  1.0000  2.78E+02  1.53E+02  5.95E+02
1.01E+03  1.68E+03  2.01E+03  2.22E+03  2.00E-04   55
 CAN FAT/TOTAL               0-80.5 km  1.0000  1.08E+03  6.27E+02  2.28E+03
3.52E+03  6.12E+03  7.02E+03  7.86E+03  2.23E-04   29
 ERL FAT/TOTAL               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT     0-80.5 km  0.0080  1.91E-01  0.00E+00  0.00E+00
0.00E+00  0.00E+00  1.11E+01  9.25E+01  1.03E-03   84
 ERL INJ/DIARRHEA            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM      0-80.5 km  0.2451  2.01E+01  0.00E+00  5.29E+01
8.86E+01  3.39E+02  4.72E+02  1.07E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA       0-80.5 km  0.6930  4.61E+03  1.47E+03  1.02E+04
1.58E+04  5.30E+04  6.78E+04  1.60E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL      0-80.5 km  0.1622  3.75E+02  0.00E+00  5.25E+02
1.53E+03  6.41E+03  9.29E+03  4.63E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv        0.0150  2.40E+01  0.00E+00  0.00E+00
0.00E+00  8.50E+02  1.25E+03  6.68E+03  1.68E-03   84
 EARLY dose L-EDEWBODY > 0.250 Sv       0.7304  5.46E+03  2.95E+03  9.58E+03
2.52E+04  4.79E+04  7.21E+04  8.97E+04  3.42E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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                                PROB                                QUANTILES
                     PEAK      PEAK  PEAK
                                NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.41E+04  1.36E+04  5.11E+04
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8.34E+04  1.14E+05  1.22E+05  1.65E+05  2.23E-04   29

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (SV)
 L-EDEWBODY                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                16.1-32.2 km  1.0000  4.91E-01  3.53E-01  9.29E-01
1.23E+00  2.22E+00 NOT-FOUND  2.35E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  1.94E-01  1.52E-01  2.98E-01
3.44E-01  4.78E-01 NOT-FOUND  6.67E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  1.48E-01  1.29E-01  2.21E-01
2.41E-01  2.92E-01 NOT-FOUND  3.47E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  1.16E-01  1.05E-01  1.63E-01
1.97E-01  2.37E-01 NOT-FOUND  2.47E-01  6.93E-03   98
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS'  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY'  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  3 OF 11:
    Case 3CCID

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35    PAGE  21          PROB                              QUANTILES
                         PEAK      PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL               0-16.1 km  0.8807  1.36E+01  2.91E+00  4.31E+01
6.08E+01  1.02E+02  1.20E+02  1.67E+02  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT     0-16.1 km  0.9156  5.25E+01  2.86E+01  1.30E+02
1.88E+02  3.04E+02  3.41E+02  4.31E+02  1.23E-03   45
 ERL INJ/DIARRHEA            0-16.1 km  0.8957  2.71E+01  1.13E+01  7.65E+01
1.05E+02  1.61E+02  1.93E+02  2.65E+02  1.23E-03   45
 ERL INJ/PNEUMONITIS         0-16.1 km  0.6906  2.59E+00  1.36E-01  7.99E+00
1.56E+01  3.01E+01  3.22E+01  4.07E+01  4.85E-04   89
 ERL INJ/THYROIDITIS         0-16.1 km  0.7787  1.67E+00  2.94E-01  5.17E+00
7.81E+00  1.34E+01  1.61E+01  2.10E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM      0-16.1 km  0.9741  6.64E+01  5.19E+01  1.38E+02
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1.82E+02  2.60E+02  2.97E+02  3.65E+02  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.9767  1.83E+03  1.66E+03  2.98E+03
3.12E+03  3.44E+03  3.59E+03  4.88E+03  3.18E-05   95
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.9550  9.37E+02  8.22E+02  1.89E+03
2.13E+03  2.55E+03  2.76E+03  3.25E+03  8.56E-05   88
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.68E+02  1.36E+02  3.13E+02
3.64E+02  5.15E+02  5.78E+02  6.96E+02  1.63E-03   50
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.77E+02  1.14E+02  3.68E+02
5.52E+02  8.37E+02  9.47E+02  1.02E+03  2.23E-04   29
 CAN FAT/THYROID              0-80.5 km  1.0000  1.29E+02  8.51E+01  2.95E+02
4.13E+02  6.08E+02  6.80E+02  1.03E+03  1.71E-04  105
 CAN FAT/BREAST               0-80.5 km  1.0000  9.35E+01  5.37E+01  1.81E+02
3.23E+02  5.27E+02  5.54E+02  7.11E+02  2.00E-04   55
 CAN FAT/GI                   0-80.5 km  1.0000  2.97E+02  1.95E+02  5.87E+02
1.00E+03  1.20E+03  1.30E+03  1.83E+03  2.23E-04   29
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  7.75E+01  4.71E+01  1.64E+02
2.43E+02  4.25E+02  5.01E+02  5.32E+02  2.00E-04   55
 CAN FAT/BONE                 0-80.5 km  1.0000  8.34E+00  5.16E+00  1.73E+01
2.65E+01  4.92E+01  5.20E+01  6.30E+01  2.00E-04   55
 CAN FAT/OTHER                0-80.5 km  1.0000  4.64E+02  3.08E+02  9.62E+02
1.30E+03  2.32E+03  2.77E+03  3.27E+03  2.23E-04   29
 CAN INJ/THYROID              0-80.5 km  1.0000  1.29E+03  8.51E+02  2.95E+03
4.13E+03  6.08E+03  6.80E+03  1.03E+04  1.71E-04  105
 CAN INJ/BREAST               0-80.5 km  1.0000  2.94E+02  1.70E+02  6.04E+02
1.01E+03  1.69E+03  2.01E+03  2.24E+03  2.00E-04   55
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.25E+03  8.08E+02  2.64E+03
3.76E+03  6.74E+03  7.15E+03  8.00E+03  2.23E-04   29
 ERL FAT/TOTAL                0-80.5 km  0.8807  1.36E+01  2.91E+00  4.31E+01
6.08E+01  1.02E+02  1.20E+02  1.67E+02  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9156  5.27E+01  2.86E+01  1.31E+02
1.90E+02  3.04E+02  3.41E+02  4.31E+02  1.23E-03   45
 ERL INJ/DIARRHEA             0-80.5 km  0.8957  2.71E+01  1.13E+01  7.65E+01
1.05E+02  1.61E+02  1.93E+02  2.65E+02  1.23E-03   45
 ERL INJ/PNEUMONITIS          0-80.5 km  0.6906  2.59E+00  1.36E-01  7.99E+00
1.56E+01  3.01E+01  3.22E+01  4.07E+01  4.85E-04   89
 ERL INJ/THYROIDITIS          0-80.5 km  0.7787  1.67E+00  2.94E-01  5.17E+00
7.81E+00  1.34E+01  1.61E+01  2.10E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9741  8.65E+01  5.29E+01  1.93E+02
2.70E+02  5.13E+02  6.68E+02  1.21E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9767  6.44E+03  3.70E+03  1.34E+04
2.06E+04  5.81E+04  6.85E+04  1.62E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9550  1.31E+03  8.46E+02  2.45E+03
3.39E+03  8.64E+03  1.46E+04  4.80E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8912  4.71E+00  3.77E+00  7.81E+00
8.69E+00 NOT-FOUND NOT-FOUND  1.61E+01  2.02E-02   50

POPULATICN EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8807  6.80E+01  3.96E+01  1.67E+02
2.38E+02  4.06E+02  4.94E+02  6.00E+02  4.28E-04   60
 EARLY dose A-LUNGS > 5.00 Sv             0.6906  1.46E+01  2.24E+00  5.05E+01
7.08E+01  1.09E+02  1.32E+02  1.94E+02  1.23E-03   45
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9118  3.57E+02  2.36E+02  7.81E+02
1.04E+03  1.87E+03  2.28E+03  8.02E+03  6.56E-04   98
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9901  7.03E+03  4.65E+03  1.33E+04
2.52E+04  6.06E+04  7.23E+04  9.10E+04  3.42E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.8912  6.28E-02  6.35E-02  1.01E-01
1.07E-01  1.21E-01  1.28E-01  1.61E-01  2.85E-04   18
 ERL FAT/TOTAL              1.6-3.2 km   0.8100  1.42E-02  3.95E-03  4.02E-02
5.03E-02  5.73E-02  6.06E-02  7.72E-02  2.85E-04   19
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 ERL FAT/TOTAL                3.2-4.8 km  0.5467  3.59E-03  1.07E-04  1.51E-02
2.08E-02  2.50E-02  2.70E-02  3.08E-02  2.00E-03  122
 ERL FAT/TOTAL                4.8-6.4 km  0.2761  1.27E-03  0.00E+00  2.25E-03
1.07E-02 NOT-FOUND NOT-FOUND  2.29E-02  1.12E-02   45
□11-APR-06  11:10:35    PAGE  22          PROB                          QUANTILES
                              PEAK      PEAK  PEAK
                                          NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                6.4-8.1 km  0.2040  2.93E-04  0.00E+00  5.18E-04
1.61E-03  7.83E-03 NOT-FOUND  8.65E-03  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  2.84E+03  2.34E+03  5.45E+03
6.79E+03  9.20E+03  1.02E+04  1.24E+04  4.28E-04   60
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.69E+04  1.66E+04  5.44E+04
8.77E+04  1.15E+05  1.23E+05  1.67E+05  2.23E-04   29

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8807  1.61E-02  6.03E-03  5.08E-02
6.52E-02  9.27E-02  1.02E-01  1.37E-01  2.09E-05   19
 CAN FAT/TOTAL                0-16.1 km  1.0000  8.16E-03  7.27E-03  1.40E-02
1.74E-02  2.40E-02  2.68E-02  3.37E-02  1.63E-03   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  4.08E+01  3.16E+01  7.91E+01
9.47E+01 NOT-FOUND NOT-FOUND  1.21E+02  1.12E-02    9
 L-EDEWBODY                   1.6-3.2 km  1.0000  1.45E+01  1.12E+01  3.02E+01
3.41E+01  4.55E+01 NOT-FOUND  4.97E+01  6.14E-03   89
 L-EDEWBODY                   3.2-4.8 km  1.0000  8.04E+00  6.40E+00  1.57E+01
2.06E+01  2.87E+01  3.13E+01  3.39E+01  2.00E-03  122
 L-EDEWBODY                   4.8-6.4 km  1.0000  5.35E+00  3.49E+00  1.13E+01
1.48E+01  2.11E+01 NOT-FOUND  2.17E+01  6.14E-03   36
 L-EDEWBODY                   6.4-8.1 km  1.0000  3.71E+00  2.68E+00  8.23E+00
1.09E+01  1.56E+01 NOT-FOUND  1.74E+01  6.14E-03   60
 L-EDEWBODY                   8.1-9.7 km  1.0000  2.83E+00  1.73E+00  6.87E+00
8.44E+00  1.27E+01 NOT-FOUND  1.39E+01  6.93E-03   98
 L-EDEWBODY                  9.7-16.1 km  1.0000  1.49E+00  1.03E+00  3.12E+00
4.83E+00  5.90E+00  6.35E+00  7.34E+00  2.00E-03   65
 L-EDEWBODY                 16.1-32.2 km  1.0000  4.91E-01  3.53E-01  9.29E-01
1.23E+00  2.22E+00 NOT-FOUND  2.35E+00  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km  1.0000  1.94E-01  1.52E-01  2.98E-01
3.44E-01  4.78E-01 NOT-FOUND  6.67E-01  8.02E-03  105
 L-EDEWBODY                 48.3-64.4 km  1.0000  1.48E-01  1.29E-01  2.21E-01
2.41E-01  2.92E-01 NOT-FOUND  3.47E-01  8.02E-03  105
 L-EDEWBODY                 64.4-80.5 km  1.0000  1.16E-01  1.05E-01  1.63E-01
1.97E-01  2.37E-01 NOT-FOUND  2.47E-01  6.93E-03   98
□  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  3 OF 11:
    Case 3CCID

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model
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11-APR-06  11:10:35     PAGE  23          PROB                                  QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                    0-16.1 km  1.0000  8.81E+01  6.91E+01  1.64E+02
2.16E+02  3.10E+02  3.28E+02  5.17E+02  2.76E-05   19
 CAN FAT/LUNG                     0-80.5 km  1.0000  2.85E+02  2.02E+02  5.93E+02
7.42E+02  1.14E+03  1.33E+03  1.67E+03  1.83E-03  120
 CAN FAT/THYROID                  0-80.5 km  1.0000  3.26E+01  2.22E+01  6.73E+01
9.17E+01  1.35E+02  1.57E+02  1.94E+02  1.83E-03  120
 CAN FAT/BREAST                   0-80.5 km  1.0000  2.38E+02  1.59E+02  4.79E+02
6.54E+02  1.04E+03  1.17E+03  1.41E+03  1.83E-03  120
 CAN FAT/GI                       0-80.5 km  1.0000  5.68E+02  3.92E+02  1.16E+03
1.43E+03  2.20E+03  2.51E+03  3.28E+03  1.83E-03  120
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  1.81E+02  1.24E+02  3.83E+02
4.99E+02  7.36E+02  8.40E+02  1.06E+03  1.83E-03  120
 CAN FAT/BONE                     0-80.5 km  1.0000  1.85E+01  1.26E+01  3.92E+01
5.07E+01  7.36E+01  8.40E+01  1.10E+02  1.83E-03  120
 CAN FAT/OTHER                    0-80.5 km  1.0000  5.91E+02  4.00E+02  1.22E+03
1.53E+03  2.29E+03  2.57E+03  3.48E+03  1.83E-03  120
 CAN INJ/THYROID                  0-80.5 km  1.0000  3.26E+02  2.22E+02  6.73E+02
9.17E+02  1.35E+03  1.57E+03  1.94E+03  1.83E-03  120
 CAN INJ/BREAST                   0-80.5 km  1.0000  7.49E+02  5.15E+02  1.53E+03
2.03E+03  3.14E+03  3.62E+03  4.44E+03  1.83E-03  120
 CAN FAT/TOTAL                    0-80.5 km  1.0000  1.91E+03  1.28E+03  4.00E+03
5.11E+03  7.45E+03  8.45E+03  1.12E+04  1.83E-03  120

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF              0-16.1 km  1.0000  1.82E+03  1.35E+03  3.41E+03
4.39E+03  6.05E+03  6.73E+03  1.05E+04  2.76E-05   19
 L-EDEWBODY  TOT LIF              0-80.5 km  1.0000  4.28E+04  3.03E+04  8.85E+04
1.11E+05  1.78E+05  2.11E+05  2.52E+05  1.83E-03  120

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                    0-16.1 km  0.9397  6.26E-04  5.74E-04  1.01E-03
1.08E-03  1.25E-03  1.33E-03  2.33E-03  2.02E-05   47

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                        0-1.6 km  0.0895  9.00E-03  0.00E+00  0.00E+00
1.13E-01 NOT-FOUND NOT-FOUND  1.79E-01  1.93E-02  109
 L-EDEWBODY                      1.6-3.2 km  0.1942  2.87E-02  0.00E+00  1.06E-01
1.15E-01  1.39E-01  1.50E-01  2.00E-01  4.28E-04   33
 L-EDEWBODY                      3.2-4.8 km  0.1395  1.96E-02  0.00E+00  1.03E-01
1.36E-01 NOT-FOUND NOT-FOUND  2.00E-01  1.93E-02   57
 L-EDEWBODY                      4.8-6.4 km  0.3236  5.18E-02  0.00E+00  1.25E-01
1.44E-01 NOT-FOUND NOT-FOUND  1.98E-01  1.03E-02  100
 L-EDEWBODY                      6.4-8.1 km  0.5096  8.05E-02  7.41E-03  1.16E-01
1.24E-01  1.45E-01  1.55E-01  2.00E-01  3.42E-04   16
 L-EDEWBODY                      8.1-9.7 km  0.6735  1.04E-01  1.04E-01  1.31E-01
1.45E-01  1.83E-01 NOT-FOUND  2.00E-01  5.39E-03   27
 L-EDEWBODY                     9.7-16.1 km  0.9035  1.16E-01  1.05E-01  1.27E-01
1.38E-01  1.68E-01  1.82E-01  2.00E-01  2.34E-03    7
 L-EDEWBODY                    16.1-32.2 km  0.9078  9.33E-02  8.55E-02  1.19E-01
1.29E-01  1.56E-01  1.69E-01  2.00E-01  4.28E-04   80
 L-EDEWBODY                    32.2-48.3 km  0.9920  1.40E-01  1.07E-01  1.37E-01
1.52E-01  1.93E-01 NOT-FOUND  1.99E-01  8.02E-03   44
 L-EDEWBODY                    48.3-64.4 km  1.0000  1.06E-01  1.04E-01  1.33E-01
1.47E-01  1.87E-01 NOT-FOUND  1.93E-01  8.02E-03   44
 L-EDEWBODY                    64.4-80.5 km  1.0000  8.76E-02  8.34E-02  1.18E-01
1.30E-01 NOT-FOUND NOT-FOUND  1.48E-01  1.84E-02  120
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L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE          1.0000  4.28E+04  3.03E+04  8.85E+04
1.11E+05  1.78E+05  2.11E+05  2.52E+05  1.83E-03  120
 LONG-TERM DIRECT EXPOSURE PATHWAYS     1.0000  3.59E+04  2.44E+04  7.91E+04
1.02E+05  1.36E+05  1.54E+05  1.85E+05  1.83E-03  120
 TOTAL INGESTION PATHWAYS DOSE          1.0000  2.20E+03  1.91E+03  3.76E+03
4.75E+03  6.89E+03  7.29E+03  1.04E+04  2.76E-05   19
 LONG-TERM GROUNDSHINE DOSE             1.0000  3.58E+04  2.41E+04  7.91E+04
1.02E+05  1.36E+05  1.54E+05  1.85E+05  1.83E-03  120
 LONG-TERM RESUSPENSION DOSE            1.0000  1.29E+02  8.87E+01  3.05E+02
3.40E+02  4.37E+02  4.87E+02  6.11E+02  5.35E-06   26
 WATER INGESTION DOSE                   1.0000  1.85E+03  1.39E+03  3.46E+03
4.49E+03  6.15E+03  6.86E+03  1.02E+04  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE    1.0000  4.59E+03  2.23E+03  1.09E+04
1.59E+04  3.21E+04  3.92E+04  6.54E+04  1.71E-04   44
11-APR-06  11:10:35     PAGE  24          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                      NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  1.15E+02  1.01E+02  1.90E+02
2.32E+02  3.44E+02  4.00E+02  5.16E+02  1.43E-03  120
 INGESTION OF GRAINS                    1.0000  5.83E+00  5.17E+00  1.00E+01
1.06E+01  1.20E+01  1.26E+01  2.37E+01  6.21E-06   20
 INGESTION OF LEAF VEG                  1.0000  1.86E+01  1.52E+01  3.15E+01
3.59E+01  4.88E+01  5.23E+01  6.17E+01  6.28E-04   57
 INGESTION OF ROOT CROPS                1.0000  1.08E+01  9.50E+00  1.77E+01
2.14E+01  2.89E+01  3.11E+01  3.62E+01  6.28E-04   57
 INGESTION OF FRUITS                    1.0000  5.49E+01  4.73E+01  9.19E+01
1.05E+02  1.30E+02  1.42E+02  1.85E+02  6.28E-04   57
 INGESTION OF LEGUMES                   1.0000  2.17E+01  1.85E+01  3.62E+01
4.35E+01  5.53E+01  5.90E+01  7.29E+01  6.28E-04   57
 INGESTION OF BEEF                      1.0000  1.14E+02  3.76E+01  3.29E+02
4.28E+02  6.13E+02  6.90E+02  8.83E+02  2.54E-03   90
 INGESTION OF MILK                      1.0000  8.87E+01  2.44E+01  2.60E+02
3.22E+02  4.38E+02  5.00E+02  6.41E+02  2.54E-03   90
 INGESTION OF POULTRY                   1.0000  2.58E+01  1.32E+01  6.60E+01
7.84E+01  1.04E+02  1.12E+02  1.52E+02  2.57E-04   60
 INGESTION OF OTHER MEAT CROPS          1.0000  1.33E+01  1.78E+00  4.38E+01
5.47E+01  7.28E+01  7.80E+01  1.09E+02  2.57E-04   60

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                   1.0000  1.44E+10  8.78E+09  3.08E+10
3.75E+10  7.24E+10  8.32E+10  1.22E+11  1.83E-03  120
 POP.-DEPENDENT COSTS                   1.0000  1.41E+10  8.35E+09  3.08E+10
3.75E+10  7.24E+10  8.32E+10  1.22E+11  1.83E-03  120
 FARM-DEPENDENT COSTS                   1.0000  3.32E+08  3.13E+08  5.08E+08
5.46E+08  6.48E+08  6.97E+08  9.03E+08  2.33E-05   33
 POP.-DEPENDENT DECONTAMINATION COST    1.0000  2.77E+09  1.67E+09  6.50E+09
1.01E+10  1.07E+10  1.10E+10  1.25E+10  1.71E-04   56
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  9.56E+07  8.99E+07  1.35E+08
1.55E+08  2.05E+08  2.16E+08  2.66E+08  2.85E-04   56
 POP.-DEPENDENT INTERDICTION COST       1.0000  1.02E+10  5.87E+09  2.30E+10
2.88E+10  6.01E+10  7.92E+10  1.08E+11  1.83E-03  120
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.63E+08  1.34E+08  2.58E+08
3.03E+08  3.49E+08  3.71E+08  5.21E+08  1.71E-04  109
 POP.-DEPENDENT CONDEMNATION COST       0.9766  1.06E+09  6.91E+08  1.64E+09
5.03E+09  5.81E+09  6.19E+09  2.48E+10  1.17E-03   31
 FARM-DEPENDENT CONDEMNATION COST       0.9767  2.74E+07  2.57E+07  4.95E+07
5.51E+07  6.96E+07  1.06E+08  1.43E+08  9.42E-04   44
 EMERGENCY PHASE COST                   0.9976  2.00E+07  8.43E+06  5.14E+07
7.49E+07  2.05E+08  2.31E+08  2.74E+08  1.83E-03  120
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      1.0000  1.74E+06  1.31E+06  3.82E+06
5.05E+06  5.75E+06  6.08E+06  7.50E+06  6.51E-04   33
 CROP DISPOSAL COST                      1.0000  4.36E+07  4.55E+07  7.03E+07
7.43E+07  8.43E+07  8.91E+07  1.22E+08  1.96E-04   33

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         1.0000  8.28E+04  7.86E+04  1.13E+05
1.22E+05  1.46E+05  1.58E+05  2.06E+05  6.28E-04   81
 POP. DECONTAMINATION (INDIVIDUALS)      1.0000  4.05E+05  2.41E+05  1.03E+06
1.07E+06  1.18E+06  1.24E+06  1.35E+06  1.14E-03   81
 FARM INTERDICTION (HECTARES)            1.0000  9.33E+04  8.85E+04  1.23E+05
1.37E+05  1.75E+05  1.95E+05  2.68E+05  1.71E-04  109
 POP. INTERDICTION (INDIVIDUALS)         1.0000  4.05E+05  2.41E+05  1.03E+06
1.07E+06  1.18E+06  1.24E+06  1.35E+06  1.14E-03   81
 FARM CONDEMNATION (HECTARES)            0.9767  4.01E+03  3.92E+03  7.06E+03
7.86E+03  1.01E+04  1.18E+04  2.04E+04  2.00E-04   44
 POP. CONDEMNATION (INDIVIDUALS)         0.9766  7.57E+03  4.67E+03  1.45E+04
3.03E+04  3.77E+04  4.14E+04  1.58E+05  1.17E-03   31
 MILK DISPOSAL AREA (HECTARES)           1.0000  9.43E+04  8.58E+04  1.21E+05
1.35E+05  1.71E+05  1.90E+05  2.68E+05  1.96E-04   33
 CROP DISPOSAL AREA (HECTARES)           1.0000  9.50E+04  8.66E+04  1.23E+05
1.36E+05  1.75E+05  1.95E+05  2.68E+05  1.96E-04   33
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XXXX

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XXXX
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  0.1318  1.38E-04  0.00E+00  3.58E-04
1.02E-03  2.54E-03  3.20E-03  5.41E-03  2.28E-04   89
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.6918  1.88E-01  1.75E-02  4.68E-01
1.08E+00  2.26E+00  2.53E+00  3.47E+00  4.85E-04   89
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.1550  1.69E-03  0.00E+00  3.21E-03
8.83E-03  3.79E-02  5.06E-02  6.79E-02  1.60E-03    9
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.46E+01  1.21E+01  2.02E+01
2.16E+01  2.53E+01  2.71E+01  3.69E+01  5.62E-06   37
 CAN FAT/LUNG                 0-80.5 km  1.0000  7.99E+01  4.84E+01  1.67E+02
2.78E+02  4.89E+02  5.80E+02  7.13E+02  2.28E-03   79
 CAN FAT/THYROID              0-80.5 km  1.0000  9.63E+00  5.34E+00  2.00E+01
3.23E+01  5.92E+01  6.71E+01  8.83E+01  2.28E-03   79
 CAN FAT/BREAST               0-80.5 km  1.0000  6.60E+01  3.73E+01  1.42E+02
2.23E+02  3.84E+02  4.42E+02  5.95E+02  2.28E-03   79
 CAN FAT/GI                   0-80.5 km  1.0000  1.60E+02  9.79E+01  3.17E+02
5.01E+02  9.76E+02  1.16E+03  1.40E+03  2.28E-03   79
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  5.03E+01  3.03E+01  1.00E+02
1.81E+02  3.00E+02  3.62E+02  4.49E+02  2.28E-03   79
 CAN FAT/BONE                 0-80.5 km  1.0000  5.17E+00  3.06E+00  1.06E+01
1.83E+01  3.15E+01  3.78E+01  4.63E+01  2.28E-03   79
 CAN FAT/OTHER                0-80.5 km  1.0000  1.65E+02  9.79E+01  3.40E+02
5.62E+02  9.94E+02  1.20E+03  1.48E+03  2.28E-03   79
 CAN INJ/THYROID              0-80.5 km  1.0000  9.63E+01  5.34E+01  2.00E+02
3.23E+02  5.92E+02  6.71E+02  8.83E+02  2.28E-03   79
 CAN INJ/BREAST               0-80.5 km  1.0000  2.08E+02  1.17E+02  4.41E+02
6.72E+02  1.29E+03  1.54E+03  1.87E+03  2.28E-03   79
 CAN FAT/TOTAL                0-80.5 km  1.0000  5.36E+02  3.16E+02  1.08E+03
1.87E+03  3.21E+03  3.87E+03  4.77E+03  2.28E-03   79
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0061  1.72E-06  0.00E+00  0.00E+00
0.00E+00  0.00E+00  1.18E-04  8.59E-04  2.09E-05   19
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.1318  1.38E-04  0.00E+00  3.58E-04
1.02E-03  2.54E-03  3.20E-03  5.41E-03  2.28E-04   89
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.6918  1.88E-01  1.75E-02  4.68E-01
1.08E+00  2.26E+00  2.53E+00  3.47E+00  4.85E-04   89
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.1550  1.69E-03  0.00E+00  3.21E-03
8.83E-03  3.79E-02  5.06E-02  6.79E-02  1.60E-03    9

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  26          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv        0.5225  2.84E-01  1.87E-02  1.05E+00
1.57E+00  3.11E+00  3.47E+00  5.21E+00  4.85E-04   60

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  3.22E+02  3.09E+02  4.20E+02
4.80E+02  5.47E+02  5.73E+02  8.09E+02  5.62E-06   37
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.20E+04  7.14E+03  2.47E+04
4.06E+04  7.03E+04  8.30E+04  1.07E+05  2.28E-03   79

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  1.0000  5.24E-04  5.01E-04  7.47E-04
8.12E-04  9.88E-04  1.02E-03  1.30E-03  7.23E-06   37

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.50E-01  1.29E-01  2.18E-01
2.33E-01 NOT-FOUND NOT-FOUND  2.70E-01  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  1.42E-01  1.18E-01  2.01E-01
2.03E-01  2.10E-01 NOT-FOUND  2.12E-01  6.14E-03   36
 L-EDEWBODY                  3.2-4.8 km  1.0000  1.31E-01  1.10E-01  1.62E-01
1.91E-01  2.08E-01 NOT-FOUND  2.10E-01  6.93E-03   21
 L-EDEWBODY                  4.8-6.4 km  1.0000  1.27E-01  1.11E-01  1.61E-01
1.89E-01  2.05E-01  2.07E-01  2.10E-01  2.00E-03   31
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.14E-01  1.06E-01  1.44E-01
1.64E-01 NOT-FOUND NOT-FOUND  2.07E-01  1.12E-02   45
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.00E-01  9.19E-02  1.32E-01
1.50E-01 NOT-FOUND NOT-FOUND  1.96E-01  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  7.75E-02  7.25E-02  1.06E-01
1.16E-01 NOT-FOUND NOT-FOUND  1.38E-01  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  8.33E-02  7.96E-02  1.20E-01
1.34E-01  1.73E-01 NOT-FOUND  1.79E-01  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  6.22E-02  5.41E-02  1.02E-01
1.11E-01  1.37E-01 NOT-FOUND  1.41E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  5.44E-02  5.26E-02  7.81E-02
8.48E-02  1.00E-01  1.02E-01  1.07E-01  5.14E-04  123
 L-EDEWBODY                64.4-80.5 km  1.0000  4.19E-02  3.36E-02  8.23E-02
1.06E-01 NOT-FOUND NOT-FOUND  1.13E-01  3.98E-02   99
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  4 OF 11:
    Case 4CCIW

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING
APPLIED
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COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE

11-APR-06 11:10:35 PAGE 27

	PEAK CONS	PROB PEAK PROB	NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/LUNG	0-80.5 km	1.0000	5.33E+00	2.99E+00	1.24E+01	1.79E+01	3.25E+01	3.95E+01	5.75E+01
CAN FAT/THYROID	0-80.5 km	1.0000	1.41E+00	8.02E-01	3.48E+00	5.04E+00	7.57E+00	8.50E+00	1.58E+01
CAN FAT/BREAST	0-80.5 km	1.0000	3.88E+00	2.16E+00	9.39E+00	1.28E+01	2.21E+01	2.54E+01	4.36E+01
CAN FAT/GI	0-80.5 km	1.0000	9.99E+00	5.63E+00	2.52E+01	3.48E+01	6.05E+01	7.25E+01	1.09E+02
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	2.90E+00	1.59E+00	7.01E+00	1.02E+01	1.75E+01	2.20E+01	3.23E+01
CAN FAT/BONE	0-80.5 km	1.0000	3.10E-01	1.66E-01	7.79E-01	1.12E+00	2.06E+00	2.44E+00	3.45E+00
CAN FAT/OTHER	0-80.5 km	1.0000	1.03E+01	5.70E+00	2.59E+01	3.54E+01	6.11E+01	7.67E+01	1.13E+02
CAN INJ/THYROID	0-80.5 km	1.0000	1.41E+01	8.02E+00	3.48E+01	5.04E+01	7.57E+01	8.50E+01	1.58E+02
CAN INJ/BREAST	0-80.5 km	1.0000	1.22E+01	6.75E+00	3.00E+01	4.00E+01	7.36E+01	8.46E+01	1.37E+02
CAN FAT/TOTAL	0-80.5 km	1.0000	3.41E+01	1.87E+01	8.58E+01	1.19E+02	2.12E+02	2.48E+02	3.72E+02
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/TRANSEPIDERMAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                1.6-3.2 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                3.2-4.8 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                4.8-6.4 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  28            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                6.4-8.1 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF          0-80.5 km   1.0000  7.46E+02  4.11E+02  1.82E+03
2.45E+03  4.33E+03  5.45E+03  8.18E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   1.6-3.2 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   3.2-4.8 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   4.8-6.4 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   6.4-8.1 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   8.1-9.7 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  9.7-16.1 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 16.1-32.2 km   1.0000  2.69E-02  2.23E-02  5.15E-02
7.03E-02  1.13E-01 NOT-FOUND  1.20E-01  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km   1.0000  9.75E-03  9.06E-03  1.66E-02
2.06E-02  2.87E-02 NOT-FOUND  3.93E-02  8.02E-03  105
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 L-EDEWBODY                    48.3-64.4 km  1.0000  4.72E-03  4.04E-03  8.29E-03
9.60E-03  2.15E-02 NOT-FOUND  2.22E-02  8.02E-03  105
 L-EDEWBODY                    64.4-80.5 km  1.0000  3.07E-03  2.36E-03  6.40E-03
7.47E-03  9.65E-03 NOT-FOUND  1.04E-02  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  4 OF 11:
    Case 4CCIW

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35     PAGE  29          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.0061  3.45E-05  0.00E+00  0.00E+00
0.00E+00  0.00E+00  3.17E-03  1.72E-02  2.09E-05   19
 ERL INJ/DIARRHEA                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.1318  2.76E-03  0.00E+00  7.90E-03
2.05E-02  5.32E-02  6.15E-02  1.08E-01  2.28E-04   89
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.6918  3.76E+00  3.48E-01  9.45E+00
2.22E+01  4.52E+01  5.23E+01  6.95E+01  4.85E-04   89
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.1550  3.39E-02  0.00E+00  6.14E-02
1.76E-01  7.87E-01  1.01E+00  1.36E+00  1.60E-03    9
 CAN FAT/TOTAL                    0-16.1 km  1.0000  5.01E+00  4.77E+00  8.26E+00
9.62E+00  1.10E+01  1.16E+01  1.63E+01  3.33E-05   17
 CAN FAT/LUNG                     0-80.5 km  1.0000  6.15E+00  3.78E+00  1.31E+01
2.01E+01  3.31E+01  3.99E+01  5.90E+01  1.71E-04   44
 CAN FAT/THYROID                  0-80.5 km  1.0000  1.67E+00  1.09E+00  3.71E+00
5.32E+00  8.22E+00  9.60E+00  1.60E+01  1.71E-04  105
 CAN FAT/BREAST                   0-80.5 km  1.0000  4.39E+00  2.62E+00  1.01E+01
1.32E+01  2.22E+01  2.54E+01  4.44E+01  1.71E-04   44
 CAN FAT/GI                       0-80.5 km  1.0000  1.14E+01  7.23E+00  2.75E+01
3.61E+01  6.10E+01  7.25E+01  1.11E+02  1.71E-04   44
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  3.29E+00  2.04E+00  7.91E+00
1.09E+01  1.89E+01  2.32E+01  3.29E+01  1.71E-04   44
 CAN FAT/BONE                     0-80.5 km  1.0000  3.54E-01  2.17E-01  8.55E-01
1.17E+00  2.08E+00  2.45E+00  3.53E+00  1.71E-04   44
 CAN FAT/OTHER                    0-80.5 km  1.0000  1.18E+01  7.34E+00  2.78E+01
3.64E+01  6.14E+01  7.67E+01  1.16E+02  1.71E-04   44
 CAN INJ/THYROID                  0-80.5 km  1.0000  1.67E+01  1.09E+01  3.71E+01
5.32E+01  8.22E+01  9.60E+01  1.60E+02  1.71E-04  105
 CAN INJ/BREAST                   0-80.5 km  1.0000  1.38E+01  8.27E+00  3.22E+01
4.25E+01  7.41E+01  8.49E+01  1.40E+02  1.71E-04   44
 CAN FAT/TOTAL                    0-80.5 km  1.0000  3.91E+01  2.38E+01  9.34E+01
1.24E+02  2.13E+02  2.49E+02  3.80E+02  1.71E-04   44
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 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.0061  3.45E-05  0.00E+00  0.00E+00
0.00E+00  0.00E+00  3.17E-03  1.72E-02  2.09E-05   19
 ERL INJ/DIARRHEA               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.1318  2.76E-03  0.00E+00  7.90E-03
2.05E-02  5.32E-02  6.15E-02  1.08E-01  2.28E-04   89
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.6918  3.76E+00  3.48E-01  9.45E+00
2.22E+01  4.52E+01  5.23E+01  6.95E+01  4.85E-04   89
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.1550  3.39E-02  0.00E+00  6.14E-02
1.76E-01  7.87E-01  1.01E+00  1.36E+00  1.60E-03    9

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.5225  5.68E+00  2.88E-01  2.08E+01
2.95E+01  6.14E+01  7.21E+01  1.04E+02  4.85E-04   60

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  30          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  1.03E+02  1.00E+02  1.60E+02
1.96E+02  2.24E+02  2.36E+02  3.53E+02  3.33E-05   17
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  8.49E+02  5.24E+02  1.91E+03
2.59E+03  4.80E+03  5.74E+03  8.34E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  1.0000  2.43E-04  2.26E-04  3.88E-04
4.59E-04  5.41E-04  5.65E-04  7.88E-04  3.33E-05   17

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  5.03E-01  4.08E-01  1.02E+00
1.14E+00 NOT-FOUND NOT-FOUND  1.43E+00  1.12E-02    9
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 L-EDEWBODY                    1.6-3.2 km  1.0000  2.09E-01  1.76E-01  3.64E-01
4.50E-01  5.78E-01 NOT-FOUND  6.11E-01  6.14E-03   89
 L-EDEWBODY                    3.2-4.8 km  1.0000  1.61E-01  1.46E-01  2.51E-01
2.86E-01  3.77E-01  4.24E-01  4.95E-01  2.00E-03  122
 L-EDEWBODY                    4.8-6.4 km  1.0000  1.50E-01  1.33E-01  2.21E-01
2.38E-01  2.82E-01 NOT-FOUND  2.97E-01  6.14E-03   36
 L-EDEWBODY                    6.4-8.1 km  1.0000  1.22E-01  1.11E-01  1.78E-01
2.05E-01  2.34E-01 NOT-FOUND  2.47E-01  5.11E-03    4
 L-EDEWBODY                    8.1-9.7 km  1.0000  1.04E-01  1.02E-01  1.68E-01
2.02E-01  2.34E-01 NOT-FOUND  2.49E-01  5.11E-03   68
 L-EDEWBODY                   9.7-16.1 km  1.0000  7.27E-02  6.26E-02  1.29E-01
1.56E-01  2.19E-01 NOT-FOUND  2.32E-01  6.14E-03  107
 L-EDEWBODY                  16.1-32.2 km  1.0000  2.69E-02  2.23E-02  5.15E-02
7.03E-02  1.13E-01 NOT-FOUND  1.20E-01  8.02E-03   84
 L-EDEWBODY                  32.2-48.3 km  1.0000  9.75E-03  9.06E-03  1.66E-02
2.06E-02  2.87E-02 NOT-FOUND  3.93E-02  8.02E-03  105
 L-EDEWBODY                  48.3-64.4 km  1.0000  4.72E-03  4.04E-03  8.29E-03
9.60E-03  2.15E-02 NOT-FOUND  2.22E-02  8.02E-03  105
 L-EDEWBODY                  64.4-80.5 km  1.0000  3.07E-03  2.36E-03  6.40E-03
7.47E-03  9.65E-03 NOT-FOUND  1.04E-02  8.02E-03  105
 DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  4 OF 11:
    Case 4CCIW

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE  31          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.44E+01  1.19E+01  1.95E+01
2.12E+01  2.49E+01  2.67E+01  3.62E+01  5.62E-06   37
 CAN FAT/LUNG                  0-80.5 km  1.0000  7.45E+01  4.39E+01  1.57E+02
2.65E+02  4.12E+02  4.78E+02  6.78E+02  2.28E-03   79
 CAN FAT/THYROID               0-80.5 km  1.0000  8.20E+00  4.76E+00  1.74E+01
2.85E+01  5.20E+01  5.98E+01  7.83E+01  2.28E-03   79
 CAN FAT/BREAST                0-80.5 km  1.0000  6.21E+01  3.56E+01  1.29E+02
2.01E+02  3.69E+02  4.25E+02  5.70E+02  2.28E-03   79
 CAN FAT/GI                    0-80.5 km  1.0000  1.50E+02  9.29E+01  2.95E+02
4.78E+02  8.48E+02  9.55E+02  1.33E+03  2.28E-03   79
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  4.74E+01  2.90E+01  9.33E+01
1.60E+02  2.94E+02  3.52E+02  4.30E+02  2.28E-03   79
 CAN FAT/BONE                  0-80.5 km  1.0000  4.85E+00  2.92E+00  9.68E+00
1.78E+01  2.98E+01  3.59E+01  4.43E+01  2.28E-03   79
 CAN FAT/OTHER                 0-80.5 km  1.0000  1.55E+02  9.31E+01  3.09E+02
5.02E+02  8.72E+02  9.85E+02  1.41E+03  2.28E-03   79
 CAN INJ/THYROID               0-80.5 km  1.0000  8.20E+01  4.76E+01  1.74E+02
2.85E+02  5.20E+02  5.98E+02  7.83E+02  2.28E-03   79
 CAN INJ/BREAST                0-80.5 km  1.0000  1.95E+02  1.09E+02  4.12E+02
6.66E+02  1.26E+03  1.49E+03  1.79E+03  2.28E-03   79
 CAN FAT/TOTAL                 0-80.5 km  1.0000  5.01E+02  3.03E+02  9.96E+02
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1.81E+03  3.00E+03  3.64E+03  4.54E+03  2.28E-03   79

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  3.17E+02  3.06E+02  4.14E+02
4.71E+02  5.39E+02  5.61E+02  7.96E+02  5.62E-06   37
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.12E+04  6.79E+03  2.24E+04
3.83E+04  6.95E+04  8.24E+04  1.02E+05  2.28E-03   79

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                0-16.1 km  1.0000  5.11E-04  4.89E-04  7.32E-04
7.92E-04  9.52E-04  1.01E-03  1.27E-03  7.23E-06   37

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.9046  1.25E-01  1.05E-01  1.29E-01
1.40E-01  1.72E-01  1.88E-01  2.00E-01  3.05E-03  111
 L-EDEWBODY                 1.6-3.2 km  0.9977  1.31E-01  1.05E-01  1.27E-01
1.38E-01  1.67E-01  1.82E-01  1.97E-01  2.60E-03   66
 L-EDEWBODY                 3.2-4.8 km  0.9539  1.23E-01  1.04E-01  1.22E-01
1.31E-01  1.54E-01  1.65E-01  2.00E-01  6.28E-04   41
 L-EDEWBODY                 4.8-6.4 km  0.9877  1.20E-01  1.06E-01  1.32E-01
1.45E-01  1.81E-01 NOT-FOUND  1.98E-01  5.11E-03   93
 L-EDEWBODY                 6.4-8.1 km  1.0000  1.08E-01  1.04E-01  1.36E-01
1.53E-01 NOT-FOUND NOT-FOUND  1.97E-01  1.12E-02   45
 L-EDEWBODY                 8.1-9.7 km  1.0000  9.51E-02  8.68E-02  1.27E-01
1.44E-01 NOT-FOUND NOT-FOUND  1.88E-01  1.20E-02   50
 L-EDEWBODY                9.7-16.1 km  1.0000  7.39E-02  7.11E-02  1.04E-01
1.12E-01 NOT-FOUND NOT-FOUND  1.31E-01  1.20E-02   50
 L-EDEWBODY               16.1-32.2 km  1.0000  5.64E-02  4.96E-02  8.66E-02
9.75E-02  1.02E-01  1.03E-01  1.06E-01  1.23E-03  104
 L-EDEWBODY               32.2-48.3 km  1.0000  5.25E-02  4.58E-02  7.68E-02
8.28E-02  9.87E-02  1.00E-01  1.02E-01  4.28E-04   33
 L-EDEWBODY               48.3-64.4 km  1.0000  4.97E-02  4.87E-02  7.23E-02
7.55E-02  8.33E-02  8.70E-02  1.00E-01  5.14E-04  123
 L-EDEWBODY               64.4-80.5 km  1.0000  3.89E-02  3.20E-02  7.90E-02
1.02E-01 NOT-FOUND NOT-FOUND  1.04E-01  3.98E-02   99

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE          1.0000  1.12E+04  6.79E+03  2.24E+04
3.83E+04  6.95E+04  8.24E+04  1.02E+05  2.28E-03   79
 LONG-TERM DIRECT EXPOSURE PATHWAYS     1.0000  1.05E+04  5.74E+03  2.23E+04
3.78E+04  6.88E+04  8.20E+04  1.01E+05  2.28E-03   79
 TOTAL INGESTION PATHWAYS DOSE          1.0000  6.24E+02  5.40E+02  1.09E+03
1.25E+03  1.74E+03  2.00E+03  2.59E+03  2.85E-04   10
 LONG-TERM GROUNDSHINE DOSE             1.0000  1.05E+04  5.73E+03  2.15E+04
3.78E+04  6.88E+04  8.20E+04  1.01E+05  2.28E-03   79
 LONG-TERM RESUSPENSION DOSE            1.0000  5.27E+01  3.02E+01  1.13E+02
1.91E+02  3.36E+02  4.05E+02  5.21E+02  2.28E-03   79
 WATER INGESTION DOSE                   1.0000  4.56E+01  3.60E+01  8.91E+01
1.08E+02  1.41E+02  1.59E+02  2.52E+02  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE    0.9930  6.59E+01  4.22E+01  1.24E+02
2.40E+02  4.27E+02  5.01E+02  9.37E+02  1.83E-03  120
11-APR-06  11:10:35    PAGE  32          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    0.9930  3.00E+00  2.55E+00  5.68E+00
6.51E+00  7.79E+00  8.26E+00  1.11E+01  5.71E-05   65
 INGESTION OF GRAINS                    1.0000  1.36E+01  1.17E+00  3.82E+01
5.02E+01  7.61E+01  9.79E+01  1.29E+02  2.85E-04   10
 INGESTION OF LEAF VEG                  1.0000  1.95E+01  3.61E+00  5.49E+01
7.44E+01  1.14E+02  1.26E+02  2.63E+02  1.86E-05   43
 INGESTION OF ROOT CROPS                1.0000  1.82E+01  1.97E+00  5.23E+01
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6.52E+01  9.80E+01  1.10E+02  1.68E+02  2.85E-04   10
 INGESTION OF FRUITS                     1.0000  3.01E+01  9.70E+00  7.78E+01
1.00E+02  1.59E+02  1.94E+02  2.49E+02  2.85E-04   10
 INGESTION OF LEGUMES                    1.0000  1.65E+01  4.26E+00  4.46E+01
5.66E+01  9.22E+01  1.05E+02  1.43E+02  2.85E-04   10
 INGESTION OF BEEF                       1.0000  2.27E+02  1.89E+02  4.22E+02
5.43E+02  7.38E+02  7.70E+02  9.17E+02  2.85E-04   10
 INGESTION OF MILK                       1.0000  1.87E+02  1.36E+02  3.62E+02
4.68E+02  7.01E+02  7.20E+02  8.80E+02  2.76E-05   49
 INGESTION OF POULTRY                    1.0000  5.49E+01  4.61E+01  9.72E+01
1.16E+02  1.72E+02  2.01E+02  3.83E+02  1.86E-05   43
 INGESTION OF OTHER MEAT CROPS           1.0000  1.17E+01  1.03E+01  2.08E+01
2.50E+01  3.25E+01  3.45E+01  5.87E+01  1.86E-05   43

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    0.9953  7.80E+08  4.26E+08  1.47E+09
3.11E+09  1.00E+10  1.30E+10  1.90E+10  1.83E-03  120
 POP.-DEPENDENT COSTS                    0.9930  7.17E+08  3.45E+08  1.31E+09
3.07E+09  1.00E+10  1.29E+10  1.87E+10  1.83E-03  120
 FARM-DEPENDENT COSTS                    0.9953  6.38E+07  3.99E+07  1.34E+08
1.70E+08  2.43E+08  2.74E+08  4.67E+08  4.00E-04  120
 POP.-DEPENDENT DECONTAMINATION COST     0.9930  1.57E+08  8.32E+07  2.76E+08
7.19E+08  2.01E+09  2.36E+09  3.68E+09  1.83E-03  120
 FARM-DEPENDENT DECONTAMINATION COST     0.9930  1.04E+07  9.60E+06  1.86E+07
2.42E+07  3.42E+07  3.74E+07  4.39E+07  1.43E-03  120
 POP.-DEPENDENT INTERDICTION COST        0.9930  5.56E+08  2.74E+08  9.42E+08
2.42E+09  7.16E+09  8.20E+09  1.50E+10  1.83E-03  120
 FARM-DEPENDENT INTERDICTION COST        0.9953  4.27E+07  1.84E+07  1.06E+08
1.24E+08  1.79E+08  2.10E+08  3.43E+08  4.00E-04  120
 POP.-DEPENDENT CONDEMNATION COST        0.6139  3.37E+06  2.59E+05  1.03E+07
1.56E+07  2.61E+07  3.05E+07  4.31E+07  1.51E-03    9
 FARM-DEPENDENT CONDEMNATION COST        0.7188  2.05E+05  6.25E+04  6.28E+05
7.94E+05  1.23E+06 NOT-FOUND  1.40E+06  7.02E-03    9
 EMERGENCY PHASE COST                    0.8870  5.44E+04  3.05E+04  1.26E+05
2.00E+05  3.98E+05  4.83E+05  5.16E+05  1.63E-03   50
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      0.9875  3.69E+05  1.11E+05  1.11E+06
1.65E+06  2.60E+06  3.00E+06  5.32E+06  4.00E-04  120
 CROP DISPOSAL COST                      0.9953  1.01E+07  4.56E+06  2.51E+07
3.22E+07  5.28E+07  5.81E+07  8.72E+07  5.14E-04  120

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         0.9930  1.23E+04  1.05E+04  2.39E+04
2.89E+04  3.94E+04  4.47E+04  6.50E+04  1.43E-03  120
 POP. DECONTAMINATION (INDIVIDUALS)      0.9930  3.57E+04  1.46E+04  6.15E+04
1.44E+05  5.10E+05  5.81E+05  1.05E+06  1.83E-03  120
 FARM INTERDICTION (HECTARES)            0.9953  2.68E+04  2.10E+04  5.71E+04
7.11E+04  9.26E+04  1.05E+05  1.77E+05  4.00E-04  120
 POP. INTERDICTION (INDIVIDUALS)         0.9930  3.57E+04  1.46E+04  6.15E+04
1.44E+05  5.10E+05  5.81E+05  1.05E+06  1.83E-03  120
 FARM CONDEMNATION (HECTARES)            0.7188  3.14E+01  1.59E+01  9.04E+01
1.15E+02  1.84E+02 NOT-FOUND  1.95E+02  8.22E-03    9
 POP. CONDEMNATION (INDIVIDUALS)         0.6139  2.53E+01  2.59E+00  7.76E+01
1.17E+02  2.06E+02  2.83E+02  3.10E+02  1.51E-03    9
 MILK DISPOSAL AREA (HECTARES)           0.9875  2.03E+04  6.93E+03  5.35E+04
6.77E+04  9.19E+04  1.05E+05  1.77E+05  4.00E-04  120
 CROP DISPOSAL AREA (HECTARES)           0.9953  2.33E+04  1.22E+04  5.71E+04
7.11E+04  9.26E+04  1.05E+05  1.77E+05  4.00E-04  120
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Case 5DCH

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

FRACTION OF THE PEOPLE

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

11-APR-06 11:10:35 PAGE 33

		PROB			QUANTILES					
		PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.8807	5.52E-01	1.09E-01	1.76E+00	2.54E+00	4.29E+00	5.15E+00	6.66E+00	1.23E-03 45
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9150	2.33E+00	1.20E+00	6.02E+00	8.28E+00	1.28E+01	1.48E+01	2.00E+01	1.23E-03 45
ERL INJ/DIARRHEA	0-16.1 km	0.8870	1.19E+00	4.98E-01	3.39E+00	4.86E+00	7.27E+00	8.40E+00	1.19E+01	1.23E-03 45
ERL INJ/PNEUMONITIS	0-16.1 km	0.6696	1.23E-01	6.17E-03	3.65E-01	7.56E-01	1.22E+00	1.36E+00	1.97E+00	4.85E-04 89
ERL INJ/THYROIDITIS	0-16.1 km	0.8089	1.11E-01	2.41E-02	3.29E-01	5.01E-01	9.13E-01	1.04E+00	1.34E+00	4.28E-04 60
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9742	3.81E+00	3.05E+00	8.11E+00	1.02E+01	1.28E+01	1.42E+01	2.04E+01	4.28E-04 60
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9767	9.29E+01	9.05E+01	1.13E+02	1.20E+02	1.37E+02	1.46E+02	2.56E+02	3.18E-05 95
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9551	4.99E+01	4.64E+01	1.00E+02	1.08E+02	1.27E+02	1.36E+02	1.67E+02	6.56E-04 74
CAN FAT/TOTAL	0-16.1 km	1.0000	5.78E+01	5.00E+01	9.88E+01	1.11E+02	1.44E+02	1.61E+02	2.55E+02	2.76E-05 19
CAN FAT/LUNG	0-80.5 km	1.0000	3.66E+02	2.38E+02	7.56E+02	1.01E+03	1.19E+03	1.28E+03	1.81E+03	1.71E-04 105
CAN FAT/THYROID	0-80.5 km	1.0000	1.56E+02	1.00E+02	3.45E+02	5.08E+02	7.81E+02	8.66E+02	1.34E+03	1.71E-04 105
CAN FAT/BREAST	0-80.5 km	1.0000	2.58E+02	1.67E+02	5.45E+02	7.09E+02	1.12E+03	1.25E+03	1.46E+03	1.83E-03 120
CAN FAT/GI	0-80.5 km	1.0000	6.44E+02	4.22E+02	1.36E+03	1.83E+03	2.56E+03	2.89E+03	3.42E+03	1.83E-03 120
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.99E+02	1.32E+02	4.19E+02	5.54E+02	7.99E+02	8.76E+02	1.10E+03	1.83E-03 120
CAN FAT/BONE	0-80.5 km	1.0000	2.32E+01	1.52E+01	4.74E+01	6.59E+01	9.85E+01	1.05E+02	1.27E+02	3.74E-04 4
CAN FAT/OTHER	0-80.5 km	1.0000	8.68E+02	5.70E+02	1.77E+03	2.45E+03	3.36E+03	3.60E+03	5.13E+03	1.71E-04 105
CAN INJ/THYROID	0-80.5 km	1.0000	1.56E+03	1.00E+03	3.45E+03	5.08E+03	7.81E+03	8.66E+03	1.34E+04	1.71E-04 105

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 CAN INJ/BREAST                0-80.5 km  1.0000  8.12E+02  5.34E+02  1.67E+03
2.27E+03  3.50E+03  3.91E+03  4.59E+03  1.83E-03  120
 CAN FAT/TOTAL                 0-80.5 km  1.0000  2.51E+03  1.63E+03  5.13E+03
7.07E+03  1.04E+04  1.07E+04  1.29E+04  1.71E-04   44
 ERL FAT/TOTAL                 0-80.5 km  0.8807  5.52E-01  1.09E-01  1.76E+00
2.54E+00  4.29E+00  5.15E+00  6.66E+00  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.9150  2.49E+00  1.20E+00  6.25E+00
8.83E+00  1.46E+01  1.78E+01  7.87E+01  1.03E-03   84
 ERL INJ/DIARRHEA              0-80.5 km  0.8870  1.19E+00  4.98E-01  3.39E+00
4.86E+00  7.27E+00  8.40E+00  1.19E+01  1.23E-03   45
 ERL INJ/PNEUMONITIS           0-80.5 km  0.6696  1.23E-01  6.17E-03  3.65E-01
7.56E-01  1.22E+00  1.36E+00  1.97E+00  4.85E-04   89
 ERL INJ/THYROIDITIS           0-80.5 km  0.8089  1.11E-01  2.41E-02  3.29E-01
5.01E-01  9.13E-01  1.04E+00  1.34E+00  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.9742  2.89E+01  3.26E+00  7.18E+01
1.23E+02  4.74E+02  6.63E+02  1.24E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.9767  5.29E+03  2.22E+03  1.14E+04
1.80E+04  5.30E+04  6.78E+04  1.64E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.9551  5.01E+02  4.92E+01  8.13E+02
2.18E+03  7.05E+03  9.49E+03  4.68E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.8912  2.21E-01  2.01E-01  3.29E-01
3.55E-01  4.21E-01  4.53E-01  8.05E-01  2.00E-03   65

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.8807  2.78E+00  1.53E+00  7.21E+00
9.78E+00  1.53E+01  1.84E+01  2.57E+01  1.23E-03   45
11-APR-06  11:10:35    PAGE  34            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.6696  7.03E-01  1.06E-01  2.35E+00
3.32E+00  5.66E+00  7.19E+00  9.71E+00  1.23E-03   45
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9149  4.65E+01  1.41E+01  4.71E+01
6.16E+01  1.03E+03  1.35E+03  6.75E+03  6.56E-04   98
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9902  6.55E+03  3.49E+03  1.22E+04
3.10E+04  7.16E+04  8.03E+04  2.44E+05  1.71E-04  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km   0.8912  2.95E-03  2.93E-03  4.68E-03
5.18E-03  5.86E-03  6.18E-03  7.82E-03  2.85E-04   18
 ERL FAT/TOTAL               1.6-3.2 km   0.8100  6.06E-04  1.45E-04  2.01E-03
2.16E-03  2.58E-03  2.78E-03  3.66E-03  2.85E-04   19
 ERL FAT/TOTAL               3.2-4.8 km   0.5061  1.39E-04  3.06E-06  5.10E-04
9.06E-04  1.20E-03  1.31E-03  1.47E-03  2.00E-03  122
 ERL FAT/TOTAL               4.8-6.4 km   0.2390  4.68E-05  0.00E+00  7.60E-05
3.37E-04 NOT-FOUND NOT-FOUND  9.02E-04  1.12E-02   45
 ERL FAT/TOTAL               6.4-8.1 km   0.1774  9.61E-06  0.00E+00  1.07E-05
5.63E-05  2.48E-04 NOT-FOUND  3.12E-04  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  1.19E+03  1.03E+03  2.03E+03
2.42E+03  3.19E+03  3.38E+03  5.21E+03  2.76E-05   19
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  5.76E+04  3.73E+04  1.25E+05
1.78E+05  2.20E+05  2.31E+05  2.93E+05  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km   0.8807  6.95E-04  2.28E-04  2.18E-03
3.04E-03  4.10E-03  4.67E-03  6.63E-03  2.09E-05   19
 CAN FAT/TOTAL                 0-16.1 km  1.0000  9.82E-04  9.00E-04  1.24E-03
1.38E-03  1.77E-03  1.98E-03  2.49E-03  8.28E-04   50
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PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  2.36E+00  2.06E+00  4.47E+00
5.37E+00 NOT-FOUND NOT-FOUND  6.97E+00  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  8.70E-01  7.17E-01  1.71E+00
2.12E+00  2.77E+00 NOT-FOUND  3.05E+00  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  5.11E-01  3.90E-01  1.03E+00
1.15E+00  1.48E+00  1.66E+00  1.92E+00  2.00E-03  122
 L-EDEWBODY                  4.8-6.4 km  1.0000  4.05E-01  3.40E-01  7.91E-01
1.01E+00  1.18E+00 NOT-FOUND  1.24E+00  6.14E-03   36
 L-EDEWBODY                  6.4-8.1 km  1.0000  3.33E-01  2.91E-01  5.95E-01
7.23E-01  9.25E-01 NOT-FOUND  9.97E-01  6.14E-03   60
 L-EDEWBODY                  8.1-9.7 km  1.0000  2.75E-01  2.34E-01  4.42E-01
5.94E-01 NOT-FOUND NOT-FOUND  9.18E-01  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.75E-01  1.51E-01  2.49E-01
2.82E-01 NOT-FOUND NOT-FOUND  4.86E-01  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  6.84E-01  5.50E-01  1.22E+00
1.48E+00  2.46E+00 NOT-FOUND  2.69E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  3.20E-01  3.09E-01  4.57E-01
5.26E-01  6.76E-01 NOT-FOUND  9.29E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  2.30E-01  2.14E-01  3.00E-01
3.45E-01  4.78E-01 NOT-FOUND  5.23E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  1.78E-01  1.61E-01  2.38E-01
2.61E-01 NOT-FOUND NOT-FOUND  3.12E-01  1.45E-02  118
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  5 OF 11:
    Case 5DCH

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  35          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 CAN FAT/LUNG                    0-80.5 km  1.0000  1.48E+02  8.68E+01  3.24E+02
5.44E+02  7.39E+02  7.71E+02  9.30E+02  2.23E-04   29
 CAN FAT/THYROID                 0-80.5 km  1.0000  1.30E+02  7.59E+01  3.09E+02
4.67E+02  7.04E+02  7.47E+02  1.23E+03  1.71E-04  105
 CAN FAT/BREAST                  0-80.5 km  1.0000  7.73E+01  4.20E+01  1.64E+02
2.74E+02  5.21E+02  5.54E+02  7.12E+02  3.74E-04    4
 CAN FAT/GI                      0-80.5 km  1.0000  2.15E+02  1.20E+02  4.50E+02
7.71E+02  1.14E+03  1.24E+03  1.67E+03  3.74E-04    4
 CAN FAT/LEUKEMIA                0-80.5 km  1.0000  6.13E+01  3.34E+01  1.37E+02
2.17E+02  3.44E+02  3.77E+02  5.30E+02  3.74E-04    4
 CAN FAT/BONE                    0-80.5 km  1.0000  8.68E+00  5.08E+00  1.87E+01
3.18E+01  5.07E+01  5.42E+01  8.15E+01  3.74E-04    4
 CAN FAT/OTHER                   0-80.5 km  1.0000  4.15E+02  2.41E+02  9.58E+02
1.32E+03  2.14E+03  2.30E+03  3.17E+03  2.23E-04   29
 CAN INJ/THYROID                 0-80.5 km  1.0000  1.30E+03  7.59E+02  3.09E+03
4.67E+03  7.04E+03  7.47E+03  1.23E+04  1.71E-04  105
 CAN INJ/BREAST                  0-80.5 km  1.0000  2.43E+02  1.29E+02  4.76E+02
8.75E+02  1.26E+03  1.41E+03  2.24E+03  3.74E-04    4
 CAN FAT/TOTAL                   0-80.5 km  1.0000  1.06E+03  6.12E+02  2.26E+03
3.48E+03  6.11E+03  7.02E+03  7.38E+03  2.23E-04   29
 ERL FAT/TOTAL                   0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT         0-80.5 km  0.0080  1.52E-01  0.00E+00  0.00E+00
0.00E+00  0.00E+00  1.06E+01  7.37E+01  1.03E-03   84
 ERL INJ/DIARRHEA                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM          0-80.5 km  0.3025  2.51E+01  0.00E+00  6.51E+01
1.10E+02  4.74E+02  6.55E+02  1.23E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA           0-80.5 km  0.7021  5.20E+03  2.12E+03  1.12E+04
1.80E+04  5.30E+04  6.78E+04  1.64E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL          0-80.5 km  0.1855  4.51E+02  0.00E+00  7.51E+02
2.13E+03  6.88E+03  9.45E+03  4.67E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv            0.0170  2.65E+01  0.00E+00  0.00E+00
0.00E+00  9.17E+02  1.29E+03  6.68E+03  1.83E-03   65
 EARLY dose L-EDEWBODY > 0.250 Sv           0.7422  6.47E+03  3.43E+03  1.22E+04
3.10E+04  7.09E+04  7.60E+04  2.44E+05  1.71E-04  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                  3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                  4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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	PEAK	PEAK	PROB PEAK NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH

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     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  2.49E+04  1.40E+04  5.32E+04
8.81E+04  1.14E+05  1.22E+05  1.62E+05  2.23E-04   29

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 16.1-32.2 km  1.0000  5.53E-01  4.16E-01  1.14E+00
1.42E+00  2.46E+00 NOT-FOUND  2.69E+00  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km  1.0000  2.13E-01  1.86E-01  3.31E-01
4.05E-01  6.54E-01 NOT-FOUND  7.65E-01  8.02E-03  105
 L-EDEWBODY                 48.3-64.4 km  1.0000  1.55E-01  1.33E-01  2.24E-01
2.43E-01  2.92E-01 NOT-FOUND  3.98E-01  8.02E-03  105
 L-EDEWBODY                 64.4-80.5 km  1.0000  1.16E-01  1.03E-01  1.50E-01
1.77E-01  2.09E-01  2.15E-01  2.48E-01  1.43E-04  119
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  5 OF 11:
    Case 5DCH

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35    PAGE  37          PROB                              QUANTILES
                         PEAK      PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.8807  1.10E+01  2.20E+00  3.54E+01
5.17E+01  8.50E+01  1.03E+02  1.33E+02  1.23E-03   45
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 ERL INJ/PRODROMAL VOMIT      0-16.1 km  0.9150  4.67E+01  2.46E+01  1.17E+02
1.61E+02  2.54E+02  2.93E+02  4.00E+02  1.23E-03   45
 ERL INJ/DIARRHEA             0-16.1 km  0.8870  2.37E+01  9.95E+00  6.68E+01
9.72E+01  1.42E+02  1.66E+02  2.38E+02  1.23E-03   45
 ERL INJ/PNEUMONITIS          0-16.1 km  0.6696  2.47E+00  1.29E-01  7.47E+00
1.49E+01  2.95E+01  3.18E+01  3.94E+01  4.85E-04   89
 ERL INJ/THYROIDITIS          0-16.1 km  0.8089  2.22E+00  4.73E-01  6.91E+00
1.00E+01  1.77E+01  2.08E+01  2.68E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  0.9742  7.61E+01  5.90E+01  1.57E+02
2.08E+02  3.03E+02  3.23E+02  4.07E+02  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.9767  1.86E+03  1.70E+03  3.00E+03
3.13E+03  3.47E+03  3.63E+03  5.12E+03  3.18E-05   95
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.9551  9.98E+02  9.32E+02  2.01E+03
2.20E+03  2.72E+03  2.98E+03  3.34E+03  6.56E-04   74
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.76E+02  1.44E+02  3.21E+02
3.76E+02  5.36E+02  6.12E+02  7.31E+02  1.63E-03   50
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.75E+02  1.15E+02  3.66E+02
5.56E+02  7.46E+02  7.80E+02  9.51E+02  2.23E-04   29
 CAN FAT/THYROID              0-80.5 km  1.0000  1.54E+02  1.03E+02  3.29E+02
5.07E+02  7.09E+02  7.52E+02  1.25E+03  1.71E-04  105
 CAN FAT/BREAST               0-80.5 km  1.0000  8.15E+01  4.60E+01  1.67E+02
2.79E+02  5.21E+02  5.54E+02  7.17E+02  3.74E-04    4
 CAN FAT/GI                   0-80.5 km  1.0000  2.46E+02  1.55E+02  4.76E+02
7.87E+02  1.15E+03  1.25E+03  1.70E+03  3.74E-04    4
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  6.83E+01  4.15E+01  1.46E+02
2.22E+02  3.45E+02  3.77E+02  5.38E+02  3.74E-04    4
 CAN FAT/BONE                 0-80.5 km  1.0000  1.01E+01  6.53E+00  2.00E+01
3.27E+01  5.17E+01  5.51E+01  8.27E+01  3.74E-04    4
 CAN FAT/OTHER                0-80.5 km  1.0000  4.96E+02  3.31E+02  9.95E+02
1.38E+03  2.17E+03  2.33E+03  3.24E+03  2.23E-04   29
 CAN INJ/THYROID              0-80.5 km  1.0000  1.54E+03  1.03E+03  3.29E+03
5.07E+03  7.09E+03  7.52E+03  1.25E+04  1.71E-04  105
 CAN INJ/BREAST               0-80.5 km  1.0000  2.57E+02  1.51E+02  5.00E+02
8.91E+02  1.26E+03  1.41E+03  2.26E+03  3.74E-04    4
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.23E+03  7.98E+02  2.61E+03
3.71E+03  6.22E+03  7.03E+03  7.52E+03  2.23E-04   29
 ERL FAT/TOTAL                0-80.5 km  0.8807  1.10E+01  2.20E+00  3.54E+01
5.17E+01  8.50E+01  1.03E+02  1.33E+02  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9150  4.68E+01  2.46E+01  1.18E+02
1.62E+02  2.54E+02  2.93E+02  4.00E+02  1.23E-03   45
 ERL INJ/DIARRHEA             0-80.5 km  0.8870  2.37E+01  9.95E+00  6.68E+01
9.72E+01  1.42E+02  1.66E+02  2.38E+02  1.23E-03   45
 ERL INJ/PNEUMONITIS          0-80.5 km  0.6696  2.47E+00  1.29E-01  7.47E+00
1.49E+01  2.95E+01  3.18E+01  3.94E+01  4.85E-04   89
 ERL INJ/THYROIDITIS          0-80.5 km  0.8089  2.22E+00  4.73E-01  6.91E+00
1.00E+01  1.77E+01  2.08E+01  2.68E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9742  1.01E+02  6.12E+01  2.29E+02
3.14E+02  5.81E+02  7.05E+02  1.39E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9767  7.06E+03  4.14E+03  1.45E+04
2.27E+04  5.85E+04  6.86E+04  1.66E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9551  1.45E+03  9.78E+02  2.73E+03
4.11E+03  9.12E+03  1.46E+04  4.84E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8912  4.41E+00  3.67E+00  7.36E+00
7.77E+00  8.81E+00  9.31E+00  1.61E+01  2.00E-03   65

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8807  5.56E+01  3.08E+01  1.35E+02
1.95E+02  3.18E+02  3.73E+02  5.15E+02  1.23E-03   45
 EARLY dose A-LUNGS > 5.00 Sv             0.6696  1.41E+01  2.09E+00  4.74E+01
6.72E+01  1.09E+02  1.32E+02  1.94E+02  1.23E-03   45
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9149  4.27E+02  2.92E+02  9.41E+02
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1.19E+03  1.95E+03  2.33E+03  8.02E+03  6.56E-04   98
 EARLY dose L-EDEWBODY > 0.250 Sv        0.9902  8.09E+03  5.33E+03  1.50E+04
3.13E+04  7.16E+04  8.03E+04  2.45E+05  1.71E-04  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.8912  5.89E-02  6.00E-02  9.50E-02
1.04E-01  1.18E-01  1.25E-01  1.56E-01  2.85E-04   18
 ERL FAT/TOTAL               1.6-3.2 km  0.8100  1.21E-02  3.49E-03  3.62E-02
4.68E-02  5.55E-02  5.83E-02  7.31E-02  2.85E-04   19
 ERL FAT/TOTAL               3.2-4.8 km  0.5061  2.78E-03  5.23E-05  1.02E-02
1.79E-02  2.40E-02  2.62E-02  2.93E-02  2.00E-03  122
 ERL FAT/TOTAL               4.8-6.4 km  0.2390  9.37E-04  0.00E+00  1.32E-03
7.59E-03 NOT-FOUND NOT-FOUND  1.80E-02  1.12E-02   45
□11-APR-06  11:10:35    PAGE  38          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.1774  1.92E-04  0.00E+00  2.12E-04
1.12E-03  5.62E-03 NOT-FOUND  6.24E-03  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  3.25E+03  2.73E+03  6.10E+03
7.58E+03  1.05E+04  1.13E+04  1.43E+04  4.28E-04   60
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.82E+04  1.76E+04  5.73E+04
9.05E+04  1.15E+05  1.23E+05  1.64E+05  2.23E-04   29

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8807  1.39E-02  4.36E-03  4.40E-02
6.02E-02  8.45E-02  9.44E-02  1.33E-01  2.09E-05   19
 CAN FAT/TOTAL               0-16.1 km  1.0000  8.56E-03  7.53E-03  1.52E-02
1.96E-02  2.52E-02  2.79E-02  3.54E-02  1.63E-03   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  4.68E+01  4.06E+01  9.04E+01
1.07E+02 NOT-FOUND NOT-FOUND  1.39E+02  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  1.66E+01  1.33E+01  3.31E+01
4.05E+01  5.44E+01 NOT-FOUND  5.71E+01  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  9.19E+00  7.18E+00  2.09E+01
2.52E+01  3.29E+01  3.51E+01  3.83E+01  2.00E-03  122
 L-EDEWBODY                  4.8-6.4 km  1.0000  6.11E+00  4.44E+00  1.43E+01
2.02E+01  2.36E+01 NOT-FOUND  2.48E+01  6.14E-03   36
 L-EDEWBODY                  6.4-8.1 km  1.0000  4.23E+00  3.04E+00  1.01E+01
1.20E+01  1.77E+01 NOT-FOUND  1.99E+01  6.14E-03   60
 L-EDEWBODY                  8.1-9.7 km  1.0000  3.23E+00  2.12E+00  7.76E+00
1.07E+01  1.48E+01 NOT-FOUND  1.60E+01  6.93E-03   98
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.70E+00  1.19E+00  3.49E+00
5.12E+00  7.39E+00  7.80E+00  8.38E+00  2.00E-03   65
 L-EDEWBODY                16.1-32.2 km  1.0000  5.53E-01  4.16E-01  1.14E+00
1.42E+00  2.46E+00 NOT-FOUND  2.69E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  2.13E-01  1.86E-01  3.31E-01
4.05E-01  6.54E-01 NOT-FOUND  7.65E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  1.55E-01  1.33E-01  2.24E-01
2.43E-01  2.92E-01 NOT-FOUND  3.98E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  1.16E-01  1.03E-01  1.50E-01
1.77E-01  2.09E-01  2.15E-01  2.48E-01  1.43E-04  119
□  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model
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SOURCE TERM  5 OF 11:
    Case 5DCH

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model

11-APR-06  11:10:35     PAGE  39          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                    0-16.1 km  1.0000  4.90E+01  3.94E+01  8.79E+01
1.06E+02  1.40E+02  1.57E+02  2.48E+02  2.76E-05   19
 CAN FAT/LUNG                     0-80.5 km  1.0000  2.17E+02  1.49E+02  4.61E+02
5.58E+02  8.30E+02  1.02E+03  1.22E+03  1.83E-03  120
 CAN FAT/THYROID                  0-80.5 km  1.0000  2.49E+01  1.70E+01  5.40E+01
6.26E+01  1.02E+02  1.17E+02  1.41E+02  1.83E-03  120
 CAN FAT/BREAST                   0-80.5 km  1.0000  1.81E+02  1.21E+02  3.62E+02
4.38E+02  7.30E+02  8.30E+02  1.03E+03  1.83E-03  120
 CAN FAT/GI                       0-80.5 km  1.0000  4.27E+02  2.94E+02  9.09E+02
1.09E+03  1.47E+03  1.68E+03  2.38E+03  1.83E-03  120
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  1.37E+02  9.51E+01  3.00E+02
3.57E+02  5.25E+02  5.94E+02  7.72E+02  1.83E-03  120
 CAN FAT/BONE                     0-80.5 km  1.0000  1.45E+01  9.89E+00  3.13E+01
3.69E+01  5.28E+01  5.96E+01  8.09E+01  1.83E-03  120
 CAN FAT/OTHER                    0-80.5 km  1.0000  4.49E+02  3.08E+02  9.68E+02
1.16E+03  1.72E+03  2.04E+03  2.53E+03  1.83E-03  120
 CAN INJ/THYROID                  0-80.5 km  1.0000  2.49E+02  1.70E+02  5.40E+02
6.26E+02  1.02E+03  1.17E+03  1.41E+03  1.83E-03  120
 CAN INJ/BREAST                   0-80.5 km  1.0000  5.68E+02  3.85E+02  1.17E+03
1.41E+03  2.12E+03  2.44E+03  3.23E+03  1.83E-03  120
 CAN FAT/TOTAL                    0-80.5 km  1.0000  1.45E+03  9.93E+02  3.13E+03
3.68E+03  5.28E+03  5.96E+03  8.15E+03  1.83E-03  120

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF              0-16.1 km  1.0000  1.02E+03  8.48E+02  1.78E+03
2.23E+03  3.11E+03  3.29E+03  5.03E+03  2.76E-05   19
 L-EDEWBODY  TOT LIF              0-80.5 km  1.0000  3.25E+04  2.17E+04  7.07E+04
8.21E+04  1.19E+05  1.42E+05  1.83E+05  1.83E-03  120

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                    0-16.1 km  1.0000  5.54E-04  5.22E-04  9.64E-04
1.05E-03  1.20E-03  1.27E-03  1.96E-03  2.60E-05   47

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                        0-1.6 km  0.1352  1.99E-02  0.00E+00  1.04E-01
1.36E-01 NOT-FOUND NOT-FOUND  1.98E-01  1.93E-02    3
 L-EDEWBODY                      1.6-3.2 km  0.2689  3.83E-02  0.00E+00  1.22E-01
1.45E-01 NOT-FOUND NOT-FOUND  1.97E-01  1.45E-02  118
 L-EDEWBODY                      3.2-4.8 km  0.3478  5.16E-02  0.00E+00  1.13E-01
1.21E-01  1.44E-01  1.55E-01  2.00E-01  4.28E-04   17
 L-EDEWBODY                      4.8-6.4 km  0.6565  9.92E-02  1.04E-01  1.43E-01
1.64E-01 NOT-FOUND NOT-FOUND  2.00E-01  1.84E-02  120
 L-EDEWBODY                      6.4-8.1 km  0.8545  1.22E-01  1.06E-01  1.27E-01
1.38E-01  1.67E-01  1.81E-01  2.00E-01  5.14E-04   24
 L-EDEWBODY                      8.1-9.7 km  0.9009  1.14E-01  1.03E-01  1.16E-01
1.23E-01  1.40E-01  1.48E-01  2.00E-01  1.14E-04   34
 L-EDEWBODY                     9.7-16.1 km  0.9045  9.01E-02  9.27E-02  1.39E-01
1.60E-01 NOT-FOUND NOT-FOUND  1.98E-01  1.84E-02   86
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 L-EDEWBODY                    16.1-32.2 km  0.9593  1.30E-01  1.03E-01  1.20E-01
1.27E-01  1.47E-01  1.57E-01  1.99E-01  3.42E-04  110
 L-EDEWBODY                    32.2-48.3 km  1.0000  1.07E-01  1.03E-01  1.24E-01
1.34E-01  1.60E-01 NOT-FOUND  1.64E-01  8.02E-03  105
 L-EDEWBODY                    48.3-64.4 km  1.0000  7.47E-02  7.16E-02  1.06E-01
1.14E-01  1.36E-01 NOT-FOUND  1.39E-01  8.02E-03   44
 L-EDEWBODY                    64.4-80.5 km  1.0000  6.29E-02  5.90E-02  1.02E-01
1.07E-01 NOT-FOUND NOT-FOUND  1.15E-01  1.84E-02  120

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE                1.0000  3.25E+04  2.17E+04  7.07E+04
8.21E+04  1.19E+05  1.42E+05  1.83E+05  1.83E-03  120
 LONG-TERM DIRECT EXPOSURE PATHWAYS           1.0000  2.82E+04  1.89E+04  6.10E+04
7.49E+04  1.07E+05  1.20E+05  1.43E+05  1.83E-03  120
 TOTAL INGESTION PATHWAYS DOSE                1.0000  1.09E+03  9.52E+02  1.94E+03
2.33E+03  3.13E+03  3.30E+03  4.91E+03  2.76E-05   19
 LONG-TERM GROUNDSHINE DOSE                   1.0000  2.80E+04  1.88E+04  6.09E+04
7.49E+04  1.06E+05  1.20E+05  1.43E+05  1.83E-03  120
 LONG-TERM RESUSPENSION DOSE                  1.0000  2.06E+02  1.37E+02  4.71E+02
5.89E+02  7.68E+02  8.19E+02  9.40E+02  1.14E-03    3
 WATER INGESTION DOSE                         1.0000  8.69E+02  7.17E+02  1.67E+03
2.15E+03  3.05E+03  3.22E+03  4.80E+03  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE          1.0000  3.09E+03  1.53E+03  7.92E+03
1.13E+04  2.08E+04  2.46E+04  3.95E+04  1.71E-04   44
011-APR-06  11:10:35    PAGE  40          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE          1.0000  8.80E+01  7.71E+01  1.48E+02
1.86E+02  2.57E+02  2.92E+02  3.47E+02  4.00E-04  120
 INGESTION OF GRAINS                          1.0000  5.38E+00  4.21E+00  9.51E+00
1.27E+01  2.16E+01  2.42E+01  3.49E+01  2.57E-04   36
 INGESTION OF LEAF VEG                        1.0000  1.62E+01  1.32E+01  2.68E+01
3.14E+01  3.89E+01  4.26E+01  6.72E+01  2.57E-04   36
 INGESTION OF ROOT CROPS                      1.0000  1.02E+01  8.80E+00  1.70E+01
2.13E+01  3.10E+01  3.38E+01  4.90E+01  2.57E-04   36
 INGESTION OF FRUITS                          1.0000  4.08E+01  3.53E+01  6.75E+01
7.68E+01  9.98E+01  1.05E+02  1.16E+02  1.43E-03  120
 INGESTION OF LEGUMES                         1.0000  1.85E+01  1.59E+01  3.04E+01
3.35E+01  4.21E+01  4.65E+01  5.33E+01  1.43E-03  120
 INGESTION OF BEEF                            1.0000  6.03E+01  2.76E+01  1.55E+02
2.30E+02  3.58E+02  4.08E+02  4.64E+02  2.54E-03   90
 INGESTION OF MILK                            1.0000  4.60E+01  1.97E+01  1.19E+02
1.48E+02  2.18E+02  2.38E+02  3.14E+02  5.71E-05   85
 INGESTION OF POULTRY                         1.0000  1.43E+01  1.07E+01  2.93E+01
3.40E+01  4.67E+01  5.29E+01  8.03E+01  2.57E-04   36
 INGESTION OF OTHER MEAT CROPS                1.0000  1.03E+01  1.53E+00  3.58E+01
4.66E+01  6.66E+01  7.23E+01  1.02E+02  5.71E-05   85

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                         1.0000  9.37E+09  5.46E+09  2.23E+10
3.11E+10  3.94E+10  4.37E+10  6.30E+10  1.71E-04   44
 POP.-DEPENDENT COSTS                         1.0000  9.08E+09  5.11E+09  2.21E+10
3.11E+10  3.94E+10  4.37E+10  6.28E+10  1.71E-04   44
 FARM-DEPENDENT COSTS                         1.0000  2.92E+08  2.65E+08  4.34E+08
5.06E+08  5.75E+08  6.08E+08  7.71E+08  2.49E-05   33
 POP.-DEPENDENT DECONTAMINATION COST          1.0000  2.14E+09  1.16E+09  4.62E+09
9.03E+09  1.07E+10  1.11E+10  1.16E+10  1.83E-03  120
 FARM-DEPENDENT DECONTAMINATION COST          1.0000  7.66E+07  7.13E+07  1.11E+08
1.23E+08  1.54E+08  1.70E+08  2.21E+08  4.00E-04  120
 POP.-DEPENDENT INTERDICTION COST             1.0000  6.56E+09  3.64E+09  1.66E+10
2.12E+10  2.64E+10  2.91E+10  5.26E+10  1.71E-04   44
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 FARM-DEPENDENT INTERDICTION COST        1.0000  1.58E+08  1.30E+08  2.46E+08
2.90E+08  3.41E+08  3.62E+08  4.84E+08  1.71E-04  109
 POP.-DEPENDENT CONDEMNATION COST        0.9631  3.52E+08  1.59E+08  7.79E+08
1.19E+09  5.10E+09  5.42E+09  6.85E+09  3.17E-04    4
 FARM-DEPENDENT CONDEMNATION COST        0.9666  1.07E+07  7.69E+06  2.61E+07
3.41E+07  4.98E+07  5.06E+07  5.57E+07  1.99E-05  110
 EMERGENCY PHASE COST                    0.9976  1.93E+07  8.25E+06  4.93E+07
7.26E+07  2.02E+08  2.12E+08  2.72E+08  1.71E-04  105
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      1.0000  1.81E+06  1.41E+06  4.00E+06
5.07E+06  5.76E+06  6.09E+06  7.50E+06  6.51E-04   33
 CROP DISPOSAL COST                      1.0000  4.51E+07  4.97E+07  7.06E+07
7.45E+07  8.45E+07  8.92E+07  1.22E+08  1.96E-04   33

AFFECTED AREA/POPULATION       0-80.5 km
 FARM DECONTAMINATION (HECTARES)         1.0000  6.82E+04  6.28E+04  1.05E+05
1.15E+05  1.42E+05  1.56E+05  1.88E+05  1.26E-03   57
 POP. DECONTAMINATION (INDIVIDUALS)      1.0000  3.17E+05  1.88E+05  1.00E+06
1.06E+06  1.20E+06  1.26E+06  1.34E+06  2.28E-03   57
 FARM INTERDICTION (HECTARES)            1.0000  9.64E+04  8.92E+04  1.24E+05
1.38E+05  1.77E+05  1.97E+05  2.68E+05  1.71E-04  109
 POP. INTERDICTION (INDIVIDUALS)         1.0000  3.17E+05  1.88E+05  1.00E+06
1.06E+06  1.20E+06  1.26E+06  1.34E+06  2.28E-03   57
 FARM CONDEMNATION (HECTARES)            0.9666  1.53E+03  1.09E+03  3.76E+03
5.43E+03  7.15E+03  7.32E+03  8.87E+03  1.99E-05  110
 POP. CONDEMNATION (INDIVIDUALS)         0.9631  2.55E+03  1.18E+03  4.97E+03
9.20E+03  3.10E+04  3.40E+04  4.93E+04  3.17E-04    4
 MILK DISPOSAL AREA (HECTARES)           1.0000  9.84E+04  9.05E+04  1.24E+05
1.38E+05  1.77E+05  1.97E+05  2.68E+05  1.96E-04   33
 CROP DISPOSAL AREA (HECTARES)           1.0000  9.79E+04  8.97E+04  1.24E+05
1.38E+05  1.77E+05  1.97E+05  2.68E+05  1.96E-04   33
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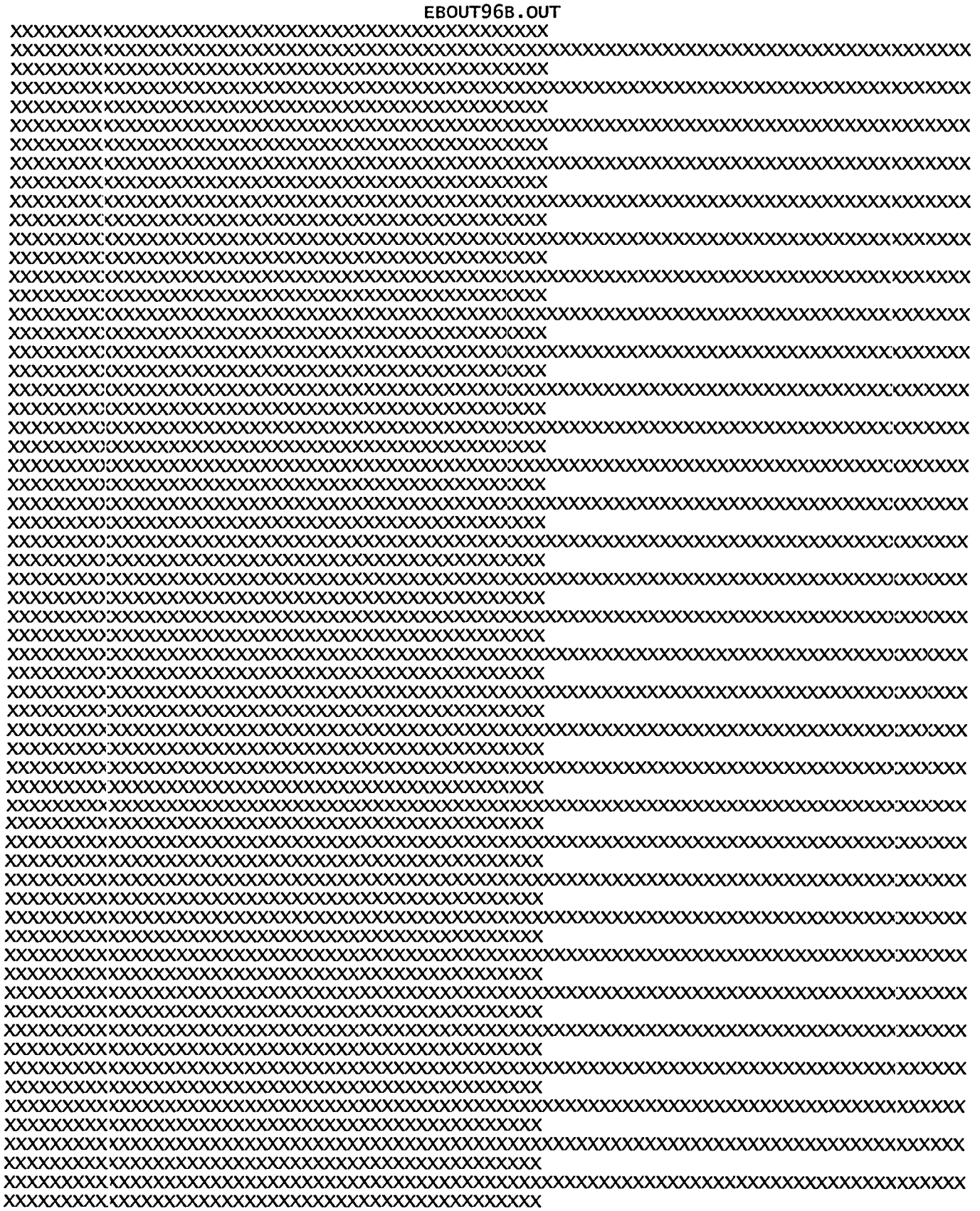

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     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.8861  8.87E-01  2.17E-01  2.80E+00
3.69E+00  6.28E+00  7.64E+00  1.11E+01  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.9205  3.65E+00  1.83E+00  9.62E+00
1.27E+01  2.10E+01  2.27E+01  3.29E+01  4.28E-04   60
 ERL INJ/DIARRHEA              0-16.1 km  0.9020  1.75E+00  7.68E-01  4.95E+00
6.81E+00  1.05E+01  1.17E+01  1.75E+01  4.28E-04   60
 ERL INJ/PNEUMONITIS           0-16.1 km  0.7479  2.07E-01  1.71E-02  7.16E-01
1.16E+00  2.08E+00  2.26E+00  2.95E+00  4.85E-04   89
 ERL INJ/THYROIDITIS           0-16.1 km  0.7485  8.24E-02  1.05E-02  2.33E-01
3.98E-01  9.43E-01  1.06E+00  1.42E+00  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9740  1.46E+01  8.94E+00  3.53E+01
4.97E+01  7.83E+01  8.86E+01  1.12E+02  1.31E-03   84
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9767  6.17E+02  4.90E+02  1.22E+03
1.51E+03  2.03E+03  2.07E+03  2.12E+03  1.63E-03   13
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.9550  1.75E+02  1.17E+02  3.91E+02
5.39E+02  8.75E+02  1.11E+03  1.80E+03  1.31E-03   84
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.95E+02  1.59E+02  3.31E+02
3.93E+02  5.29E+02  5.61E+02  6.46E+02  9.42E-04   98
 CAN FAT/LUNG                  0-80.5 km  1.0000  8.23E+02  5.46E+02  1.77E+03
2.45E+03  3.41E+03  3.69E+03  6.24E+03  1.71E-04  105
 CAN FAT/THYROID               0-80.5 km  1.0000  1.27E+02  8.22E+01  2.69E+02
3.78E+02  5.98E+02  6.77E+02  9.88E+02  1.71E-04  105
 CAN FAT/BREAST                0-80.5 km  1.0000  3.31E+02  2.27E+02  6.48E+02
1.01E+03  1.35E+03  1.53E+03  1.83E+03  1.83E-03  120
 CAN FAT/GI                    0-80.5 km  1.0000  8.92E+02  6.13E+02  1.71E+03
2.49E+03  3.33E+03  3.51E+03  4.54E+03  1.71E-04   44
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  2.96E+02  2.08E+02  5.83E+02
8.22E+02  1.11E+03  1.18E+03  1.57E+03  1.71E-04   44
 CAN FAT/BONE                  0-80.5 km  1.0000  7.64E+01  5.19E+01  1.68E+02
2.47E+02  3.38E+02  3.61E+02  5.71E+02  1.71E-04  105
 CAN FAT/OTHER                 0-80.5 km  1.0000  1.11E+03  7.63E+02  2.17E+03
3.09E+03  4.13E+03  4.68E+03  6.70E+03  1.71E-04  105
 CAN INJ/THYROID               0-80.5 km  1.0000  1.27E+03  8.22E+02  2.69E+03
3.78E+03  5.98E+03  6.77E+03  9.88E+03  1.71E-04  105
 CAN INJ/BREAST                0-80.5 km  1.0000  1.04E+03  6.91E+02  2.14E+03
3.10E+03  4.19E+03  4.77E+03  5.76E+03  1.83E-03  120
 CAN FAT/TOTAL                 0-80.5 km  1.0000  3.65E+03  2.44E+03  6.90E+03
1.02E+04  1.27E+04  1.39E+04  2.18E+04  1.71E-04  105
 ERL FAT/TOTAL                 0-80.5 km  0.8861  8.87E-01  2.17E-01  2.80E+00
3.69E+00  6.28E+00  7.64E+00  1.11E+01  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.9205  4.07E+00  1.83E+00  1.00E+01
1.42E+01  2.86E+01  3.57E+01  1.48E+02  1.03E-03   84
 ERL INJ/DIARRHEA              0-80.5 km  0.9020  1.75E+00  7.68E-01  4.95E+00
6.81E+00  1.05E+01  1.17E+01  1.75E+01  4.28E-04   60
 ERL INJ/PNEUMONITIS           0-80.5 km  0.7479  2.07E-01  1.71E-02  7.16E-01
1.16E+00  2.08E+00  2.26E+00  2.95E+00  4.85E-04   89
 ERL INJ/THYROIDITIS           0-80.5 km  0.7485  8.24E-02  1.05E-02  2.33E-01
3.98E-01  9.43E-01  1.06E+00  1.42E+00  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.9740  3.08E+01  9.16E+00  8.05E+01
1.28E+02  3.46E+02  4.73E+02  1.03E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.9767  5.47E+03  2.25E+03  1.18E+04
1.74E+04  5.81E+04  6.85E+04  1.64E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.9550  5.77E+02  1.21E+02  1.07E+03
2.02E+03  8.04E+03  1.37E+04  4.80E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000              0.8912  6.94E-01  2.31E-01  2.10E+00
2.25E+00 NOT-FOUND NOT-FOUND  2.33E+00  3.52E-02   36

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv         0.8861  4.27E+00  2.52E+00  1.08E+01
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1.53E+01  2.40E+01  2.70E+01  3.55E+01  4.28E-04   60
□11-APR-06  11:10:35     PAGE  42                                                  QUANTILES
                                  PEAK        PEAK  PEAK
                                                     NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS        PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv                0.7479  1.10E+00  1.84E-01  3.35E+00
4.74E+00  8.97E+00  1.12E+01  1.74E+01  1.23E-03   45
 EARLY dose L-EDEWBODY > 2.00 Sv             0.9153  1.74E+02  6.48E+01  2.75E+02
4.21E+02  2.14E+03  4.12E+03  2.10E+04  1.03E-03   84
 EARLY dose L-EDEWBODY > 0.250 Sv            0.9902  8.66E+03  5.25E+03  1.65E+04
3.32E+04  7.69E+04  8.78E+04  2.45E+05  1.71E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.8912  3.99E-03  3.56E-03  6.68E-03
8.59E-03 NOT-FOUND NOT-FOUND  1.31E-02  1.12E-02    9
 ERL FAT/TOTAL                 1.6-3.2 km  0.8155  8.57E-04  3.73E-04  2.23E-03
2.53E-03  3.15E-03  3.32E-03  4.11E-03  2.85E-04   19
 ERL FAT/TOTAL                 3.2-4.8 km  0.6246  2.43E-04  1.49E-05  1.02E-03
1.11E-03  1.37E-03  1.50E-03  1.68E-03  2.00E-03  122
 ERL FAT/TOTAL                 4.8-6.4 km  0.3341  9.13E-05  0.00E+00  2.20E-04
7.35E-04 NOT-FOUND NOT-FOUND  1.45E-03  1.12E-02   45
 ERL FAT/TOTAL                 6.4-8.1 km  0.2107  2.55E-05  0.00E+00  4.43E-05
1.49E-04  5.68E-04 NOT-FOUND  6.35E-04  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  3.12E+03  2.71E+03  5.26E+03
6.44E+03  8.20E+03  8.92E+03  1.23E+04  2.76E-05   19
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  7.27E+04  4.79E+04  1.58E+05
2.10E+05  3.06E+05  3.19E+05  3.92E+05  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.8861  9.84E-04  4.16E-04  2.94E-03
3.60E-03  5.14E-03  5.38E-03  7.46E-03  2.09E-05   19
 CAN FAT/TOTAL                 0-16.1 km  1.0000  5.22E-03  4.13E-03  9.78E-03
1.14E-02  1.58E-02  1.82E-02  2.51E-02  1.31E-03   84

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  1.36E+01  1.06E+01  2.70E+01
3.17E+01 NOT-FOUND NOT-FOUND  3.92E+01  1.12E-02    9
 L-EDEWBODY                    1.6-3.2 km  1.0000  5.30E+00  4.41E+00  1.03E+01
1.18E+01  1.62E+01 NOT-FOUND  1.78E+01  6.14E-03   89
 L-EDEWBODY                    3.2-4.8 km  1.0000  3.00E+00  2.31E+00  6.26E+00
8.20E+00  1.05E+01 NOT-FOUND  1.08E+01  6.14E-03   60
 L-EDEWBODY                    4.8-6.4 km  1.0000  1.97E+00  1.47E+00  3.99E+00
5.20E+00  7.09E+00 NOT-FOUND  7.25E+00  6.14E-03   60
 L-EDEWBODY                    6.4-8.1 km  1.0000  1.34E+00  1.10E+00  2.68E+00
3.28E+00  4.62E+00 NOT-FOUND  5.35E+00  6.93E-03   98
 L-EDEWBODY                    8.1-9.7 km  1.0000  1.01E+00  8.10E-01  2.04E+00
2.52E+00  3.74E+00 NOT-FOUND  4.04E+00  6.93E-03   98
 L-EDEWBODY                   9.7-16.1 km  1.0000  5.79E-01  5.17E-01  1.06E+00
1.26E+00  1.89E+00 NOT-FOUND  2.33E+00  8.02E-03   84
 L-EDEWBODY                  16.1-32.2 km  1.0000  7.02E-01  5.56E-01  1.26E+00
1.58E+00  2.75E+00 NOT-FOUND  2.98E+00  8.02E-03   84
 L-EDEWBODY                  32.2-48.3 km  1.0000  3.77E-01  3.44E-01  5.62E-01
6.53E-01  8.26E-01 NOT-FOUND  8.49E-01  8.02E-03  105
 L-EDEWBODY                  48.3-64.4 km  1.0000  2.59E-01  2.35E-01  3.56E-01
4.05E-01  5.83E-01 NOT-FOUND  6.26E-01  8.02E-03  105
 L-EDEWBODY                  64.4-80.5 km  1.0000  2.21E-01  2.13E-01  3.13E-01
3.29E-01 NOT-FOUND NOT-FOUND  3.55E-01  1.84E-02   14
□  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input
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"EARLY" DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1 EARLY input

SOURCE TERM 6 OF 11:
Case 6EVE

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

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE

11-APR-06 11:10:35 PAGE 43

		PEAK CONS	PROB PEAK	NON-ZERO PROB	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.1013	7.89E-03	0.00E+00	1.12E-03	3.26E-02	2.14E-01	2.50E-01	4.03E-01	1.60E-03 9
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.5350	5.31E-01	2.48E-02	1.64E+00	2.97E+00	6.28E+00	7.17E+00	9.09E+00	2.28E-04 60
ERL INJ/DIARRHEA	0-16.1 km	0.2523	9.63E-02	0.00E+00	2.79E-01	5.96E-01	1.44E+00	1.90E+00	3.05E+00	2.28E-04 89
ERL INJ/PNEUMONITIS	0-16.1 km	0.0484	1.58E-03	0.00E+00	0.00E+00	0.00E+00	5.67E-02	7.48E-02	1.33E-01	1.60E-03 9
ERL INJ/THYROIDITIS	0-16.1 km	0.1371	1.72E-02	0.00E+00	3.82E-02	1.01E-01	3.52E-01	4.54E-01	7.66E-01	2.28E-04 89
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9086	1.23E+01	6.93E+00	3.26E+01	4.56E+01	7.33E+01	8.15E+01	1.09E+02	1.31E-03 84
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9491	5.53E+02	4.02E+02	1.18E+03	1.46E+03	2.02E+03	2.04E+03	2.08E+03	1.63E-03 13
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9036	1.34E+02	7.94E+01	3.19E+02	4.61E+02	8.31E+02	1.07E+03	1.78E+03	1.31E-03 84
CAN FAT/TOTAL	0-16.1 km	1.0000	8.50E+01	6.79E+01	1.75E+02	2.29E+02	3.43E+02	3.90E+02	5.10E+02	1.31E-03 84
CAN FAT/LUNG	0-80.5 km	1.0000	5.17E+02	3.13E+02	1.14E+03	1.66E+03	2.72E+03	3.12E+03	4.81E+03	1.71E-04 105
CAN FAT/THYROID	0-80.5 km	1.0000	9.37E+01	5.84E+01	2.20E+02	3.14E+02	4.62E+02	5.17E+02	8.24E+02	1.71E-04 105
CAN FAT/BREAST	0-80.5 km	1.0000	8.97E+01	5.16E+01	1.91E+02	3.16E+02	5.04E+02	5.29E+02	7.75E+02	4.59E-05 41
CAN FAT/GI	0-80.5 km	1.0000	3.06E+02	1.89E+02	6.79E+02	1.01E+03	1.14E+03	1.20E+03	1.92E+03	8.35E-06 103
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.02E+02	6.32E+01	2.23E+02	3.20E+02	4.81E+02	5.09E+02	6.30E+02	8.35E-06 103
CAN FAT/BONE	0-80.5 km	1.0000	5.33E+01	3.13E+01	1.16E+02	1.84E+02	2.89E+02	3.19E+02	4.75E+02	1.71E-04 105
CAN FAT/OTHER	0-80.5 km	1.0000	4.89E+02	3.10E+02	1.09E+03	1.50E+03	2.27E+03	2.48E+03	3.74E+03	1.71E-04 105
CAN INJ/THYROID	0-80.5 km	1.0000	9.37E+02	5.84E+02	2.20E+03	3.14E+03	4.62E+03	5.17E+03	8.24E+03	1.71E-04 105
CAN INJ/BREAST	0-80.5 km	1.0000	2.82E+02	1.54E+02	6.11E+02	1.02E+03	1.48E+03	1.74E+03	2.44E+03	4.59E-05 41
CAN FAT/TOTAL	0-80.5 km	1.0000	1.65E+03	1.05E+03	3.87E+03	5.57E+03	7.45E+03	7.84E+03	1.23E+04	1.71E-04 105
ERL FAT/TOTAL	0-80.5 km	0.1013	7.89E-03	0.00E+00	1.12E-03	3.26E-02	2.14E-01	2.50E-01	4.03E-01	1.60E-03 9
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.5350	9.53E-01	2.48E-02	1.66E+00	3.26E+00	1.51E+01	2.59E+01	1.41E+02	1.03E-03 84
ERL INJ/DIARRHEA	0-80.5 km	0.2523	9.63E-02	0.00E+00	2.79E-01	5.96E-01	1.44E+00	1.90E+00	3.05E+00	2.28E-04 89
ERL INJ/PNEUMONITIS	0-80.5 km	0.0484	1.58E-03	0.00E+00	0.00E+00					

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0.00E+00  5.67E-02  7.48E-02  1.33E-01  1.60E-03    9
 ERL INJ/THYROIDITIS          0-80.5 km  0.1371  1.72E-02  0.00E+00  3.82E-02
1.01E-01  3.52E-01  4.54E-01  7.66E-01  2.28E-04   89
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9086  2.84E+01  7.19E+00  7.62E+01
1.17E+02  3.43E+02  4.73E+02  1.03E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9491  5.40E+03  2.19E+03  1.17E+04
1.74E+04  5.81E+04  6.85E+04  1.64E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9036  5.36E+02  8.16E+01  1.02E+03
2.02E+03  7.90E+03  1.37E+04  4.79E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.2867  4.62E-01  0.00E+00 NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  1.61E+00  2.87E-01    6

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.1013  1.42E-01  0.00E+00  2.05E-01
1.31E+00  2.80E+00 NOT-FOUND  3.00E+00  7.75E-03    9
 EARLY dose A-LUNGS > 5.00 Sv             0.0484  5.90E-02  0.00E+00  0.00E+00
0.00E+00  1.66E+00  2.19E+00  3.00E+00  1.60E-03    9
 EARLY dose L-EDEWBODY > 2.00 Sv          0.8623  1.57E+02  4.88E+01  2.46E+02
3.96E+02  2.14E+03  4.12E+03  2.10E+04  1.03E-03   84
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9567  8.62E+03  5.23E+03  1.65E+04
3.32E+04  7.69E+04  8.78E+04  2.45E+05  1.71E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.2867  6.47E-04  0.00E+00  2.23E-03
4.52E-03 NOT-FOUND NOT-FOUND  8.40E-03  1.12E-02    9
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  44          PROB                          QUANTILES
                         PEAK       PEAK  PEAK
                                      NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  9.79E+02  7.74E+02  1.95E+03
2.52E+03  3.60E+03  4.02E+03  5.65E+03  1.31E-03   84
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.82E+04  1.64E+04  6.17E+04
1.00E+05  1.11E+05  1.16E+05  1.74E+05  8.35E-06  103

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.1013  1.65E-05  0.00E+00  3.10E-06
7.26E-05  4.34E-04  5.56E-04  8.43E-04  1.60E-03    9
 CAN FAT/TOTAL               0-16.1 km  1.0000  4.12E-03  3.23E-03  8.49E-03
1.08E-02  1.55E-02  1.80E-02  2.47E-02  1.31E-03   84

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.17E+01  1.01E+01  2.24E+01
2.71E+01 NOT-FOUND NOT-FOUND  3.32E+01  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  4.59E+00  3.69E+00  9.71E+00
1.11E+01  1.43E+01 NOT-FOUND  1.55E+01  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  2.61E+00  2.10E+00  5.42E+00
6.81E+00  8.78E+00 NOT-FOUND  9.45E+00  6.14E-03   60
 L-EDEWBODY                  4.8-6.4 km  0.9960  1.66E+00  1.31E+00  3.32E+00
4.76E+00  6.03E+00 NOT-FOUND  6.31E+00  6.93E-03   98
 L-EDEWBODY                  6.4-8.1 km  0.9914  1.10E+00  8.53E-01  1.98E+00
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3.18E+00  4.37E+00 NOT-FOUND  4.69E+00  6.93E-03   98
 L-EDEWBODY                  8.1-9.7 km  0.9888  7.73E-01  6.12E-01  1.71E+00
2.30E+00  3.22E+00 NOT-FOUND  3.33E+00  6.93E-03   98
 L-EDEWBODY                 9.7-16.1 km  0.9376  3.86E-01  3.32E-01  8.78E-01
1.18E+00  1.88E+00 NOT-FOUND  2.20E+00  8.02E-03   84
 L-EDEWBODY                16.1-32.2 km  1.0000  6.11E-01  4.53E-01  1.23E+00
1.56E+00  2.75E+00 NOT-FOUND  2.98E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  2.35E-01  2.11E-01  3.71E-01
4.75E-01  6.70E-01 NOT-FOUND  8.49E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  1.51E-01  1.26E-01  2.23E-01
2.49E-01  3.93E-01 NOT-FOUND  4.45E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  1.33E-01  1.17E-01  2.03E-01
2.09E-01  2.23E-01  2.30E-01  2.39E-01  2.00E-03  122
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  6 OF 11:
    Case 6EVE

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35     PAGE  45          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.8861  1.76E+01  4.41E+00  5.50E+01
7.38E+01  1.23E+02  1.49E+02  2.19E+02  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.9205  6.29E+01  3.63E+01  1.58E+02
2.23E+02  3.31E+02  3.62E+02  4.96E+02  4.28E-04   60
 ERL INJ/DIARRHEA              0-16.1 km  0.9020  3.32E+01  1.53E+01  9.02E+01
1.18E+02  1.95E+02  2.31E+02  3.09E+02  1.23E-03   45
 ERL INJ/PNEUMONITIS           0-16.1 km  0.7479  4.11E+00  3.73E-01  1.34E+01
2.41E+01  3.76E+01  4.28E+01  5.89E+01  4.85E-04   89
 ERL INJ/THYROIDITIS           0-16.1 km  0.7485  1.32E+00  2.10E-01  4.12E+00
6.51E+00  1.11E+01  1.22E+01  1.74E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9740  5.92E+01  4.44E+01  1.22E+02
1.59E+02  2.20E+02  2.36E+02  3.32E+02  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9767  1.84E+03  1.66E+03  2.99E+03
3.13E+03  3.47E+03  3.62E+03  4.98E+03  3.18E-05   95
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.9550  9.57E+02  8.55E+02  1.93E+03
2.15E+03  2.61E+03  2.84E+03  3.27E+03  8.56E-05   88
 CAN FAT/TOTAL                 0-16.1 km  1.0000  2.76E+02  2.43E+02  5.11E+02
5.94E+02  8.01E+02  8.94E+02  1.15E+03  1.63E-03   50
 CAN FAT/LUNG                  0-80.5 km  1.0000  5.79E+02  3.69E+02  1.17E+03
1.77E+03  2.87E+03  3.20E+03  4.84E+03  1.71E-04  105
 CAN FAT/THYROID               0-80.5 km  1.0000  1.04E+02  7.09E+01  2.31E+02
3.26E+02  4.84E+02  5.25E+02  8.27E+02  1.71E-04  105
 CAN FAT/BREAST                0-80.5 km  1.0000  9.41E+01  5.53E+01  1.95E+02
3.16E+02  5.04E+02  5.29E+02  7.79E+02  4.59E-05   41
 CAN FAT/GI                    0-80.5 km  1.0000  3.43E+02  2.29E+02  6.99E+02
1.01E+03  1.14E+03  1.20E+03  1.95E+03  8.35E-06  103
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.14E+02  7.69E+01  2.48E+02
3.30E+02  4.82E+02  5.10E+02  6.41E+02  8.35E-06  103
 CAN FAT/BONE                  0-80.5 km  1.0000  5.93E+01  3.69E+01  1.23E+02
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1.95E+02  3.01E+02  3.25E+02  4.77E+02  1.71E-04  105
 CAN FAT/OTHER                0-80.5 km  1.0000  5.48E+02  3.65E+02  1.12E+03
1.52E+03  2.27E+03  2.48E+03  3.76E+03  1.71E-04  105
 CAN INJ/THYROID              0-80.5 km  1.0000  1.04E+03  7.09E+02  2.31E+03
3.26E+03  4.84E+03  5.25E+03  8.27E+03  1.71E-04  105
 CAN INJ/BREAST               0-80.5 km  1.0000  2.96E+02  1.71E+02  6.27E+02
1.03E+03  1.49E+03  1.74E+03  2.45E+03  4.59E-05   41
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.84E+03  1.21E+03  4.13E+03
5.66E+03  7.74E+03  8.35E+03  1.24E+04  1.71E-04  105
 ERL FAT/TOTAL                0-80.5 km  0.8861  1.76E+01  4.41E+00  5.50E+01
7.38E+01  1.23E+02  1.49E+02  2.19E+02  1.23E-03   45
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9205  6.33E+01  3.63E+01  1.61E+02
2.26E+02  3.32E+02  3.62E+02  4.96E+02  4.28E-04   60
 ERL INJ/DIARRHEA             0-80.5 km  0.9020  3.32E+01  1.53E+01  9.02E+01
1.18E+02  1.95E+02  2.31E+02  3.09E+02  1.23E-03   45
 ERL INJ/PNEUMONITIS          0-80.5 km  0.7479  4.11E+00  3.73E-01  1.34E+01
2.41E+01  3.76E+01  4.28E+01  5.89E+01  4.85E-04   89
 ERL INJ/THYROIDITIS          0-80.5 km  0.7485  1.32E+00  2.10E-01  4.12E+00
6.51E+00  1.11E+01  1.22E+01  1.74E+01  4.28E-04   60
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9740  7.54E+01  4.54E+01  1.70E+02
2.43E+02  4.13E+02  5.06E+02  1.07E+03  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9767  6.69E+03  3.86E+03  1.37E+04
2.07E+04  5.82E+04  6.85E+04  1.64E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9550  1.36E+03  8.84E+02  2.58E+03
3.74E+03  8.81E+03  1.46E+04  4.82E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8912  5.11E+00  3.97E+00  8.12E+00
9.33E+00 NOT-FOUND NOT-FOUND  1.61E+01  3.52E-02   36

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8861  8.27E+01  5.08E+01  2.07E+02
2.97E+02  4.69E+02  5.24E+02  6.71E+02  4.28E-04   60
 EARLY dose A-LUNGS > 5.00 Sv             0.7479  2.09E+01  3.55E+00  6.70E+01
8.76E+01  1.50E+02  1.88E+02  3.20E+02  1.23E-03   45
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9153  5.00E+02  3.21E+02  1.03E+03
1.37E+03  2.70E+03  4.12E+03  2.10E+04  1.03E-03   84
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9902  9.33E+03  5.98E+03  1.67E+04
3.35E+04  7.69E+04  8.78E+04  2.45E+05  3.42E-04   44

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.8912  6.76E-02  6.96E-02  1.02E-01
1.09E-01  1.24E-01  1.32E-01  1.67E-01  2.85E-04   18
 ERL FAT/TOTAL              1.6-3.2 km   0.8155  1.71E-02  8.15E-03  5.02E-02
5.34E-02  6.18E-02  6.57E-02  8.22E-02  2.85E-04   19
 ERL FAT/TOTAL              3.2-4.8 km   0.6246  4.87E-03  3.11E-04  2.09E-02
2.59E-02  3.15E-02  3.24E-02  3.36E-02  2.00E-03  122
 ERL FAT/TOTAL              4.8-6.4 km   0.3341  1.83E-03  0.00E+00  3.84E-03
1.21E-02 NOT-FOUND NOT-FOUND  2.90E-02  1.12E-02   45
11-APR-06  11:10:35    PAGE  46          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                          NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km   0.2107  5.09E-04  0.00E+00  9.19E-04
3.06E-03  1.14E-02 NOT-FOUND  1.27E-02  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  3.57E+03  3.01E+03  6.90E+03
8.19E+03  1.09E+04  1.18E+04  1.57E+04  4.28E-04   60
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  3.07E+04  2.01E+04  6.40E+04
1.00E+05  1.11E+05  1.17E+05  1.76E+05  8.35E-06  103
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POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.8861  1.94E-02  8.24E-03  5.65E-02
7.28E-02  1.01E-01  1.05E-01  1.43E-01  2.09E-05   19
 CAN FAT/TOTAL               0-16.1 km  1.0000  1.34E-02  1.12E-02  2.40E-02
2.95E-02  3.92E-02  4.42E-02  5.59E-02  1.63E-03   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  5.12E+01  4.08E+01  1.01E+02
1.15E+02 NOT-FOUND NOT-FOUND  1.52E+02  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  1.82E+01  1.39E+01  3.60E+01
4.48E+01  5.88E+01 NOT-FOUND  6.25E+01  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  1.01E+01  7.46E+00  2.14E+01
2.65E+01  3.48E+01  3.80E+01  4.26E+01  2.00E-03  122
 L-EDEWBODY                  4.8-6.4 km  1.0000  6.72E+00  4.72E+00  1.57E+01
2.08E+01  2.57E+01 NOT-FOUND  2.74E+01  6.14E-03   36
 L-EDEWBODY                  6.4-8.1 km  1.0000  4.66E+00  3.23E+00  1.03E+01
1.21E+01  1.78E+01 NOT-FOUND  2.20E+01  6.14E-03   60
 L-EDEWBODY                  8.1-9.7 km  1.0000  3.56E+00  2.27E+00  8.59E+00
1.12E+01  1.62E+01 NOT-FOUND  1.76E+01  6.93E-03   98
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.88E+00  1.39E+00  4.08E+00
5.84E+00  7.95E+00  8.53E+00  9.35E+00  2.00E-03   65
 L-EDEWBODY                16.1-32.2 km  1.0000  6.11E-01  4.53E-01  1.23E+00
1.56E+00  2.75E+00 NOT-FOUND  2.98E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  2.35E-01  2.11E-01  3.71E-01
4.75E-01  6.70E-01 NOT-FOUND  8.49E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  1.51E-01  1.26E-01  2.23E-01
2.49E-01  3.93E-01 NOT-FOUND  4.45E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  1.33E-01  1.17E-01  2.03E-01
2.09E-01  2.23E-01  2.30E-01  2.39E-01  2.00E-03  122
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  6 OF 11:
    Case 6EVE

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE  47          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL               0-16.1 km  1.0000  1.01E+02  7.59E+01  2.00E+02
2.48E+02  3.32E+02  3.57E+02  5.95E+02  2.76E-05   19
 CAN FAT/LUNG                0-80.5 km  1.0000  3.03E+02  2.09E+02  6.29E+02
7.89E+02  1.21E+03  1.40E+03  1.75E+03  1.83E-03  120
 CAN FAT/THYROID             0-80.5 km  1.0000  3.29E+01  2.25E+01  6.88E+01
8.99E+01  1.36E+02  1.59E+02  2.02E+02  1.83E-03  120
 CAN FAT/BREAST              0-80.5 km  1.0000  2.41E+02  1.60E+02  4.96E+02
6.66E+02  1.04E+03  1.20E+03  1.47E+03  1.83E-03  120
 CAN FAT/GI                  0-80.5 km  1.0000  5.85E+02  3.98E+02  1.20E+03
1.52E+03  2.29E+03  2.57E+03  3.42E+03  1.83E-03  120
 CAN FAT/LEUKEMIA            0-80.5 km  1.0000  1.93E+02  1.34E+02  3.90E+02
5.01E+02  7.41E+02  8.43E+02  1.12E+03  1.83E-03  120
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 CAN FAT/BONE                    0-80.5 km  1.0000  2.27E+01  1.59E+01  4.63E+01
6.02E+01  8.15E+01  8.90E+01  1.18E+02  1.83E-03  120
 CAN FAT/OTHER                   0-80.5 km  1.0000  6.13E+02  4.21E+02  1.28E+03
1.65E+03  2.35E+03  2.61E+03  3.64E+03  1.83E-03  120
 CAN INJ/THYROID                 0-80.5 km  1.0000  3.29E+02  2.25E+02  6.88E+02
8.99E+02  1.36E+03  1.59E+03  2.02E+03  1.83E-03  120
 CAN INJ/BREAST                  0-80.5 km  1.0000  7.59E+02  5.20E+02  1.52E+03
2.00E+03  3.18E+03  3.70E+03  4.62E+03  1.83E-03  120
 CAN FAT/TOTAL                   0-80.5 km  1.0000  1.99E+03  1.38E+03  4.00E+03
5.14E+03  7.72E+03  8.63E+03  1.17E+04  1.83E-03  120

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF             0-16.1 km  1.0000  2.01E+03  1.49E+03  3.78E+03
5.02E+03  7.12E+03  7.46E+03  1.17E+04  2.76E-05   19
 L-EDEWBODY  TOT LIF             0-80.5 km  1.0000  4.44E+04  3.09E+04  9.02E+04
1.13E+05  1.90E+05  2.20E+05  2.64E+05  1.83E-03  120

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                   0-16.1 km  0.9306  6.31E-04  5.76E-04  1.01E-03
1.08E-03  1.25E-03  1.33E-03  2.33E-03  2.02E-05   47

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                       0-1.6 km  0.0895  9.16E-03  0.00E+00  0.00E+00
1.13E-01 NOT-FOUND NOT-FOUND  1.85E-01  1.93E-02  109
 L-EDEWBODY                     1.6-3.2 km  0.1858  2.77E-02  0.00E+00  1.12E-01
1.31E-01  1.88E-01 NOT-FOUND  1.98E-01  8.02E-03   67
 L-EDEWBODY                     3.2-4.8 km  0.1395  1.97E-02  0.00E+00  1.03E-01
1.20E-01  1.73E-01 NOT-FOUND  1.99E-01  5.39E-03   32
 L-EDEWBODY                     4.8-6.4 km  0.3133  5.10E-02  0.00E+00  1.17E-01
1.29E-01  1.64E-01  1.82E-01  2.00E-01  2.60E-03   66
 L-EDEWBODY                     6.4-8.1 km  0.4065  6.13E-02  0.00E+00  1.35E-01
1.57E-01 NOT-FOUND NOT-FOUND  1.95E-01  1.84E-02   86
 L-EDEWBODY                     8.1-9.7 km  0.6497  1.01E-01  1.06E-01  1.62E-01
1.95E-01  2.00E-01 NOT-FOUND  2.00E-01  5.39E-03   56
 L-EDEWBODY                    9.7-16.1 km  0.9024  1.19E-01  1.06E-01  1.32E-01
1.45E-01  1.81E-01 NOT-FOUND  1.99E-01  5.11E-03    4
 L-EDEWBODY                   16.1-32.2 km  0.9078  9.12E-02  8.48E-02  1.12E-01
1.19E-01  1.36E-01  1.45E-01  1.99E-01  1.14E-04   34
 L-EDEWBODY                   32.2-48.3 km  0.9840  1.42E-01  1.10E-01  1.47E-01
1.66E-01 NOT-FOUND NOT-FOUND  1.98E-01  1.84E-02   14
 L-EDEWBODY                   48.3-64.4 km  1.0000  1.08E-01  1.05E-01  1.34E-01
1.49E-01  1.89E-01 NOT-FOUND  1.96E-01  8.02E-03   44
 L-EDEWBODY                   64.4-80.5 km  1.0000  8.77E-02  8.26E-02  1.19E-01
1.32E-01 NOT-FOUND NOT-FOUND  1.52E-01  1.84E-02  120

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  4.44E+04  3.09E+04  9.02E+04
1.13E+05  1.90E+05  2.20E+05  2.64E+05  1.83E-03  120
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  3.66E+04  2.53E+04  8.00E+04
1.01E+05  1.38E+05  1.57E+05  1.91E+05  1.83E-03  120
 TOTAL INGESTION PATHWAYS DOSE           1.0000  2.82E+03  2.49E+03  4.73E+03
5.65E+03  7.58E+03  8.22E+03  1.21E+04  1.55E-05   19
 LONG-TERM GROUNDSHINE DOSE              1.0000  3.59E+04  2.44E+04  7.88E+04
9.89E+04  1.36E+05  1.56E+05  1.90E+05  1.83E-03  120
 LONG-TERM RESUSPENSION DOSE             1.0000  6.53E+02  4.45E+02  1.39E+03
1.86E+03  2.22E+03  2.34E+03  2.55E+03  1.48E-03   97
 WATER INGESTION DOSE                    1.0000  2.10E+03  1.66E+03  3.88E+03
5.06E+03  7.11E+03  7.45E+03  1.14E+04  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE     1.0000  4.90E+03  2.39E+03  1.13E+04
1.73E+04  3.25E+04  3.95E+04  7.01E+04  1.83E-03  120
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	PEAK	PEAK	PROB PEAK NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH

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     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  1.23E+02  1.07E+02  2.05E+02
2.44E+02  3.58E+02  4.20E+02  5.57E+02  1.43E-03  120
 INGESTION OF GRAINS                    1.0000  1.06E+01  9.53E+00  1.64E+01
2.01E+01  2.34E+01  2.50E+01  6.38E+01  1.55E-05   18
 INGESTION OF LEAF VEG                  1.0000  6.82E+01  6.11E+01  1.07E+02
1.20E+02  1.57E+02  1.76E+02  2.12E+02  4.00E-04  120
 INGESTION OF ROOT CROPS                1.0000  4.34E+01  3.73E+01  7.11E+01
8.04E+01  1.03E+02  1.10E+02  1.36E+02  4.00E-04  120
 INGESTION OF FRUITS                    1.0000  6.53E+01  5.70E+01  1.05E+02
1.15E+02  1.41E+02  1.54E+02  2.03E+02  6.28E-04   57
 INGESTION OF LEGUMES                   1.0000  8.18E+01  7.44E+01  1.21E+02
1.39E+02  1.94E+02  2.09E+02  2.55E+02  4.00E-04  120
 INGESTION OF BEEF                      1.0000  1.80E+02  4.60E+01  5.23E+02
6.58E+02  9.32E+02  1.02E+03  1.59E+03  7.76E-06  102
 INGESTION OF MILK                      1.0000  2.07E+02  5.14E+01  5.61E+02
6.95E+02  9.86E+02  1.04E+03  1.65E+03  6.21E-06  103
 INGESTION OF POULTRY                   1.0000  3.96E+01  1.57E+01  1.04E+02
1.23E+02  1.83E+02  2.08E+02  2.84E+02  4.00E-04   74
 INGESTION OF OTHER MEAT CROPS          1.0000  1.80E+01  3.87E+00  5.11E+01
6.17E+01  9.42E+01  1.06E+02  1.48E+02  4.00E-04   74

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                   1.0000  1.52E+10  9.21E+09  3.18E+10
3.87E+10  7.25E+10  8.32E+10  1.27E+11  1.83E-03  120
 POP.-DEPENDENT COSTS                   1.0000  1.48E+10  8.67E+09  3.15E+10
3.84E+10  7.25E+10  8.32E+10  1.26E+11  1.83E-03  120
 FARM-DEPENDENT COSTS                   1.0000  3.30E+08  3.10E+08  5.06E+08
5.51E+08  6.72E+08  7.09E+08  8.67E+08  2.33E-05   33
 POP.-DEPENDENT DECONTAMINATION COST    1.0000  2.85E+09  1.73E+09  6.76E+09
1.02E+10  1.11E+10  1.16E+10  1.25E+10  1.14E-03   81
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  9.77E+07  9.20E+07  1.37E+08
1.59E+08  2.11E+08  2.26E+08  2.80E+08  6.28E-04   81
 POP.-DEPENDENT INTERDICTION COST       1.0000  1.08E+10  6.17E+09  2.36E+10
3.09E+10  7.16E+10  8.21E+10  1.13E+11  1.83E-03  120
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.62E+08  1.32E+08  2.57E+08
3.02E+08  3.49E+08  3.71E+08  5.21E+08  1.71E-04  109
 POP.-DEPENDENT CONDEMNATION COST       0.9766  1.15E+09  7.45E+08  1.72E+09
5.07E+09  6.01E+09  6.46E+09  2.48E+10  1.03E-03   44
 FARM-DEPENDENT CONDEMNATION COST       0.9767  2.86E+07  2.62E+07  5.14E+07
5.96E+07  1.07E+08  1.20E+08  1.47E+08  1.43E-03   14
 EMERGENCY PHASE COST                   0.9976  2.46E+07  1.04E+07  6.19E+07
9.44E+07  2.14E+08  2.52E+08  2.75E+08  3.45E-03   99
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                     1.0000  1.55E+06  1.01E+06  3.45E+06
4.77E+06  5.68E+06  6.03E+06  7.50E+06  6.51E-04   33
 CROP DISPOSAL COST                     1.0000  4.10E+07  3.96E+07  6.84E+07
7.34E+07  8.36E+07  8.84E+07  1.22E+08  1.71E-04  109

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)        1.0000  8.40E+04  7.97E+04  1.14E+05
1.24E+05  1.50E+05  1.63E+05  2.06E+05  6.28E-04   81
 POP. DECONTAMINATION (INDIVIDUALS)     1.0000  4.13E+05  2.44E+05  1.03E+06
1.07E+06  1.18E+06  1.24E+06  1.35E+06  1.14E-03   81
 FARM INTERDICTION (HECTARES)           1.0000  9.37E+04  8.87E+04  1.24E+05
1.37E+05  1.76E+05  1.96E+05  2.68E+05  1.71E-04  109
 POP. INTERDICTION (INDIVIDUALS)        1.0000  4.13E+05  2.44E+05  1.03E+06
1.07E+06  1.18E+06  1.24E+06  1.35E+06  1.14E-03   81
 FARM CONDEMNATION (HECTARES)           0.9767  4.18E+03  3.97E+03  7.38E+03
8.58E+03  1.24E+04  1.47E+04  2.10E+04  5.14E-04   14
 POP. CONDEMNATION (INDIVIDUALS)        0.9766  8.17E+03  5.33E+03  1.53E+04
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3.06E+04  3.96E+04  4.43E+04  1.58E+05  1.03E-03   44
 MILK DISPOSAL AREA (HECTARES)          1.0000  8.46E+04  7.78E+04  1.18E+05
1.32E+05  1.70E+05  1.90E+05  2.68E+05  1.96E-04   33
 CROP DISPOSAL AREA (HECTARES)          1.0000  8.98E+04  8.17E+04  1.20E+05
1.33E+05  1.70E+05  1.89E+05  2.68E+05  1.71E-04  109
XXXX
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1/8/04, K. McFadden
"ATMOS" DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

"EARLY" DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1 EARLY input

"CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

SOURCE TERM 7 OF 11:
Case 7FR

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

FRACTION OF THE PEOPLE

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

11-APR-06 11:10:35 PAGE 49

		PROB			QUANTILES						
		PEAK	PEAK	PEAK NON-ZERO	MEAN	50TH	90TH	95TH	99TH	99.5TH	CONS
HEALTH EFFECTS CASES											
ERL FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/DIARRHEA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/PNEUMONITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/THYROIDITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0
CAN FAT/TOTAL	0-16.1 km	1.0000	1.35E+00	1.11E-05	1.16E+00	2.18E+00	2.49E+00	3.12E+00	3.25E+00	4.68E+00	37
CAN FAT/LUNG	0-80.5 km	1.0000	1.94E+00	1.71E-04	1.23E+00	4.40E+00	5.93E+00	1.03E+01	1.14E+01	1.89E+01	44
CAN FAT/THYROID	0-80.5 km	1.0000	3.33E-01	1.71E-04	2.02E-01	8.04E-01	1.14E+00	2.01E+00	2.18E+00	3.45E+00	105
CAN FAT/BREAST	0-80.5 km	1.0000	1.53E+00	1.71E-04	1.00E+00	3.38E+00	4.43E+00	7.65E+00	8.64E+00	1.53E+01	44
CAN FAT/GI	0-80.5 km	1.0000	4.81E+00		3.52E+00	1.00E+01					

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1.25E+01  2.07E+01  2.45E+01  3.80E+01  1.71E-04   44
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.17E+00  7.88E-01  2.55E+00
3.43E+00  5.35E+00  6.04E+00  1.10E+01  1.71E-04   44
 CAN FAT/BONE                  0-80.5 km  1.0000  1.35E-01  9.70E-02  3.03E-01
3.79E-01  6.71E-01  8.11E-01  1.24E+00  1.71E-04   44
 CAN FAT/OTHER                 0-80.5 km  1.0000  4.17E+00  2.92E+00  9.02E+00
1.21E+01  2.08E+01  2.46E+01  3.86E+01  1.71E-04   44
 CAN INJ/THYROID               0-80.5 km  1.0000  3.33E+00  2.02E+00  8.04E+00
1.14E+01  2.01E+01  2.18E+01  3.45E+01  1.71E-04  105
 CAN INJ/BREAST                0-80.5 km  1.0000  4.83E+00  3.12E+00  1.06E+01
1.40E+01  2.27E+01  2.58E+01  4.83E+01  1.71E-04   44
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.41E+01  1.01E+01  3.07E+01
3.96E+01  7.18E+01  8.35E+01  1.26E+02  1.71E-04   44
 ERL FAT/TOTAL                 0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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                                PROB                                QUANTILES
                          PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
    99TH     99.5TH     CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.0186  3.69E-04  0.00E+00  0.00E+00
0.00E+00  1.48E-02  2.25E-02  6.43E-02  7.42E-04   31

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               6.4-8.1 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km   1.0000  2.88E+01  2.71E+01  4.77E+01
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5.41E+01  6.83E+01  7.20E+01  1.02E+02  1.11E-05   37
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  3.02E+02  2.08E+02  6.82E+02
8.63E+02  1.35E+03  1.61E+03  2.80E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  1.0000  4.74E-05  4.15E-05  8.39E-05
1.01E-04  1.14E-04  1.20E-04  1.90E-04  1.11E-05   37

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  6.07E-02  6.10E-02  9.17E-02
1.01E-01  1.10E-01 NOT-FOUND  1.14E-01  5.11E-03   68
 L-EDEWBODY                 1.6-3.2 km  1.0000  4.25E-02  4.18E-02  6.92E-02
7.23E-02  7.83E-02  8.11E-02  8.49E-02  2.00E-03   85
 L-EDEWBODY                 3.2-4.8 km  1.0000  3.67E-02  3.43E-02  6.47E-02
7.15E-02  7.74E-02  8.00E-02  8.36E-02  2.00E-03   31
 L-EDEWBODY                 4.8-6.4 km  1.0000  2.91E-02  2.47E-02  5.42E-02
6.30E-02 NOT-FOUND NOT-FOUND  7.93E-02  1.12E-02   70
 L-EDEWBODY                 6.4-8.1 km  1.0000  2.20E-02  1.65E-02  4.31E-02
5.23E-02  6.54E-02 NOT-FOUND  8.16E-02  6.14E-03   60
 L-EDEWBODY                 8.1-9.7 km  1.0000  1.71E-02  1.27E-02  3.54E-02
4.54E-02 NOT-FOUND NOT-FOUND  7.31E-02  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  8.98E-03  7.73E-03  1.66E-02
2.12E-02 NOT-FOUND NOT-FOUND  3.41E-02  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  7.53E-03  6.27E-03  1.42E-02
1.88E-02  3.07E-02 NOT-FOUND  3.13E-02  6.93E-03   98
 L-EDEWBODY                32.2-48.3 km  1.0000  2.83E-03  2.48E-03  4.97E-03
6.28E-03  9.49E-03 NOT-FOUND  1.01E-02  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  1.39E-03  1.17E-03  2.38E-03
2.76E-03  5.72E-03 NOT-FOUND  6.09E-03  8.02E-03   44
 L-EDEWBODY                64.4-80.5 km  1.0000  9.18E-04  7.26E-04  2.08E-03
2.30E-03  2.91E-03 NOT-FOUND  3.04E-03  8.02E-03  105
 DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  7 OF 11:
    Case 7FR

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  51          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                          NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT     0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                 0-80.5 km  1.0000  8.12E-01  4.48E-01  2.00E+00
2.82E+00  4.91E+00  5.78E+00  8.93E+00  1.71E-04   44
 CAN FAT/THYROID              0-80.5 km  1.0000  2.23E-01  1.25E-01  5.51E-01
7.70E-01  1.13E+00  1.27E+00  2.54E+00  1.71E-04  105
 CAN FAT/BREAST               0-80.5 km  1.0000  6.31E-01  3.54E-01  1.46E+00
2.21E+00  3.55E+00  4.15E+00  7.22E+00  1.71E-04   44
 CAN FAT/GI                   0-80.5 km  1.0000  1.47E+00  8.20E-01  3.56E+00
5.17E+00  8.77E+00  1.04E+01  1.62E+01  1.71E-04   44
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  4.20E-01  2.30E-01  1.02E+00
1.36E+00  2.27E+00  2.58E+00  4.75E+00  1.71E-04   44
 CAN FAT/BONE                 0-80.5 km  1.0000  4.98E-02  2.75E-02  1.15E-01
1.57E-01  3.11E-01  3.43E-01  5.65E-01  1.71E-04   44
 CAN FAT/OTHER                0-80.5 km  1.0000  1.59E+00  8.85E-01  3.87E+00
5.50E+00  9.77E+00  1.10E+01  1.77E+01  1.71E-04   44
 CAN INJ/THYROID              0-80.5 km  1.0000  2.23E+00  1.25E+00  5.51E+00
7.70E+00  1.13E+01  1.27E+01  2.54E+01  1.71E-04  105
 CAN INJ/BREAST               0-80.5 km  1.0000  1.99E+00  1.10E+00  4.94E+00
7.03E+00  1.12E+01  1.26E+01  2.27E+01  1.71E-04   44
 CAN FAT/TOTAL                0-80.5 km  1.0000  5.19E+00  2.85E+00  1.16E+01
1.58E+01  3.17E+01  3.48E+01  5.75E+01  1.71E-04   44
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL FAT/TOTAL                1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  52          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (SV)
 L-EDEWBODY  TOT LIF          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.15E+02  6.33E+01  2.94E+02
3.79E+02  6.85E+02  8.17E+02  1.29E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (SV)
 L-EDEWBODY                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 16.1-32.2 km  1.0000  4.87E-03  3.87E-03  9.65E-03
1.26E-02  2.19E-02 NOT-FOUND  2.38E-02  6.93E-03   98
 L-EDEWBODY                 32.2-48.3 km  1.0000  1.85E-03  1.40E-03  3.42E-03
4.68E-03  6.70E-03 NOT-FOUND  7.46E-03  8.02E-03  105
 L-EDEWBODY                 48.3-64.4 km  1.0000  9.16E-04  8.30E-04  1.69E-03
2.16E-03  4.05E-03 NOT-FOUND  4.66E-03  8.02E-03  105
 L-EDEWBODY                 64.4-80.5 km  1.0000  6.08E-04  4.53E-04  1.15E-03
1.40E-03  2.26E-03 NOT-FOUND  2.41E-03  8.02E-03  105
  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  7 OF 11:
    Case 7FR

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
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11-APR-05  11:10:35     PAGE  53          PROB                                QUANTILES
                          PEAK      PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS      PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/DIARRHEA                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/THYROIDITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 CAN FAT/TOTAL                    0-16.1 km  1.0000  1.01E+00  8.76E-01  1.87E+00
2.27E+00  3.11E+00  3.31E+00  4.13E+00  4.28E-04    60
 CAN FAT/LUNG                     0-80.5 km  1.0000  9.73E-01  6.19E-01  2.17E+00
3.05E+00  5.22E+00  5.97E+00  9.18E+00  1.71E-04    44
 CAN FAT/THYROID                  0-80.5 km  1.0000  2.71E-01  1.74E-01  5.93E-01
8.03E-01  1.17E+00  1.31E+00  2.58E+00  1.71E-04   105
 CAN FAT/BREAST                   0-80.5 km  1.0000  7.48E-01  4.70E-01  1.64E+00
2.29E+00  3.57E+00  4.16E+00  7.40E+00  1.71E-04    44
 CAN FAT/GI                       0-80.5 km  1.0000  1.75E+00  1.13E+00  3.90E+00
5.45E+00  9.75E+00  1.08E+01  1.66E+01  1.71E-04    44
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  5.01E-01  3.24E-01  1.10E+00
1.44E+00  2.52E+00  3.05E+00  4.87E+00  1.71E-04    44
 CAN FAT/BONE                     0-80.5 km  1.0000  5.92E-02  3.81E-02  1.22E-01
1.71E-01  3.16E-01  3.47E-01  5.80E-01  1.71E-04    44
 CAN FAT/OTHER                    0-80.5 km  1.0000  1.90E+00  1.20E+00  4.26E+00
5.76E+00  9.80E+00  1.10E+01  1.82E+01  1.71E-04    44
 CAN INJ/THYROID                  0-80.5 km  1.0000  2.71E+00  1.74E+00  5.93E+00
8.03E+00  1.17E+01  1.31E+01  2.58E+01  1.71E-04   105
 CAN INJ/BREAST                   0-80.5 km  1.0000  2.36E+00  1.48E+00  5.32E+00
7.59E+00  1.14E+01  1.28E+01  2.33E+01  1.71E-04    44
 CAN FAT/TOTAL                    0-80.5 km  1.0000  6.20E+00  3.95E+00  1.31E+01
1.93E+01  3.21E+01  3.51E+01  5.91E+01  1.71E-04    44
 ERL FAT/TOTAL                    0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/PRODROMAL VOMIT          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/DIARRHEA                 0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/PNEUMONITIS              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/THYROIDITIS              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/HYPOTHYROIDISM           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/SKIN ERYTHEMA            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0
 ERL INJ/TRANSEPIDERMAL           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00     0

EARLY FATALITY DISTANCE (km)
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 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0186  7.37E-03  0.00E+00  0.00E+00
0.00E+00  2.51E-01  3.49E-01  1.29E+00  7.42E-04   31

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  54          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                     NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  2.22E+01  1.90E+01  4.07E+01
5.08E+01  6.91E+01  7.35E+01  8.93E+01  4.28E-04   60
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  1.37E+02  8.69E+01  3.08E+02
3.96E+02  7.50E+02  8.54E+02  1.32E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  1.0000  4.92E-05  4.17E-05  9.15E-05
1.06E-04  1.31E-04  1.44E-04  2.00E-04  4.28E-04   60

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  1.66E-01  1.53E-01  2.27E-01
2.44E-01  2.88E-01  3.61E-01  4.19E-01  4.00E-03   31
 L-EDEWBODY                    1.6-3.2 km  1.0000  1.02E-01  9.84E-02  1.77E-01
2.03E-01  2.15E-01  2.21E-01  2.42E-01  4.28E-04   51
 L-EDEWBODY                    3.2-4.8 km  1.0000  6.85E-02  5.31E-02  1.32E-01
1.68E-01  2.29E-01 NOT-FOUND  2.43E-01  6.14E-03   89
 L-EDEWBODY                    4.8-6.4 km  1.0000  4.68E-02  3.52E-02  1.01E-01
1.18E-01  1.70E-01 NOT-FOUND  1.90E-01  6.14E-03   36
 L-EDEWBODY                    6.4-8.1 km  1.0000  3.32E-02  2.36E-02  7.13E-02
9.18E-02  1.35E-01 NOT-FOUND  1.51E-01  6.14E-03   60
 L-EDEWBODY                    8.1-9.7 km  1.0000  2.58E-02  1.70E-02  6.13E-02
8.16E-02  1.14E-01 NOT-FOUND  1.20E-01  6.93E-03   98
 L-EDEWBODY                   9.7-16.1 km  1.0000  1.41E-02  1.03E-02  2.73E-02
3.91E-02  6.02E-02 NOT-FOUND  6.49E-02  6.14E-03   60
 L-EDEWBODY                  16.1-32.2 km  1.0000  4.87E-03  3.87E-03  9.65E-03
1.26E-02  2.19E-02 NOT-FOUND  2.38E-02  6.93E-03   98
 L-EDEWBODY                  32.2-48.3 km  1.0000  1.85E-03  1.40E-03  3.42E-03
4.68E-03  6.70E-03 NOT-FOUND  7.46E-03  8.02E-03  105
 L-EDEWBODY                  48.3-64.4 km  1.0000  9.16E-04  8.30E-04  1.69E-03
2.16E-03  4.05E-03 NOT-FOUND  4.66E-03  8.02E-03  105
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 L-EDEWBODY                    64.4-80.5 km  1.0000  6.08E-04  4.53E-04  1.15E-03
1.40E-03  2.26E-03 NOT-FOUND  2.41E-03  8.02E-03  105
0  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  7 OF 11:
    Case 7FR

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE  55          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                   0-16.1 km  1.0000  1.30E+00  1.13E+00  2.10E+00
2.36E+00  3.03E+00  3.16E+00  4.50E+00  1.11E-05   37
 CAN FAT/LUNG                    0-80.5 km  1.0000  1.12E+00  8.02E-01  2.35E+00
3.22E+00  5.18E+00  5.94E+00  9.96E+00  1.71E-04   44
 CAN FAT/THYROID                 0-80.5 km  1.0000  1.08E-01  6.69E-02  2.49E-01
3.41E-01  5.72E-01  7.29E-01  1.09E+00  1.71E-04   44
 CAN FAT/BREAST                  0-80.5 km  1.0000  8.98E-01  6.34E-01  1.97E+00
2.48E+00  4.66E+00  5.66E+00  8.10E+00  1.71E-04   44
 CAN FAT/GI                      0-80.5 km  1.0000  3.33E+00  2.55E+00  6.54E+00
8.25E+00  1.31E+01  1.57E+01  2.31E+01  1.83E-03  120
 CAN FAT/LEUKEMIA                0-80.5 km  1.0000  7.47E-01  5.48E-01  1.41E+00
1.97E+00  3.22E+00  3.89E+00  6.27E+00  1.71E-04   44
 CAN FAT/BONE                    0-80.5 km  1.0000  8.52E-02  6.34E-02  1.71E-01
2.24E-01  3.45E-01  4.08E-01  6.75E-01  1.83E-03  120
 CAN FAT/OTHER                   0-80.5 km  1.0000  2.56E+00  1.92E+00  5.25E+00
6.82E+00  1.07E+01  1.40E+01  2.12E+01  1.83E-03  120
 CAN INJ/THYROID                 0-80.5 km  1.0000  1.08E+00  6.69E-01  2.49E+00
3.41E+00  5.72E+00  7.29E+00  1.09E+01  1.71E-04   44
 CAN INJ/BREAST                  0-80.5 km  1.0000  2.83E+00  2.03E+00  5.98E+00
8.06E+00  1.31E+01  1.59E+01  2.55E+01  1.71E-04   44
 CAN FAT/TOTAL                   0-80.5 km  1.0000  8.86E+00  6.67E+00  1.77E+01
2.32E+01  3.58E+01  4.16E+01  7.01E+01  1.83E-03  120

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF             0-16.1 km  1.0000  2.77E+01  2.57E+01  4.49E+01
5.24E+01  6.67E+01  7.14E+01  9.82E+01  1.11E-05   37
 L-EDEWBODY  TOT LIF             0-80.5 km  1.0000  1.86E+02  1.29E+02  3.61E+02
4.87E+02  7.62E+02  9.36E+02  1.53E+03  1.83E-03  120

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                   0-16.1 km  1.0000  4.49E-05  3.85E-05  7.92E-05
9.42E-05  1.10E-04  1.16E-04  1.81E-04  1.11E-05   37

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                       0-1.6 km  1.0000  5.24E-02  5.01E-02  8.23E-02
9.19E-02  1.01E-01  1.02E-01  1.06E-01  3.42E-04   25
 L-EDEWBODY                     1.6-3.2 km  0.9977  3.74E-02  3.43E-02  6.67E-02
7.05E-02  7.22E-02  7.29E-02  7.69E-02  1.43E-04  102
 L-EDEWBODY                     3.2-4.8 km  1.0000  3.33E-02  3.12E-02  5.81E-02
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7.00E-02  7.34E-02  7.50E-02  7.63E-02  2.74E-03   73
 L-EDEWBODY                  4.8-6.4 km  1.0000  2.68E-02  2.24E-02  5.19E-02
5.86E-02  7.05E-02  7.11E-02  7.43E-02  1.43E-04   37
 L-EDEWBODY                  6.4-8.1 km  1.0000  2.03E-02  1.48E-02  3.93E-02
5.02E-02  6.48E-02 NOT-FOUND  7.40E-02  6.14E-03   60
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.58E-02  1.20E-02  3.26E-02
4.37E-02 NOT-FOUND NOT-FOUND  6.73E-02  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  8.27E-03  7.27E-03  1.48E-02
1.86E-02 NOT-FOUND NOT-FOUND  3.09E-02  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  2.66E-03  2.48E-03  4.39E-03
5.28E-03  7.94E-03 NOT-FOUND  8.37E-03  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  9.71E-04  8.71E-04  1.36E-03
1.59E-03  2.43E-03 NOT-FOUND  2.61E-03  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  4.75E-04  3.72E-04  7.71E-04
9.13E-04  1.67E-03 NOT-FOUND  1.83E-03  8.02E-03   44
 L-EDEWBODY                64.4-80.5 km  1.0000  3.09E-04  2.31E-04  6.86E-04
8.02E-04 NOT-FOUND NOT-FOUND  9.85E-04  1.84E-02  120

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  1.86E+02  1.29E+02  3.61E+02
4.87E+02  7.62E+02  9.36E+02  1.53E+03  1.83E-03  120
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  1.39E+02  8.62E+01  3.19E+02
4.23E+02  7.37E+02  8.46E+02  1.40E+03  1.71E-04   44
 TOTAL INGESTION PATHWAYS DOSE           1.0000  4.68E+01  2.36E+01  1.10E+02
1.35E+02  2.14E+02  2.51E+02  3.33E+02  4.00E-04  120
 LONG-TERM GROUNDSHINE DOSE              1.0000  1.37E+02  8.53E+01  3.17E+02
4.22E+02  7.26E+02  8.39E+02  1.39E+03  1.71E-04   44
 LONG-TERM RESUSPENSION DOSE             1.0000  1.33E+00  8.26E-01  3.01E+00
3.95E+00  7.26E+00  8.39E+00  1.35E+01  1.71E-04   44
 WATER INGESTION DOSE                    1.0000  2.65E-01  2.17E-01  5.16E-01
6.47E-01  8.80E-01  9.89E-01  1.47E+00  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE     0.6688  1.12E-01  1.77E-02  3.37E-01
4.75E-01  9.14E-01  1.14E+00  1.77E+00  1.23E-03   45
11-APR-06  11:10:35     PAGE  56          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE     0.7565  5.90E-03  1.90E-03  1.83E-02
3.20E-02  4.30E-02  4.89E-02  6.36E-02  8.00E-05   19
 INGESTION OF GRAINS                     1.0000  1.06E+00  9.98E-03  3.05E+00
3.56E+00  5.13E+00  6.22E+00  7.69E+00  4.00E-04  120
 INGESTION OF LEAF VEG                   1.0000  1.69E+00  3.26E-02  4.00E+00
7.08E+00  1.57E+01  2.02E+01  2.89E+01  9.42E-04   44
 INGESTION OF ROOT CROPS                 1.0000  1.30E+00  1.93E-02  3.59E+00
4.47E+00  6.48E+00  7.28E+00  9.92E+00  4.00E-04  120
 INGESTION OF FRUITS                     1.0000  2.08E+00  9.63E-02  5.72E+00
7.11E+00  9.65E+00  1.07E+01  1.54E+01  4.00E-04  120
 INGESTION OF LEGUMES                    1.0000  1.20E+00  4.21E-02  3.28E+00
4.03E+00  5.88E+00  6.67E+00  8.85E+00  4.00E-04  120
 INGESTION OF BEEF                       1.0000  2.39E+01  1.23E+01  5.99E+01
7.72E+01  1.19E+02  1.39E+02  2.03E+02  4.00E-04  120
 INGESTION OF MILK                       1.0000  1.03E+01  5.57E+00  2.51E+01
3.11E+01  4.34E+01  5.00E+01  5.97E+01  5.14E-04  120
 INGESTION OF POULTRY                    1.0000  2.58E+00  9.94E-01  5.69E+00
8.88E+00  1.90E+01  2.24E+01  3.39E+01  9.42E-04   44
 INGESTION OF OTHER MEAT CROPS           1.0000  2.49E+00  2.03E+00  4.16E+00
5.59E+00  1.00E+01  1.22E+01  1.96E+01  9.42E-04   44

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    0.9206  2.47E+06  8.40E+05  8.14E+06
1.04E+07  1.26E+07  1.37E+07  1.93E+07  2.85E-04   45
 POP.-DEPENDENT COSTS                    0.6688  5.87E+05  7.30E+04  1.75E+06
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2.44E+06  5.02E+06  5.72E+06  1.00E+07  1.23E-03   45
 FARM-DEPENDENT COSTS                    0.9149  1.88E+06  2.04E+05  7.05E+06
9.97E+06  1.11E+07  1.16E+07  1.61E+07  2.49E-05   17
 POP.-DEPENDENT DECONTAMINATION COST     0.6688  1.15E+05  1.53E+04  3.49E+05
5.07E+05  9.94E+05  1.25E+06  1.97E+06  1.23E-03   45
 FARM-DEPENDENT DECONTAMINATION COST     0.7565  2.67E+04  9.99E+03  7.03E+04
8.90E+04  1.47E+05  1.81E+05  2.26E+05  2.03E-03   45
 POP.-DEPENDENT INTERDICTION COST        0.6688  4.70E+05  5.21E+04  1.30E+06
2.09E+06  3.14E+06  3.78E+06  8.02E+06  1.23E-03   45
 FARM-DEPENDENT INTERDICTION COST        0.9149  1.42E+06  1.29E+05  5.13E+06
6.85E+06  7.69E+06  8.01E+06  1.14E+07  2.49E-05   17
 POP.-DEPENDENT CONDEMNATION COST        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 FARM-DEPENDENT CONDEMNATION COST        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EMERGENCY PHASE COST                    0.3093  9.47E+02  0.00E+00  2.01E+03
8.00E+03  1.29E+04  1.49E+04  3.94E+04  2.00E-04  122
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      0.4920  4.27E+03  0.00E+00  1.25E+04
2.04E+04  2.78E+04  3.03E+04  3.74E+04  1.66E-05   18
 CROP DISPOSAL COST                      0.9149  4.25E+05  3.07E+04  1.26E+06
2.58E+06  3.27E+06  3.41E+06  4.68E+06  2.49E-05   17

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         0.7565  3.92E+01  2.00E+01  9.94E+01
1.28E+02  2.22E+02  2.73E+02  3.29E+02  2.03E-03   45
 POP. DECONTAMINATION (INDIVIDUALS)      0.6688  3.27E+01  4.13E+00  1.03E+02
1.39E+02  2.98E+02  3.54E+02  5.58E+02  1.23E-03   45
 FARM INTERDICTION (HECTARES)            0.9149  1.27E+03  1.21E+02  5.01E+03
5.90E+03  7.36E+03  7.65E+03  1.04E+04  2.49E-05   17
 POP. INTERDICTION (INDIVIDUALS)         0.6688  3.27E+01  4.13E+00  1.03E+02
1.39E+02  2.98E+02  3.54E+02  5.58E+02  1.23E-03   45
 FARM CONDEMNATION (HECTARES)            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 POP. CONDEMNATION (INDIVIDUALS)         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL AREA (HECTARES)           0.4920  2.16E+02  0.00E+00  6.51E+02
9.44E+02  1.10E+03  1.15E+03  1.68E+03  1.34E-05   18
 CROP DISPOSAL AREA (HECTARES)           0.9149  1.27E+03  1.21E+02  5.01E+03
5.90E+03  7.36E+03  7.65E+03  1.04E+04  2.49E-05   17
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COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

11-APR-06 11:10:35 PAGE 57

		PROB			QUANTILES					
		PEAK CONS	PEAK PROB	PEAK NON-ZERO TRIAL	MEAN	50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.4250	7.78E-03	0.00E+00	1.95E-02	5.01E-02	1.07E-01	1.15E-01	2.17E-01	2.09E-05 19
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.8468	1.49E-01	2.77E-02	4.80E-01	7.42E-01	1.15E+00	1.27E+00	1.81E+00	4.85E-04 60
ERL INJ/DIARRHEA	0-16.1 km	0.5812	5.08E-02	4.29E-03	1.63E-01	2.80E-01	5.32E-01	5.86E-01	7.37E-01	4.85E-04 60
ERL INJ/PNEUMONITIS	0-16.1 km	0.1159	1.00E-03	0.00E+00	1.92E-04	2.46E-03	3.22E-02	4.25E-02	8.00E-02	2.09E-05 19
ERL INJ/THYROIDITIS	0-16.1 km	0.2686	2.53E-03	0.00E+00	6.30E-03	1.54E-02	4.32E-02	5.14E-02	6.78E-02	2.28E-04 89
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9149	7.74E-01	4.71E-01	1.88E+00	2.52E+00	3.44E+00	3.74E+00	5.48E+00	4.28E-04 60
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9550	4.96E+01	4.45E+01	1.00E+02	1.08E+02	1.27E+02	1.36E+02	1.67E+02	6.56E-04 74
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9087	1.35E+01	8.58E+00	3.13E+01	4.41E+01	8.13E+01	9.79E+01	1.23E+02	1.63E-03 50
CAN FAT/TOTAL	0-16.1 km	1.0000	2.96E+01	2.77E+01	4.14E+01	4.81E+01	6.01E+01	6.57E+01	8.76E+01	1.12E-05 19
CAN FAT/LUNG	0-80.5 km	1.0000	1.91E+02	1.23E+02	4.29E+02	6.44E+02	8.39E+02	9.14E+02	1.17E+03	2.23E-04 75
CAN FAT/THYROID	0-80.5 km	1.0000	5.98E+01	3.67E+01	1.30E+02	1.92E+02	2.83E+02	3.18E+02	5.14E+02	1.71E-04 105
CAN FAT/BREAST	0-80.5 km	1.0000	1.38E+02	8.68E+01	3.11E+02	4.63E+02	6.21E+02	6.88E+02	8.80E+02	2.23E-04 75
CAN FAT/GI	0-80.5 km	1.0000	3.32E+02	2.13E+02	7.27E+02	1.02E+03	1.24E+03	1.36E+03	2.07E+03	2.23E-04 75
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.08E+02	6.98E+01	2.27E+02	3.25E+02	4.68E+02	5.17E+02	6.76E+02	2.23E-04 75
CAN FAT/BONE	0-80.5 km	1.0000	1.38E+01	8.89E+00	3.07E+01	4.56E+01	5.93E+01	6.43E+01	8.26E+01	2.23E-04 75
CAN FAT/OTHER	0-80.5 km	1.0000	4.13E+02	2.61E+02	9.12E+02	1.14E+03	1.64E+03	1.92E+03	2.45E+03	2.23E-04 75
CAN INJ/THYROID	0-80.5 km	1.0000	5.98E+02	3.67E+02	1.30E+03	1.92E+03	2.83E+03	3.18E+03	5.14E+03	1.71E-04 105
CAN INJ/BREAST	0-80.5 km	1.0000	4.35E+02	2.75E+02	1.00E+03	1.21E+03	1.85E+03	2.08E+03	2.77E+03	2.23E-04 75
CAN FAT/TOTAL	0-80.5 km	1.0000	1.26E+03	7.91E+02	2.76E+03	3.80E+03	5.69E+03	6.26E+03	7.63E+03	2.23E-04 75
ERL FAT/TOTAL	0-80.5 km	0.4250	7.78E-03	0.00E+00	1.95E-02	5.01E-02	1.07E-01	1.15E-01	2.17E-01	2.09E-05 19
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.8468	1.49E-01	2.77E-02	4.80E-01	7.42E-01	1.15E+00	1.27E+00	1.81E+00	4.85E-04 60
ERL INJ/DIARRHEA	0-80.5 km	0.5812	5.08E-02	4.29E-03	1.63E-01	2.80E-01	5.32E-01	5.86E-01	7.37E-01	4.85E-04 60
ERL INJ/PNEUMONITIS	0-80.5 km	0.1159	1.00E-03	0.00E+00	1.92E-04	2.46E-03	3.22E-02	4.25E-02	8.00E-02	2.09E-05 19
ERL INJ/THYROIDITIS	0-80.5 km	0.2686	2.53E-03	0.00E+00	6.30E-03	1.54E-02	4.32E-02	5.14E-02	6.78E-02	2.28E-04 89
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.9149	1.57E+00	4.71E-01	2.11E+00	3.39E+00	1.86E+01	4.07E+01	2.22E+02	1.03E-03 84
ERL INJ/SKIN ERYTHEMA	0-80.5 km	0.9550	4.78E+02	4.70E+01	6.71E+02	1.93E+03	7.05E+03	9.49E+03	4.68E+04	1.03E-03 84

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 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9087  1.35E+01  8.58E+00  3.13E+01
4.41E+01  8.13E+01  9.79E+01  1.23E+02  1.63E-03   50

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.7586  7.68E-02  7.71E-02  1.23E-01
1.66E-01 NOT-FOUND NOT-FOUND  2.42E-01  3.23E-02   36

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.4250  1.37E-01  0.00E+00  4.43E-01
1.02E+00  1.45E+00  1.68E+00  3.01E+00  5.71E-05  122
11-APR-06  11:10:35     PAGE  58            PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.1159  8.26E-03  0.00E+00  2.37E-02
7.29E-02  1.41E-01  1.75E-01  5.00E-01  2.28E-04   89
 EARLY dose L-EDEWBODY > 2.00 Sv          0.8853  4.69E+00  2.50E+00  1.15E+01
1.72E+01  3.12E+01  3.74E+01  5.29E+01  1.63E-03   50
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9738  1.02E+03  5.27E+01  3.17E+03
4.21E+03  2.33E+04  2.76E+04  3.57E+04  1.03E-03  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.7586  4.20E-04  5.39E-05  1.40E-03
2.08E-03  2.53E-03  2.75E-03  3.95E-03  2.85E-04   19
 ERL FAT/TOTAL               1.6-3.2 km  0.1630  5.87E-06  0.00E+00  2.07E-05
3.81E-05  1.11E-04 NOT-FOUND  1.22E-04  6.14E-03   89
 ERL FAT/TOTAL               3.2-4.8 km  0.0323  2.43E-07  0.00E+00  0.00E+00
0.00E+00  6.46E-06  7.92E-06  3.83E-05  2.00E-03  122
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  6.26E+02  5.84E+02  8.73E+02
9.96E+02  1.12E+03  1.17E+03  1.78E+03  1.12E-05   19
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.93E+04  1.83E+04  6.34E+04
9.65E+04  1.18E+05  1.27E+05  1.78E+05  2.23E-04   75

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.4250  1.58E-05  0.00E+00  4.03E-05
9.94E-05  2.41E-04  2.88E-04  4.54E-04  2.09E-05   19
 CAN FAT/TOTAL                0-16.1 km  1.0000  7.78E-04  7.42E-04  1.06E-03
1.11E-03  1.26E-03  1.32E-03  2.01E-03  2.17E-05   33

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  8.06E-01  7.20E-01  1.38E+00
1.69E+00 NOT-FOUND NOT-FOUND  2.28E+00  1.12E-02    9
 L-EDEWBODY                  1.6-3.2 km  1.0000  3.88E-01  3.46E-01  7.01E-01
7.65E-01  9.40E-01 NOT-FOUND  1.04E+00  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  2.59E-01  2.37E-01  3.92E-01
4.65E-01  5.52E-01  5.81E-01  6.22E-01  2.00E-03  122
 L-EDEWBODY                  4.8-6.4 km  1.0000  2.07E-01  2.03E-01  2.95E-01
3.48E-01 NOT-FOUND NOT-FOUND  5.16E-01  1.12E-02   45
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.91E-01  2.00E-01  2.43E-01
2.64E-01 NOT-FOUND NOT-FOUND  3.91E-01  1.12E-02   45
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.71E-01  1.53E-01  2.33E-01
2.53E-01 NOT-FOUND NOT-FOUND  3.30E-01  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.54E-01  1.25E-01  2.14E-01
2.32E-01  2.81E-01 NOT-FOUND  2.94E-01  6.93E-03  113
 L-EDEWBODY                16.1-32.2 km  1.0000  2.97E-01  2.54E-01  4.65E-01
5.95E-01  9.45E-01 NOT-FOUND  1.02E+00  8.02E-03   84
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 L-EDEWBODY                    32.2-48.3 km  1.0000  1.77E-01  1.52E-01  2.28E-01
2.46E-01  2.93E-01 NOT-FOUND  3.31E-01  8.02E-03  105
 L-EDEWBODY                    48.3-64.4 km  1.0000  1.27E-01  1.09E-01  1.56E-01
1.83E-01  2.11E-01  2.18E-01  2.32E-01  1.23E-03    1
 L-EDEWBODY                    64.4-80.5 km  1.0000  9.93E-02  8.94E-02  1.26E-01
1.42E-01  1.85E-01 NOT-FOUND  2.04E-01  6.14E-03   36
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  8 OF 11:
    Case 8-OPVB

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  59          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                     0-80.5 km  1.0000  6.12E+01  3.36E+01  1.33E+02
2.03E+02  3.50E+02  4.27E+02  6.14E+02  1.83E-03  120
 CAN FAT/THYROID                  0-80.5 km  1.0000  4.49E+01  2.52E+01  1.08E+02
1.45E+02  2.48E+02  2.95E+02  4.80E+02  1.71E-04  105
 CAN FAT/BREAST                   0-80.5 km  1.0000  3.39E+01  1.71E+01  7.71E+01
1.14E+02  2.14E+02  2.58E+02  4.71E+02  1.83E-03  120
 CAN FAT/GI                       0-80.5 km  1.0000  8.56E+01  4.34E+01  1.90E+02
3.06E+02  5.68E+02  7.49E+02  1.09E+03  1.83E-03  120
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  2.70E+01  1.36E+01  6.10E+01
9.82E+01  2.06E+02  2.40E+02  3.53E+02  1.83E-03  120
 CAN FAT/BONE                     0-80.5 km  1.0000  4.44E+00  2.44E+00  1.05E+01
1.44E+01  2.91E+01  3.44E+01  4.29E+01  1.83E-03  120
 CAN FAT/OTHER                    0-80.5 km  1.0000  1.48E+02  8.19E+01  3.52E+02
5.10E+02  9.63E+02  1.12E+03  1.34E+03  1.83E-03  120
 CAN INJ/THYROID                  0-80.5 km  1.0000  4.49E+02  2.52E+02  1.08E+03
1.45E+03  2.48E+03  2.95E+03  4.80E+03  1.71E-04  105
 CAN INJ/BREAST                   0-80.5 km  1.0000  1.07E+02  5.50E+01  2.43E+02
3.53E+02  7.20E+02  8.23E+02  1.48E+03  1.83E-03  120
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 CAN FAT/TOTAL                  0-80.5 km  1.0000  4.05E+02  2.22E+02  1.00E+03
1.31E+03  2.83E+03  3.37E+03  4.10E+03  1.83E-03  120
 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.0319  7.97E-01  0.00E+00  0.00E+00
0.00E+00  1.82E+01  4.05E+01  2.20E+02  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.1855  4.28E+02  0.00E+00  5.61E+02
1.88E+03  7.05E+03  9.49E+03  4.67E+04  1.03E-03   84
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.2128  9.69E+02  0.00E+00  3.04E+03
4.11E+03  2.33E+04  2.76E+04  3.57E+04  1.03E-03  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  60          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  1.02E+04  5.55E+03  2.36E+04
3.22E+04  6.72E+04  7.91E+04  9.66E+04  1.83E-03  120

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
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 L-EDEWBODY                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                16.1-32.2 km  1.0000  2.12E-01  1.87E-01  3.83E-01
5.02E-01  8.10E-01 NOT-FOUND  8.78E-01  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  1.26E-01  1.15E-01  1.99E-01
2.13E-01  2.46E-01 NOT-FOUND  2.51E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  6.81E-02  6.12E-02  1.15E-01
1.30E-01  1.72E-01 NOT-FOUND  1.79E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  4.55E-02  3.47E-02  9.69E-02
1.12E-01  1.50E-01 NOT-FOUND  1.56E-01  8.02E-03  105
0  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  8 OF 11:
    Case 8-OPVB

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35     PAGE  61          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.4250  1.56E-01  0.00E+00  3.97E-01
1.00E+00  2.37E+00  2.87E+00  4.34E+00  2.09E-05   19
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.8468  2.98E+00  5.78E-01  9.63E+00
1.39E+01  2.62E+01  3.05E+01  3.62E+01  4.85E-04   60
 ERL INJ/DIARRHEA              0-16.1 km  0.5812  1.02E+00  8.53E-02  3.22E+00
5.72E+00  1.05E+01  1.14E+01  1.47E+01  4.85E-04   60
 ERL INJ/PNEUMONITIS           0-16.1 km  0.1159  2.00E-02  0.00E+00  4.50E-03
5.06E-02  7.35E-01  8.93E-01  1.60E+00  2.09E-05   19
 ERL INJ/THYROIDITIS           0-16.1 km  0.2686  5.06E-02  0.00E+00  1.23E-01
2.92E-01  8.78E-01  1.03E+00  1.36E+00  2.28E-04   89
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9149  1.55E+01  9.45E+00  3.65E+01
4.97E+01  7.37E+01  7.88E+01  1.10E+02  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9550  9.93E+02  8.99E+02  2.01E+03
2.20E+03  2.72E+03  2.98E+03  3.34E+03  6.56E-04   74
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.9087  2.69E+02  1.68E+02  6.26E+02
8.88E+02  1.56E+03  1.95E+03  2.46E+03  1.63E-03   50
 CAN FAT/TOTAL                 0-16.1 km  1.0000  5.93E+01  4.90E+01  1.11E+02
1.37E+02  2.06E+02  2.19E+02  2.71E+02  4.28E-04   60
 CAN FAT/LUNG                  0-80.5 km  1.0000  7.15E+01  4.35E+01  1.43E+02
2.08E+02  3.54E+02  4.29E+02  6.16E+02  1.83E-03  120
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 CAN FAT/THYROID                0-80.5 km  1.0000  5.36E+01  3.48E+01  1.12E+02
1.56E+02  2.57E+02  3.01E+02  4.87E+02  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  3.54E+01  1.89E+01  7.76E+01
1.14E+02  2.14E+02  2.58E+02  4.72E+02  1.83E-03  120
 CAN FAT/GI                     0-80.5 km  1.0000  9.33E+01  5.36E+01  2.09E+02
3.07E+02  5.71E+02  7.49E+02  1.09E+03  1.83E-03  120
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  2.92E+01  1.60E+01  6.37E+01
1.02E+02  2.06E+02  2.40E+02  3.54E+02  1.83E-03  120
 CAN FAT/BONE                   0-80.5 km  1.0000  5.22E+00  3.34E+00  1.14E+01
1.55E+01  2.92E+01  3.44E+01  4.31E+01  1.83E-03  120
 CAN FAT/OTHER                  0-80.5 km  1.0000  1.76E+02  1.14E+02  3.79E+02
5.37E+02  9.69E+02  1.12E+03  1.35E+03  1.83E-03  120
 CAN INJ/THYROID                0-80.5 km  1.0000  5.36E+02  3.48E+02  1.12E+03
1.56E+03  2.57E+03  3.01E+03  4.87E+03  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  1.11E+02  5.94E+01  2.46E+02
3.67E+02  7.20E+02  8.23E+02  1.48E+03  1.83E-03  120
 CAN FAT/TOTAL                  0-80.5 km  1.0000  4.64E+02  2.77E+02  1.04E+03
1.36E+03  2.84E+03  3.37E+03  4.11E+03  1.83E-03  120
 ERL FAT/TOTAL                  0-80.5 km  0.4250  1.56E-01  0.00E+00  3.97E-01
1.00E+00  2.37E+00  2.87E+00  4.34E+00  2.09E-05   19
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.8468  2.98E+00  5.78E-01  9.63E+00
1.39E+01  2.62E+01  3.05E+01  3.62E+01  4.85E-04   60
 ERL INJ/DIARRHEA               0-80.5 km  0.5812  1.02E+00  8.53E-02  3.22E+00
5.72E+00  1.05E+01  1.14E+01  1.47E+01  4.85E-04   60
 ERL INJ/PNEUMONITIS            0-80.5 km  0.1159  2.00E-02  0.00E+00  4.50E-03
5.06E-02  7.35E-01  8.93E-01  1.60E+00  2.09E-05   19
 ERL INJ/THYROIDITIS            0-80.5 km  0.2686  5.06E-02  0.00E+00  1.23E-01
2.92E-01  8.78E-01  1.03E+00  1.36E+00  2.28E-04   89
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9149  1.63E+01  9.45E+00  3.84E+01
5.34E+01  8.26E+01  9.38E+01  2.56E+02  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9550  1.42E+03  9.39E+02  2.54E+03
3.75E+03  9.05E+03  1.46E+04  4.84E+04  1.03E-03   84
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9087  2.69E+02  1.68E+02  6.26E+02
8.88E+02  1.56E+03  1.95E+03  2.46E+03  1.63E-03   50

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.7586  1.54E+00  1.21E+00  3.46E+00
4.25E+00 NOT-FOUND NOT-FOUND  4.83E+00  3.23E-02   36

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.4250  2.75E+00  0.00E+00  9.01E+00
2.05E+01  3.04E+01  3.38E+01  6.03E+01  5.71E-05  122
 EARLY dose A-LUNGS > 5.00 Sv              0.1159  1.65E-01  0.00E+00  3.73E-01
1.26E+00  2.56E+00  2.98E+00  1.00E+01  2.28E-04   89
 EARLY dose L-EDEWBODY > 2.00 Sv           0.8853  9.37E+01  4.81E+01  2.33E+02
3.40E+02  6.46E+02  7.78E+02  1.06E+03  1.63E-03   50
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9738  1.94E+03  1.05E+03  4.34E+03
5.86E+03  2.33E+04  2.76E+04  3.70E+04  1.03E-03  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.7586  8.40E-03  1.12E-03  3.16E-02
4.14E-02  5.68E-02  6.15E-02  7.90E-02  2.85E-04   19
 ERL FAT/TOTAL                1.6-3.2 km  0.1630  1.17E-04  0.00E+00  3.73E-04
7.66E-04  2.23E-03 NOT-FOUND  2.45E-03  6.14E-03   89
 ERL FAT/TOTAL                3.2-4.8 km  0.0323  4.86E-06  0.00E+00  0.00E+00
0.00E+00  1.22E-04  1.51E-04  7.66E-04  2.00E-03  122
 ERL FAT/TOTAL                4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  62          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
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 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.09E+03  9.19E+02  2.03E+03
2.42E+03  3.26E+03  3.53E+03  4.67E+03  4.28E-04   60
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.13E+04  6.67E+03  2.43E+04
3.31E+04  6.74E+04  7.92E+04  9.69E+04  1.83E-03  120

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.4250  3.15E-04  0.00E+00  7.95E-04
1.99E-03  5.15E-03  5.97E-03  9.08E-03  2.09E-05   19
 CAN FAT/TOTAL                0-16.1 km  1.0000  2.88E-03  2.34E-03  5.62E-03
7.10E-03  9.63E-03  1.05E-02  1.32E-02  4.28E-04   60

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.52E+01  1.29E+01  3.02E+01
3.44E+01 NOT-FOUND NOT-FOUND  4.55E+01  1.12E-02    9
 L-EDEWBODY                   1.6-3.2 km  1.0000  5.42E+00  4.65E+00  1.07E+01
1.23E+01  1.69E+01 NOT-FOUND  1.86E+01  6.14E-03   89
 L-EDEWBODY                   3.2-4.8 km  1.0000  3.00E+00  2.16E+00  6.35E+00
8.04E+00  1.09E+01  1.15E+01  1.24E+01  2.00E-03  122
 L-EDEWBODY                   4.8-6.4 km  1.0000  1.99E+00  1.38E+00  4.47E+00
7.04E+00  7.81E+00 NOT-FOUND  8.06E+00  6.14E-03   36
 L-EDEWBODY                   6.4-8.1 km  1.0000  1.38E+00  1.01E+00  3.13E+00
3.99E+00  5.96E+00 NOT-FOUND  6.51E+00  6.14E-03   60
 L-EDEWBODY                   8.1-9.7 km  1.0000  1.06E+00  7.29E-01  2.52E+00
3.34E+00  4.64E+00 NOT-FOUND  5.21E+00  6.93E-03   98
 L-EDEWBODY                  9.7-16.1 km  1.0000  5.60E-01  4.28E-01  1.15E+00
1.66E+00  2.29E+00  2.47E+00  2.73E+00  2.00E-03   65
 L-EDEWBODY                 16.1-32.2 km  1.0000  2.12E-01  1.87E-01  3.83E-01
5.02E-01  8.10E-01 NOT-FOUND  8.78E-01  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km  1.0000  1.26E-01  1.15E-01  1.99E-01
2.13E-01  2.46E-01 NOT-FOUND  2.51E-01  8.02E-03  105
 L-EDEWBODY                 48.3-64.4 km  1.0000  6.81E-02  6.12E-02  1.15E-01
1.30E-01  1.72E-01 NOT-FOUND  1.79E-01  8.02E-03  105
 L-EDEWBODY                 64.4-80.5 km  1.0000  4.55E-02  3.47E-02  9.69E-02
1.12E-01  1.50E-01 NOT-FOUND  1.56E-01  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  8 OF 11:
    Case 8-OPVB

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35    PAGE  63          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                0-16.1 km  1.0000  2.67E+01  2.44E+01  3.79E+01
4.36E+01  5.50E+01  5.89E+01  8.21E+01  1.12E-05   19
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.29E+02  8.37E+01  2.80E+02
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3.81E+02  5.39E+02  5.69E+02  8.19E+02  2.23E-04   75
 CAN FAT/THYROID              0-80.5 km  1.0000  1.44E+01  9.28E+00  3.10E+01
4.64E+01  6.53E+01  7.17E+01  9.15E+01  2.23E-04   75
 CAN FAT/BREAST               0-80.5 km  1.0000  1.04E+02  6.74E+01  2.29E+02
3.19E+02  4.60E+02  5.14E+02  6.63E+02  2.23E-04   75
 CAN FAT/GI                   0-80.5 km  1.0000  2.46E+02  1.61E+02  5.34E+02
7.69E+02  1.08E+03  1.15E+03  1.54E+03  2.23E-04   75
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  8.12E+01  5.38E+01  1.83E+02
2.47E+02  3.37E+02  3.62E+02  5.07E+02  2.23E-04   75
 CAN FAT/BONE                 0-80.5 km  1.0000  9.35E+00  6.24E+00  2.03E+01
3.02E+01  3.56E+01  3.82E+01  5.79E+01  2.23E-04   75
 CAN FAT/OTHER                0-80.5 km  1.0000  2.63E+02  1.72E+02  5.80E+02
8.10E+02  1.11E+03  1.20E+03  1.66E+03  2.23E-04   75
 CAN INJ/THYROID              0-80.5 km  1.0000  1.44E+02  9.28E+01  3.10E+02
4.64E+02  6.53E+02  7.17E+02  9.15E+02  2.23E-04   75
 CAN INJ/BREAST               0-80.5 km  1.0000  3.28E+02  2.16E+02  7.28E+02
1.03E+03  1.25E+03  1.36E+03  2.09E+03  2.23E-04   75
 CAN FAT/TOTAL                0-80.5 km  1.0000  8.48E+02  5.60E+02  1.87E+03
2.67E+03  3.44E+03  3.68E+03  5.34E+03  2.23E-04   75

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  5.72E+02  5.40E+02  8.13E+02
9.26E+02  1.09E+03  1.15E+03  1.72E+03  1.69E-05   17
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.91E+04  1.23E+04  4.28E+04
5.99E+04  8.11E+04  8.82E+04  1.20E+05  2.23E-04   75

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                0-16.1 km  1.0000  6.34E-04  6.03E-04  9.24E-04
1.03E-03  1.17E-03  1.24E-03  1.92E-03  2.17E-05   33

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.3064  4.42E-02  0.00E+00  1.41E-01
1.77E-01 NOT-FOUND NOT-FOUND  1.99E-01  3.51E-02   90
 L-EDEWBODY                  1.6-3.2 km  0.8527  1.17E-01  1.07E-01  1.49E-01
1.72E-01 NOT-FOUND NOT-FOUND  2.00E-01  2.38E-02  108
 L-EDEWBODY                  3.2-4.8 km  0.8988  1.09E-01  1.02E-01  1.19E-01
1.27E-01  1.48E-01  1.58E-01  2.00E-01  4.28E-04   51
 L-EDEWBODY                  4.8-6.4 km  0.9019  1.07E-01  1.02E-01  1.19E-01
1.27E-01  1.48E-01  1.58E-01  2.01E-01  4.28E-04   17
 L-EDEWBODY                  6.4-8.1 km  0.9019  1.22E-01  1.03E-01  1.24E-01
1.34E-01  1.61E-01  1.75E-01  2.00E-01  7.99E-04   78
 L-EDEWBODY                  8.1-9.7 km  0.9106  1.18E-01  1.04E-01  1.27E-01
1.38E-01  1.69E-01  1.84E-01  1.99E-01  2.60E-03   66
 L-EDEWBODY                 9.7-16.1 km  0.9717  1.26E-01  1.07E-01  1.35E-01
1.49E-01  1.89E-01 NOT-FOUND  1.99E-01  6.93E-03  113
 L-EDEWBODY                16.1-32.2 km  1.0000  8.50E-02  8.13E-02  1.12E-01
1.19E-01  1.38E-01 NOT-FOUND  1.41E-01  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  5.10E-02  4.83E-02  7.38E-02
7.90E-02  9.24E-02  9.89E-02  1.07E-01  1.43E-04   37
 L-EDEWBODY                48.3-64.4 km  1.0000  5.85E-02  6.01E-02  8.07E-02
8.66E-02  1.01E-01  1.02E-01  1.07E-01  1.23E-03    1
 L-EDEWBODY                64.4-80.5 km  1.0000  5.38E-02  4.47E-02  7.77E-02
8.36E-02  9.91E-02  1.03E-01  1.06E-01  3.05E-03   75

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  1.91E+04  1.23E+04  4.28E+04
5.99E+04  8.11E+04  8.82E+04  1.20E+05  2.23E-04   75
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  1.78E+04  1.11E+04  4.11E+04
5.78E+04  7.95E+04  8.65E+04  1.16E+05  2.23E-04   75
 TOTAL INGESTION PATHWAYS DOSE            1.0000  4.56E+02  4.06E+02  6.94E+02
7.78E+02  1.00E+03  1.04E+03  1.47E+03  6.21E-06   38
 LONG-TERM GROUNDSHINE DOSE               1.0000  1.75E+04  1.10E+04  3.96E+04
5.59E+04  7.89E+04  8.60E+04  1.14E+05  2.23E-04   75
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 LONG-TERM RESUSPENSION DOSE                1.0000  2.94E+02  1.92E+02  6.79E+02
1.00E+03  1.32E+03  1.48E+03  1.91E+03  1.14E-03   81
 WATER INGESTION DOSE                       1.0000  2.15E+02  1.71E+02  4.03E+02
5.20E+02  7.19E+02  7.61E+02  1.15E+03  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE        1.0000  7.90E+02  4.25E+02  2.05E+03
2.69E+03  5.25E+03  5.98E+03  1.03E+04  1.71E-04   44
011-APR-06  11:10:35    PAGE  64          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE        1.0000  2.53E+01  2.30E+01  4.45E+01
5.34E+01  7.12E+01  7.50E+01  9.53E+01  2.00E-04  105
 INGESTION OF GRAINS                        1.0000  6.79E+00  4.32E+00  1.35E+01
1.69E+01  2.18E+01  2.31E+01  3.46E+01  1.14E-04  114
 INGESTION OF LEAF VEG                      1.0000  2.34E+01  2.14E+01  3.46E+01
3.88E+01  5.04E+01  5.31E+01  7.71E+01  4.35E-05   40
 INGESTION OF ROOT CROPS                    1.0000  1.69E+01  1.38E+01  2.88E+01
3.16E+01  3.67E+01  3.91E+01  5.88E+01  7.76E-06  115
 INGESTION OF FRUITS                        1.0000  2.51E+01  2.23E+01  3.89E+01
4.61E+01  5.93E+01  6.50E+01  8.12E+01  7.76E-06  115
 INGESTION OF LEGUMES                       1.0000  2.65E+01  2.38E+01  4.15E+01
5.00E+01  5.52E+01  5.75E+01  7.71E+01  7.76E-06  115
 INGESTION OF BEEF                          1.0000  5.49E+01  2.98E+01  1.21E+02
1.49E+02  2.06E+02  2.14E+02  3.24E+02  6.21E-06  103
 INGESTION OF MILK                          1.0000  5.63E+01  2.50E+01  1.23E+02
1.46E+02  2.03E+02  2.11E+02  3.10E+02  6.21E-06  103
 INGESTION OF POULTRY                       1.0000  1.49E+01  1.28E+01  2.46E+01
2.90E+01  3.58E+01  3.89E+01  7.59E+01  1.86E-05   43
 INGESTION OF OTHER MEAT CROPS              1.0000  1.65E+01  4.28E+00  4.30E+01
5.20E+01  6.50E+01  7.23E+01  9.24E+01  1.48E-03   63

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                       1.0000  4.04E+09  2.06E+09  8.58E+09
1.20E+10  2.77E+10  3.14E+10  3.40E+10  1.83E-03  120
 POP.-DEPENDENT COSTS                       1.0000  3.84E+09  1.86E+09  8.58E+09
1.19E+10  2.77E+10  3.13E+10  3.37E+10  1.83E-03  120
 FARM-DEPENDENT COSTS                       1.0000  2.00E+08  1.84E+08  3.17E+08
3.48E+08  4.35E+08  4.79E+08  5.76E+08  1.71E-04  109
 POP.-DEPENDENT DECONTAMINATION COST        1.0000  9.07E+08  3.79E+08  2.27E+09
3.24E+09  7.22E+09  8.24E+09  1.03E+10  1.83E-03  120
 FARM-DEPENDENT DECONTAMINATION COST        1.0000  3.83E+07  3.41E+07  6.06E+07
7.11E+07  9.37E+07  1.03E+08  1.34E+08  4.00E-04  120
 POP.-DEPENDENT INTERDICTION COST           1.0000  2.90E+09  1.29E+09  6.11E+09
1.07E+10  1.92E+10  2.12E+10  2.34E+10  1.83E-03  120
 FARM-DEPENDENT INTERDICTION COST           1.0000  1.21E+08  1.04E+08  2.13E+08
2.43E+08  3.13E+08  3.31E+08  4.39E+08  1.71E-04  109
 POP.-DEPENDENT CONDEMNATION COST           0.8981  3.29E+07  2.13E+07  7.59E+07
1.10E+08  2.18E+08  2.42E+08  2.85E+08  1.63E-03   50
 FARM-DEPENDENT CONDEMNATION COST           0.9031  1.72E+06  1.26E+06  3.48E+06
4.89E+06  7.49E+06  7.78E+06  1.10E+07  8.30E-06   37
 EMERGENCY PHASE COST                       0.9809  3.23E+06  2.02E+06  5.79E+06
1.16E+07  3.20E+07  3.74E+07  1.37E+08  1.71E-04  105
 INTERMEDIATE PHASE COST                    0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                         1.0000  1.54E+06  9.97E+05  3.44E+06
4.74E+06  5.68E+06  6.02E+06  7.50E+06  6.51E-04   33
 CROP DISPOSAL COST                         1.0000  3.83E+07  3.46E+07  6.75E+07
7.32E+07  8.34E+07  8.83E+07  1.22E+08  1.71E-04  109

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)            1.0000  3.93E+04  3.55E+04  6.42E+04
7.30E+04  8.69E+04  9.36E+04  1.32E+05  4.00E-04  120
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 POP. DECONTAMINATION (INDIVIDUALS)      1.0000  1.73E+05  7.51E+04  4.11E+05
1.01E+06  1.09E+06  1.13E+06  1.19E+06  1.83E-03  120
 FARM INTERDICTION (HECTARES)            1.0000  8.33E+04  7.68E+04  1.17E+05
1.31E+05  1.69E+05  1.89E+05  2.68E+05  1.71E-04  109
 POP. INTERDICTION (INDIVIDUALS)         1.0000  1.73E+05  7.51E+04  4.11E+05
1.01E+06  1.09E+06  1.13E+06  1.19E+06  1.83E-03  120
 FARM CONDEMNATION (HECTARES)            0.9031  2.45E+02  1.82E+02  4.49E+02
6.74E+02  1.04E+03  1.07E+03  1.52E+03  6.69E-06   37
 POP. CONDEMNATION (INDIVIDUALS)         0.8981  2.44E+02  1.55E+02  5.42E+02
7.70E+02  1.45E+03  1.83E+03  2.05E+03  1.63E-03   50
 MILK DISPOSAL AREA (HECTARES)           1.0000  8.40E+04  7.73E+04  1.18E+05
1.31E+05  1.70E+05  1.90E+05  2.68E+05  1.96E-04   33
 CROP DISPOSAL AREA (HECTARES)           1.0000  8.35E+04  7.68E+04  1.17E+05
1.31E+05  1.69E+05  1.89E+05  2.68E+05  1.71E-04  109
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 CAN FAT/TOTAL                  0-16.1 km  1.0000  5.38E+01  4.67E+01  9.18E+01
1.08E+02  1.40E+02  1.57E+02  2.41E+02  2.76E-05   19
 CAN FAT/LUNG                   0-80.5 km  1.0000  3.30E+02  2.19E+02  7.11E+02
9.07E+02  1.35E+03  1.58E+03  1.98E+03  1.83E-03  120
 CAN FAT/THYROID                0-80.5 km  1.0000  1.18E+02  7.36E+01  2.57E+02
3.61E+02  5.86E+02  6.75E+02  9.73E+02  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  2.49E+02  1.63E+02  5.44E+02
7.02E+02  9.56E+02  1.17E+03  1.63E+03  1.83E-03  120
 CAN FAT/GI                     0-80.5 km  1.0000  6.10E+02  4.02E+02  1.28E+03
1.66E+03  2.66E+03  3.13E+03  3.81E+03  1.83E-03  120
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  1.91E+02  1.23E+02  3.97E+02
5.15E+02  8.29E+02  1.03E+03  1.22E+03  1.83E-03  120
 CAN FAT/BONE                   0-80.5 km  1.0000  2.09E+01  1.40E+01  4.37E+01
5.60E+01  8.83E+01  1.06E+02  1.40E+02  1.83E-03   14
 CAN FAT/OTHER                  0-80.5 km  1.0000  7.74E+02  5.01E+02  1.56E+03
2.07E+03  3.34E+03  4.04E+03  5.72E+03  2.28E-03   79
 CAN INJ/THYROID                0-80.5 km  1.0000  1.18E+03  7.36E+02  2.57E+03
3.61E+03  5.86E+03  6.75E+03  9.73E+03  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  7.82E+02  5.05E+02  1.60E+03
2.11E+03  3.32E+03  3.92E+03  5.13E+03  1.83E-03  120
 CAN FAT/TOTAL                  0-80.5 km  1.0000  2.29E+03  1.52E+03  4.85E+03
6.28E+03  9.37E+03  1.13E+04  1.45E+04  2.28E-03   79
 ERL FAT/TOTAL                  0-80.5 km  0.7692  1.73E-01  1.90E-02  5.60E-01
9.59E-01  1.43E+00  1.67E+00  2.34E+00  4.85E-04   60
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.9127  1.05E+00  3.94E-01  3.15E+00
4.20E+00  7.06E+00  8.27E+00  1.09E+01  1.23E-03   45
 ERL INJ/DIARRHEA               0-80.5 km  0.8686  4.75E-01  1.35E-01  1.38E+00
2.08E+00  3.29E+00  3.88E+00  5.45E+00  1.23E-03   45
 ERL INJ/PNEUMONITIS            0-80.5 km  0.4988  2.21E-02  0.00E+00  6.32E-02
1.28E-01  3.19E-01  3.71E-01  6.56E-01  2.28E-04   89
 ERL INJ/THYROIDITIS            0-80.5 km  0.6509  3.33E-02  2.96E-03  1.02E-01
1.71E-01  3.22E-01  3.52E-01  4.77E-01  4.85E-04   89
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9545  1.21E+01  1.61E+00  3.30E+01
5.04E+01  2.20E+02  2.86E+02  7.02E+02  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9744  2.72E+03  2.96E+02  7.26E+03
1.05E+04  3.70E+04  4.71E+04  1.04E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9353  1.44E+02  2.58E+01  8.32E+01
2.36E+02  3.07E+03  5.21E+03  2.62E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.8858  1.56E-01  1.09E-01  3.27E-01
4.02E-01 NOT-FOUND NOT-FOUND  4.82E-01  2.71E-02   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.7692  1.30E+00  3.41E-01  3.73E+00
5.24E+00  9.47E+00  1.16E+01  1.70E+01  1.23E-03   45
11-APR-06  11:10:35    PAGE  66            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.4988  2.24E-01  0.00E+00  8.84E-01
1.31E+00  2.54E+00  3.14E+00  4.17E+00  1.46E-03   60
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9098  1.26E+01  8.44E+00  3.08E+01
3.98E+01  5.79E+01  6.41E+01  8.58E+01  1.63E-03   50
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9890  3.64E+03  1.60E+03  6.56E+03
1.65E+04  3.75E+04  4.48E+04  8.97E+04  1.71E-04  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.8858  1.90E-03  1.66E-03  3.66E-03
4.18E-03  5.20E-03  5.41E-03  6.37E-03  2.85E-04   18
 ERL FAT/TOTAL                1.6-3.2 km  0.5497  2.25E-04  1.34E-05  1.02E-03
1.11E-03  1.35E-03  1.47E-03  2.31E-03  2.85E-04   19
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 ERL FAT/TOTAL                3.2-4.8 km  0.2536  2.92E-05  0.00E+00  6.82E-05
2.02E-04  4.63E-04  5.62E-04  9.17E-04  2.00E-03  122
 ERL FAT/TOTAL                4.8-6.4 km  0.1221  7.10E-06  0.00E+00  5.86E-06
5.60E-05  1.42E-04 NOT-FOUND  1.66E-04  6.14E-03   36
 ERL FAT/TOTAL                6.4-8.1 km  0.0719  9.75E-07  0.00E+00  0.00E+00
4.09E-06  3.71E-05 NOT-FOUND  4.49E-05  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.10E+03  9.55E+02  1.83E+03
2.25E+03  3.11E+03  3.28E+03  4.87E+03  2.76E-05   19
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  5.27E+04  3.45E+04  1.09E+05
1.40E+05  2.37E+05  2.85E+05  3.15E+05  2.28E-03   79

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.7692  2.77E-04  3.66E-05  8.41E-04
1.40E-03  2.50E-03  2.88E-03  4.51E-03  2.09E-05   19
 CAN FAT/TOTAL                0-16.1 km  1.0000  8.65E-04  7.99E-04  1.08E-03
1.14E-03  1.28E-03  1.35E-03  1.99E-03  2.60E-05   47

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.63E+00  1.31E+00  3.08E+00
3.54E+00 NOT-FOUND NOT-FOUND  4.81E+00  1.12E-02    9
 L-EDEWBODY                   1.6-3.2 km  1.0000  6.11E-01  4.86E-01  1.18E+00
1.45E+00  2.08E+00 NOT-FOUND  2.16E+00  6.14E-03   89
 L-EDEWBODY                   3.2-4.8 km  1.0000  3.76E-01  3.10E-01  7.11E-01
8.48E-01  1.11E+00  1.20E+00  1.32E+00  2.00E-03  122
 L-EDEWBODY                   4.8-6.4 km  1.0000  3.15E-01  2.68E-01  5.85E-01
7.16E-01  8.20E-01 NOT-FOUND  8.55E-01  6.14E-03   36
 L-EDEWBODY                   6.4-8.1 km  1.0000  2.68E-01  2.43E-01  4.20E-01
5.07E-01  6.41E-01 NOT-FOUND  6.89E-01  6.14E-03   60
 L-EDEWBODY                   8.1-9.7 km  1.0000  2.22E-01  2.02E-01  3.33E-01
4.21E-01 NOT-FOUND NOT-FOUND  6.82E-01  1.20E-02   50
 L-EDEWBODY                  9.7-16.1 km  1.0000  1.52E-01  1.27E-01  2.22E-01
2.45E-01 NOT-FOUND NOT-FOUND  3.62E-01  1.20E-02   50
 L-EDEWBODY                 16.1-32.2 km  1.0000  5.25E-01  4.42E-01  9.29E-01
1.14E+00  1.75E+00 NOT-FOUND  1.86E+00  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km  1.0000  2.75E-01  2.68E-01  3.88E-01
4.39E-01  6.47E-01 NOT-FOUND  6.89E-01  8.02E-03  105
 L-EDEWBODY                 48.3-64.4 km  1.0000  2.07E-01  2.07E-01  2.80E-01
3.14E-01  3.89E-01 NOT-FOUND  4.00E-01  8.02E-03  105
 L-EDEWBODY                 64.4-80.5 km  1.0000  1.62E-01  1.33E-01  2.53E-01
3.05E-01 NOT-FOUND NOT-FOUND  3.45E-01  1.84E-02  120
0  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  9 OF 11:
    Case 9-OPW1

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  67          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
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 ERL FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                   0-80.5 km  1.0000  1.13E+02  6.14E+01  2.42E+02
3.97E+02  6.72E+02  8.07E+02  1.05E+03  2.28E-03   79
 CAN FAT/THYROID                0-80.5 km  1.0000  9.22E+01  5.36E+01  2.20E+02
3.16E+02  5.10E+02  5.96E+02  8.68E+02  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  6.79E+01  3.50E+01  1.52E+02
2.49E+02  4.52E+02  6.23E+02  7.62E+02  1.83E-03   14
 CAN FAT/GI                     0-80.5 km  1.0000  1.82E+02  9.81E+01  3.99E+02
6.21E+02  1.19E+03  1.44E+03  1.79E+03  2.28E-03   79
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  5.26E+01  2.77E+01  1.12E+02
1.89E+02  3.72E+02  4.70E+02  5.65E+02  1.83E-03   14
 CAN FAT/BONE                   0-80.5 km  1.0000  6.40E+00  3.46E+00  1.44E+01
2.31E+01  4.28E+01  5.27E+01  8.29E+01  1.83E-03   14
 CAN FAT/OTHER                  0-80.5 km  1.0000  3.23E+02  1.72E+02  7.12E+02
1.09E+03  1.91E+03  2.37E+03  3.96E+03  2.28E-03   79
 CAN INJ/THYROID                0-80.5 km  1.0000  9.22E+02  5.36E+02  2.20E+03
3.16E+03  5.10E+03  5.96E+03  8.68E+03  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  2.14E+02  1.13E+02  4.54E+02
7.66E+02  1.64E+03  2.06E+03  2.40E+03  1.83E-03   14
 CAN FAT/TOTAL                  0-80.5 km  1.0000  8.37E+02  4.54E+02  1.80E+03
2.78E+03  4.77E+03  6.40E+03  8.84E+03  2.28E-03   79
 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.1855  9.93E+00  0.00E+00  3.09E+01
4.74E+01  2.20E+02  2.86E+02  6.97E+02  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.5484  2.64E+03  1.87E+02  7.22E+03
1.04E+04  3.70E+04  4.71E+04  1.04E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.0534  1.11E+02  0.00E+00  0.00E+00
2.20E+02  3.03E+03  5.21E+03  2.61E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv       0.6110  3.56E+03  1.59E+03  6.52E+03
1.65E+04  3.75E+04  4.48E+04  8.97E+04  1.71E-04  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  68          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.00E+04  1.10E+04  4.34E+04
6.91E+04  1.27E+05  1.52E+05  1.88E+05  2.28E-03   79

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY               16.1-32.2 km  1.0000  3.87E-01  2.98E-01  8.06E-01
1.02E+00  1.73E+00 NOT-FOUND  1.86E+00  8.02E-03   84
 L-EDEWBODY               32.2-48.3 km  1.0000  1.71E-01  1.46E-01  2.53E-01
2.91E-01  4.68E-01 NOT-FOUND  5.31E-01  8.02E-03  105
 L-EDEWBODY               48.3-64.4 km  1.0000  1.30E-01  1.17E-01  2.09E-01
2.26E-01  2.71E-01 NOT-FOUND  2.77E-01  8.02E-03  105
 L-EDEWBODY               64.4-80.5 km  1.0000  9.98E-02  8.67E-02  1.98E-01
2.21E-01 NOT-FOUND NOT-FOUND  2.47E-01  2.38E-02   79
  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input
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SOURCE TERM 9 OF 11:
Case 9-OPW1

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

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE

11-APR-06 11:10:35 PAGE 69

	PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.7692	3.46E+00	3.63E-01	1.08E+01	1.89E+01	3.26E+01	3.54E+01	4.68E+01
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9127	2.11E+01	8.04E+00	6.10E+01	8.43E+01	1.35E+02	1.62E+02	2.19E+02
ERL INJ/DIARRHEA	0-16.1 km	0.8686	9.51E+00	2.66E+00	3.07E+01	4.24E+01	6.85E+01	7.97E+01	1.09E+02
ERL INJ/PNEUMONITIS	0-16.1 km	0.4988	4.41E-01	0.00E+00	1.27E+00	2.57E+00	6.92E+00	7.86E+00	1.31E+01
ERL INJ/THYROIDITIS	0-16.1 km	0.6509	6.65E-01	6.38E-02	2.06E+00	3.52E+00	6.79E+00	7.45E+00	9.54E+00
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9545	4.35E+01	3.17E+01	9.81E+01	1.18E+02	1.78E+02	2.04E+02	2.58E+02
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9744	1.64E+03	1.43E+03	2.70E+03	3.03E+03	3.19E+03	3.26E+03	3.66E+03
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9353	6.48E+02	5.18E+02	1.29E+03	1.58E+03	2.09E+03	2.16E+03	2.59E+03
CAN FAT/TOTAL	0-16.1 km	1.0000	1.26E+02	1.06E+02	2.37E+02	3.01E+02	3.89E+02	4.34E+02	5.23E+02
CAN FAT/LUNG	0-80.5 km	1.0000	1.31E+02	8.39E+01	2.71E+02	4.18E+02	6.76E+02	8.10E+02	1.07E+03
CAN FAT/THYROID	0-80.5 km	1.0000	1.10E+02	7.33E+01	2.30E+02	3.26E+02	5.22E+02	6.16E+02	8.84E+02
CAN FAT/BREAST	0-80.5 km	1.0000	7.11E+01	3.86E+01	1.55E+02	2.49E+02	4.52E+02	6.23E+02	7.65E+02
CAN FAT/GI	0-80.5 km	1.0000	2.05E+02	1.22E+02	4.26E+02	6.33E+02	1.20E+03	1.46E+03	1.81E+03
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	5.75E+01	3.34E+01	1.12E+02	1.89E+02	3.72E+02	4.70E+02	5.70E+02
CAN FAT/BONE	0-80.5 km	1.0000	7.17E+00	4.15E+00	1.54E+01	2.38E+01	4.35E+01	5.32E+01	8.35E+01
CAN FAT/OTHER	0-80.5 km	1.0000	3.81E+02	2.45E+02	8.16E+02	1.14E+03	1.94E+03	2.39E+03	4.02E+03
CAN INJ/THYROID	0-80.5 km	1.0000	1.10E+03	7.33E+02	2.30E+03	3.26E+03	5.22E+03	6.16E+03	8.84E+03
CAN INJ/BREAST	0-80.5 km	1.0000	2.24E+02	1.21E+02	4.61E+02	7.73E+02	1.64E+03	2.06E+03	2.41E+03
CAN FAT/TOTAL	0-80.5 km	1.0000	9.63E+02	6.00E+02	1.97E+03	2.94E+03	4.91E+03	6.46E+03	8.97E+03
ERL FAT/TOTAL	0-80.5 km	0.7692	3.46E+00	3.63E-01	1.08E+01	1.89E+01	3.26E+01	3.54E+01	4.68E+01
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.9127	2.11E+01	8.04E+00	6.10E+01	8.43E+01	1.35E+02	1.62E+02	2.19E+02
ERL INJ/DIARRHEA	0-80.5 km	0.8686	9.51E+00	2.66E+00	3.07E+01	4.24E+01	6.85E+01	7.97E+01	1.09E+02
ERL INJ/PNEUMONITIS	0-80.5 km	0.4988	4.41E-01	0.00E+00	1.27E+00	2.57E+00	6.92E+00	7.86E+00	1.31E+01
ERL INJ/THYROIDITIS	0-80.5 km	0.6509	6.65E-01	6.38E-02	2.06E+00				

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3.52E+00  6.79E+00  7.45E+00  9.54E+00  4.85E-04   89
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9545  5.34E+01  3.23E+01  1.21E+02
1.68E+02  2.88E+02  3.79E+02  7.92E+02  1.03E-03   84
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9744  4.28E+03  2.27E+03  8.88E+03
1.29E+04  4.05E+04  5.20E+04  1.06E+05  1.03E-03  105
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9353  7.60E+02  5.18E+02  1.47E+03
1.99E+03  4.53E+03  6.02E+03  2.78E+04  1.03E-03   84

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8858  3.11E+00  3.10E+00  6.18E+00
8.11E+00 NOT-FOUND NOT-FOUND  9.65E+00  2.71E-02   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.7692  2.60E+01  7.57E+00  7.75E+01
1.05E+02  1.89E+02  2.30E+02  3.40E+02  1.23E-03   45
 EARLY dose A-LUNGS > 5.00 Sv             0.4988  4.49E+00  0.00E+00  1.63E+01
2.64E+01  5.23E+01  6.06E+01  8.34E+01  1.46E-03   60
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9098  2.51E+02  1.61E+02  6.07E+02
8.17E+02  1.21E+03  1.38E+03  1.72E+03  1.63E-03   50
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9890  5.01E+03  3.08E+03  8.62E+03
1.82E+04  4.60E+04  6.01E+04  9.07E+04  1.71E-04  105

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.8858  3.79E-02  3.66E-02  7.67E-02
8.59E-02  1.04E-01  1.08E-01  1.27E-01  2.85E-04   18
 ERL FAT/TOTAL              1.6-3.2 km  0.5497  4.51E-03  3.07E-04  2.11E-02
2.60E-02  3.33E-02  3.55E-02  4.63E-02  2.85E-04   19
 ERL FAT/TOTAL              3.2-4.8 km  0.2536  5.85E-04  0.00E+00  1.47E-03
3.39E-03  9.39E-03  1.23E-02  1.83E-02  2.00E-03  122
 ERL FAT/TOTAL              4.8-6.4 km  0.1221  1.42E-04  0.00E+00  1.25E-04
1.11E-03  3.17E-03 NOT-FOUND  3.32E-03  6.14E-03   36
011-APR-06  11:10:35    PAGE  70          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0719  1.95E-05  0.00E+00  0.00E+00
8.69E-05  5.98E-04 NOT-FOUND  8.97E-04  6.14E-03   60

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  2.26E+03  1.87E+03  4.19E+03
5.30E+03  7.35E+03  7.85E+03  9.91E+03  4.28E-04   60
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.23E+04  1.32E+04  4.47E+04
7.05E+04  1.30E+05  1.55E+05  1.90E+05  2.28E-03   79

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.7692  5.53E-03  7.83E-04  1.67E-02
3.13E-02  5.14E-02  5.81E-02  9.03E-02  2.09E-05   19
 CAN FAT/TOTAL               0-16.1 km  1.0000  6.11E-03  5.26E-03  1.12E-02
1.34E-02  2.01E-02  2.12E-02  2.54E-02  4.28E-04   60

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  3.23E+01  2.84E+01  6.36E+01
7.50E+01 NOT-FOUND NOT-FOUND  9.63E+01  1.12E-02    9
 L-EDEWBODY                 1.6-3.2 km  1.0000  1.15E+01  9.46E+00  2.36E+01
3.03E+01  3.70E+01 NOT-FOUND  3.94E+01  6.14E-03   89
 L-EDEWBODY                 3.2-4.8 km  1.0000  6.34E+00  5.08E+00  1.26E+01
1.60E+01  2.22E+01  2.39E+01  2.64E+01  2.00E-03  122
 L-EDEWBODY                 4.8-6.4 km  1.0000  4.22E+00  3.05E+00  9.74E+00
1.14E+01  1.55E+01 NOT-FOUND  1.71E+01  6.14E-03   36
 L-EDEWBODY                 6.4-8.1 km  1.0000  2.92E+00  2.10E+00  7.11E+00
8.77E+00  1.25E+01 NOT-FOUND  1.38E+01  6.14E-03   60
 L-EDEWBODY                 8.1-9.7 km  1.0000  2.23E+00  1.40E+00  5.51E+00
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7.67E+00  1.06E+01 NOT-FOUND  1.10E+01  6.93E-03   98
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.18E+00  8.21E-01  2.35E+00
3.41E+00  5.24E+00  5.48E+00  5.82E+00  2.00E-03   65
 L-EDEWBODY                16.1-32.2 km  1.0000  3.87E-01  2.98E-01  8.06E-01
1.02E+00  1.73E+00 NOT-FOUND  1.86E+00  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  1.71E-01  1.46E-01  2.53E-01
2.91E-01  4.68E-01 NOT-FOUND  5.31E-01  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  1.30E-01  1.17E-01  2.09E-01
2.26E-01  2.71E-01 NOT-FOUND  2.77E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  9.98E-02  8.67E-02  1.98E-01
2.21E-01 NOT-FOUND NOT-FOUND  2.47E-01  2.38E-02   79
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  9 OF 11:
    Case 9-OPW1

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE  71          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  4.75E+01  3.82E+01  8.37E+01
1.02E+02  1.25E+02  1.37E+02  2.36E+02  2.76E-05   19
 CAN FAT/LUNG                  0-80.5 km  1.0000  2.16E+02  1.48E+02  4.79E+02
5.60E+02  7.54E+02  8.52E+02  1.16E+03  1.83E-03  120
 CAN FAT/THYROID               0-80.5 km  1.0000  2.48E+01  1.66E+01  5.37E+01
6.51E+01  9.21E+01  1.07E+02  1.35E+02  1.83E-03  120
 CAN FAT/BREAST                0-80.5 km  1.0000  1.80E+02  1.21E+02  3.73E+02
4.66E+02  7.15E+02  8.13E+02  9.78E+02  1.83E-03  120
 CAN FAT/GI                    0-80.5 km  1.0000  4.27E+02  2.93E+02  9.19E+02
1.09E+03  1.48E+03  1.68E+03  2.27E+03  1.83E-03  120
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.38E+02  9.47E+01  3.03E+02
3.58E+02  5.20E+02  5.87E+02  7.38E+02  1.83E-03  120
 CAN FAT/BONE                  0-80.5 km  1.0000  1.44E+01  9.83E+00  3.11E+01
3.68E+01  5.30E+01  5.94E+01  7.69E+01  1.83E-03  120
 CAN FAT/OTHER                 0-80.5 km  1.0000  4.49E+02  3.00E+02  1.01E+03
1.14E+03  1.51E+03  1.70E+03  2.42E+03  1.83E-03  120
 CAN INJ/THYROID               0-80.5 km  1.0000  2.48E+02  1.66E+02  5.37E+02
6.51E+02  9.21E+02  1.07E+03  1.35E+03  1.83E-03  120
 CAN INJ/BREAST                0-80.5 km  1.0000  5.68E+02  3.87E+02  1.17E+03
1.42E+03  2.15E+03  2.46E+03  3.08E+03  1.83E-03  120
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.45E+03  9.83E+02  3.11E+03
3.68E+03  5.30E+03  5.94E+03  7.78E+03  1.83E-03  120

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  9.88E+02  8.34E+02  1.69E+03
2.12E+03  3.00E+03  3.17E+03  4.74E+03  2.76E-05   19
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  3.25E+04  2.20E+04  7.10E+04
8.32E+04  1.20E+05  1.40E+05  1.75E+05  1.83E-03  120

POPULATION WEIGHTED RISK
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 CAN FAT/TOTAL                    0-16.1 km  1.0000  5.60E-04  5.20E-04  9.70E-04
1.05E-03  1.19E-03  1.26E-03  1.90E-03  2.60E-05   47

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                        0-1.6 km  0.1352  2.02E-02  0.00E+00  1.02E-01
1.20E-01  1.73E-01 NOT-FOUND  1.99E-01  5.39E-03   10
 L-EDEWBODY                      1.6-3.2 km  0.2689  3.77E-02  0.00E+00  1.16E-01
1.32E-01  1.76E-01 NOT-FOUND  1.97E-01  5.39E-03   32
 L-EDEWBODY                      3.2-4.8 km  0.3933  5.93E-02  0.00E+00  1.30E-01
1.50E-01 NOT-FOUND NOT-FOUND  2.00E-01  1.20E-02   97
 L-EDEWBODY                      4.8-6.4 km  0.6929  1.04E-01  1.06E-01  1.48E-01
1.71E-01 NOT-FOUND NOT-FOUND  2.00E-01  2.38E-02   79
 L-EDEWBODY                      6.4-8.1 km  0.8713  1.22E-01  1.04E-01  1.20E-01
1.28E-01  1.48E-01  1.57E-01  2.00E-01  3.42E-04   25
 L-EDEWBODY                      8.1-9.7 km  0.9014  1.10E-01  1.03E-01  1.20E-01
1.28E-01  1.49E-01  1.59E-01  2.00E-01  4.28E-04   51
 L-EDEWBODY                     9.7-16.1 km  0.9045  9.28E-02  9.63E-02  1.55E-01
1.88E-01 NOT-FOUND NOT-FOUND  2.00E-01  3.98E-02   92
 L-EDEWBODY                    16.1-32.2 km  0.9655  1.38E-01  1.05E-01  1.23E-01
1.32E-01  1.55E-01  1.66E-01  2.00E-01  7.99E-04   40
 L-EDEWBODY                    32.2-48.3 km  1.0000  1.03E-01  1.02E-01  1.22E-01
1.31E-01  1.55E-01 NOT-FOUND  1.59E-01  8.02E-03  105
 L-EDEWBODY                    48.3-64.4 km  1.0000  7.68E-02  7.17E-02  1.06E-01
1.13E-01  1.32E-01 NOT-FOUND  1.35E-01  8.02E-03   44
 L-EDEWBODY                    64.4-80.5 km  1.0000  6.22E-02  5.68E-02  9.35E-02
1.04E-01 NOT-FOUND NOT-FOUND  1.13E-01  1.84E-02  120

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  3.25E+04  2.20E+04  7.10E+04
8.32E+04  1.20E+05  1.40E+05  1.75E+05  1.83E-03  120
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  2.87E+04  1.93E+04  6.39E+04
7.86E+04  1.09E+05  1.21E+05  1.40E+05  1.83E-03  120
 TOTAL INGESTION PATHWAYS DOSE            1.0000  1.10E+03  1.00E+03  1.89E+03
2.27E+03  3.09E+03  3.24E+03  4.65E+03  2.76E-05   19
 LONG-TERM GROUNDSHINE DOSE               1.0000  2.85E+04  1.92E+04  6.34E+04
7.78E+04  1.08E+05  1.20E+05  1.40E+05  1.83E-03  120
 LONG-TERM RESUSPENSION DOSE              1.0000  1.69E+02  1.12E+02  3.86E+02
5.12E+02  6.78E+02  7.17E+02  7.90E+02  6.81E-04   61
 WATER INGESTION DOSE                     1.0000  8.25E+02  6.83E+02  1.53E+03
2.01E+03  2.72E+03  3.04E+03  4.53E+03  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE      1.0000  2.70E+03  1.37E+03  6.67E+03
9.48E+03  1.87E+04  2.32E+04  3.37E+04  1.71E-04   44
11-APR-06  11:10:35    PAGE  72          PROB                          QUANTILES
                         PEAK       PEAK  PEAK
                                     NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE      1.0000  7.77E+01  6.76E+01  1.27E+02
1.51E+02  2.22E+02  2.56E+02  3.05E+02  5.14E-04  120
 INGESTION OF GRAINS                      1.0000  6.39E+00  5.17E+00  1.14E+01
1.44E+01  2.16E+01  2.35E+01  3.33E+01  2.57E-04   36
 INGESTION OF LEAF VEG                    1.0000  2.36E+01  2.11E+01  3.67E+01
4.32E+01  5.77E+01  6.38E+01  7.67E+01  1.43E-03  120
 INGESTION OF ROOT CROPS                  1.0000  1.54E+01  1.26E+01  2.50E+01
3.02E+01  3.55E+01  3.80E+01  5.58E+01  1.86E-05   16
 INGESTION OF FRUITS                      1.0000  4.22E+01  3.64E+01  6.93E+01
7.48E+01  8.79E+01  9.43E+01  1.32E+02  1.43E-03  120
 INGESTION OF LEGUMES                     1.0000  2.74E+01  2.42E+01  4.45E+01
5.19E+01  6.24E+01  6.76E+01  9.16E+01  1.43E-03  120
 INGESTION OF BEEF                        1.0000  7.02E+01  3.00E+01  1.96E+02
2.34E+02  3.15E+02  3.33E+02  4.43E+02  1.66E-04   91
 INGESTION OF MILK                        1.0000  6.08E+01  2.36E+01  1.55E+02
2.05E+02  2.70E+02  3.01E+02  3.58E+02  1.66E-04   91
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 INGESTION OF POULTRY                          1.0000  1.73E+01  1.27E+01  3.50E+01
4.19E+01  5.57E+01  6.04E+01  8.21E+01  5.71E-05   63
 INGESTION OF OTHER MEAT CROPS                 1.0000  1.30E+01  2.16E+00  4.03E+01
5.24E+01  7.09E+01  7.42E+01  1.18E+02  5.71E-05   63

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                          1.0000  8.74E+09  4.86E+09  2.09E+10
3.08E+10  3.93E+10  4.36E+10  5.91E+10  1.71E-04   44
 POP.-DEPENDENT COSTS                          1.0000  8.46E+09  4.65E+09  2.07E+10
3.08E+10  3.93E+10  4.36E+10  5.89E+10  1.71E-04   44
 FARM-DEPENDENT COSTS                          1.0000  2.80E+08  2.52E+08  4.09E+08
4.83E+08  5.48E+08  5.72E+08  7.07E+08  1.71E-04  109
 POP.-DEPENDENT DECONTAMINATION COST           1.0000  2.04E+09  1.08E+09  4.42E+09
8.75E+09  1.07E+10  1.11E+10  1.16E+10  1.83E-03  120
 FARM-DEPENDENT DECONTAMINATION COST           1.0000  7.32E+07  6.72E+07  1.10E+08
1.22E+08  1.53E+08  1.69E+08  2.23E+08  4.00E-04  120
 POP.-DEPENDENT INTERDICTION COST              1.0000  6.18E+09  3.36E+09  1.58E+10
2.11E+10  2.64E+10  2.91E+10  4.89E+10  1.71E-04   44
 FARM-DEPENDENT INTERDICTION COST              1.0000  1.53E+08  1.24E+08  2.47E+08
2.97E+08  3.43E+08  3.64E+08  4.84E+08  1.71E-04  109
 POP.-DEPENDENT CONDEMNATION COST              0.9547  2.34E+08  1.42E+08  3.52E+08
6.88E+08  1.54E+09  1.98E+09  6.85E+09  2.60E-05   76
 FARM-DEPENDENT CONDEMNATION COST              0.9551  8.84E+06  7.37E+06  1.66E+07
2.64E+07  4.17E+07  4.88E+07  5.41E+07  6.64E-05   46
 EMERGENCY PHASE COST                          0.9953  1.20E+07  5.72E+06  2.77E+07
4.55E+07  1.15E+08  2.01E+08  2.62E+08  1.71E-04  105
 INTERMEDIATE PHASE COST                       0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                            1.0000  1.74E+06  1.31E+06  3.82E+06
5.05E+06  5.75E+06  6.08E+06  7.50E+06  6.51E-04   33
 CROP DISPOSAL COST                            1.0000  4.33E+07  4.47E+07  7.03E+07
7.42E+07  8.42E+07  8.89E+07  1.22E+08  1.71E-04  109

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)               1.0000  6.44E+04  5.90E+04  1.01E+05
1.11E+05  1.40E+05  1.54E+05  1.88E+05  1.26E-03   57
 POP. DECONTAMINATION (INDIVIDUALS)            1.0000  2.94E+05  1.64E+05  9.34E+05
1.05E+06  1.19E+06  1.26E+06  1.34E+06  2.28E-03   57
 FARM INTERDICTION (HECTARES)                  1.0000  9.31E+04  8.53E+04  1.21E+05
1.34E+05  1.71E+05  1.90E+05  2.68E+05  1.71E-04  109
 POP. INTERDICTION (INDIVIDUALS)               1.0000  2.94E+05  1.64E+05  9.34E+05
1.05E+06  1.19E+06  1.26E+06  1.34E+06  2.28E-03   57
 FARM CONDEMNATION (HECTARES)                  0.9551  1.27E+03  1.04E+03  1.79E+03
4.01E+03  7.02E+03  7.23E+03  8.64E+03  6.64E-05   46
 POP. CONDEMNATION (INDIVIDUALS)               0.9547  1.70E+03  1.09E+03  2.49E+03
4.11E+03  1.29E+04  1.97E+04  4.93E+04  2.60E-05   76
 MILK DISPOSAL AREA (HECTARES)                 1.0000  9.43E+04  8.58E+04  1.21E+05
1.35E+05  1.71E+05  1.90E+05  2.68E+05  1.96E-04   33
 CROP DISPOSAL AREA (HECTARES)                 1.0000  9.43E+04  8.58E+04  1.21E+05
1.35E+05  1.71E+05  1.90E+05  2.68E+05  1.71E-04  109
XXXX
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XXXX

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XXXX
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COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

11-APR-06 11:10:35 PAGE 73

HEALTH EFFECTS CASES	PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
ERL FAT/TOTAL	0-16.1 km	0.1634	1.01E-03	0.00E+00	1.04E-03	4.41E-03	2.42E-02	3.13E-02	9.42E-02
2.09E-05 19									
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.6185	3.17E-02	2.41E-03	1.00E-01	1.75E-01	3.12E-01	3.25E-01	4.56E-01
2.09E-05 19									
ERL INJ/DIARRHEA	0-16.1 km	0.3177	7.58E-03	0.00E+00	1.86E-02	4.99E-02	1.06E-01	1.14E-01	2.30E-01
2.09E-05 19									
ERL INJ/PNEUMONITIS	0-16.1 km	0.0213	7.19E-06	0.00E+00	0.00E+00	0.00E+00	1.91E-04	5.28E-04	1.47E-03
2.09E-05 19									
ERL INJ/THYROIDITIS	0-16.1 km	0.0273	2.94E-05	0.00E+00	0.00E+00	0.00E+00	1.12E-03	1.40E-03	2.96E-03
1.60E-03 9									
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.8865	1.32E-01	6.14E-02	3.53E-01	5.11E-01	8.15E-01	9.29E-01	1.33E+00
4.28E-04 60									
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9153	1.85E+01	1.21E+01	4.24E+01	6.03E+01	9.25E+01	1.06E+02	1.29E+02
1.63E-03 50									
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.8839	3.34E+00	1.11E+00	9.47E+00	1.30E+01	2.27E+01	2.64E+01	3.75E+01
1.23E-03 45									
CAN FAT/TOTAL	0-16.1 km	1.0000	2.94E+01	2.69E+01	4.22E+01	4.99E+01	6.19E+01	6.79E+01	9.71E+01
1.12E-05 19									
CAN FAT/LUNG	0-80.5 km	1.0000	1.91E+02	1.24E+02	4.25E+02	5.80E+02	7.96E+02	8.68E+02	9.85E+02
1.83E-03 120									
CAN FAT/THYROID	0-80.5 km	1.0000	3.14E+01	1.96E+01	6.86E+01	9.68E+01	1.21E+02	1.32E+02	2.16E+02
1.71E-04 105									
CAN FAT/BREAST	0-80.5 km	1.0000	1.48E+02	9.48E+01	3.11E+02	4.36E+02	6.05E+02	6.69E+02	7.97E+02
1.83E-03 120									
CAN FAT/GI	0-80.5 km	1.0000	3.60E+02	2.39E+02	7.63E+02	1.06E+03	1.40E+03	1.58E+03	1.87E+03
1.83E-03 120									
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.14E+02	7.43E+01	2.47E+02	3.42E+02	5.09E+02	5.45E+02	6.02E+02
1.83E-03 120									
CAN FAT/BONE	0-80.5 km	1.0000	1.28E+01	8.50E+00	2.80E+01	3.71E+01	5.44E+01	5.87E+01	6.54E+01
1.83E-03 120									
CAN FAT/OTHER	0-80.5 km	1.0000	3.85E+02	2.52E+02	8.34E+02	1.09E+03	1.47E+03	1.67E+03	2.01E+03
1.83E-03 120									
CAN INJ/THYROID	0-80.5 km	1.0000	3.14E+02	1.96E+02	6.86E+02	9.68E+02	1.21E+03	1.32E+03	2.16E+03
1.71E-04 105									
CAN INJ/BREAST	0-80.5 km	1.0000	4.65E+02	2.98E+02	1.00E+03	1.26E+03	2.05E+03	2.23E+03	2.51E+03
1.83E-03 120									
CAN FAT/TOTAL	0-80.5 km	1.0000	1.24E+03	8.19E+02	2.76E+03	3.61E+03	5.35E+03	5.78E+03	6.48E+03
1.83E-03 120									
ERL FAT/TOTAL	0-80.5 km	0.1634	1.01E-03	0.00E+00	1.04E-03	4.41E-03	2.42E-02	3.13E-02	9.42E-02
2.09E-05 19									
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.6185	3.17E-02	2.41E-03	1.00E-01	1.75E-01	3.12E-01	3.25E-01	4.56E-01
2.09E-05 19									
ERL INJ/DIARRHEA	0-80.5 km	0.3177	7.58E-03	0.00E+00	1.86E-02				

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4.99E-02  1.06E-01  1.14E-01  2.30E-01  2.09E-05   19
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0213  7.19E-06  0.00E+00  0.00E+00
0.00E+00  1.91E-04  5.28E-04  1.47E-03  2.09E-05   19
 ERL INJ/THYROIDITIS          0-80.5 km  0.0273  2.94E-05  0.00E+00  0.00E+00
0.00E+00  1.12E-03  1.40E-03  2.96E-03  1.60E-03    9
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.8865  1.32E-01  6.14E-02  3.53E-01
5.11E-01  8.15E-01  9.29E-01  1.33E+00  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9153  2.80E+01  1.21E+01  4.37E+01
6.62E+01  3.36E+02  5.33E+02  3.19E+03  1.03E-03   84
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.8839  3.34E+00  1.11E+00  9.47E+00
1.30E+01  2.27E+01  2.64E+01  3.75E+01  1.23E-03   45

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.4062  3.46E-02  0.00E+00  8.36E-02
9.12E-02 NOT-FOUND NOT-FOUND  1.61E-01  2.41E-02   60

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.1634  1.45E-02  0.00E+00  5.04E-02
1.10E-01  3.02E-01  3.54E-01  5.00E-01  1.10E-03   60
11-APR-06  11:10:35    PAGE  74          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.0213  6.47E-04  0.00E+00  0.00E+00
0.00E+00  2.66E-02  4.07E-02  1.07E-01  2.09E-05   19
 EARLY dose L-EDEWBODY > 2.00 Sv          0.5911  5.71E-01  5.52E-02  1.85E+00
3.10E+00  5.20E+00  6.68E+00  9.06E+00  4.28E-04   60
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9118  4.12E+01  1.19E+01  3.96E+01
5.35E+01  1.00E+03  1.31E+03  6.75E+03  6.56E-04   98

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.4062  8.16E-05  0.00E+00  3.16E-04
5.13E-04  1.06E-03  1.20E-03  2.06E-03  2.85E-04   19
 ERL FAT/TOTAL               1.6-3.2 km  0.0241  1.34E-07  0.00E+00  0.00E+00
0.00E+00  5.89E-06 NOT-FOUND  6.80E-06  6.14E-03   89
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  6.21E+02  5.70E+02  8.80E+02
1.01E+03  1.15E+03  1.22E+03  1.99E+03  1.12E-05   19
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.78E+04  1.78E+04  6.13E+04
8.43E+04  1.16E+05  1.27E+05  1.46E+05  1.83E-03  120

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.1634  2.12E-06  0.00E+00  2.21E-06
9.06E-06  5.35E-05  6.47E-05  1.97E-04  2.09E-05   19
 CAN FAT/TOTAL               0-16.1 km  1.0000  7.26E-04  7.05E-04  1.04E-03
1.11E-03  1.27E-03  1.35E-03  2.07E-03  2.17E-05   17

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  2.93E-01  2.20E-01  5.62E-01
6.86E-01  8.04E-01 NOT-FOUND  8.40E-01  6.14E-03   89
 L-EDEWBODY                  1.6-3.2 km  1.0000  1.90E-01  1.76E-01  2.90E-01
3.24E-01  4.07E-01 NOT-FOUND  4.35E-01  6.14E-03   89
 L-EDEWBODY                  3.2-4.8 km  1.0000  1.65E-01  1.43E-01  2.28E-01
2.48E-01 NOT-FOUND NOT-FOUND  2.97E-01  1.12E-02    9
 L-EDEWBODY                  4.8-6.4 km  1.0000  1.36E-01  1.14E-01  2.05E-01
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2.26E-01 NOT-FOUND NOT-FOUND  2.80E-01  1.12E-02   45
 L-EDEWBODY                 6.4-8.1 km  1.0000  1.30E-01  1.13E-01  2.02E-01
2.07E-01 NOT-FOUND NOT-FOUND  2.20E-01  1.12E-02   45
 L-EDEWBODY                 8.1-9.7 km  1.0000  1.40E-01  1.18E-01  2.04E-01
2.09E-01 NOT-FOUND NOT-FOUND  2.14E-01  2.38E-02   28
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.44E-01  1.23E-01  2.03E-01
2.08E-01  2.22E-01 NOT-FOUND  2.26E-01  6.14E-03   89
 L-EDEWBODY                16.1-32.2 km  1.0000  2.29E-01  2.17E-01  3.18E-01
3.53E-01  4.48E-01 NOT-FOUND  4.63E-01  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  1.44E-01  1.22E-01  2.14E-01
2.37E-01  3.00E-01 NOT-FOUND  3.03E-01  8.02E-03   44
 L-EDEWBODY                48.3-64.4 km  1.0000  1.05E-01  1.01E-01  1.39E-01
1.60E-01  2.31E-01 NOT-FOUND  2.47E-01  8.02E-03  105
 L-EDEWBODY                64.4-80.5 km  1.0000  8.32E-02  7.94E-02  1.15E-01
1.26E-01  1.54E-01 NOT-FOUND  1.62E-01  6.93E-03   59
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 10 OF 11:
    Case 10-OPW2

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


11-APR-06  11:10:35     PAGE  75          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                  0-80.5 km  1.0000  4.66E+01  2.51E+01  1.12E+02
1.51E+02  2.93E+02  3.25E+02  5.30E+02  1.71E-04   44
 CAN FAT/THYROID               0-80.5 km  1.0000  1.52E+01  8.57E+00  3.57E+01
5.24E+01  8.19E+01  9.82E+01  1.76E+02  1.71E-04  105
 CAN FAT/BREAST                0-80.5 km  1.0000  2.89E+01  1.46E+01  7.16E+01
1.02E+02  2.08E+02  2.46E+02  3.61E+02  1.71E-04   44
 CAN FAT/GI                    0-80.5 km  1.0000  7.63E+01  3.97E+01  1.76E+02
2.58E+02  5.16E+02  5.93E+02  9.11E+02  1.71E-04   44
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  2.26E+01  1.17E+01  5.50E+01
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7.46E+01  1.26E+02  1.55E+02  2.77E+02  1.71E-04   44
 CAN FAT/BONE                0-80.5 km  1.0000  2.96E+00  1.61E+00  7.30E+00
1.02E+01  1.96E+01  2.38E+01  3.83E+01  1.71E-04  105
 CAN FAT/OTHER               0-80.5 km  1.0000  8.68E+01  4.70E+01  2.14E+02
2.92E+02  5.24E+02  5.98E+02  1.02E+03  1.71E-04   44
 CAN INJ/THYROID             0-80.5 km  1.0000  1.52E+02  8.57E+01  3.57E+02
5.24E+02  8.19E+02  9.82E+02  1.76E+03  1.71E-04  105
 CAN INJ/BREAST              0-80.5 km  1.0000  9.10E+01  4.73E+01  2.25E+02
3.18E+02  6.17E+02  7.98E+02  1.14E+03  1.71E-04   44
 CAN FAT/TOTAL               0-80.5 km  1.0000  2.79E+02  1.46E+02  7.13E+02
9.68E+02  1.91E+03  2.12E+03  3.27E+03  1.71E-04   44
 ERL FAT/TOTAL               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT     0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA       0-80.5 km  0.0150  9.43E+00  0.00E+00  0.00E+00
0.00E+00  2.78E+02  4.34E+02  3.13E+03  1.03E-03   84
 ERL INJ/TRANSEPIDERMAL      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATICN EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv        0.0150  2.40E+01  0.00E+00  0.00E+00
0.00E+00  8.50E+02  1.25E+03  6.68E+03  1.68E-03   84

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  76          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  6.19E+03  3.31E+03  1.37E+04
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2.07E+04  3.54E+04  4.37E+04  7.31E+04  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY               16.1-32.2 km  1.0000  1.33E-01  1.13E-01  2.10E-01
2.32E-01  2.91E-01 NOT-FOUND  3.05E-01  8.02E-03   84
 L-EDEWBODY               32.2-48.3 km  1.0000  8.44E-02  7.74E-02  1.40E-01
1.71E-01  2.18E-01 NOT-FOUND  2.22E-01  8.02E-03   44
 L-EDEWBODY               48.3-64.4 km  1.0000  4.14E-02  3.61E-02  7.36E-02
8.27E-02  1.57E-01 NOT-FOUND  1.93E-01  8.02E-03  105
 L-EDEWBODY               64.4-80.5 km  1.0000  2.68E-02  2.08E-02  5.58E-02
7.17E-02  8.57E-02 NOT-FOUND  8.79E-02  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 10 OF 11:
    Case 10-OPW2

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35     PAGE  77          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                            NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL               0-16.1 km  0.1634  2.03E-02  0.00E+00  2.09E-02
8.26E-02  5.31E-01  6.43E-01  1.88E+00  2.09E-05   19
 ERL INJ/PRODROMAL VOMIT     0-16.1 km  0.6185  6.34E-01  5.32E-02  2.00E+00
3.47E+00  7.00E+00  7.21E+00  9.12E+00  2.09E-05   19
 ERL INJ/DIARRHEA            0-16.1 km  0.3177  1.52E-01  0.00E+00  3.82E-01
9.97E-01  2.36E+00  2.91E+00  4.61E+00  2.09E-05   19
 ERL INJ/PNEUMONITIS         0-16.1 km  0.0213  1.44E-04  0.00E+00  0.00E+00
0.00E+00  4.27E-03  1.03E-02  2.95E-02  2.09E-05   19
 ERL INJ/THYROIDITIS         0-16.1 km  0.0273  5.88E-04  0.00E+00  0.00E+00
0.00E+00  2.53E-02  3.44E-02  5.93E-02  1.60E-03    9
 ERL INJ/HYPOTHYROIDISM      0-16.1 km  0.8865  2.63E+00  1.23E+00  7.31E+00
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1.01E+01  1.52E+01  1.81E+01  2.66E+01  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.9153  3.71E+02  2.50E+02  8.55E+02
1.13E+03  1.80E+03  2.12E+03  2.57E+03  1.63E-03   50
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.8839  6.68E+01  2.25E+01  1.88E+02
2.64E+02  4.39E+02  5.25E+02  7.51E+02  1.23E-03   45
 CAN FAT/TOTAL                0-16.1 km  1.0000  2.79E+01  2.24E+01  5.35E+01
6.89E+01  9.25E+01  1.02E+02  1.28E+02  4.28E-04   60
 CAN FAT/LUNG                 0-80.5 km  1.0000  5.28E+01  3.22E+01  1.18E+02
1.61E+02  2.94E+02  3.31E+02  5.40E+02  1.71E-04   44
 CAN FAT/THYROID              0-80.5 km  1.0000  1.76E+01  1.13E+01  3.77E+01
5.44E+01  8.52E+01  9.85E+01  1.78E+02  1.71E-04  105
 CAN FAT/BREAST               0-80.5 km  1.0000  3.01E+01  1.61E+01  7.16E+01
1.02E+02  2.08E+02  2.46E+02  3.62E+02  1.71E-04   44
 CAN FAT/GI                   0-80.5 km  1.0000  8.32E+01  4.77E+01  2.02E+02
2.69E+02  5.17E+02  5.93E+02  9.22E+02  1.71E-04   44
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  2.41E+01  1.31E+01  5.67E+01
7.56E+01  1.26E+02  1.56E+02  2.79E+02  1.71E-04   44
 CAN FAT/BONE                 0-80.5 km  1.0000  3.32E+00  2.00E+00  7.50E+00
1.05E+01  1.96E+01  2.38E+01  3.86E+01  1.71E-04  105
 CAN FAT/OTHER                0-80.5 km  1.0000  9.60E+01  5.65E+01  2.21E+02
3.03E+02  5.33E+02  6.30E+02  1.03E+03  1.71E-04   44
 CAN INJ/THYROID              0-80.5 km  1.0000  1.76E+02  1.13E+02  3.77E+02
5.44E+02  8.52E+02  9.85E+02  1.78E+03  1.71E-04  105
 CAN INJ/BREAST               0-80.5 km  1.0000  9.48E+01  5.15E+01  2.29E+02
3.18E+02  6.17E+02  7.98E+02  1.14E+03  1.71E-04   44
 CAN FAT/TOTAL                0-80.5 km  1.0000  3.07E+02  1.74E+02  7.26E+02
9.72E+02  1.95E+03  2.38E+03  3.32E+03  1.71E-04   44
 ERL FAT/TOTAL                0-80.5 km  0.1634  2.03E-02  0.00E+00  2.09E-02
8.26E-02  5.31E-01  6.43E-01  1.88E+00  2.09E-05   19
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.6185  6.34E-01  5.32E-02  2.00E+00
3.47E+00  7.00E+00  7.21E+00  9.12E+00  2.09E-05   19
 ERL INJ/DIARRHEA             0-80.5 km  0.3177  1.52E-01  0.00E+00  3.82E-01
9.97E-01  2.36E+00  2.91E+00  4.61E+00  2.09E-05   19
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0213  1.44E-04  0.00E+00  0.00E+00
0.00E+00  4.27E-03  1.03E-02  2.95E-02  2.09E-05   19
 ERL INJ/THYROIDITIS          0-80.5 km  0.0273  5.88E-04  0.00E+00  0.00E+00
0.00E+00  2.53E-02  3.44E-02  5.93E-02  1.60E-03    9
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.8865  2.63E+00  1.23E+00  7.31E+00
1.01E+01  1.52E+01  1.81E+01  2.66E+01  4.28E-04   60
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9153  3.80E+02  2.50E+02  8.69E+02
1.17E+03  2.04E+03  2.37E+03  4.25E+03  1.03E-03   84
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.8839  6.68E+01  2.25E+01  1.88E+02
2.64E+02  4.39E+02  5.25E+02  7.51E+02  1.23E-03   45

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.4062  6.93E-01  0.00E+00  1.41E+00
1.67E+00 NOT-FOUND NOT-FOUND  3.22E+00  2.41E-02   60

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.1634  2.91E-01  0.00E+00  1.00E+00
2.15E+00  5.04E+00  6.04E+00  1.00E+01  1.10E-03   60
 EARLY dose A-LUNGS > 5.00 Sv             0.0213  1.29E-02  0.00E+00  0.00E+00
0.00E+00  4.29E-01  8.66E-01  2.14E+00  2.09E-05   19
 EARLY dose L-EDEWBODY > 2.00 Sv          0.5911  1.14E+01  1.07E+00  3.81E+01
6.13E+01  1.02E+02  1.16E+02  1.81E+02  4.28E-04   60
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9118  3.67E+02  2.40E+02  8.06E+02
1.06E+03  1.87E+03  2.28E+03  8.02E+03  6.56E-04   98

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.4062  1.63E-03  0.00E+00  7.14E-03
1.03E-02  2.07E-02  2.25E-02  4.12E-02  2.85E-04   19
 ERL FAT/TOTAL              1.6-3.2 km   0.0241  2.67E-06  0.00E+00  0.00E+00
0.00E+00  1.18E-04 NOT-FOUND  1.36E-04  6.14E-03   89
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 ERL FAT/TOTAL                3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
□11-APR-06  11:10:35    PAGE  78          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  4.22E+02  3.56E+02  7.16E+02
8.45E+02  1.11E+03  1.20E+03  1.57E+03  4.28E-04   60
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  6.61E+03  3.78E+03  1.45E+04
2.13E+04  3.54E+04  4.37E+04  7.36E+04  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.1634  4.24E-05  0.00E+00  4.64E-05
1.78E-04  1.09E-03  1.40E-03  3.94E-03  2.09E-05   19
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.35E-03  1.07E-03  2.53E-03
3.19E-03  4.47E-03  5.07E-03  6.21E-03  4.28E-04   60

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  5.17E+00  4.14E+00  1.01E+01
1.15E+01 NOT-FOUND NOT-FOUND  1.53E+01  1.12E-02    9
 L-EDEWBODY                   1.6-3.2 km  1.0000  1.86E+00  1.39E+00  3.60E+00
4.48E+00  5.90E+00 NOT-FOUND  6.29E+00  6.14E-03   89
 L-EDEWBODY                   3.2-4.8 km  1.0000  1.03E+00  7.51E-01  2.17E+00
2.76E+00  3.58E+00  3.92E+00  4.41E+00  2.00E-03  122
 L-EDEWBODY                   4.8-6.4 km  1.0000  6.91E-01  5.12E-01  1.57E+00
2.09E+00  2.62E+00 NOT-FOUND  2.80E+00  6.14E-03   36
 L-EDEWBODY                   6.4-8.1 km  1.0000  4.83E-01  3.24E-01  1.03E+00
1.21E+00  1.78E+00 NOT-FOUND  2.22E+00  6.14E-03   60
 L-EDEWBODY                   8.1-9.7 km  1.0000  3.75E-01  2.50E-01  8.59E-01
1.13E+00  1.63E+00 NOT-FOUND  1.78E+00  6.93E-03   98
 L-EDEWBODY                  9.7-16.1 km  1.0000  2.22E-01  1.68E-01  4.08E-01
5.84E-01  8.03E-01  8.67E-01  9.58E-01  2.00E-03   65
 L-EDEWBODY                 16.1-32.2 km  1.0000  1.33E-01  1.13E-01  2.10E-01
2.32E-01  2.91E-01 NOT-FOUND  3.05E-01  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km  1.0000  8.44E-02  7.74E-02  1.40E-01
1.71E-01  2.18E-01 NOT-FOUND  2.22E-01  8.02E-03   44
 L-EDEWBODY                 48.3-64.4 km  1.0000  4.14E-02  3.61E-02  7.36E-02
8.27E-02  1.57E-01 NOT-FOUND  1.93E-01  8.02E-03  105
 L-EDEWBODY                 64.4-80.5 km  1.0000  2.68E-02  2.08E-02  5.58E-02
7.17E-02  8.57E-02 NOT-FOUND  8.79E-02  8.02E-03  105
□  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM 10 OF 11:
    Case 10-OPW2

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model
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11-APR-06  11:10:35     PAGE  79          PROB                                  QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                    0-16.1 km  1.0000  2.80E+01  2.56E+01  4.06E+01
4.77E+01  6.00E+01  6.56E+01  9.45E+01  1.12E-05   19
 CAN FAT/LUNG                     0-80.5 km  1.0000  1.44E+02  9.56E+01  3.10E+02
4.37E+02  5.77E+02  6.21E+02  7.61E+02  1.60E-03   45
 CAN FAT/THYROID                  0-80.5 km  1.0000  1.61E+01  1.04E+01  3.44E+01
5.15E+01  7.32E+01  7.81E+01  8.70E+01  1.60E-03   45
 CAN FAT/BREAST                   0-80.5 km  1.0000  1.19E+02  7.82E+01  2.55E+02
3.47E+02  5.26E+02  5.63E+02  6.31E+02  1.60E-03   45
 CAN FAT/GI                       0-80.5 km  1.0000  2.83E+02  1.89E+02  5.93E+02
8.73E+02  1.18E+03  1.28E+03  1.47E+03  1.60E-03   45
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  9.16E+01  6.09E+01  1.96E+02
2.96E+02  3.73E+02  4.10E+02  4.79E+02  1.60E-03   45
 CAN FAT/BONE                     0-80.5 km  1.0000  9.80E+00  6.54E+00  2.08E+01
3.03E+01  3.83E+01  4.24E+01  5.11E+01  1.60E-03   45
 CAN FAT/OTHER                    0-80.5 km  1.0000  2.98E+02  2.00E+02  6.37E+02
9.30E+02  1.22E+03  1.34E+03  1.57E+03  1.60E-03   45
 CAN INJ/THYROID                  0-80.5 km  1.0000  1.61E+02  1.04E+02  3.44E+02
5.15E+02  7.32E+02  7.81E+02  8.70E+02  1.60E-03   45
 CAN INJ/BREAST                   0-80.5 km  1.0000  3.74E+02  2.47E+02  8.02E+02
1.08E+03  1.44E+03  1.62E+03  1.99E+03  1.60E-03   45
 CAN FAT/TOTAL                    0-80.5 km  1.0000  9.61E+02  6.38E+02  2.08E+03
3.03E+03  3.83E+03  4.24E+03  5.05E+03  1.60E-03   45

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF              0-16.1 km  1.0000  6.00E+02  5.57E+02  8.57E+02
9.92E+02  1.13E+03  1.20E+03  1.96E+03  1.12E-05   19
 L-EDEWBODY  TOT LIF              0-80.5 km  1.0000  2.16E+04  1.44E+04  4.66E+04
7.01E+04  8.57E+04  9.35E+04  1.14E+05  1.60E-03   45

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                    0-16.1 km  1.0000  6.59E-04  6.41E-04  1.00E-03
1.07E-03  1.23E-03  1.30E-03  2.02E-03  2.17E-05   17

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                        0-1.6 km  0.2511  3.47E-02  0.00E+00  1.16E-01
1.31E-01  1.76E-01 NOT-FOUND  1.98E-01  5.11E-03   93
 L-EDEWBODY                      1.6-3.2 km  0.7018  9.74E-02  1.01E-01  1.22E-01
1.32E-01  1.58E-01  1.71E-01  2.01E-01  1.23E-03  104
 L-EDEWBODY                      3.2-4.8 km  0.8804  1.13E-01  1.03E-01  1.17E-01
1.23E-01  1.40E-01  1.48E-01  2.00E-01  1.14E-04   82
 L-EDEWBODY                      4.8-6.4 km  0.9016  1.02E-01  1.04E-01  1.43E-01
1.64E-01 NOT-FOUND NOT-FOUND  2.00E-01  1.84E-02   86
 L-EDEWBODY                      6.4-8.1 km  0.9019  1.06E-01  1.05E-01  1.55E-01
1.84E-01 NOT-FOUND NOT-FOUND  2.00E-01  3.51E-02   72
 L-EDEWBODY                      8.1-9.7 km  0.9025  1.21E-01  1.06E-01  1.48E-01
1.70E-01 NOT-FOUND NOT-FOUND  1.98E-01  2.38E-02   28
 L-EDEWBODY                     9.7-16.1 km  0.9506  1.33E-01  1.08E-01  1.37E-01
1.52E-01  1.92E-01  2.00E-01  2.00E-01  2.60E-03   66
 L-EDEWBODY                    16.1-32.2 km  1.0000  9.58E-02  9.36E-02  1.18E-01
1.28E-01  1.54E-01 NOT-FOUND  1.58E-01  8.02E-03   84
 L-EDEWBODY                    32.2-48.3 km  1.0000  5.94E-02  5.71E-02  7.88E-02
8.47E-02 NOT-FOUND NOT-FOUND  1.06E-01  1.03E-02  114
 L-EDEWBODY                    48.3-64.4 km  1.0000  6.34E-02  6.30E-02  9.58E-02
1.04E-01 NOT-FOUND NOT-FOUND  1.07E-01  3.51E-02  112
 L-EDEWBODY                    64.4-80.5 km  1.0000  5.64E-02  5.20E-02  8.02E-02
8.76E-02  1.01E-01  1.02E-01  1.06E-01  7.99E-04  116
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L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE          1.0000  2.16E+04  1.44E+04  4.66E+04
7.01E+04  8.57E+04  9.35E+04  1.14E+05  1.60E-03   45
 LONG-TERM DIRECT EXPOSURE PATHWAYS     1.0000  2.00E+04  1.27E+04  4.49E+04
6.70E+04  8.49E+04  9.26E+04  1.11E+05  1.60E-03   45
 TOTAL INGESTION PATHWAYS DOSE          1.0000  8.12E+02  7.57E+02  1.23E+03
1.41E+03  1.95E+03  2.08E+03  3.52E+03  3.42E-05   95
 LONG-TERM GROUNDSHINE DOSE             1.0000  1.98E+04  1.23E+04  4.47E+04
6.61E+04  8.23E+04  8.87E+04  1.10E+05  1.60E-03   45
 LONG-TERM RESUSPENSION DOSE            1.0000  1.65E+02  1.04E+02  3.74E+02
5.35E+02  7.56E+02  8.21E+02  9.40E+02  1.60E-03   45
 WATER INGESTION DOSE                   1.0000  2.61E+02  2.15E+02  5.09E+02
6.37E+02  8.53E+02  9.46E+02  1.42E+03  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE    1.0000  7.19E+02  3.80E+02  1.62E+03
2.47E+03  5.12E+03  5.90E+03  9.41E+03  1.71E-04   44
011-APR-06  11:10:35    PAGE  80          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  2.32E+01  2.08E+01  4.11E+01
5.07E+01  6.83E+01  7.23E+01  8.73E+01  2.00E-04  105
 INGESTION OF GRAINS                    1.0000  1.11E+01  4.20E+00  3.14E+01
3.97E+01  5.77E+01  6.42E+01  9.49E+01  6.21E-06   26
 INGESTION OF LEAF VEG                  1.0000  2.63E+01  2.08E+01  4.92E+01
6.32E+01  9.89E+01  1.09E+02  2.22E+02  4.35E-05   52
 INGESTION OF ROOT CROPS                1.0000  2.05E+01  1.31E+01  4.55E+01
5.78E+01  8.15E+01  9.12E+01  1.29E+02  6.21E-06   26
 INGESTION OF FRUITS                    1.0000  3.58E+01  2.65E+01  7.18E+01
8.84E+01  1.10E+02  1.16E+02  1.92E+02  6.21E-06   26
 INGESTION OF LEGUMES                   1.0000  2.74E+01  2.26E+01  4.97E+01
5.80E+01  7.99E+01  9.04E+01  1.18E+02  6.21E-06   26
 INGESTION OF BEEF                      1.0000  2.02E+02  1.82E+02  3.86E+02
4.77E+02  7.05E+02  7.80E+02  1.37E+03  3.42E-05   95
 INGESTION OF MILK                      1.0000  1.58E+02  1.10E+02  3.69E+02
5.11E+02  7.35E+02  7.76E+02  1.29E+03  3.42E-05   95
 INGESTION OF POULTRY                   1.0000  4.87E+01  3.83E+01  1.01E+02
1.25E+02  2.01E+02  2.11E+02  2.97E+02  4.35E-05   52
 INGESTION OF OTHER MEAT CROPS          1.0000  2.17E+01  1.28E+01  5.30E+01
7.37E+01  1.09E+02  1.20E+02  1.81E+02  2.85E-04   56

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                   1.0000  4.35E+09  2.21E+09  9.57E+09
1.34E+10  3.03E+10  3.18E+10  3.42E+10  1.83E-03  120
 POP.-DEPENDENT COSTS                   1.0000  4.18E+09  2.08E+09  9.39E+09
1.32E+10  3.03E+10  3.17E+10  3.39E+10  1.83E-03  120
 FARM-DEPENDENT COSTS                   1.0000  1.68E+08  1.34E+08  2.92E+08
3.29E+08  4.21E+08  4.69E+08  5.72E+08  4.00E-04  120
 POP.-DEPENDENT DECONTAMINATION COST    1.0000  1.00E+09  4.18E+08  2.49E+09
3.49E+09  7.75E+09  9.24E+09  1.04E+10  1.83E-03  120
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  4.14E+07  3.61E+07  6.55E+07
7.66E+07  1.03E+08  1.11E+08  1.44E+08  4.00E-04  120
 POP.-DEPENDENT INTERDICTION COST       1.0000  3.13E+09  1.42E+09  6.70E+09
1.10E+10  2.03E+10  2.15E+10  2.35E+10  1.83E-03  120
 FARM-DEPENDENT INTERDICTION COST       1.0000  9.68E+07  7.05E+07  1.97E+08
2.30E+08  3.05E+08  3.16E+08  3.64E+08  2.85E-04   10
 POP.-DEPENDENT CONDEMNATION COST       0.9095  4.45E+07  2.80E+07  9.68E+07
1.51E+08  2.18E+08  2.29E+08  3.56E+08  2.22E-05   18
 FARM-DEPENDENT CONDEMNATION COST       0.9110  2.29E+06  1.82E+06  4.95E+06
7.18E+06  8.29E+06  8.82E+06  1.21E+07  1.66E-05   18
 EMERGENCY PHASE COST                   0.9741  1.49E+06  7.86E+05  2.71E+06
4.11E+06  1.28E+07  1.47E+07  3.89E+07  1.03E-03  105
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      0.9953  1.10E+06  6.02E+05  2.87E+06
3.82E+06  5.21E+06  5.37E+06  5.86E+06  6.51E-04   33
 CROP DISPOSAL COST                      1.0000  2.62E+07  2.09E+07  5.54E+07
6.37E+07  7.38E+07  7.62E+07  9.75E+07  2.49E-05   33

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         1.0000  4.15E+04  3.69E+04  6.76E+04
7.42E+04  8.75E+04  9.39E+04  1.32E+05  4.00E-04  120
 POP. DECONTAMINATION (INDIVIDUALS)      1.0000  1.82E+05  8.09E+04  4.21E+05
1.01E+06  1.09E+06  1.13E+06  1.19E+06  1.83E-03  120
 FARM INTERDICTION (HECTARES)            1.0000  6.30E+04  5.47E+04  1.02E+05
1.08E+05  1.23E+05  1.30E+05  2.05E+05  2.33E-05   33
 POP. INTERDICTION (INDIVIDUALS)         1.0000  1.82E+05  8.09E+04  4.21E+05
1.01E+06  1.09E+06  1.13E+06  1.19E+06  1.83E-03  120
 FARM CONDEMNATION (HECTARES)            0.9110  3.26E+02  2.87E+02  6.91E+02
9.69E+02  1.10E+03  1.15E+03  1.68E+03  1.34E-05   18
 POP. CONDEMNATION (INDIVIDUALS)         0.9095  3.29E+02  2.35E+02  6.87E+02
1.02E+03  1.76E+03  2.03E+03  2.56E+03  2.22E-05   18
 MILK DISPOSAL AREA (HECTARES)           0.9953  6.00E+04  4.80E+04  1.08E+05
1.18E+05  1.43E+05  1.56E+05  2.06E+05  6.51E-04   33
 CROP DISPOSAL AREA (HECTARES)           1.0000  5.82E+04  4.90E+04  1.02E+05
1.08E+05  1.23E+05  1.30E+05  2.06E+05  2.33E-05   33
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.43E+00  1.20E+00  2.36E+00
2.80E+00  3.71E+00  4.15E+00  4.98E+00  1.63E-03   50
 CAN FAT/LUNG                 0-80.5 km  1.0000  2.01E+00  1.31E+00  4.42E+00
5.85E+00  1.02E+01  1.13E+01  1.84E+01  1.71E-04   44
 CAN FAT/THYROID              0-80.5 km  1.0000  1.75E-01  1.10E-01  3.93E-01
5.46E-01  9.75E-01  1.08E+00  1.64E+00  1.71E-04   44
 CAN FAT/BREAST               0-80.5 km  1.0000  1.06E+00  7.35E-01  2.31E+00
3.16E+00  5.18E+00  5.93E+00  9.85E+00  1.71E-04   44
 CAN FAT/GI                   0-80.5 km  1.0000  3.04E+00  2.20E+00  6.38E+00
8.21E+00  1.30E+01  1.57E+01  2.65E+01  1.71E-04   44
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  8.41E-01  6.07E-01  1.82E+00
2.41E+00  3.65E+00  4.21E+00  7.59E+00  1.71E-04   44
 CAN FAT/BONE                 0-80.5 km  1.0000  8.99E-02  6.43E-02  2.00E-01
2.48E-01  4.66E-01  5.66E-01  8.19E-01  1.71E-04   44
 CAN FAT/OTHER                0-80.5 km  1.0000  3.20E+00  2.30E+00  6.93E+00
8.53E+00  1.33E+01  1.60E+01  2.76E+01  1.71E-04   44
 CAN INJ/THYROID              0-80.5 km  1.0000  1.75E+00  1.10E+00  3.93E+00
5.46E+00  9.75E+00  1.08E+01  1.64E+01  1.71E-04   44
 CAN INJ/BREAST               0-80.5 km  1.0000  3.33E+00  2.29E+00  7.14E+00
9.19E+00  1.39E+01  1.64E+01  3.10E+01  1.71E-04   44
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.04E+01  7.50E+00  2.11E+01
2.77E+01  4.84E+01  5.76E+01  9.24E+01  1.71E-04   44
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  82            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  3.14E+01  3.02E+01  5.25E+01
5.95E+01  7.90E+01  8.89E+01  1.07E+02  1.63E-03   50
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.32E+02  1.64E+02  5.03E+02
6.16E+02  1.03E+03  1.15E+03  2.00E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  1.0000  5.66E-05  5.18E-05  1.02E-04
1.16E-04  1.56E-04  1.78E-04  2.15E-04  1.63E-03   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  7.41E-02  7.38E-02  1.04E-01
1.08E-01  1.18E-01  1.23E-01  1.44E-01  2.85E-04   19
 L-EDEWBODY                  1.6-3.2 km  1.0000  5.00E-02  4.91E-02  7.73E-02
8.25E-02  9.61E-02  1.01E-01  1.08E-01  2.85E-04   19
 L-EDEWBODY                  3.2-4.8 km  1.0000  4.15E-02  3.87E-02  7.02E-02
7.54E-02  8.92E-02 NOT-FOUND  9.13E-02  8.02E-03   84
 L-EDEWBODY                  4.8-6.4 km  1.0000  3.36E-02  3.14E-02  6.59E-02
7.42E-02  8.82E-02 NOT-FOUND  9.17E-02  6.93E-03   98
 L-EDEWBODY                  6.4-8.1 km  1.0000  2.53E-02  2.22E-02  5.30E-02
6.12E-02  7.41E-02 NOT-FOUND  7.57E-02  6.93E-03   98
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.99E-02  1.40E-02  3.97E-02
5.22E-02 NOT-FOUND NOT-FOUND  8.43E-02  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.04E-02  8.92E-03  1.81E-02
2.29E-02 NOT-FOUND NOT-FOUND  3.85E-02  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  3.86E-03  3.34E-03  6.31E-03
7.51E-03  1.22E-02 NOT-FOUND  1.33E-02  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  1.40E-03  1.25E-03  2.27E-03
2.54E-03  3.83E-03 NOT-FOUND  4.20E-03  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  6.81E-04  5.88E-04  1.14E-03
1.41E-03  2.43E-03 NOT-FOUND  2.66E-03  8.02E-03   44
 L-EDEWBODY                64.4-80.5 km  1.0000  4.42E-04  3.42E-04  1.01E-03
1.11E-03 NOT-FOUND NOT-FOUND  1.32E-03  1.45E-02  118
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 11 OF 11:
    Case 11TSL

RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING
APPLIED
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COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE

11-APR-06 11:10:35 PAGE 83

	PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-16.1 km	1.0000	9.69E-02	7.92E-02	1.91E-01	2.29E-01	3.15E-01	3.40E-01	4.30E-01
CAN FAT/LUNG	0-80.5 km	1.0000	4.05E-01	2.56E-01	9.07E-01	1.23E+00	2.06E+00	2.23E+00	4.11E+00
CAN FAT/THYROID	0-80.5 km	1.0000	6.00E-02	3.80E-02	1.28E-01	1.98E-01	3.04E-01	3.31E-01	6.05E-01
CAN FAT/BREAST	0-80.5 km	1.0000	8.52E-02	4.83E-02	2.02E-01	2.82E-01	5.25E-01	5.98E-01	9.11E-01
CAN FAT/GI	0-80.5 km	1.0000	2.53E-01	1.43E-01	6.19E-01	8.10E-01	1.29E+00	1.57E+00	2.51E+00
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	6.53E-02	3.68E-02	1.51E-01	2.21E-01	3.46E-01	4.09E-01	6.89E-01
CAN FAT/BONE	0-80.5 km	1.0000	7.98E-03	4.55E-03	1.87E-02	2.58E-02	4.41E-02	5.45E-02	8.12E-02
CAN FAT/OTHER	0-80.5 km	1.0000	3.26E-01	2.02E-01	7.93E-01	1.11E+00	1.96E+00	2.16E+00	3.22E+00
CAN INJ/THYROID	0-80.5 km	1.0000	6.00E-01	3.80E-01	1.28E+00	1.98E+00	3.04E+00	3.31E+00	6.05E+00
CAN INJ/BREAST	0-80.5 km	1.0000	2.68E-01	1.48E-01	6.55E-01	8.88E-01	1.38E+00	1.63E+00	2.87E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	1.20E+00	7.37E-01	2.78E+00	3.75E+00	7.03E+00	7.56E+00	1.19E+01
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/TRANSEPIDERMAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  84            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  1.68E+00  1.30E+00  3.26E+00
3.93E+00  5.42E+00  5.86E+00  7.39E+00  5.99E-04   98
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  2.36E+01  1.39E+01  5.69E+01
7.78E+01  1.14E+02  1.28E+02  2.34E+02  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  1.0000  4.70E-06  3.80E-06  9.33E-06
1.08E-05  1.40E-05  1.56E-05  2.09E-05  5.99E-04   98

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  2.26E-02  2.01E-02  4.49E-02
5.30E-02 NOT-FOUND NOT-FOUND  6.55E-02  1.12E-02    9
 L-EDEWBODY                    1.6-3.2 km  1.0000  8.39E-03  7.12E-03  1.71E-02
2.11E-02  2.65E-02 NOT-FOUND  2.85E-02  6.14E-03   89
 L-EDEWBODY                    3.2-4.8 km  1.0000  4.74E-03  3.48E-03  1.03E-02
1.15E-02  1.46E-02  1.63E-02  1.87E-02  2.00E-03  122
 L-EDEWBODY                    4.8-6.4 km  1.0000  3.15E-03  2.21E-03  7.51E-03
1.01E-02  1.12E-02 NOT-FOUND  1.16E-02  6.14E-03   60
 L-EDEWBODY                    6.4-8.1 km  1.0000  2.19E-03  1.50E-03  5.14E-03
5.98E-03  8.40E-03 NOT-FOUND  9.29E-03  6.14E-03   60
 L-EDEWBODY                    8.1-9.7 km  1.0000  1.64E-03  1.12E-03  3.37E-03
4.76E-03  6.56E-03 NOT-FOUND  7.58E-03  6.93E-03   98
 L-EDEWBODY                  9.7-16.1 km  1.0000  8.57E-04  6.64E-04  1.90E-03
2.29E-03  3.08E-03 NOT-FOUND  3.15E-03  6.93E-03   98
 L-EDEWBODY                 16.1-32.2 km  1.0000  8.12E-04  7.05E-04  1.45E-03
2.01E-03  3.45E-03 NOT-FOUND  3.73E-03  8.02E-03   84
 L-EDEWBODY                 32.2-48.3 km  1.0000  2.85E-04  2.57E-04  4.70E-04
6.18E-04  9.50E-04 NOT-FOUND  1.21E-03  8.02E-03  105
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 L-EDEWBODY                    48.3-64.4 km  1.0000  1.35E-04  1.16E-04  2.35E-04
2.70E-04  6.05E-04 NOT-FOUND  6.61E-04  8.02E-03  105
 L-EDEWBODY                    64.4-80.5 km  1.0000  8.63E-05  7.13E-05  1.64E-04
2.12E-04  2.85E-04 NOT-FOUND  2.97E-04  8.02E-03  105
 DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 11 OF 11:
    Case 11TSL

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


11-APR-06  11:10:35     PAGE  85          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                  0-16.1 km  1.0000  2.43E-01  2.10E-01  4.53E-01
5.53E-01  7.39E-01  7.90E-01  1.04E+00  4.28E-04   60
 CAN FAT/LUNG                   0-80.5 km  1.0000  4.38E-01  3.00E-01  1.00E+00
1.27E+00  2.06E+00  2.23E+00  4.12E+00  1.71E-04  105
 CAN FAT/THYROID                0-80.5 km  1.0000  6.40E-02  4.19E-02  1.33E-01
2.04E-01  3.09E-01  3.36E-01  6.05E-01  1.71E-04  105
 CAN FAT/BREAST                 0-80.5 km  1.0000  1.01E-01  6.50E-02  2.31E-01
3.18E-01  5.25E-01  5.98E-01  9.33E-01  1.71E-04   44
 CAN FAT/GI                     0-80.5 km  1.0000  2.91E-01  1.89E-01  6.56E-01
8.56E-01  1.35E+00  1.61E+00  2.56E+00  1.71E-04   44
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  7.69E-02  5.06E-02  1.75E-01
2.34E-01  3.57E-01  4.16E-01  7.06E-01  1.71E-04   44
 CAN FAT/BONE                   0-80.5 km  1.0000  9.25E-03  5.99E-03  2.07E-02
2.84E-02  4.91E-02  5.78E-02  8.30E-02  1.71E-04   44
 CAN FAT/OTHER                  0-80.5 km  1.0000  3.70E-01  2.42E-01  8.38E-01
1.15E+00  1.96E+00  2.16E+00  3.25E+00  1.71E-04  105
 CAN INJ/THYROID                0-80.5 km  1.0000  6.40E-01  4.19E-01  1.33E+00
2.04E+00  3.09E+00  3.36E+00  6.05E+00  1.71E-04  105
 CAN INJ/BREAST                 0-80.5 km  1.0000  3.17E-01  2.07E-01  7.04E-01
9.69E-01  1.42E+00  1.66E+00  2.94E+00  1.71E-04   44
 CAN FAT/TOTAL                  0-80.5 km  1.0000  1.35E+00  8.84E-01  3.04E+00
3.86E+00  7.03E+00  7.56E+00  1.20E+01  1.71E-04  105
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 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
11-APR-06  11:10:35    PAGE  86          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                     NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  4.82E+00  4.08E+00  8.98E+00
1.05E+01  1.31E+01  1.44E+01  2.04E+01  4.28E-04   60
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  2.68E+01  1.70E+01  6.15E+01
8.07E+01  1.15E+02  1.29E+02  2.35E+02  1.71E-04  105

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.18E-05  1.02E-05  2.21E-05
2.72E-05  3.47E-05  3.76E-05  5.03E-05  4.28E-04   60

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  7.00E-02  5.85E-02  1.09E-01
1.18E-01  1.40E-01  1.52E-01  2.19E-01  2.85E-04   19
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 L-EDEWBODY                    1.6-3.2 km  1.0000  2.48E-02  2.13E-02  5.04E-02
5.92E-02  7.71E-02 NOT-FOUND  8.14E-02  6.14E-03   89
 L-EDEWBODY                    3.2-4.8 km  1.0000  1.37E-02  1.07E-02  2.91E-02
3.26E-02  4.04E-02  4.43E-02  5.35E-02  2.00E-03  122
 L-EDEWBODY                    4.8-6.4 km  1.0000  9.10E-03  7.05E-03  2.05E-02
3.02E-02  3.36E-02 NOT-FOUND  3.47E-02  6.14E-03   36
 L-EDEWBODY                    6.4-8.1 km  1.0000  6.31E-03  4.79E-03  1.33E-02
1.78E-02  2.61E-02 NOT-FOUND  2.88E-02  6.14E-03   60
 L-EDEWBODY                    8.1-9.7 km  1.0000  4.81E-03  3.55E-03  1.07E-02
1.46E-02  2.19E-02 NOT-FOUND  2.27E-02  6.93E-03   98
 L-EDEWBODY                   9.7-16.1 km  1.0000  2.54E-03  1.88E-03  5.20E-03
7.48E-03  1.04E-02  1.08E-02  1.14E-02  2.00E-03   65
 L-EDEWBODY                  16.1-32.2 km  1.0000  8.12E-04  7.05E-04  1.45E-03
2.01E-03  3.45E-03 NOT-FOUND  3.73E-03  8.02E-03   84
 L-EDEWBODY                  32.2-48.3 km  1.0000  2.85E-04  2.57E-04  4.70E-04
6.18E-04  9.50E-04 NOT-FOUND  1.21E-03  8.02E-03  105
 L-EDEWBODY                  48.3-64.4 km  1.0000  1.35E-04  1.16E-04  2.35E-04
2.70E-04  6.05E-04 NOT-FOUND  6.61E-04  8.02E-03  105
 L-EDEWBODY                  64.4-80.5 km  1.0000  8.63E-05  7.13E-05  1.64E-04
2.12E-04  2.85E-04 NOT-FOUND  2.97E-04  8.02E-03  105
▯  DATE AND TIME OF RUN = MACCS2 11-APR-06  11:10:35   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM 11 OF 11:
    Case 11TSL

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


11-APR-06  11:10:35     PAGE  87          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.33E+00  1.14E+00  2.19E+00
2.51E+00  3.15E+00  3.29E+00  4.71E+00  2.22E-05   18
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.60E+00  1.10E+00  3.36E+00
4.38E+00  7.37E+00  8.46E+00  1.49E+01  1.71E-04   44
 CAN FAT/THYROID               0-80.5 km  1.0000  1.15E-01  7.27E-02  2.68E-01
3.59E-01  6.52E-01  7.98E-01  1.17E+00  1.71E-04   44
 CAN FAT/BREAST                0-80.5 km  1.0000  9.71E-01  7.06E-01  2.05E+00
2.69E+00  4.75E+00  5.71E+00  8.93E+00  1.71E-04   44
 CAN FAT/GI                    0-80.5 km  1.0000  2.78E+00  2.04E+00  5.72E+00
7.30E+00  1.19E+01  1.49E+01  2.39E+01  1.71E-04   44
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  7.75E-01  5.57E-01  1.56E+00
2.17E+00  3.35E+00  4.02E+00  6.90E+00  1.71E-04   44
 CAN FAT/BONE                  0-80.5 km  1.0000  8.19E-02  5.87E-02  1.69E-01
2.30E-01  3.57E-01  4.16E-01  7.38E-01  1.71E-04   44
 CAN FAT/OTHER                 0-80.5 km  1.0000  2.87E+00  2.12E+00  6.01E+00
7.93E+00  1.26E+01  1.54E+01  2.45E+01  1.71E-04   44
 CAN INJ/THYROID               0-80.5 km  1.0000  1.15E+00  7.27E-01  2.68E+00
3.59E+00  6.52E+00  7.98E+00  1.17E+01  1.71E-04   44
 CAN INJ/BREAST                0-80.5 km  1.0000  3.06E+00  2.14E+00  6.71E+00
8.42E+00  1.32E+01  1.59E+01  2.81E+01  1.71E-04   44
 CAN FAT/TOTAL                 0-80.5 km  1.0000  9.20E+00  6.85E+00  1.98E+01
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2.49E+01  3.93E+01  4.72E+01  8.12E+01  1.71E-04   44

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  2.96E+01  2.83E+01  5.01E+01
5.68E+01  7.52E+01  8.39E+01  1.03E+02  2.22E-05   18
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.08E+02  1.46E+02  4.26E+02
5.72E+02  9.54E+02  1.08E+03  1.78E+03  1.71E-04   44

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                0-16.1 km  1.0000  5.16E-05  4.80E-05  9.15E-05
1.04E-04  1.19E-04  1.26E-04  1.99E-04  2.22E-05   18

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  4.92E-02  5.09E-02  7.73E-02
8.33E-02 NOT-FOUND NOT-FOUND  9.03E-02  2.38E-02   79
 L-EDEWBODY                  1.6-3.2 km  0.9977  4.08E-02  3.80E-02  6.57E-02
7.13E-02  7.70E-02  7.95E-02  9.11E-02  2.85E-04   19
 L-EDEWBODY                  3.2-4.8 km  1.0000  3.63E-02  3.38E-02  6.15E-02
7.05E-02  7.38E-02  7.53E-02  8.12E-02  3.42E-04   25
 L-EDEWBODY                  4.8-6.4 km  1.0000  3.01E-02  2.57E-02  5.38E-02
6.09E-02  7.72E-02 NOT-FOUND  8.06E-02  6.93E-03   98
 L-EDEWBODY                  6.4-8.1 km  1.0000  2.29E-02  1.87E-02  4.25E-02
5.12E-02  5.92E-02  6.31E-02  6.85E-02  2.00E-03   31
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.81E-02  1.39E-02  3.71E-02
4.98E-02 NOT-FOUND NOT-FOUND  7.69E-02  1.20E-02   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  9.45E-03  8.17E-03  1.68E-02
2.16E-02 NOT-FOUND NOT-FOUND  3.53E-02  1.20E-02   50
 L-EDEWBODY                16.1-32.2 km  1.0000  3.04E-03  2.69E-03  5.38E-03
6.45E-03  9.15E-03 NOT-FOUND  9.58E-03  8.02E-03   84
 L-EDEWBODY                32.2-48.3 km  1.0000  1.11E-03  1.06E-03  2.02E-03
2.25E-03  2.89E-03 NOT-FOUND  2.99E-03  8.02E-03  105
 L-EDEWBODY                48.3-64.4 km  1.0000  5.46E-04  5.14E-04  9.84E-04
1.20E-03  1.88E-03 NOT-FOUND  2.11E-03  8.02E-03   44
 L-EDEWBODY                64.4-80.5 km  1.0000  3.56E-04  2.81E-04  7.29E-04
8.88E-04 NOT-FOUND NOT-FOUND  1.13E-03  1.84E-02  120

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  2.08E+02  1.46E+02  4.26E+02
5.72E+02  9.54E+02  1.08E+03  1.78E+03  1.71E-04   44
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  1.59E+02  9.90E+01  3.54E+02
5.02E+02  9.28E+02  1.07E+03  1.62E+03  1.71E-04   44
 TOTAL INGESTION PATHWAYS DOSE            1.0000  4.90E+01  2.33E+01  1.14E+02
1.37E+02  2.12E+02  2.76E+02  3.61E+02  9.42E-04   44
 LONG-TERM GROUNDSHINE DOSE               1.0000  1.51E+02  9.38E+01  3.37E+02
4.54E+02  7.52E+02  8.56E+02  1.54E+03  1.71E-04   44
 LONG-TERM RESUSPENSION DOSE              1.0000  7.85E+00  4.89E+00  1.81E+01
2.43E+01  4.45E+01  5.54E+01  8.01E+01  1.71E-04   44
 WATER INGESTION DOSE                     1.0000  3.40E-01  2.84E-01  6.62E-01
8.29E-01  1.09E+00  1.16E+00  1.84E+00  2.76E-05   19
 POP.-DEPENDENT DECONTAMINATION DOSE      0.7198  5.83E-02  2.21E-02  1.67E-01
2.39E-01  4.11E-01  5.10E-01  8.19E-01  1.23E-03   45
11-APR-06  11:10:35    PAGE  88          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE      0.7865  4.16E-03  1.10E-03  1.17E-02
1.47E-02  2.12E-02  2.25E-02  3.39E-02  8.00E-05   19
 INGESTION OF GRAINS                      1.0000  1.37E+00  1.81E-02  3.76E+00
4.81E+00  6.70E+00  7.76E+00  1.06E+01  9.42E-04   44
 INGESTION OF LEAF VEG                    1.0000  2.53E+00  1.62E-01  5.78E+00
1.09E+01  2.32E+01  2.73E+01  5.17E+01  9.42E-04   44
 INGESTION OF ROOT CROPS                  1.0000  1.82E+00  5.72E-02  5.20E+00
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6.20E+00  9.24E+00  1.06E+01  1.37E+01  9.42E-04   44
 INGESTION OF FRUITS                     1.0000  2.69E+00  1.58E-01  7.57E+00
9.26E+00  1.30E+01  1.49E+01  2.03E+01  9.42E-04   44
 INGESTION OF LEGUMES                    1.0000  1.60E+00  1.77E-01  4.43E+00
5.39E+00  7.32E+00  9.27E+00  1.19E+01  9.42E-04   44
 INGESTION OF BEEF                       1.0000  1.77E+01  9.25E+00  4.41E+01
5.43E+01  7.51E+01  8.95E+01  1.21E+02  4.00E-04  120
 INGESTION OF MILK                       1.0000  1.61E+01  8.48E+00  3.87E+01
5.13E+01  7.53E+01  8.76E+01  1.24E+02  1.43E-03  120
 INGESTION OF POULTRY                    1.0000  3.49E+00  1.31E+00  8.20E+00
1.17E+01  2.29E+01  2.72E+01  5.15E+01  9.42E-04   44
 INGESTION OF OTHER MEAT CROPS           1.0000  1.30E+00  1.01E+00  2.25E+00
3.13E+00  5.53E+00  6.42E+00  1.19E+01  9.42E-04   44

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    0.8641  1.68E+06  8.44E+05  3.92E+06
5.62E+06  1.02E+07  1.10E+07  1.59E+07  1.71E-04  113
 POP.-DEPENDENT COSTS                    0.7198  7.05E+05  3.34E+05  2.04E+06
2.61E+06  5.28E+06  6.12E+06  9.99E+06  1.23E-03   45
 FARM-DEPENDENT COSTS                    0.8486  9.71E+05  1.50E+05  2.29E+06
2.72E+06  9.93E+06  1.06E+07  1.42E+07  1.71E-04  113
 POP.-DEPENDENT DECONTAMINATION COST     0.7198  1.39E+05  6.03E+04  3.89E+05
5.50E+05  1.08E+06  1.31E+06  1.97E+06  1.23E-03   45
 FARM-DEPENDENT DECONTAMINATION COST     0.7865  3.26E+04  2.08E+04  7.73E+04
9.63E+04  1.58E+05  1.95E+05  2.26E+05  2.03E-03   45
 POP.-DEPENDENT INTERDICTION COST        0.7198  5.66E+05  2.34E+05  1.52E+06
2.21E+06  3.48E+06  4.21E+06  8.02E+06  1.23E-03   45
 FARM-DEPENDENT INTERDICTION COST        0.8293  7.44E+05  8.15E+04  1.62E+06
2.15E+06  6.90E+06  7.42E+06  9.74E+06  2.28E-04  113
 POP.-DEPENDENT CONDEMNATION COST        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 FARM-DEPENDENT CONDEMNATION COST        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EMERGENCY PHASE COST                    0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      0.8395  2.77E+04  1.07E+03  1.01E+05
1.09E+05  1.31E+05  1.42E+05  2.35E+05  4.14E-05   33
 CROP DISPOSAL COST                      0.8293  1.67E+05  1.69E+04  3.82E+05
4.99E+05  2.05E+06  3.12E+06  4.26E+06  7.42E-04    6

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         0.7865  4.59E+01  3.03E+01  1.09E+02
1.41E+02  2.41E+02  2.93E+02  3.29E+02  2.03E-03   45
 POP. DECONTAMINATION (INDIVIDUALS)      0.7198  3.93E+01  1.73E+01  1.12E+02
1.52E+02  3.19E+02  3.80E+02  5.58E+02  1.23E-03   45
 FARM INTERDICTION (HECTARES)            0.8293  6.09E+02  7.83E+01  1.36E+03
1.69E+03  5.91E+03  7.03E+03  8.53E+03  7.42E-04    6
 POP. INTERDICTION (INDIVIDUALS)         0.7198  3.93E+01  1.73E+01  1.12E+02
1.52E+02  3.19E+02  3.80E+02  5.58E+02  1.23E-03   45
 FARM CONDEMNATION (HECTARES)            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 POP. CONDEMNATION (INDIVIDUALS)         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL AREA (HECTARES)           0.8395  1.53E+03  6.81E+01  5.42E+03
6.37E+03  7.53E+03  7.85E+03  1.07E+04  2.49E-05   33
 CROP DISPOSAL AREA (HECTARES)           0.8293  6.09E+02  7.83E+01  1.36E+03
1.69E+03  5.91E+03  7.03E+03  8.53E+03  7.42E-04    6

Successful completion of MACCS2 was achieved!
This job required a total of     49.719 CPU seconds
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 Input processing required      0.281 CPU seconds
       Simulation required     46.988 CPU seconds
Output processing required      2.449 CPU seconds
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* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "CHRONC" INPUT FILE
* BASE CASE Using revised Economic data CHEVACST =40, CHRELCST = 40
* CHDBCST = 42000, CHPOPCST = 7300, CHVALWF = 6979, CHVALWNF = 141206
*    LAST MODIFIED by MGM  04/10/06
CHCHNAME001 'NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model'
*******************************************************************************
* EMERGENCY RESPONSE COST DATA BLOCK
*
* DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)
*
CHEVACST001  40.00   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)
*
* DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)
*
CHRELCST001  40.00   (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
*
CHCRTOCRC01 'L-EDEWBODY'
*
* Long Term Exposure Period    Previously permanently set to:
*    one million years = 3.15 E13 seconds
*    MACCS2 allowable range is 3.15E7 to 1.E10
*
CHEXPTIM001    1.E10
*******************************************************************************
* DECONTAMINATION PLAN DATA BLOCK
*
* NUMBER OF LEVELS OF DECONTAMINATION
*
CHLVLDEC001  2
*
* DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*  (SECONDS)
*
CHTIMDEC001   5.184E6  1.0368E7    (60, 120 DAYS)
*
* DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
*
CHDSRFCT001   3.      15.
*
* COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
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*  FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
CHCDFRM0001   658.1   1463.
*
* COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
*  FOR THE VARIOUS LEVELS OF DECONTAMINATION
*
CHCDNFRM0001   3510.   9360.
*
* 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
*
CHFRNFDL0001  .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
*
CHTFWKNF0001  .33     .33
*
* AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
*
CHDLBCST0001   42000.
*******************************************************************************
* 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   7300.
*******************************************************************************
* 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)
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*****************************************************************************
* RESUSPENSION WEATHERING DEFINITION DATA BLOCK
*
* NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
*
CHNRWTRM001    3
*
* RESUSPENSION CONCENTRATION COEFFICIENTS   (/ METER)
*  RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
*
CHRWCOEF001  1.0E-5   1.0E-7   1.0E-9  (VALUES HERE SELECTED BY JON HELTON)
*
* HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
*
CHTRWHLF001  1.6E7    1.6E8    1.6E9   (6 MONTHS, 5 YEARS, 50 YEARS)
*****************************************************************************
* SITE REGION DESCRIPTION DATA BLOCK
*
* FRACTION OF AREA THAT IS LAND IN THE REGION
*
CHFRACLD001   0.95   (ROUGH GUESS VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
*
CHFRCFRM001   0.382  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
*  (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN FARMS)
*
CHFRMPRD001   371.0  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
*  (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME CONSUMPTION)
*
CHDPFRCT001   0.198  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
*
* VALUE OF FARM WEALTH (DOLLARS/HECTARE)
*  (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 100 MILES)
*
CHVALWF0001   6979.  *  NAPS
*
* FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
*
CHFRFIM0C01   0.25  *  SURRY/NAPS
*
* 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  141206.  *  NAPS
*
* 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 critera, GCMAXR, used for NUREG-1150 wre based on
* an ingestion dose integrated from zero to infinity.  It is not possible to
* translate those parameter values into corresponding annual dose limits, as is
* required by the COMIDA2-based food model.  The "total" dose limits used in
* NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, are used
* here as annual dose limits for interdiction of food production in years the
* years subsequent to the accident.
*
*              effective     thyroid  (doses in sieverts)
DOSELONG001     0.005          0.015
*
* NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
*
CHNUMWPI001     4
*
* TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
*
* IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
*  FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
*
*                          INITIAL      ANNUAL     INGESTION FACTOR
*              WATER       WASHOFF      WASHOFF     ((Bq INGESTED)/
*             NUCLIDE      FRACTION      RATE        (Bq IN WATER))
*
*              NAMWPI       WSHFRI       WSHRTA          WINGF
CHWTRISO001    Sr-89         0.01        0.004          5.0E-6
CHWTRISO002    Sr-90         0.01        0.004          5.0E-6
CHWTRISO003    Cs-134        0.005       0.001          5.0E-6
CHWTRISO004    Cs-137        0.005       0.001          5.0E-6
*******************************************************************************
* SPECIAL OPTIONS DATA BLOCK
*
* DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING ON!!
*          KSWDSC
*
CHKSWTCH001    0
*******************************************************************************
* DEFINE THE TYPE 9 RESULTS
*
* LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
```

```
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
TYPE9NUMBER   1      (UP TO 10 ALLOWED)
*
*              ORGNAM        INNER      OUTER
*
TYPE9OUT001   'L-EDEWBODY'       1          11    (0-50 MILES)
*******************************************************************************
* ECONOMIC COST RESULTS IN A REGION BROKEN DOWN BY 12 TYPES OF COSTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
*
TYP10NUMBER   1      (UP TO 10 ALLOWED)
*
*              INNER      OUTER
*
TYP10OUT001      1          11    (0-50 MILES)
*******************************************************************************
* DEFINE A FLAG THAT CONTROLS THE PRODUCTION OF THE ACTION DISTANCE RESULTS
*
* SPECIFYING A VALUE OF .TRUE. TURNS ON ALL 8 OF THE ACTION DISTANCE RESULTS,
* A VALUE OF .FALSE. WILL ELIMINATE THE ACTION DISTANCE RESULTS FROM THE OUTPUT.
*
TYP11FLAG11  .FALSE.
*******************************************************************************
* IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF IMPACTS
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
* FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
*
TYP12NUMBER   1      (UP TO 10 ALLOWED)
*
*              INNER      OUTER
*
TYP12OUT001      1          11    (0-50 MILES)
*******************************************************************************
* Maximal annual food ingestion dose to an individual, requested by IXOT13
*
* This result is calculated after accounting for temporary or
* permanent interdiction.  It is only available for the "new" food model.
*
* NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
*
TYP13NUMBER   0   (UP TO 10 ALLOWED)
*
* IRAD13 is the radial spatial interval at which results are requested
*
* ORGN13 is the name of the organ for which results are requested
*  (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')
*
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* GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "EARLY" INPUT FILE
* BASE CASE using EZDLTSHL = 7200 seconds and 95% Evacuation
* Last Modified by MGM 04/10/06
MIEANAM1001 'NAPS ESBWR NEARLY.INP, Sample Problem 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 ACTIVTY:
*
* ACTIVITY TYPE:
*     1 -- EVACUEES WHILE MOVING
*     2 -- NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
*     3 -- SHELTERED ACTIVITY
*
* CLOUD SHIELDING FACTOR
*
*    SITE        GG   PB   SEQ  SUR  ZION
*    SHELTERING  0.7  0.5  0.65 0.6  0.5
*
*            EVACUEES  NORMAL  SHELTER
*
SECSFACT001      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 FOR EVACUATION
*
EZWTFRAC001  0.95   (95% of the people within 10 miles evacuate)
*
* LAST RING IN THE MOVEMENT ZONE
*
EZLASMOV001     8    (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) or (4 mph) Contains Three Phases
*  3 Phases: (Initial)  (Middle)    (Late)
EZESPEED001    1.8        1.8        1.8          (NAPS)
EZEVATYP001     'RADIAL'
EZDURBEG001    86400.0
EZDURMID001    0.0
EZREFPNT001     'ALARM'
EZNUMEVA001      7
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
```

```
EFATAGRP()02 'A-LUNGS'        10.0      7.0    5.0
*****************************************************************************
* EARLY INJURY MODEL PARAMETERS, LOADED BY INEINJ, STORED IN /EINJUR/
*
* NUMBER OF EARLY INJURY EFFECTS
*
EINUMEIN()01  7
*
*            EINAME            ORGNAM   EISUSC EITHRE EIFACA EIFACB
*
EINJUGRP()01 'PRODROMAL VOMIT' 'A-STOMACH'  1.     .5     2.     3.
EINJUGRP()02 'DIARRHEA'        'A-STOMACH'  1.     1.     3.     2.5
EINJUGRP()03 'PNEUMONITIS'     'A-LUNGS'    1.     5.    10.     7.
EINJUGRP()04 'SKIN ERYTHEMA'   'A-SKIN'     1.     3.     6.     5.
EINJUGRP()05 'TRANSEPIDERMAL'  'A-SKIN'     1.    10.    20.     5.
EINJUGRP()06 'THYROIDITIS'     'A-THYROIDH' 1.    40.   240.     2.
EINJUGRP()07 'HYPOTHYROIDISM'  'A-THYROIDH' 1.     2.    60.     1.3
*****************************************************************************
* ACUTE EXPOSURE CANCER PARAMETERS, LOADED BY INACAN STORED IN /ACANCR/.
*
* NUMBER OF ACUTE EXPOSURE CANCER EFFECTS
*
LCNUMACA()01   7
*
* THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
*
LCDDTHRE()01   0.2  (LOWEST DOSE FOR WHICH DDREFA WILL BE APPLIED)
*
* DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (Sv)
*
LCACTHRE()01   0.0  (LINEAR-QUADRATIC MODEL IS NOT BEING USED)
*
*            ACNAME     ORGNAM  ACSUSC DOSEFA DOSEFB CFRISK   CIRISK  DDREFA
*
LCANCERS()01 'LEUKEMIA' 'L-RED MARR'  1.0   1.0   0.0   9.70E-3   0.0     2.0
LCANCERS()02 'BONE'     'L-BONE SUR'  1.0   1.0   0.0   9.00E-4   0.0     2.0
LCANCERS()03 'BREAST'   'L-BREAST'    1.0   1.0   0.0   5.40E-3   1.7E-2  1.0
LCANCERS()04 'LUNG'     'L-LUNGS'     1.0   1.0   0.0   1.55E-2   0.0     2.0
LCANCERS()05 'THYROID'  'L-THYROIDH'  1.0   1.0   0.0   7.20E-4   7.2E-3  1.0
LCANCERS()06 'GI'       'L-LOWER LI'  1.0   1.0   0.0   3.36E-2   0.0     2.0
LCANCERS()07 '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    27
*
TYPE1OUT()01    'ERL FAT/TOTAL'                1  7   NOCCDF (0 TO 10 MILES)
TYPE1OUT()02    'ERL INJ/PRODROMAL VOMIT'      1  7   NOCCDF
TYPE1OUT()03    'ERL INJ/DIARRHEA'             1  7
TYPE1OUT()04    'ERL INJ/PNEUMONITIS'          1  7
TYPE1OUT()05    'ERL INJ/THYROIDITIS'          1  7
TYPE1OUT()06    'ERL INJ/HYPOTHYROIDISM'       1  7
TYPE1OUT()07    'ERL INJ/SKIN ERYTHEMA'        1  7
TYPE1OUT()08    'ERL INJ/TRANSEPIDERMAL'       1  7
TYPE1OUT()09    'CAN FAT/TOTAL'                1  7   NOCCDF
TYPE1OUT()10    'CAN FAT/LUNG'                 1  11  (0 TO 50 MILES)
TYPE1OUT()11    'CAN FAT/THYROID'              1  11
TYPE1OUT()12    'CAN FAT/BREAST'               1  11
TYPE1OUT()13    'CAN FAT/GI'                   1  11
TYPE1OUT()14    'CAN FAT/LEUKEMIA'             1  11
```

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TYPE1OUT015     'CAN FAT/BONE'                  1  11
TYPE1OUT016     'CAN FAT/OTHER'                 1  11
TYPE1OUT017     'CAN INJ/THYROID'               1  11
TYPE1OUT018     'CAN INJ/BREAST'                1  11
TYPE1OUT019     'CAN FAT/TOTAL'                 1  11  (0 TO 50 MILES)
TYPE1OUT020     'ERL FAT/TOTAL'                 1  11
TYPE1OUT021     'ERL INJ/PRODROMAL VOMIT'       1  11
TYPE1OUT022     'ERL INJ/DIARRHEA'              1  11
TYPE1OUT023     'ERL INJ/PNEUMONITIS'           1  11
TYPE1OUT024     'ERL INJ/THYROIDITIS'           1  11
TYPE1OUT025     'ERL INJ/HYPOTHYROIDISM'        1  11
TYPE1OUT026     'ERL INJ/SKIN ERYTHEMA'         1  11
TYPE1OUT027     'ERL INJ/TRANSEPIDERMAL'        1  11
*******************************************************************************
* 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  4
*
*               ORGAN NAME   DOSE THRESHOLD (Sv)
*
TYPE3OUT001    'A-RED MARR'        1.5
TYPE3OUT002    'A-LUNGS'           5.0
TYPE3OUT003    'L-EDEWBODY'        2.0
TYPE3OUT004    'L-EDEWBODY'        0.25
*******************************************************************************
* 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     2
*
*             ORGAN      I1DIS5     I2DIS5
*
TYPE5OUT001 'L-EDEWBODY'      1          7          (0-10 MILES)
TYPE5OUT002 'L-EDEWBODY'      1          11    NOCCDF  (0-50 MILES)
*******************************************************************************
* RESULT 6 OPTIONS BLOCK, LOADED BY INOUT6, STORED IN /INOUT6/
*
* CENTERLINE DOSE TO AN ORGAN VS DIST BY PATHWAY, PATHWAY NAMES ARE AS FOLLOWS:
*
*  PATHWAY NAME:
*    'CLD'      - CLOUDSHINE
*    'GRD'      - GROUNDSHINE
*    'INH ACU' - "ACUTE DOSE EQUIVALENT" FROM DIRECT INHALATION OF THE CLOUD
*    'INH LIF' - "LIFETIME DOSE COMMITMENT" FROM DIRECT INHALATION OF THE CLOUD
*    'RES ACU' - "ACUTE DOSE EQUIVALENT" FROM RESUSPENSION INHALATION
*    'RES LIF' - "LIFETIME DOSE COMMITMENT" FROM RESUSPENSION INHALATION
*    'TOT ACU' - "ACUTE DOSE EQUIVALENT" FROM ALL PATHWAYS
*    'TOT LIF' - "LIFETIME DOSE COMMITMENT" FROM ALL PATHWAYS
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE6NUMBER     0
*
*             ORGNAM        PATHNM      I1DIS6   I2DIS6
*
*TYPE6OUT001  'A-RED MARR'    'TOT ACU'      1       11     (0-50 MILES)
*TYPE6OUT002  'A-LUNGS'       'TOT ACU'      1       11     (0-50 MILES)
*TYPE6OUT003  'L-EDEWBODY'    'TOT LIF'      1       11     (0-50 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           11       (0-50 MILES)
*******************************************************************************
* RESULT 8 OPTIONS BLOCK, LOADED BY INOUT8, STORED IN /INOUT8/
*
* POPULATION WEIGHTED FATALITY RISK BETWEEN 2 DISTANCES
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
TYPE8NUMBER   2
*
*                NAME       I1DIS8  I2DIS8
*
TYPE8OUT001 'ERL FAT/TOTAL'   1       2     NOCCDF  (0-EXCL ZONE + 1 MI)
TYPE8OUT002 'CAN FAT/TOTAL'   1       7     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        11
.
*******************************************************************************
*********** BEGINNING OF CHANGE CASE 1 USER INPUT ******************************
*******************************************************************************
* EMERGENCY RESPONSE SCENARIO NUMBER 2
*
* SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
*
EZEANAM2001  'NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE'
*
* THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS
*
* WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO FOR EVACUATION
*
EZWTFRAC001  0.05   (5% of the people DO NOT evacuate)
*
* LAST RING IN THE MOVEMENT ZONE
*
EZLASMOV001     0    (A ZERO TURNS OFF THE EVACUATION MODEL)
*
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```
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1 16  3 644  0
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352 10  2 124  0
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352 14 12 194  0
352 15  5 284  0
352 16  4 324  0
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354 19 12 226  0
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355  6  4 164  0
355  7  2 134  0
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356 13  7 934  0
356 14  6 914  0
356 15  5 684  0
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357  8 10 374  0
357  9 10 274  0
357 10  9 224  0
357 11 11 184  0
357 12  9 164  0
357 13 11 174  0
357 14 10 204  0
357 15 11 244  0
357 16 11 294  0
357 17 11 234  0
357 18 12 234  0
357 19 11 264  1
357 20 11 274  2
357 21 11 224  3
357 22 11 204  5
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357	24	9	334	3
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358	14	10	204	0
358	15	9	184	0
358	16	7	154	0
358	17	5	164	0
358	18	6	194	0
358	19	5	184	0
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358	24	6	255	0
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359	24	3	226	0
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360	13	3	254	0

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360	16	3	194	0
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363	3	10	174	0
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365  18   3 315   0
365  19   3 225   0
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365 20  2 315  0
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365 23  3 485  0
365 24  4 475  0
      6.       5.       4.       5.       10.      16.      17.      11.
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FGRDCF 01/12/2004 09:37:57   Version 1.11
Implicit daughter halflives (m) less than  90 and less than 0.100 of parent
        9 ORGANS DEFINED IN THIS FILE:
GONADS
BREAST
LUNGS
RED MARR
BONE SUR
THYROID
REMAINDER
EFFECTIVE
SKIN(FGR)
        60 NUCLIDES DEFINED IN THIS FILE:
Co-58     Y
Co-60     Y
Kr-85
Kr-85m
Kr-87
Kr-88
Rb-86     D
Sr-89     D
Sr-90     D
Sr-91     D     Including:Y-91m
Sr-92     D
Y-90      Y
Y-91      Y
Y-92      Y
Y-93      Y
Zr-95     W
Zr-97     W     Including:Nb-97m , Including:Nb-97
Nb-95     Y
Mo-99     Y
Tc-99m    W
Ru-103    Y     Including:Rh-103m
Ru-105    Y
Ru-106    Y     Including:Rh-106
Rh-105    Y
Sb-127    W
Sb-129    W
Te-127    W
Te-127m   W
Te-129    W
Te-129m   W     Including:Te-129
Te-131m   W     Including:Te-131
Te-132    W
I-131     D
I-132     D
I-133     D
I-134     D
I-135     D     Including:Xe-135m
Xe-133
Xe-135
Cs-134    D
Cs-136    D
Cs-137    D     Including:Ba-137m
Ba-139    D
Ba-140    D
La-140    W
La-141    W
La-142    W
Ce-141    Y
Ce-143    Y
Ce-144    Y     Including:Pr-144m, Including:Pr-144
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Pr-143	Y
Nd-147	Y
Np-239	W
Pu-238	Y
Pu-239	Y
Pu-240	Y
Pu-241	Y
Am-241	W
Cm-242	W
Cm-244	W

	CLOUDSHINE	GROUND SHINE 8HR	GROUND SHINE 7DAY	GROUND SHINE RATE	INHALED ACUTE	INHALED CHRONIC	INGESTION
Co-58							
GONADS	4.660E-14	2.867E-11	5.828E-10	9.970E-16	1.000E+00	6.170E-10	1.040E-09
BREAST	5.300E-14	2.737E-11	5.565E-10	9.520E-16	1.000E+00	9.370E-10	1.790E-10
LUNGS	4.640E-14	2.617E-11	5.319E-10	9.100E-16	1.000E+00	1.600E-08	8.530E-11
RED MARR	4.530E-14	2.671E-11	5.430E-10	9.290E-16	1.000E+00	9.230E-10	2.600E-10
BONE SUR	7.410E-14	3.795E-11	7.716E-10	1.320E-15	1.000E+00	6.930E-10	1.250E-10
THYROID	4.770E-14	2.720E-11	5.530E-10	9.460E-16	1.000E+00	8.720E-10	6.310E-11
REMAINDER	4.440E-14	2.585E-11	5.255E-10	8.990E-16	1.000E+00	1.890E-09	1.580E-09
EFFECTIVE	4.760E-14	2.732E-11	5.553E-10	9.500E-16	1.000E+00	2.940E-09	8.090E-10
SKIN(FGR)	5.580E-14	3.278E-11	6.664E-10	1.140E-15	1.000E+00	0.000E+00	0.000E+00
Co-60							
GONADS	1.230E-13	7.056E-11	1.480E-09	2.450E-15	1.000E+00	4.760E-09	3.190E-09
BREAST	1.390E-13	6.739E-11	1.413E-09	2.340E-15	1.000E+00	1.840E-08	1.100E-09
LUNGS	1.240E-13	6.537E-11	1.371E-09	2.270E-15	1.000E+00	3.450E-07	8.770E-10
RED MARR	1.230E-13	6.710E-11	1.407E-09	2.330E-15	1.000E+00	1.720E-08	1.320E-09
BONE SUR	1.780E-13	8.956E-11	1.879E-09	3.110E-15	1.000E+00	1.350E-08	9.390E-10
THYROID	1.270E-13	6.480E-11	1.359E-09	2.250E-15	1.000E+00	1.620E-08	7.880E-10
REMAINDER	1.200E-13	6.508E-11	1.365E-09	2.260E-15	1.000E+00	3.600E-08	4.970E-09
EFFECTIVE	1.260E-13	6.768E-11	1.419E-09	2.350E-15	1.000E+00	5.910E-08	2.770E-09
SKIN(FGR)	1.450E-13	7.948E-11	1.667E-09	2.760E-15	1.000E+00	0.000E+00	0.000E+00
Kr-85							
GONADS	1.170E-16	8.121E-14	1.704E-12	2.820E-18	1.000E+00	0.000E+00	0.000E+00
BREAST	1.340E-16	7.891E-14	1.656E-12	2.740E-18	1.000E+00	0.000E+00	0.000E+00
LUNGS	1.140E-16	7.056E-14	1.481E-12	2.450E-18	1.000E+00	0.000E+00	0.000E+00
RED MARR	1.090E-16	6.998E-14	1.469E-12	2.430E-18	1.000E+00	0.000E+00	0.000E+00
BONE SUR	2.200E-16	1.287E-13	2.702E-12	4.470E-18	1.000E+00	0.000E+00	0.000E+00
THYROID	1.180E-16	7.459E-14	1.565E-12	2.590E-18	1.000E+00	0.000E+00	0.000E+00
REMAINDER	1.090E-16	6.941E-14	1.457E-12	2.410E-18	1.000E+00	0.000E+00	0.000E+00
EFFECTIVE	1.190E-16	7.603E-14	1.596E-12	2.640E-18	1.000E+00	0.000E+00	0.000E+00
SKIN(FGR)	1.320E-14	2.304E-11	4.835E-10	8.000E-16	1.000E+00	0.000E+00	0.000E+00
Kr-85m							
GONADS	7.310E-15	2.594E-12	3.653E-12	1.570E-16	1.000E+00	0.000E+00	0.000E+00
BREAST	8.410E-15	2.527E-12	3.560E-12	1.530E-16	1.000E+00	0.000E+00	0.000E+00
LUNGS	7.040E-15	2.379E-12	3.351E-12	1.440E-16	1.000E+00	0.000E+00	0.000E+00
RED MARR	6.430E-15	2.346E-12	3.304E-12	1.420E-16	1.000E+00	0.000E+00	0.000E+00
BONE SUR	1.880E-14	5.286E-12	7.446E-12	3.200E-16	1.000E+00	0.000E+00	0.000E+00
THYROID	7.330E-15	2.395E-12	3.374E-12	1.450E-16	1.000E+00	0.000E+00	0.000E+00
REMAINDER	6.640E-15	2.313E-12	3.257E-12	1.400E-16	1.000E+00	0.000E+00	0.000E+00
EFFECTIVE	7.480E-15	2.511E-12	3.537E-12	1.520E-16	1.000E+00	0.000E+00	0.000E+00
SKIN(FGR)	2.240E-14	2.247E-11	3.164E-11	1.360E-15	1.000E+00	0.000E+00	0.000E+00
Kr-87							
GONADS	4.000E-14	4.962E-12	5.026E-12	7.610E-16	1.000E+00	0.000E+00	0.000E+00
BREAST	4.500E-14	4.740E-12	4.802E-12	7.270E-16	1.000E+00	0.000E+00	0.000E+00
LUNGS	4.040E-14	4.603E-12	4.663E-12	7.060E-16	1.000E+00	0.000E+00	0.000E+00
RED MARR	4.000E-14	4.708E-12	4.769E-12	7.220E-16	1.000E+00	0.000E+00	0.000E+00
BONE SUR	6.020E-14	6.514E-12	6.598E-12	9.990E-16	1.000E+00	0.000E+00	0.000E+00
THYROID	4.130E-14	4.473E-12	4.531E-12	6.860E-16	1.000E+00	0.000E+00	0.000E+00
REMAINDER	3.910E-14	4.590E-12	4.650E-12	7.040E-16	1.000E+00	0.000E+00	0.000E+00
EFFECTIVE	4.120E-14	4.773E-12	4.835E-12	7.320E-16	1.000E+00	0.000E+00	0.000E+00
SKIN(FGR)	1.370E-13	8.802E-11	8.916E-11	1.350E-14	1.000E+00	0.000E+00	0.000E+00
Kr-88							

GONADS	9.900E-14	2.278E-11	2.655E-11	1.800E-15	-1.000E+00	0.000E+00	0.000E+00
BREAST	1.110E-13	2.177E-11	2.537E-11	1.720E-15	-1.000E+00	0.000E+00	0.000E+00
LUNGS	1.010E-13	2.139E-11	2.493E-11	1.690E-15	-1.000E+00	0.000E+00	0.000E+00
RED MARR	1.000E-13	2.190E-11	2.552E-11	1.730E-15	-1.000E+00	0.000E+00	0.000E+00
BONE SUR	1.390E-13	2.886E-11	3.363E-11	2.280E-15	-1.000E+00	0.000E+00	0.000E+00
THYROID	1.030E-13	2.012E-11	2.345E-11	1.590E-15	-1.000E+00	0.000E+00	0.000E+00
REMAINDER	9.790E-14	2.139E-11	2.493E-11	1.690E-15	-1.000E+00	0.000E+00	0.000E+00
EFFECTIVE	1.020E-13	2.202E-11	2.567E-11	1.740E-15	-1.000E+00	0.000E+00	0.000E+00
SKIN(FGR)	1.350E-13	5.607E-11	6.534E-11	4.430E-15	-1.000E+00	0.000E+00	0.000E+00
Rb-86							
GONADS	4.710E-15	2.788E-12	5.187E-11	9.740E-17	-1.000E+00	1.340E-09	2.150E-09
BREAST	5.340E-15	2.662E-12	4.953E-11	9.300E-17	-1.000E+00	1.330E-09	2.140E-09
LUNGS	4.710E-15	2.553E-12	4.750E-11	8.920E-17	-1.000E+00	3.300E-09	2.140E-09
RED MARR	4.640E-15	2.619E-12	4.873E-11	9.150E-17	-1.000E+00	2.320E-09	3.720E-09
BONE SUR	7.050E-15	3.635E-12	6.764E-11	1.270E-16	-1.000E+00	4.270E-09	6.860E-09
THYROID	4.840E-15	2.599E-12	4.836E-11	9.080E-17	-1.000E+00	1.330E-09	2.140E-09
REMAINDER	4.520E-15	2.542E-12	4.729E-11	8.880E-17	-1.000E+00	1.380E-09	2.330E-09
EFFECTIVE	4.810E-15	2.665E-12	4.958E-11	9.310E-17	-1.000E+00	1.790E-09	2.530E-09
SKIN(FGR)	4.850E-14	2.210E-10	4.111E-09	7.720E-15	-1.000E+00	0.000E+00	0.000E+00
Sr-89							
GONADS	7.730E-17	7.155E-14	1.436E-12	2.490E-18	-1.000E+00	4.160E-10	2.400E-10
BREAST	9.080E-17	7.212E-14	1.447E-12	2.510E-18	-1.000E+00	4.160E-10	2.400E-10
LUNGS	7.080E-17	5.689E-14	1.142E-12	1.980E-18	-1.000E+00	2.160E-09	2.400E-10
RED MARR	6.390E-17	5.345E-14	1.073E-12	1.860E-18	-1.000E+00	5.630E-09	3.230E-09
BONE SUR	1.940E-16	1.560E-13	3.131E-12	5.430E-18	-1.000E+00	8.370E-09	4.810E-09
THYROID	7.600E-17	6.063E-14	1.217E-12	2.110E-18	-1.000E+00	4.160E-10	2.400E-10
REMAINDER	6.710E-17	5.603E-14	1.124E-12	1.950E-18	-1.000E+00	1.320E-09	6.110E-09
EFFECTIVE	7.730E-17	6.523E-14	1.309E-12	2.270E-18	-1.000E+00	1.760E-09	2.500E-09
SKIN(FGR)	3.690E-14	1.914E-10	3.841E-09	6.660E-15	-1.000E+00	0.000E+00	0.000E+00
Sr-90							
GONADS	7.780E-18	9.590E-15	2.014E-13	3.330E-19	-1.000E+00	2.640E-09	1.510E-09
BREAST	9.490E-18	1.008E-14	2.116E-13	3.500E-19	-1.000E+00	2.640E-09	1.510E-09
LUNGS	6.440E-18	6.307E-15	1.324E-13	2.190E-19	-1.000E+00	3.730E-09	1.510E-09
RED MARR	5.440E-18	5.558E-15	1.167E-13	1.930E-19	-1.000E+00	3.360E-07	1.940E-07
BONE SUR	2.280E-17	2.393E-14	5.025E-13	8.310E-19	-1.000E+00	7.270E-07	4.190E-07
THYROID	7.330E-18	7.171E-15	1.506E-13	2.490E-19	-1.000E+00	2.640E-09	1.510E-09
REMAINDER	6.110E-18	6.422E-15	1.348E-13	2.230E-19	-1.000E+00	3.360E-09	6.140E-09
EFFECTIVE	7.530E-18	8.179E-15	1.717E-13	2.840E-19	-1.000E+00	6.470E-08	3.850E-08
SKIN(FGR)	9.200E-15	4.032E-12	8.465E-11	1.400E-16	-1.000E+00	0.000E+00	0.000E+00
Sr-91							
GONADS	4.819E-14	2.155E-11	5.062E-11	1.026E-15	-1.000E+00	6.429E-11	2.140E-10
BREAST	5.477E-14	2.059E-11	4.838E-11	9.806E-16	-1.000E+00	4.485E-11	5.086E-11
LUNGS	4.803E-14	1.970E-11	4.626E-11	9.376E-16	-1.000E+00	9.615E-10	3.124E-11
RED MARR	4.691E-14	2.011E-11	4.722E-11	9.570E-16	-1.000E+00	1.234E-10	1.093E-10
BONE SUR	7.674E-14	2.852E-11	6.709E-11	1.360E-15	-1.000E+00	1.144E-10	7.950E-11
THYROID	4.938E-14	2.035E-11	4.782E-11	9.693E-16	-1.000E+00	4.109E-11	2.417E-11
REMAINDER	4.610E-14	1.948E-11	4.573E-11	9.268E-16	-1.000E+00	3.352E-10	1.997E-09
EFFECTIVE	4.924E-14	2.057E-11	4.832E-11	9.793E-16	-1.000E+00	2.577E-10	6.805E-10
SKIN(FGR)	9.938E-14	1.748E-10	3.987E-10	8.080E-15	-1.000E+00	0.000E+00	0.000E+00
Sr-92							
GONADS	6.610E-14	1.593E-11	1.830E-11	1.300E-15	-1.000E+00	3.030E-11	8.010E-11
BREAST	7.480E-14	1.520E-11	1.745E-11	1.240E-15	-1.000E+00	2.440E-11	2.690E-11
LUNGS	6.670E-14	1.483E-11	1.703E-11	1.210E-15	-1.000E+00	7.120E-10	1.890E-11
RED MARR	6.620E-14	1.520E-11	1.745E-11	1.240E-15	-1.000E+00	3.680E-11	3.870E-11
BONE SUR	9.490E-14	2.010E-11	2.308E-11	1.640E-15	-1.000E+00	2.560E-11	2.130E-11
THYROID	6.820E-14	1.446E-11	1.661E-11	1.180E-15	-1.000E+00	2.190E-11	1.350E-11
REMAINDER	6.450E-14	1.471E-11	1.689E-11	1.200E-15	-1.000E+00	2.250E-10	1.370E-09
EFFECTIVE	6.790E-14	1.532E-11	1.759E-11	1.250E-15	-1.000E+00	1.700E-10	4.430E-10
SKIN(FGR)	8.560E-14	2.280E-11	2.618E-11	1.860E-15	-1.000E+00	0.000E+00	0.000E+00
Y-90							
GONADS	1.890E-16	1.586E-13	1.601E-12	5.750E-18	-1.000E+00	5.170E-13	1.430E-14
BREAST	2.200E-16	1.578E-13	1.593E-12	5.720E-18	-1.000E+00	5.170E-13	1.270E-14
LUNGS	1.770E-16	1.313E-13	1.326E-12	4.760E-18	-1.000E+00	9.310E-09	1.260E-14

RED MARR	1.620E-16	1.261E-13	1.273E-12	4.570E-18-1.000E+00	1.520E-11	3.700E-13
BONE SUR	4.440E-16	3.228E-13	3.259E-12	1.170E-17-1.000E+00	1.510E-11	3.670E-13
THYROID	1.870E-16	1.385E-13	1.398E-12	5.020E-18-1.000E+00	5.170E-13	1.260E-14
REMAINDER	1.680E-16	1.291E-13	1.303E-12	4.680E-18-1.000E+00	3.870E-09	9.680E-09
EFFECTIVE	1.900E-16	1.468E-13	1.482E-12	5.320E-18-1.000E+00	2.280E-09	2.910E-09
SKIN(FGR)	6.240E-14	2.897E-10	2.924E-09	1.050E-14-1.000E+00	0.000E+00	0.000E+00
Y-91						
GONADS	2.560E-16	1.756E-13	3.546E-12	6.110E-18-1.000E+00	8.200E-12	3.540E-12
BREAST	2.930E-16	1.713E-13	3.459E-12	5.960E-18-1.000E+00	8.920E-12	5.540E-13
LUNGS	2.500E-16	1.526E-13	3.082E-12	5.310E-18-1.000E+00	9.870E-08	2.020E-13
RED MARR	2.410E-16	1.521E-13	3.070E-12	5.290E-18-1.000E+00	3.190E-10	6.590E-12
BONE SUR	4.560E-16	2.903E-13	5.862E-12	1.010E-17-1.000E+00	3.180E-10	6.130E-12
THYROID	2.600E-16	1.564E-13	3.157E-12	5.440E-18-1.000E+00	8.500E-12	1.290E-13
REMAINDER	2.390E-16	1.509E-13	3.047E-12	5.250E-18-1.000E+00	4.200E-09	8.570E-09
EFFECTIVE	2.600E-16	1.650E-13	3.332E-12	5.740E-18-1.000E+00	1.320E-08	2.570E-09
SKIN(FGR)	3.850E-14	1.989E-10	4.016E-09	6.920E-15-1.000E+00	0.000E+00	0.000E+00
Y-92						
GONADS	1.270E-14	3.855E-12	4.872E-12	2.650E-16-1.000E+00	2.610E-12	1.960E-11
BREAST	1.440E-14	3.680E-12	4.652E-12	2.530E-16-1.000E+00	1.500E-12	3.550E-12
LUNGS	1.270E-14	3.535E-12	4.468E-12	2.430E-16-1.000E+00	1.240E-09	1.390E-12
RED MARR	1.250E-14	3.608E-12	4.560E-12	2.480E-16-1.000E+00	2.070E-12	4.910E-12
BONE SUR	1.950E-14	5.091E-12	6.435E-12	3.500E-16-1.000E+00	1.510E-12	1.750E-12
THYROID	1.300E-14	3.579E-12	4.523E-12	2.460E-16-1.000E+00	1.050E-12	1.770E-13
REMAINDER	1.220E-14	3.506E-12	4.431E-12	2.410E-16-1.000E+00	2.030E-10	1.700E-09
EFFECTIVE	1.300E-14	3.680E-12	4.652E-12	2.530E-16-1.000E+00	2.110E-10	5.150E-10
SKIN(FGR)	1.140E-13	2.022E-10	2.556E-10	1.390E-14-1.000E+00	0.000E+00	0.000E+00
Y-93						
GONADS	4.670E-15	2.108E-12	4.989E-12	9.510E-17-1.000E+00	5.310E-12	2.200E-11
BREAST	5.300E-15	2.026E-12	4.794E-12	9.140E-17-1.000E+00	1.740E-12	3.130E-12
LUNGS	4.680E-15	1.937E-12	4.585E-12	8.740E-17-1.000E+00	2.520E-09	8.670E-13
RED MARR	4.580E-15	1.972E-12	4.669E-12	8.900E-17-1.000E+00	4.040E-12	4.930E-12
BONE SUR	7.580E-15	2.948E-12	6.977E-12	1.330E-16-1.000E+00	3.140E-12	1.730E-12
THYROID	4.790E-15	1.908E-12	4.516E-12	8.610E-17-1.000E+00	9.260E-13	1.260E-13
REMAINDER	4.510E-15	1.919E-12	4.543E-12	8.660E-17-1.000E+00	9.250E-10	4.090E-09
EFFECTIVE	4.800E-15	2.021E-12	4.784E-12	9.120E-17-1.000E+00	5.820E-10	1.230E-09
SKIN(FGR)	8.500E-14	2.726E-10	6.452E-10	1.230E-14-1.000E+00	0.000E+00	0.000E+00
Zr-95						
GONADS	3.530E-14	2.182E-11	4.421E-10	7.590E-16-1.000E+00	8.400E-10	8.160E-10
BREAST	4.010E-14	2.084E-11	4.223E-10	7.250E-16-1.000E+00	9.320E-10	1.050E-10
LUNGS	3.510E-14	1.989E-11	4.030E-10	6.920E-16-1.000E+00	1.860E-08	2.340E-11
RED MARR	3.430E-14	2.030E-11	4.112E-10	7.060E-16-1.000E+00	3.240E-09	2.140E-10
BONE SUR	5.620E-14	2.875E-11	5.824E-10	1.000E-15-1.000E+00	2.170E-08	4.860E-10
THYROID	3.610E-14	2.076E-11	4.205E-10	7.220E-16-1.000E+00	7.820E-10	8.270E-12
REMAINDER	3.360E-14	1.963E-11	3.978E-10	6.830E-16-1.000E+00	2.130E-09	2.530E-09
EFFECTIVE	3.600E-14	2.078E-11	4.211E-10	7.230E-16-1.000E+00	4.290E-09	1.020E-09
SKIN(FGR)	4.500E-14	2.561E-11	5.190E-10	8.910E-16-1.000E+00	0.000E+00	0.000E+00
Zr-97						
GONADS	4.331E-14	2.179E-11	7.799E-11	9.253E-16-1.000E+00	1.700E-10	6.228E-10
BREAST	4.928E-14	2.083E-11	7.455E-11	8.846E-16-1.000E+00	5.796E-11	8.137E-11
LUNGS	4.322E-14	1.992E-11	7.127E-11	8.456E-16-1.000E+00	3.958E-09	1.770E-11
RED MARR	4.224E-14	2.034E-11	7.279E-11	8.634E-16-1.000E+00	1.431E-10	1.302E-10
BONE SUR	6.897E-14	2.881E-11	1.031E-10	1.224E-15-1.000E+00	1.230E-10	4.558E-11
THYROID	4.443E-14	2.061E-11	7.377E-11	8.755E-16-1.000E+00	3.755E-11	2.671E-12
REMAINDER	4.139E-14	1.966E-11	7.035E-11	8.345E-16-1.000E+00	1.721E-09	6.990E-09
EFFECTIVE	4.432E-14	2.078E-11	7.438E-11	8.824E-16-1.000E+00	1.061E-09	2.283E-09
SKIN(FGR)	9.835E-14	2.281E-10	8.148E-10	9.587E-15-1.000E+00	0.000E+00	0.000E+00
Nb-95						
GONADS	3.660E-14	2.253E-11	4.435E-10	7.850E-16-1.000E+00	4.320E-10	8.050E-10
BREAST	4.160E-14	2.150E-11	4.231E-10	7.490E-16-1.000E+00	4.070E-10	1.070E-10
LUNGS	3.650E-14	2.055E-11	4.045E-10	7.160E-16-1.000E+00	8.320E-09	2.740E-11
RED MARR	3.560E-14	2.101E-11	4.135E-10	7.320E-16-1.000E+00	4.420E-10	1.990E-10
BONE SUR	5.790E-14	2.957E-11	5.819E-10	1.030E-15-1.000E+00	5.130E-10	2.940E-10
THYROID	3.750E-14	2.144E-11	4.220E-10	7.470E-16-1.000E+00	3.580E-10	1.180E-11

REMAINDER	3.490E-14	2.032E-11	4.000E-10	7.080E-16-1.000E+00	1.070E-09	1.470E-09
EFFECTIVE	3.740E-14	2.147E-11	4.226E-10	7.480E-16-1.000E+00	1.570E-09	6.950E-10
SKIN(FGR)	4.300E-14	2.598E-11	5.112E-10	9.050E-16-1.000E+00	0.000E+00	0.000E+00
Mo-99						
GONADS	7.130E-15	4.282E-12	4.403E-11	1.550E-16-1.000E+00	9.510E-11	2.180E-10
BREAST	8.130E-15	4.116E-12	4.233E-11	1.490E-16-1.000E+00	2.750E-11	3.430E-11
LUNGS	7.060E-15	3.867E-12	3.977E-11	1.400E-16-1.000E+00	4.290E-09	1.510E-11
RED MARR	6.820E-15	3.923E-12	4.034E-11	1.420E-16-1.000E+00	5.240E-11	8.320E-11
BONE SUR	1.240E-14	6.105E-12	6.278E-11	2.210E-16-1.000E+00	4.130E-11	6.320E-11
THYROID	7.270E-15	4.033E-12	4.147E-11	1.460E-16-1.000E+00	1.520E-11	1.030E-11
REMAINDER	6.740E-15	3.812E-12	3.920E-11	1.380E-16-1.000E+00	1.740E-09	4.280E-09
EFFECTIVE	7.280E-15	4.061E-12	4.176E-11	1.470E-16-1.000E+00	1.070E-09	1.360E-09
SKIN(FGR)	3.140E-14	1.039E-10	1.068E-09	3.760E-15-1.000E+00	0.000E+00	0.000E+00
Tc-99m						
GONADS	5.750E-15	2.334E-12	3.877E-12	1.240E-16-1.000E+00	1.700E-12	9.750E-12
BREAST	6.650E-15	2.258E-12	3.752E-12	1.200E-16-1.000E+00	1.520E-12	3.570E-12
LUNGS	5.490E-15	2.127E-12	3.533E-12	1.130E-16-1.000E+00	3.070E-11	3.140E-12
RED MARR	4.910E-15	2.070E-12	3.439E-12	1.100E-16-1.000E+00	2.390E-12	6.290E-12
BONE SUR	1.630E-14	5.383E-12	8.942E-12	2.860E-16-1.000E+00	1.780E-12	4.060E-12
THYROID	5.750E-15	2.145E-12	3.564E-12	1.140E-16-1.000E+00	2.090E-11	8.460E-11
REMAINDER	5.150E-15	2.070E-12	3.439E-12	1.100E-16-1.000E+00	6.340E-12	3.340E-11
EFFECTIVE	5.890E-15	2.277E-12	3.783E-12	1.210E-16-1.000E+00	7.210E-12	1.680E-11
SKIN(FGR)	7.140E-15	2.710E-12	4.502E-12	1.440E-16-1.000E+00	0.000E+00	0.000E+00
Ru-103						
GONADS	2.191E-14	1.404E-11	2.783E-10	4.892E-16-1.000E+00	3.070E-10	5.720E-10
BREAST	2.512E-14	1.350E-11	2.677E-10	4.705E-16-1.000E+00	3.110E-10	1.200E-10
LUNGS	2.180E-14	1.273E-11	2.522E-10	4.432E-16-1.000E+00	1.561E-08	7.310E-11
RED MARR	2.100E-14	1.287E-11	2.551E-10	4.483E-16-1.000E+00	3.190E-10	1.660E-10
BONE SUR	3.892E-14	1.958E-11	3.882E-10	6.823E-16-1.000E+00	2.370E-10	9.631E-11
THYROID	2.241E-14	1.331E-11	2.639E-10	4.638E-16-1.000E+00	2.570E-10	6.250E-11
REMAINDER	2.080E-14	1.248E-11	2.472E-10	4.346E-16-1.000E+00	1.250E-09	2.110E-09
EFFECTIVE	2.251E-14	1.332E-11	2.641E-10	4.642E-16-1.000E+00	2.421E-09	8.271E-10
SKIN(FGR)	2.774E-14	1.785E-11	3.543E-10	6.229E-16-1.000E+00	0.000E+00	0.000E+00
Ru-105						
GONADS	3.720E-14	1.327E-11	1.861E-11	8.070E-16-1.000E+00	1.590E-11	9.670E-11
BREAST	4.240E-14	1.271E-11	1.783E-11	7.730E-16-1.000E+00	6.610E-12	1.590E-11
LUNGS	3.700E-14	1.210E-11	1.697E-11	7.360E-16-1.000E+00	5.730E-10	6.210E-12
RED MARR	3.590E-14	1.230E-11	1.725E-11	7.480E-16-1.000E+00	7.700E-12	2.350E-11
BONE SUR	6.280E-14	1.809E-11	2.537E-11	1.100E-15-1.000E+00	4.620E-12	8.890E-12
THYROID	3.800E-14	1.260E-11	1.766E-11	7.660E-16-1.000E+00	4.150E-12	1.820E-12
REMAINDER	3.540E-14	1.189E-11	1.667E-11	7.230E-16-1.000E+00	1.610E-10	8.540E-10
EFFECTIVE	3.810E-14	1.265E-11	1.773E-11	7.690E-16-1.000E+00	1.230E-10	2.870E-10
SKIN(FGR)	6.730E-14	7.368E-11	1.033E-10	4.480E-15-1.000E+00	0.000E+00	0.000E+00
Ru-106						
GONADS	1.010E-14	6.411E-12	1.340E-10	2.230E-16-1.000E+00	1.300E-09	1.640E-09
BREAST	1.160E-14	6.152E-12	1.286E-10	2.140E-16-1.000E+00	1.780E-09	1.440E-09
LUNGS	1.010E-14	5.836E-12	1.220E-10	2.030E-16-1.000E+00	1.040E-06	1.420E-09
RED MARR	9.750E-15	5.893E-12	1.232E-10	2.050E-16-1.000E+00	1.760E-09	1.460E-09
BONE SUR	1.720E-14	8.883E-12	1.856E-10	3.090E-16-1.000E+00	1.610E-09	1.430E-09
THYROID	1.030E-14	6.066E-12	1.268E-10	2.110E-16-1.000E+00	1.720E-09	1.410E-09
REMAINDER	9.630E-15	5.721E-12	1.196E-10	1.990E-16-1.000E+00	1.200E-08	2.110E-08
EFFECTIVE	1.040E-14	6.095E-12	1.274E-10	2.120E-16-1.000E+00	1.290E-07	7.400E-09
SKIN(FGR)	1.090E-13	4.082E-10	8.531E-09	1.420E-14-1.000E+00	0.000E+00	0.000E+00
Rh-105						
GONADS	3.640E-15	2.127E-12	1.411E-11	7.980E-17-1.000E+00	2.110E-11	5.800E-11
BREAST	4.160E-15	2.063E-12	1.369E-11	7.740E-17-1.000E+00	5.610E-12	8.970E-12
LUNGS	3.570E-15	1.935E-12	1.284E-11	7.260E-17-1.000E+00	9.580E-10	3.860E-12
RED MARR	3.380E-15	1.946E-12	1.291E-11	7.300E-17-1.000E+00	7.770E-12	1.470E-11
BONE SUR	7.530E-15	3.332E-12	2.210E-11	1.250E-16-1.000E+00	4.460E-12	6.750E-12
THYROID	3.680E-15	1.983E-12	1.316E-11	7.440E-17-1.000E+00	2.880E-12	2.910E-12
REMAINDER	3.390E-15	1.885E-12	1.250E-11	7.070E-17-1.000E+00	4.530E-10	1.270E-09
EFFECTIVE	3.720E-15	2.031E-12	1.347E-11	7.620E-17-1.000E+00	2.580E-10	3.990E-10
SKIN(FGR)	1.070E-14	4.691E-12	3.112E-11	1.760E-16-1.000E+00	0.000E+00	0.000E+00

Sb-127						
GONADS	3.260E-14	1.985E-11	2.441E-10	7.100E-16-1.000E+00	2.520E-10	6.140E-10
BREAST	3.720E-14	1.904E-11	2.341E-10	6.810E-16-1.000E+00	9.120E-11	7.600E-11
LUNGS	3.240E-14	1.809E-11	2.224E-10	6.470E-16-1.000E+00	6.940E-09	1.570E-11
RED MARR	3.140E-14	1.834E-11	2.255E-10	6.560E-16-1.000E+00	1.610E-10	1.330E-10
BONE SUR	5.520E-14	2.720E-11	3.345E-10	9.730E-16-1.000E+00	1.340E-10	5.240E-11
THYROID	3.330E-14	1.884E-11	2.317E-10	6.740E-16-1.000E+00	6.150E-11	4.640E-12
REMAINDER	3.090E-14	1.775E-11	2.183E-10	6.350E-16-1.000E+00	2.330E-09	5.870E-09
EFFECTIVE	3.330E-14	1.890E-11	2.324E-10	6.760E-16-1.000E+00	1.630E-09	1.950E-09
SKIN(FGR)	5.580E-14	7.967E-11	9.799E-10	2.850E-15-1.000E+00	0.000E+00	0.000E+00
Sb-129						
GONADS	6.970E-14	2.336E-11	3.231E-11	1.440E-15-1.000E+00	2.150E-11	1.510E-10
BREAST	7.910E-14	2.222E-11	3.074E-11	1.370E-15-1.000E+00	1.280E-11	2.560E-11
LUNGS	6.980E-14	2.141E-11	2.962E-11	1.320E-15-1.000E+00	8.980E-10	9.390E-12
RED MARR	6.860E-14	2.190E-11	3.029E-11	1.350E-15-1.000E+00	1.700E-11	3.670E-11
BONE SUR	1.070E-13	3.033E-11	4.196E-11	1.870E-15-1.000E+00	1.460E-11	1.340E-11
THYROID	7.160E-14	2.174E-11	3.007E-11	1.340E-15-1.000E+00	9.720E-12	1.470E-12
REMAINDER	6.710E-14	2.125E-11	2.939E-11	1.310E-15-1.000E+00	1.870E-10	1.450E-09
EFFECTIVE	7.140E-14	2.238E-11	3.096E-11	1.380E-15-1.000E+00	1.740E-10	4.840E-10
SKIN(FGR)	1.050E-13	8.273E-11	1.144E-10	5.100E-15-1.000E+00	0.000E+00	0.000E+00
Te-127						
GONADS	2.370E-16	1.191E-13	2.661E-13	5.480E-18-1.000E+00	2.020E-12	4.020E-12
BREAST	2.730E-16	1.158E-13	2.588E-13	5.330E-18-1.000E+00	1.880E-12	3.000E-12
LUNGS	2.320E-16	1.060E-13	2.370E-13	4.880E-18-1.000E+00	4.270E-10	2.890E-12
RED MARR	2.210E-16	1.058E-13	2.365E-13	4.870E-18-1.000E+00	4.090E-12	6.570E-12
BONE SUR	4.650E-16	1.862E-13	4.162E-13	8.570E-18-1.000E+00	4.090E-12	6.460E-12
THYROID	2.400E-16	1.106E-13	2.472E-13	5.090E-18-1.000E+00	1.840E-12	2.860E-12
REMAINDER	2.210E-16	1.036E-13	2.316E-13	4.770E-18-1.000E+00	1.110E-10	6.130E-10
EFFECTIVE	2.420E-16	1.125E-13	2.515E-13	5.180E-18-1.000E+00	8.600E-11	1.870E-10
SKIN(FGR)	1.140E-14	1.173E-11	2.622E-11	5.400E-16-1.000E+00	0.000E+00	0.000E-00
Te-127m						
GONADS	1.900E-16	4.689E-13	9.642E-12	1.630E-17-1.000E+00	1.100E-10	1.250E-10
BREAST	2.690E-16	5.150E-13	1.059E-11	1.790E-17-1.000E+00	1.100E-10	9.740E-11
LUNGS	7.620E-17	1.602E-13	3.295E-12	5.570E-18-1.000E+00	3.340E-08	9.620E-11
RED MARR	6.430E-17	1.249E-13	2.567E-12	4.340E-18-1.000E+00	5.360E-09	5.430E-09
BONE SUR	3.940E-16	9.005E-13	1.852E-11	3.130E-17-1.000E+00	2.040E-08	2.070E-08
THYROID	1.500E-16	2.779E-13	5.714E-12	9.660E-18-1.000E+00	9.660E-11	9.430E-11
REMAINDER	8.640E-17	1.999E-13	4.111E-12	6.950E-18-1.000E+00	1.660E-09	2.980E-09
EFFECTIVE	1.470E-16	3.251E-13	6.684E-12	1.130E-17-1.000E+00	5.810E-09	2.230E-09
SKIN(FGR)	8.490E-16	1.496E-12	3.076E-11	5.200E-17-1.000E+00	0.000E+00	0.000E+00
Te-129						
GONADS	2.710E-15	3.889E-13	3.922E-13	6.510E-17-1.000E+00	5.050E-13	1.590E-12
BREAST	3.120E-15	3.800E-13	3.832E-13	6.360E-17-1.000E+00	5.390E-13	6.050E-13
LUNGS	2.640E-15	3.298E-13	3.326E-13	5.520E-17-1.000E+00	1.530E-10	4.910E-13
RED MARR	2.540E-15	3.298E-13	3.326E-13	5.520E-17-1.000E+00	6.190E-13	7.640E-13
BONE SUR	4.880E-15	5.753E-13	5.802E-13	9.630E-17-1.000E+00	6.220E-13	5.400E-13
THYROID	2.740E-15	3.525E-13	3.555E-13	5.900E-17-1.000E+00	5.090E-13	3.360E-13
REMAINDER	2.520E-15	3.262E-13	3.289E-13	5.460E-17-1.000E+00	7.280E-12	1.790E-10
EFFECTIVE	2.750E-15	3.590E-13	3.621E-13	6.010E-17-1.000E+00	2.090E-11	5.450E-11
SKIN(FGR)	3.570E-14	3.429E-11	3.458E-11	5.740E-15-1.000E+00	0.000E+00	0.000E+00
Te-129m						
GONADS	3.321E-15	2.206E-12	4.799E-11	8.561E-17-1.000E+00	1.783E-10	2.420E-10
BREAST	3.838E-15	2.181E-12	4.739E-11	8.454E-17-1.000E+00	1.694E-10	1.664E-10
LUNGS	3.176E-15	1.741E-12	3.815E-11	6.808E-17-1.000E+00	4.040E-08	1.593E-10
RED MARR	3.071E-15	1.729E-12	3.793E-11	6.768E-17-1.000E+00	3.100E-09	3.500E-09
BONE SUR	5.772E-15	3.287E-12	7.147E-11	1.275E-16-1.000E+00	7.050E-09	7.990E-09
THYROID	3.341E-15	1.923E-12	4.201E-11	7.495E-17-1.000E+00	1.563E-10	1.572E-10
REMAINDER	3.048E-15	1.746E-12	3.822E-11	6.819E-17-1.000E+00	3.275E-09	7.196E-09
EFFECTIVE	3.337E-15	1.974E-12	4.308E-11	7.686E-17-1.000E+00	6.484E-09	2.925E-09
SKIN(FGR)	3.811E-14	1.501E-10	3.360E-09	6.001E-15-1.000E+00	0.000E+00	0.000E+00
Te-131m						
GONADS	7.292E-14	4.020E-11	2.343E-10	1.535E-15-1.000E+00	2.345E-10	7.415E-10
BREAST	8.286E-14	3.853E-11	2.246E-10	1.472E-15-1.000E+00	9.309E-11	1.361E-10

LUNGS	7.265E-14	3.657E-11	2.131E-10	1.397E-15-1.000E+00	2.296E-09	6.335E-11
RED MARR	7.097E-14	3.736E-11	2.178E-10	1.427E-15-1.000E+00	1.417E-10	2.435E-10
BONE SUR	1.174E-13	5.467E-11	3.189E-10	2.090E-15-1.000E+00	2.276E-10	3.248E-10
THYROID	7.471E-14	3.741E-11	2.181E-10	1.429E-15-1.000E+00	3.669E-08	4.383E-08
REMAINDER	6.965E-14	3.626E-11	2.113E-10	1.385E-15-1.000E+00	9.509E-10	3.153E-09
EFFECTIVE	7.463E-14	3.825E-11	2.229E-10	1.461E-15-1.000E+00	1.758E-09	2.514E-09
SKIN(FGR)	1.038E-13	1.033E-10	6.188E-10	4.056E-15-1.000E+00	0.000E+00	0.000E+00
Te-132						
GONADS	1.020E-14	6.812E-12	7.706E-11	2.450E-16-1.000E+00	4.150E-10	5.410E-10
BREAST	1.180E-14	6.756E-12	7.643E-11	2.430E-16-1.000E+00	3.630E-10	3.500E-10
LUNGS	9.650E-15	5.727E-12	6.479E-11	2.060E-16-1.000E+00	1.670E-09	3.300E-10
RED MARR	8.950E-15	5.588E-12	6.322E-11	2.010E-16-1.000E+00	4.270E-10	4.440E-10
BONE SUR	2.420E-14	1.273E-11	1.441E-10	4.580E-16-1.000E+00	7.120E-10	8.300E-10
THYROID	1.020E-14	5.978E-12	6.762E-11	2.150E-16-1.000E+00	6.280E-08	5.950E-08
REMAINDER	9.160E-15	5.644E-12	6.385E-11	2.030E-16-1.000E+00	7.890E-10	1.490E-09
EFFECTIVE	1.030E-14	6.339E-12	7.171E-11	2.280E-16-1.000E+00	2.550E-09	2.540E-09
SKIN(FGR)	1.390E-14	8.313E-12	9.405E-11	2.990E-16-1.000E+00	0.000E+00	0.000E+00
I-131						
GONADS	1.780E-14	1.119E-11	1.789E-10	3.940E-16-1.000E+00	2.530E-11	4.070E-11
BREAST	2.040E-14	1.082E-11	1.730E-10	3.810E-16-1.000E+00	7.880E-11	1.210E-10
LUNGS	1.760E-14	1.016E-11	1.626E-10	3.580E-16-1.000E+00	6.570E-10	1.020E-10
RED MARR	1.680E-14	1.022E-11	1.635E-10	3.600E-16-1.000E+00	6.260E-11	9.440E-11
BONE SUR	3.450E-14	1.675E-11	2.679E-10	5.900E-16-1.000E+00	5.730E-11	8.720E-11
THYROID	1.810E-14	1.053E-11	1.685E-10	3.710E-16-1.000E+00	2.920E-07	4.760E-07
REMAINDER	1.670E-14	9.908E-12	1.585E-10	3.490E-16-1.000E+00	8.030E-11	1.570E-10
EFFECTIVE	1.820E-14	1.067E-11	1.707E-10	3.760E-16-1.000E+00	8.890E-09	1.440E-08
SKIN(FGR)	2.980E-14	1.825E-11	2.920E-10	6.430E-16-1.000E+00	0.000E+00	0.000E+00
I-132						
GONADS	1.090E-13	2.523E-11	2.771E-11	2.320E-15-1.000E+00	9.950E-12	2.330E-11
BREAST	1.240E-13	2.414E-11	2.652E-11	2.220E-15-1.000E+00	1.410E-11	2.520E-11
LUNGS	1.090E-13	2.305E-11	2.532E-11	2.120E-15-1.000E+00	2.710E-10	2.640E-11
RED MARR	1.070E-13	2.360E-11	2.592E-11	2.170E-15-1.000E+00	1.400E-11	2.460E-11
BONE SUR	1.730E-13	3.327E-11	3.655E-11	3.060E-15-1.000E+00	1.240E-11	2.190E-11
THYROID	1.120E-13	2.381E-11	2.616E-11	2.190E-15-1.000E+00	1.740E-09	3.870E-09
REMAINDER	1.050E-13	2.283E-11	2.509E-11	2.100E-15-1.000E+00	3.780E-11	1.650E-10
EFFECTIVE	1.120E-13	2.403E-11	2.640E-11	2.210E-15-1.000E+00	1.030E-10	1.820E-10
SKIN(FGR)	1.580E-13	8.199E-11	9.007E-11	7.540E-15-1.000E+00	0.000E+00	0.000E+00
I-133						
GONADS	2.870E-14	1.585E-11	6.748E-11	6.270E-16-1.000E+00	1.950E-11	3.630E-11
BREAST	3.280E-14	1.519E-11	6.468E-11	6.010E-16-1.000E+00	2.940E-11	4.680E-11
LUNGS	2.860E-14	1.446E-11	6.156E-11	5.720E-16-1.000E+00	8.200E-10	4.530E-11
RED MARR	2.770E-14	1.466E-11	6.242E-11	5.800E-16-1.000E+00	2.720E-11	4.300E-11
BONE SUR	4.870E-14	2.161E-11	9.202E-11	8.550E-16-1.000E+00	2.520E-11	4.070E-11
THYROID	2.930E-14	1.502E-11	6.393E-11	5.940E-16-1.000E+00	4.860E-08	9.100E-08
REMAINDER	2.730E-14	1.418E-11	6.038E-11	5.610E-16-1.000E+00	5.000E-11	1.550E-10
EFFECTIVE	2.940E-14	1.509E-11	6.425E-11	5.970E-16-1.000E+00	1.580E-09	2.800E-09
SKIN(FGR)	5.830E-14	1.150E-10	4.897E-10	4.550E-15-1.000E+00	0.000E+00	0.000E+00
I-134						
GONADS	1.270E-13	1.200E-11	1.202E-11	2.640E-15-1.000E+00	4.250E-12	1.100E-11
BREAST	1.440E-13	1.145E-11	1.147E-11	2.520E-15-1.000E+00	6.170E-12	1.170E-11
LUNGS	1.270E-13	1.100E-11	1.102E-11	2.420E-15-1.000E+00	1.430E-10	1.260E-11
RED MARR	1.250E-13	1.127E-11	1.129E-11	2.480E-15-1.000E+00	6.080E-12	1.090E-11
BONE SUR	1.960E-13	1.568E-11	1.571E-11	3.450E-15-1.000E+00	5.310E-12	9.320E-12
THYROID	1.300E-13	1.127E-11	1.129E-11	2.480E-15-1.000E+00	2.880E-10	6.210E-10
REMAINDER	1.220E-13	1.091E-11	1.093E-11	2.400E-15-1.000E+00	2.270E-11	1.340E-10
EFFECTIVE	1.300E-13	1.150E-11	1.152E-11	2.530E-15-1.000E+00	3.550E-11	6.660E-11
SKIN(FGR)	1.870E-13	4.477E-11	4.485E-11	9.850E-15-1.000E+00	0.000E+00	0.000E+00
I-135						
GONADS	8.078E-14	3.113E-11	5.489E-11	1.599E-15-1.000E+00	1.700E-11	3.610E-11
BREAST	9.143E-14	2.971E-11	5.240E-11	1.526E-15-1.000E+00	2.340E-11	3.850E-11
LUNGS	8.145E-14	2.886E-11	5.089E-11	1.482E-15-1.000E+00	4.410E-10	3.750E-11
RED MARR	8.054E-14	2.965E-11	5.228E-11	1.523E-15-1.000E+00	2.240E-11	3.650E-11
BONE SUR	1.184E-13	3.983E-11	7.024E-11	2.046E-15-1.000E+00	2.010E-11	3.360E-11

THYROID	8.324E-14	2.852E-11	5.030E-11	1.465E-15-1.000E+00	8.460E-09	1.790E-08
REMAINDER	7.861E-14	2.883E-11	5.084E-11	1.481E-15-1.000E+00	4.700E-11	1.540E-10
EFFECTIVE	8.294E-14	2.989E-11	5.271E-11	1.535E-15-1.000E+00	3.320E-10	6.080E-10
SKIN(FGR)	1.156E-13	9.826E-11	1.733E-10	5.047E-15-1.000E+00	0.000E+00	0.000E+00
Xe-133						
GONADS	1.610E-15	1.465E-12	2.052E-11	5.200E-17-1.000E+00	0.000E+00	0.000E+00
BREAST	1.960E-15	1.505E-12	2.107E-11	5.340E-17-1.000E+00	0.000E+00	0.000E+00
LUNGS	1.320E-15	1.045E-12	1.464E-11	3.710E-17-1.000E+00	0.000E+00	0.000E+00
RED MARR	1.070E-15	8.791E-13	1.231E-11	3.120E-17-1.000E+00	0.000E+00	0.000E+00
BONE SUR	5.130E-15	4.254E-12	5.958E-11	1.510E-16-1.000E+00	0.000E+00	0.000E+00
THYROID	1.510E-15	1.181E-12	1.653E-11	4.190E-17-1.000E+00	0.000E+00	0.000E+00
REMAINDER	1.240E-15	1.042E-12	1.460E-11	3.700E-17-1.000E+00	0.000E+00	0.000E+00
EFFECTIVE	1.560E-15	1.299E-12	1.819E-11	4.610E-17-1.000E+00	0.000E+00	0.000E+00
SKIN(FGR)	4.970E-15	1.953E-12	2.734E-11	6.930E-17-1.000E+00	0.000E+00	0.000E+00
Xe-135						
GONADS	1.170E-14	5.455E-12	1.194E-11	2.530E-16-1.000E+00	0.000E+00	0.000E+00
BREAST	1.330E-14	5.325E-12	1.166E-11	2.470E-16-1.000E+00	0.000E+00	0.000E+00
LUNGS	1.130E-14	4.959E-12	1.086E-11	2.300E-16-1.000E+00	0.000E+00	0.000E+00
RED MARR	1.070E-14	4.959E-12	1.086E-11	2.300E-16-1.000E+00	0.000E+00	0.000E+00
BONE SUR	2.570E-14	9.120E-12	1.997E-11	4.230E-16-1.000E+00	0.000E+00	0.000E+00
THYROID	1.180E-14	5.023E-12	1.100E-11	2.330E-16-1.000E+00	0.000E+00	0.000E+00
REMAINDER	1.080E-14	4.829E-12	1.058E-11	2.240E-16-1.000E+00	0.000E+00	0.000E+00
EFFECTIVE	1.190E-14	5.217E-12	1.142E-11	2.420E-16-1.000E+00	0.000E+00	0.000E+00
SKIN(FGR)	3.120E-14	4.506E-11	9.867E-11	2.090E-15-1.000E+00	0.000E+00	0.000E+00
Cs-134						
GONADS	7.400E-14	4.607E-11	9.646E-10	1.600E-15-1.000E+00	1.300E-08	2.060E-08
BREAST	8.430E-14	4.406E-11	9.224E-10	1.530E-15-1.000E+00	1.080E-08	1.720E-08
LUNGS	7.370E-14	4.204E-11	8.802E-10	1.460E-15-1.000E+00	1.180E-08	1.760E-08
RED MARR	7.190E-14	4.262E-11	8.922E-10	1.480E-15-1.000E+00	1.180E-08	1.870E-08
BONE SUR	1.200E-13	6.105E-11	1.278E-09	2.120E-15-1.000E+00	1.100E-08	1.740E-08
THYROID	7.570E-14	4.377E-11	9.163E-10	1.520E-15-1.000E+00	1.110E-08	1.760E-08
REMAINDER	7.060E-14	4.147E-11	8.681E-10	1.440E-15-1.000E+00	1.390E-08	2.210E-08
EFFECTIVE	7.570E-14	4.377E-11	9.163E-10	1.520E-15-1.000E+00	1.250E-08	1.980E-08
SKIN(FGR)	9.450E-14	6.249E-11	1.308E-09	2.170E-15-1.000E+00	0.000E+00	0.000E+00
Cs-136						
GONADS	1.040E-13	6.223E-11	1.102E-09	2.180E-15-1.000E+00	1.880E-09	3.040E-09
BREAST	1.180E-13	5.966E-11	1.056E-09	2.090E-15-1.000E+00	1.670E-09	2.650E-09
LUNGS	1.040E-13	5.710E-11	1.011E-09	2.000E-15-1.000E+00	2.320E-09	2.620E-09
RED MARR	1.010E-13	5.824E-11	1.031E-09	2.040E-15-1.000E+00	1.860E-09	2.950E-09
BONE SUR	1.660E-13	8.422E-11	1.491E-09	2.950E-15-1.000E+00	1.700E-09	2.710E-09
THYROID	1.070E-13	5.852E-11	1.036E-09	2.050E-15-1.000E+00	1.730E-09	2.740E-09
REMAINDER	9.950E-14	5.652E-11	1.001E-09	1.980E-15-1.000E+00	2.190E-09	3.520E-09
EFFECTIVE	1.060E-13	5.966E-11	1.056E-09	2.090E-15-1.000E+00	1.980E-09	3.040E-09
SKIN(FGR)	1.250E-13	7.251E-11	1.284E-09	2.540E-15-1.000E+00	0.000E+00	0.000E-00
Cs-137						
GONADS	2.669E-14	1.669E-11	3.530E-10	5.840E-16-1.000E+00	8.760E-09	1.390E-08
BREAST	3.047E-14	1.596E-11	3.376E-10	5.585E-16-1.000E+00	7.840E-09	1.240E-08
LUNGS	2.649E-14	1.517E-11	3.209E-10	5.309E-16-1.000E+00	8.820E-09	1.270E-08
RED MARR	2.583E-14	1.542E-11	3.260E-10	5.394E-16-1.000E+00	8.300E-09	1.320E-08
BONE SUR	4.382E-14	2.238E-11	4.734E-10	7.832E-16-1.000E+00	7.940E-09	1.260E-08
THYROID	2.725E-14	1.588E-11	3.358E-10	5.556E-16-1.000E+00	7.930E-09	1.260E-08
REMAINDER	2.536E-14	1.490E-11	3.152E-10	5.215E-16-1.000E+00	9.120E-09	1.450E-08
EFFECTIVE	2.725E-14	1.585E-11	3.353E-10	5.546E-16-1.000E+00	8.630E-09	1.350E-08
SKIN(FGR)	4.392E-14	5.253E-11	1.110E-09	1.836E-15-1.000E+00	0.000E+00	0.000E-00
Ba-139						
GONADS	2.130E-15	3.368E-13	3.429E-13	4.790E-17-1.000E+00	2.560E-12	1.560E-12
BREAST	2.450E-15	3.297E-13	3.357E-13	4.690E-17-1.000E+00	2.460E-12	5.170E-13
LUNGS	2.030E-15	3.002E-13	3.057E-13	4.270E-17-1.000E+00	2.530E-10	3.890E-13
RED MARR	1.870E-15	2.932E-13	2.985E-13	4.170E-17-1.000E+00	3.410E-12	8.590E-13
BONE SUR	5.290E-15	6.841E-13	6.965E-13	9.730E-17-1.000E+00	2.490E-12	4.380E-13
THYROID	2.130E-15	3.044E-13	3.100E-13	4.330E-17-1.000E+00	2.400E-12	2.660E-13
REMAINDER	1.920E-15	2.932E-13	2.985E-13	4.170E-17-1.000E+00	4.820E-11	3.570E-10
EFFECTIVE	2.170E-15	3.227E-13	3.286E-13	4.590E-17-1.000E+00	4.640E-11	1.080E-10

SKIN(FGR)	6.160E-14	7.241E-11	7.373E-11	1.030E-14	-1.000E+00	0.000E+00	0.000E+00
Ba-140							
GONADS	8.410E-15	5.451E-12	9.607E-11	1.910E-16	-1.000E+00	4.300E-10	9.960E-10
BREAST	9.640E-15	5.280E-12	9.305E-11	1.850E-16	-1.000E+00	2.870E-10	1.590E-10
LUNGS	8.270E-15	4.852E-12	8.550E-11	1.700E-16	-1.000E+00	1.660E-09	6.630E-11
RED MARR	7.930E-15	4.880E-12	8.601E-11	1.710E-16	-1.000E+00	1.290E-09	4.390E-10
BONE SUR	1.550E-14	8.020E-12	1.413E-10	2.810E-16	-1.000E+00	2.410E-09	5.530E-10
THYROID	8.530E-15	5.109E-12	9.003E-11	1.790E-16	-1.000E+00	2.560E-10	5.250E-11
REMAINDER	7.890E-15	4.766E-12	8.399E-11	1.670E-16	-1.000E+00	1.410E-09	7.370E-09
EFFECTIVE	8.580E-15	5.137E-12	9.053E-11	1.800E-16	-1.000E+00	1.010E-09	2.560E-09
SKIN(FGR)	2.520E-14	5.565E-11	9.808E-10	1.950E-15	-1.000E+00	0.000E+00	0.000E+00
La-140							
GONADS	1.140E-13	6.027E-11	4.425E-10	2.240E-15	-1.000E+00	4.540E-10	1.340E-09
BREAST	1.290E-13	5.758E-11	4.228E-10	2.140E-15	-1.000E+00	1.450E-10	1.800E-10
LUNGS	1.150E-13	5.596E-11	4.109E-10	2.080E-15	-1.000E+00	4.210E-09	4.010E-11
RED MARR	1.140E-13	5.731E-11	4.208E-10	2.130E-15	-1.000E+00	2.140E-10	2.810E-10
BONE SUR	1.690E-13	7.776E-11	5.709E-10	2.890E-15	-1.000E+00	1.410E-10	9.770E-11
THYROID	1.180E-13	5.462E-11	4.010E-10	2.030E-15	-1.000E+00	6.870E-11	6.400E-12
REMAINDER	1.110E-13	5.569E-11	4.089E-10	2.070E-15	-1.000E+00	2.120E-09	6.260E-09
EFFECTIVE	1.170E-13	5.812E-11	4.267E-10	2.160E-15	-1.000E+00	1.310E-09	2.280E-09
SKIN(FGR)	1.660E-13	2.217E-10	1.628E-09	8.240E-15	-1.000E+00	0.000E+00	0.000E+00
La-141							
GONADS	2.330E-15	7.315E-13	9.675E-13	4.740E-17	-1.000E+00	2.890E-12	3.770E-12
BREAST	2.640E-15	7.007E-13	9.267E-13	4.540E-17	-1.000E+00	2.680E-12	7.070E-13
LUNGS	2.340E-15	6.713E-13	8.879E-13	4.350E-17	-1.000E+00	8.880E-10	2.720E-13
RED MARR	2.310E-15	6.852E-13	9.063E-13	4.440E-17	-1.000E+00	7.060E-12	1.070E-12
BONE SUR	3.490E-15	9.923E-13	1.312E-12	6.430E-17	-1.000E+00	2.360E-11	6.060E-13
THYROID	2.390E-15	6.590E-13	8.716E-13	4.270E-17	-1.000E+00	2.450E-12	5.290E-14
REMAINDER	2.260E-15	6.682E-13	8.838E-13	4.330E-17	-1.000E+00	1.430E-10	1.240E-09
EFFECTIVE	2.390E-15	7.007E-13	9.267E-13	4.540E-17	-1.000E+00	1.520E-10	3.740E-10
SKIN(FGR)	6.580E-14	1.667E-10	2.204E-10	1.080E-14	-1.000E+00	0.000E+00	0.000E+00
La-142							
GONADS	1.400E-13	1.978E-11	2.034E-11	2.540E-15	-1.000E+00	5.910E-12	6.990E-11
BREAST	1.570E-13	1.885E-11	1.938E-11	2.420E-15	-1.000E+00	6.280E-12	1.540E-11
LUNGS	1.420E-13	1.846E-11	1.898E-11	2.370E-15	-1.000E+00	3.500E-10	8.400E-12
RED MARR	1.420E-13	1.900E-11	1.954E-11	2.440E-15	-1.000E+00	6.830E-12	1.930E-11
BONE SUR	1.950E-13	2.484E-11	2.554E-11	3.190E-15	-1.000E+00	5.390E-12	7.400E-12
THYROID	1.450E-13	1.768E-11	1.818E-11	2.270E-15	-1.000E+00	4.910E-12	1.160E-12
REMAINDER	1.380E-13	1.853E-11	1.906E-11	2.380E-15	-1.000E+00	3.140E-11	5.200E-10
EFFECTIVE	1.440E-13	1.916E-11	1.970E-11	2.460E-15	-1.000E+00	5.500E-11	1.790E-10
SKIN(FGR)	2.160E-13	9.111E-11	9.368E-11	1.170E-14	-1.000E+00	0.000E+00	0.000E+00
Ce-141							
GONADS	3.380E-15	2.213E-12	4.332E-11	7.710E-17	-1.000E+00	5.540E-11	1.080E-10
BREAST	3.930E-15	2.170E-12	4.247E-11	7.560E-17	-1.000E+00	4.460E-11	1.110E-11
LUNGS	3.170E-15	1.951E-12	3.820E-11	6.800E-17	-1.000E+00	1.670E-08	1.430E-12
RED MARR	2.830E-15	1.860E-12	3.641E-11	6.480E-17	-1.000E+00	8.960E-11	3.390E-11
BONE SUR	9.410E-15	5.166E-12	1.011E-10	1.800E-16	-1.000E+00	2.540E-10	2.300E-11
THYROID	3.350E-15	2.003E-12	3.922E-11	6.980E-17	-1.000E+00	2.550E-11	1.800E-13
REMAINDER	2.980E-15	1.894E-12	3.708E-11	6.600E-17	-1.000E+00	1.260E-09	2.500E-09
EFFECTIVE	3.430E-15	2.118E-12	4.146E-11	7.380E-17	-1.000E+00	2.420E-09	7.830E-10
SKIN(FGR)	1.020E-14	3.788E-12	7.416E-11	1.320E-16	-1.000E+00	0.000E+00	0.000E+00
Ce-143							
GONADS	1.280E-14	7.900E-12	4.958E-11	2.980E-16	-1.000E+00	7.530E-11	2.120E-10
BREAST	1.470E-14	7.688E-12	4.825E-11	2.900E-16	-1.000E+00	1.660E-11	2.320E-11
LUNGS	1.230E-14	6.893E-12	4.325E-11	2.600E-16	-1.000E+00	3.880E-09	3.820E-12
RED MARR	1.170E-14	6.787E-12	4.259E-11	2.560E-16	-1.000E+00	2.960E-11	5.070E-11
BONE SUR	2.520E-14	1.323E-11	8.302E-11	4.990E-16	-1.000E+00	1.640E-11	1.610E-11
THYROID	1.280E-14	7.211E-12	4.525E-11	2.720E-16	-1.000E+00	6.230E-12	4.350E-13
REMAINDER	1.170E-14	6.734E-12	4.226E-11	2.540E-16	-1.000E+00	1.420E-09	3.890E-09
EFFECTIVE	1.290E-14	7.396E-12	4.642E-11	2.790E-16	-1.000E+00	9.160E-10	1.230E-09
SKIN(FGR)	3.960E-14	1.058E-10	6.638E-10	3.990E-15	-1.000E+00	0.000E+00	0.000E+00
Ce-144							
GONADS	2.725E-15	6.328E-13	1.319E-11	6.088E-17	-1.000E+00	2.390E-10	6.987E-11

BREAST	3.129E-15	6.274E-13	1.307E-11	5.922E-17	-1.000E+00	3.480E-10	1.223E-11
LUNGS	2.639E-15	5.228E-13	1.089E-11	5.362E-17	-1.000E+00	7.911E-07	6.551E-12
RED MARR	2.507E-15	4.755E-13	9.907E-12	5.247E-17	-1.000E+00	2.880E-09	8.923E-11
BONE SUR	5.441E-15	1.646E-12	3.429E-11	1.127E-16	-1.000E+00	4.720E-09	1.280E-10
THYROID	2.753E-15	5.529E-13	1.152E-11	5.418E-17	-1.000E+00	2.920E-10	5.154E-12
REMAINDER	2.534E-15	5.086E-13	1.060E-11	5.283E-17	-1.000E+00	1.910E-08	1.890E-08
EFFECTIVE	2.773E-15	5.909E-13	1.231E-11	5.766E-17	-1.000E+00	1.010E-07	5.711E-09
SKIN(FGR)	8.574E-14	7.648E-13	1.594E-11	1.250E-14	-1.000E+00	0.000E+00	0.000E+00
Pr-143							
GONADS	2.130E-17	2.264E-14	4.032E-13	7.930E-19	-1.000E+00	4.370E-18	8.990E-18
BREAST	2.550E-17	2.330E-14	4.149E-13	8.160E-19	-1.000E+00	2.220E-18	1.090E-18
LUNGS	1.860E-17	1.642E-14	2.923E-13	5.750E-19	-1.000E+00	1.330E-08	1.910E-19
RED MARR	1.620E-17	1.493E-14	2.659E-13	5.230E-19	-1.000E+00	1.480E-11	1.030E-12
BONE SUR	5.930E-17	5.454E-14	9.711E-13	1.910E-18	-1.000E+00	1.490E-11	1.030E-12
THYROID	2.050E-17	1.802E-14	3.208E-13	6.310E-19	-1.000E+00	1.680E-18	2.660E-20
REMAINDER	1.760E-17	1.642E-14	2.923E-13	5.750E-19	-1.000E+00	1.970E-09	4.220E-09
EFFECTIVE	2.100E-17	2.002E-14	3.564E-13	7.010E-19	-1.000E+00	2.190E-09	1.270E-09
SKIN(FGR)	1.760E-14	5.711E-11	1.017E-09	2.000E-15	-1.000E+00	0.000E+00	0.000E+00
Nd-147							
GONADS	6.130E-15	4.218E-12	7.235E-11	1.480E-16	-1.000E+00	8.410E-11	1.790E-10
BREAST	7.120E-15	4.132E-12	7.088E-11	1.450E-16	-1.000E+00	3.450E-11	1.870E-11
LUNGS	5.820E-15	3.648E-12	6.257E-11	1.280E-16	-1.000E+00	1.060E-08	2.440E-12
RED MARR	5.400E-15	3.505E-12	6.013E-11	1.230E-16	-1.000E+00	9.190E-11	5.050E-11
BONE SUR	1.320E-14	8.265E-12	1.418E-10	2.900E-16	-1.000E+00	3.260E-10	2.220E-11
THYROID	6.120E-15	3.876E-12	6.648E-11	1.360E-16	-1.000E+00	1.820E-11	2.640E-13
REMAINDER	5.530E-15	3.562E-12	6.111E-11	1.250E-16	-1.000E+00	1.760E-09	3.760E-09
EFFECTIVE	6.190E-15	3.961E-12	6.795E-11	1.390E-16	-1.000E+00	1.850E-09	1.180E-09
SKIN(FGR)	1.950E-14	3.135E-11	5.377E-10	1.100E-15	-1.000E+00	0.000E+00	0.000E+00
Np-239							
GONADS	7.530E-15	4.691E-12	4.380E-11	1.710E-16	-1.000E+00	7.450E-11	1.620E-10
BREAST	8.730E-15	4.636E-12	4.329E-11	1.690E-16	-1.000E+00	1.630E-11	1.720E-11
LUNGS	7.180E-15	4.115E-12	3.842E-11	1.500E-16	-1.000E+00	2.360E-09	2.400E-12
RED MARR	6.500E-15	4.005E-12	3.740E-11	1.460E-16	-1.000E+00	2.080E-10	4.660E-11
BONE SUR	2.000E-14	1.001E-11	9.349E-11	3.650E-16	-1.000E+00	2.030E-09	3.590E-11
THYROID	7.520E-15	4.197E-12	3.919E-11	1.530E-16	-1.000E+00	7.620E-12	2.070E-13
REMAINDER	6.760E-15	4.005E-12	3.740E-11	1.460E-16	-1.000E+00	9.590E-10	2.770E-09
EFFECTIVE	7.690E-15	4.471E-12	4.175E-11	1.630E-16	-1.000E+00	6.780E-10	8.820E-10
SKIN(FGR)	1.600E-14	7.215E-12	6.737E-11	2.630E-16	-1.000E+00	0.000E+00	0.000E+00
Pu-238							
GONADS	6.560E-18	4.291E-14	9.011E-13	1.490E-18	-1.000E+00	1.040E-05	2.330E-09
BREAST	1.270E-17	5.558E-14	1.167E-12	1.930E-18	-1.000E+00	4.400E-10	1.800E-13
LUNGS	1.060E-18	2.267E-15	4.759E-14	7.870E-20	-1.000E+00	3.200E-04	8.640E-14
RED MARR	1.680E-18	5.587E-15	1.173E-13	1.940E-19	-1.000E+00	5.800E-05	1.270E-08
BONE SUR	9.300E-18	3.514E-14	7.378E-13	1.220E-18	-1.000E+00	7.250E-04	1.580E-07
THYROID	4.010E-18	9.792E-15	2.056E-13	3.400E-19	-1.000E+00	3.860E-10	7.990E-14
REMAINDER	1.990E-18	9.216E-15	1.935E-13	3.200E-19	-1.000E+00	2.740E-05	2.180E-08
EFFECTIVE	4.880E-18	2.413E-14	5.068E-13	8.380E-19	-1.000E+00	7.790E-05	1.340E-08
SKIN(FGR)	4.090E-17	2.776E-13	5.830E-12	9.640E-18	-1.000E+00	0.000E+00	0.000E+00
Pu-239							
GONADS	4.840E-18	1.768E-14	3.713E-13	6.140E-19	-1.000E+00	1.200E-05	2.640E-09
BREAST	7.550E-18	2.238E-14	4.699E-13	7.770E-19	-1.000E+00	3.990E-10	1.210E-13
LUNGS	2.650E-18	2.267E-15	4.760E-14	7.870E-20	-1.000E+00	3.230E-04	7.890E-14
RED MARR	2.670E-18	3.456E-15	7.258E-14	1.200E-19	-1.000E+00	6.570E-05	1.410E-08
BONE SUR	9.470E-18	1.673E-14	3.514E-13	5.810E-19	-1.000E+00	8.210E-04	1.760E-07
THYROID	3.880E-18	5.126E-15	1.077E-13	1.780E-19	-1.000E+00	3.750E-10	7.500E-14
REMAINDER	2.860E-18	4.838E-15	1.016E-13	1.680E-19	-1.000E+00	3.020E-05	2.120E-08
EFFECTIVE	4.240E-18	1.057E-14	2.220E-13	3.670E-19	-1.000E+00	8.330E-05	1.400E-08
SKIN(FGR)	1.860E-17	1.057E-13	2.220E-12	3.670E-18	-1.000E+00	0.000E+00	0.000E+00
Pu-240							
GONADS	6.360E-18	4.118E-14	8.649E-13	1.430E-18	-1.000E+00	1.200E-05	2.640E-09
BREAST	1.230E-17	5.328E-14	1.119E-12	1.850E-18	-1.000E+00	4.330E-10	1.730E-13
LUNGS	1.090E-18	2.249E-15	4.723E-14	7.810E-20	-1.000E+00	3.230E-04	8.220E-14
RED MARR	1.650E-18	5.386E-15	1.131E-13	1.870E-19	-1.000E+00	6.570E-05	1.410E-08

BONE SUR	9.260E-18	3.398E-14	7.137E-13	1.180E-18	-1.000E+00	8.210E-04	1.760E-07
THYROID	3.920E-18	9.446E-15	1.984E-13	3.280E-19	-1.000E+00	3.760E-10	7.510E-14
REMAINDER	1.960E-18	8.870E-15	1.863E-13	3.080E-19	-1.000E+00	3.020E-05	2.130E-08
EFFECTIVE	4.750E-18	2.313E-14	4.857E-13	8.030E-19	-1.000E+00	8.330E-05	1.400E-08
SKIN(FGR)	3.920E-17	2.644E-13	5.552E-12	9.180E-18	-1.000E+00	0.000E+00	0.000E+00
Pu-241							
GONADS	7.190E-20	6.653E-17	1.396E-15	2.310E-21	-1.000E+00	2.760E-07	5.660E-11
BREAST	8.670E-20	7.229E-17	1.517E-15	2.510E-21	-1.000E+00	2.140E-11	2.790E-15
LUNGS	6.480E-20	4.090E-17	8.584E-16	1.420E-21	-1.000E+00	3.180E-06	4.480E-15
RED MARR	5.630E-20	4.003E-17	8.403E-16	1.390E-21	-1.000E+00	1.430E-06	2.780E-10
BONE SUR	2.190E-19	1.385E-16	2.908E-15	4.810E-21	-1.000E+00	1.780E-05	3.480E-09
THYROID	6.980E-20	4.522E-17	9.491E-16	1.570E-21	-1.000E+00	9.150E-12	1.010E-15
REMAINDER	6.090E-20	4.291E-17	9.007E-16	1.490E-21	-1.000E+00	6.020E-07	1.850E-10
EFFECTIVE	7.250E-20	5.558E-17	1.167E-15	1.930E-21	-1.000E+00	1.340E-06	2.070E-10
SKIN(FGR)	1.170E-19	2.033E-16	4.268E-15	7.060E-21	-1.000E+00	0.000E+00	0.000E+00
Am-241							
GONADS	8.580E-16	9.360E-13	1.966E-11	3.250E-17	-1.000E+00	3.250E-05	2.700E-07
BREAST	1.070E-15	1.014E-12	2.129E-11	3.520E-17	-1.000E+00	2.670E-09	2.620E-11
LUNGS	6.740E-16	5.789E-13	1.216E-11	2.010E-17	-1.000E+00	1.840E-05	3.360E-11
RED MARR	5.210E-16	4.838E-13	1.016E-11	1.680E-17	-1.000E+00	1.740E-04	1.450E-06
BONE SUR	2.870E-15	2.678E-12	5.625E-11	9.300E-17	-1.000E+00	2.170E-03	1.810E-05
THYROID	7.830E-16	6.365E-13	1.337E-11	2.210E-17	-1.000E+00	1.600E-09	1.320E-11
REMAINDER	6.340E-16	5.933E-13	1.246E-11	2.060E-17	-1.000E+00	7.820E-05	6.660E-07
EFFECTIVE	8.180E-16	7.920E-13	1.663E-11	2.750E-17	-1.000E+00	1.200E-04	9.840E-07
SKIN(FGR)	1.280E-15	2.396E-12	5.032E-11	8.320E-17	-1.000E+00	0.000E+00	0.000E+00
Cm-242							
GONADS	7.830E-18	4.893E-14	1.013E-12	1.700E-18	-1.000E+00	5.700E-07	5.200E-09
BREAST	1.480E-17	6.159E-14	1.275E-12	2.140E-18	-1.000E+00	9.440E-10	8.950E-12
LUNGS	1.130E-18	3.022E-15	6.257E-14	1.050E-19	-1.000E+00	1.550E-05	8.840E-12
RED MARR	1.890E-18	6.562E-15	1.359E-13	2.280E-19	-1.000E+00	3.900E-06	3.570E-08
BONE SUR	1.060E-17	4.231E-14	8.759E-13	1.470E-18	-1.000E+00	4.870E-05	4.460E-07
THYROID	4.910E-18	1.261E-14	2.610E-13	4.380E-19	-1.000E+00	9.410E-10	8.820E-12
REMAINDER	2.270E-18	1.079E-14	2.235E-13	3.750E-19	-1.000E+00	2.450E-06	4.020E-08
EFFECTIVE	5.690E-18	2.751E-14	5.697E-13	9.560E-19	-1.000E+00	4.670E-06	3.100E-08
SKIN(FGR)	4.290E-17	2.700E-13	5.589E-12	9.380E-18	-1.000E+00	0.000E+00	0.000E+00
Cm-244							
GONADS	6.900E-18	4.522E-14	9.492E-13	1.570E-18	-1.000E+00	1.590E-05	1.330E-07
BREAST	1.330E-17	5.702E-14	1.197E-12	1.980E-18	-1.000E+00	1.040E-09	8.820E-12
LUNGS	7.080E-19	2.592E-15	5.441E-14	9.000E-20	-1.000E+00	1.930E-05	8.810E-12
RED MARR	1.460E-18	5.875E-15	1.233E-13	2.040E-19	-1.000E+00	9.380E-05	7.820E-07
BONE SUR	8.820E-18	3.859E-14	8.101E-13	1.340E-18	-1.000E+00	1.170E-03	9.770E-06
THYROID	4.190E-18	1.146E-14	2.406E-13	3.980E-19	-1.000E+00	1.010E-09	8.440E-12
REMAINDER	1.810E-18	9.821E-15	2.062E-13	3.410E-19	-1.000E+00	4.780E-05	4.150E-07
EFFECTIVE	4.910E-18	2.529E-14	5.308E-13	8.780E-19	-1.000E+00	6.700E-05	5.450E-07
SKIN(FGR)	3.910E-17	2.506E-13	5.260E-12	8.700E-18	-1.000E+00	0.000E+00	0.000E+00

```
# Microsoft Developer Studio Generated NMAKE File, Based on fconsole.dsp
!IF "$(CFG)" == ""
CFG=fconsole - Win32 Debug
!MESSAGE No configuration specified. Defaulting to fconsole - Win32 Debug.
!ENDIF

!IF "$(CFG)" != "fconsole - Win32 Release" && "$(CFG)" != "fconsole - Win32 Debug"
!MESSAGE Invalid configuration "$(CFG)" specified.
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "fconsole.mak" CFG="fconsole - Win32 Debug"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "fconsole - Win32 Release" (based on "Win32 (x86) Console Application")
!MESSAGE "fconsole - Win32 Debug" (based on "Win32 (x86) Console Application")
!MESSAGE
!ERROR An invalid configuration is specified.
!ENDIF

!IF "$(OS)" == "Windows_NT"
NULL=
!ELSE
NULL=nul
!ENDIF

!IF  "$(CFG)" == "fconsole - Win32 Release"

OUTDIR=.\Release
INTDIR=.\Release
# Begin Custom Macros
OutDir=.\Release
# End Custom Macros

ALL : "$(OUTDIR)\Maccs2.exe" "$(OUTDIR)\fconsole.bsc"


CLEAN :
        -@erase "$(INTDIR)\Maccs2.obj"
        -@erase "$(INTDIR)\Maccs2.sbr"
        -@erase "$(INTDIR)\Main.obj"
        -@erase "$(INTDIR)\Main.sbr"
        -@erase "$(INTDIR)\MXXMICRO.OBJ"
        -@erase "$(INTDIR)\MXXMICRO.SBR"
        -@erase "$(INTDIR)\MXXOPN.OBJ"
        -@erase "$(INTDIR)\MXXOPN.SBR"
        -@erase "$(INTDIR)\Script1.res"
        -@erase "$(OUTDIR)\fconsole.bsc"
        -@erase "$(OUTDIR)\Maccs2.exe"

"$(OUTDIR)" :
    if not exist "$(OUTDIR)/$(NULL)" mkdir "$(OUTDIR)"

F90=df.exe
F90_PROJ=/browser:"Release/" /compile_only /include:"Release/" /nologo
/warn:nofileopt /module:"Release/" /object:"Release/"
F90_OBJS=.\Release/

.SUFFIXES: .fpp

.for{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<
```

```
.f{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<

.f90{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<

.fpp{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<

CPP=cl.exe
CPP_PROJ=/nologo /ML /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D "_CONSOLE" /D "_MBCS"
/FR"$(INTDIR)\\" /Fp"$(INTDIR)\fconsole.pch" /YX /Fo"$(INTDIR)\\" /Fd"$(INTDIR)\\"
/FD /c

.c{$(INTDIR)}.obj::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cpp{$(INTDIR)}.obj::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cxx{$(INTDIR)}.obj::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.c{$(INTDIR)}.sbr::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cpp{$(INTDIR)}.sbr::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cxx{$(INTDIR)}.sbr::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

RSC=rc.exe
RSC_PROJ=/l 0x409 /fo"$(INTDIR)\Script1.res" /d "NDEBUG"
BSC32=bscmake.exe
BSC32_FLAGS=/nologo /o"$(OUTDIR)\fconsole.bsc"
BSC32_SBRS= \
        "$(INTDIR)\Maccs2.sbr" \
        "$(INTDIR)\Main.sbr" \
        "$(INTDIR)\MXXMICRO.SBR" \
        "$(INTDIR)\MXXOPN.SBR"

"$(OUTDIR)\fconsole.bsc" : "$(OUTDIR)" $(BSC32_SBRS)
    $(BSC32) @<<
  $(BSC32_FLAGS) $(BSC32_SBRS)
<<

LINK32=link.exe
LINK32_FLAGS=kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbc32.lib odbccp32.lib
```

```
/nologo /subsystem:console /incremental:no /pdb:"$(OUTDIR)\Maccs2.pdb" /machine:I386
/out:"$(OUTDIR)\Maccs2.exe"
LINK32_OBJS= \
        "$(INTDIR)\Maccs2.obj" \
        "$(INTDIR)\Main.obj" \
        "$(INTDIR)\MXXMICRO.OBJ" \
        "$(INTDIR)\MXXOPN.OBJ" \
        "$(INTDIR)\Script1.res"

"$(OUTDIR)\Maccs2.exe" : "$(OUTDIR)" $(DEF_FILE) $(LINK32_OBJS)
    $(LINK32) @<<
  $(LINK32_FLAGS) $(LINK32_OBJS)
<<

!ELSEIF  "$(CFG)" == "fconsole - Win32 Debug"

OUTDIR=.\Debug
INTDIR=.\Debug
# Begin Custom Macros
OutDir=.\Debug
# End Custom Macros

ALL : "$(OUTDIR)\Maccs2.exe" "$(OUTDIR)\fconsole.bsc"


CLEAN :
        -@erase "$(INTDIR)\DF60.PDB"
        -@erase "$(INTDIR)\Maccs2.obj"
        -@erase "$(INTDIR)\Maccs2.sbr"
        -@erase "$(INTDIR)\Main.obj"
        -@erase "$(INTDIR)\Main.sbr"
        -@erase "$(INTDIR)\MXXMICRO.OBJ"
        -@erase "$(INTDIR)\MXXMICRO.SBR"
        -@erase "$(INTDIR)\MXXOPN.OBJ"
        -@erase "$(INTDIR)\MXXOPN.SBR"
        -@erase "$(INTDIR)\Script1.res"
        -@erase "$(OUTDIR)\fconsole.bsc"
        -@erase "$(OUTDIR)\Maccs2.exe"
        -@erase "$(OUTDIR)\Maccs2.pdb"

"$(OUTDIR)" :
    if not exist "$(OUTDIR)/$(NULL)" mkdir "$(OUTDIR)"

F90=df.exe
F90_PROJ=/browser:"Debug/" /check:bounds /compile_only /debug:full /include:"Debug/"
/nologo /traceback /warn:argument_checking /warn:nofileopt /module:"Debug/"
/object:"Debug/" /pdbfile:"Debug/DF60.PDB"
F90_OBJS=.\Debug/

.SUFFIXES: .fpp

.for{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<

.f{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<

.f90{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<

.fpp{$(F90_OBJS)}.obj:
   $(F90) $(F90_PROJ) $<
```

```
CPP=cl.exe
CPP_PROJ=/nologo /MLd /W3 /Gm /GX /ZI /Od /D "WIN32" /D "_DEBUG" /D "_CONSOLE" /D
"_MBCS" /FR"$(INTDIR)\\" /Fp"$(INTDIR)\fconsole.pch" /YX /Fo"$(INTDIR)\\"
/Fd"$(INTDIR)\\" /FD /GZ /c

.c{$(INTDIR)}.obj::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cpp{$(INTDIR)}.obj::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cxx{$(INTDIR)}.obj::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.c{$(INTDIR)}.sbr::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cpp{$(INTDIR)}.sbr::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

.cxx{$(INTDIR)}.sbr::
   $(CPP) @<<
   $(CPP_PROJ) $<
<<

RSC=rc.exe
RSC_PROJ=/l 0x409 /fo"$(INTDIR)\Script1.res" /d "_DEBUG"
BSC32=bscmake.exe
BSC32_FLAGS=/nologo /o"$(OUTDIR)\fconsole.bsc"
BSC32_SBRS= \
        "$(INTDIR)\Maccs2.sbr" \
        "$(INTDIR)\Main.sbr" \
        "$(INTDIR)\MXXMICRO.SBR" \
        "$(INTDIR)\MXXOPN.SBR"

"$(OUTDIR)\fconsole.bsc" : "$(OUTDIR)" $(BSC32_SBRS)
    $(BSC32) @<<
  $(BSC32_FLAGS) $(BSC32_SBRS)
<<

LINK32=link.exe
LINK32_FLAGS=kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbc32.lib odbccp32.lib
/nologo /subsystem:console /incremental:no /pdb:"$(OUTDIR)\Maccs2.pdb" /debug
/machine:I386 /out:"$(OUTDIR)\Maccs2.exe" /pdbtype:sept
LINK32_OBJS= \
        "$(INTDIR)\Maccs2.obj" \
        "$(INTDIR)\Main.obj" \
        "$(INTDIR)\MXXMICRO.OBJ" \
        "$(INTDIR)\MXXOPN.OBJ" \
        "$(INTDIR)\Script1.res"

"$(OUTDIR)\Maccs2.exe" : "$(OUTDIR)" $(DEF_FILE) $(LINK32_OBJS)
```

```
    $(LINK32) @<<
  $(LINK32_FLAGS) $(LINK32_OBJS)
<<

!ENDIF


!IF "$(NO_EXTERNAL_DEPS)" != "1"
!IF EXISTS("fconsole.dep")
!INCLUDE "fconsole.dep"
!ELSE
!MESSAGE Warning: cannot find "fconsole.dep"
!ENDIF
!ENDIF


!IF "$(CFG)" == "fconsole - Win32 Release" || "$(CFG)" == "fconsole - Win32 Debug"
SOURCE=.\Source\Maccs2.for

"$(INTDIR)\Maccs2.obj"  "$(INTDIR)\Maccs2.sbr" : $(SOURCE) "$(INTDIR)"
        $(F90) $(F90_PROJ) $(SOURCE)


SOURCE=.\Source\Main.for

"$(INTDIR)\Main.obj"    "$(INTDIR)\Main.sbr" : $(SOURCE) "$(INTDIR)"
        $(F90) $(F90_PROJ) $(SOURCE)


SOURCE=.\Source\MXXMICRO.FOR

"$(INTDIR)\MXXMICRO.OBJ"        "$(INTDIR)\MXXMICRO.SBR" : $(SOURCE) "$(INTDIR)"
        $(F90) $(F90_PROJ) $(SOURCE)


SOURCE=.\Source\MXXOPN.FOR

"$(INTDIR)\MXXOPN.OBJ"  "$(INTDIR)\MXXOPN.SBR" : $(SOURCE) "$(INTDIR)"
        $(F90) $(F90_PROJ) $(SOURCE)


SOURCE=.\Source\Script1.rc

!IF  "$(CFG)" == "fconsole - Win32 Release"


"$(INTDIR)\Script1.res" : $(SOURCE) "$(INTDIR)"
        $(RSC) /l 0x409 /fo"$(INTDIR)\Script1.res" /i "Source" /d "NDEBUG" $(SOURCE)


!ELSEIF  "$(CFG)" == "fconsole - Win32 Debug"


"$(INTDIR)\Script1.res" : $(SOURCE) "$(INTDIR)"
        $(RSC) /l 0x409 /fo"$(INTDIR)\Script1.res" /i "Source" /d "_DEBUG" $(SOURCE)


!ENDIF


!ENDIF
```

```
MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised 1/8/04, K. McFadden
P1:  ATMOS USER INPUT (UNIT 24) = EBATMOS.INP


P2:  EARLY USER INPUT (UNIT 25) = EBEARLY.INP


P3: CHRONC USER INPUT (UNIT 26) = EBCHRONC.INP


P4:  METEOROLOGY DATA (UNIT 28) = NMET97.INP


P5:   SITE DATA INPUT (UNIT 29) = NSITE.INP


P6:       LIST OUTPUT (UNIT 06) = EBOUT97x.OUT




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

RECORD
NUMBER                                        RECORD

       * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS ESBWR "ATMOS" INPUT

       * This is the ESBWR BASE CASE ATMOS input deck

       *     LAST MODIFIED by MGM  4/10/06

    1  RIATNAM1001 'IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input'

*******************************************************************************

       * GEOMETRY DATA BLOCK, LOADED BY INPGEO, STORED IN /GEOM/

       *

       * NUMBER OF RADIAL SPATIAL ELEMENTS

       *

    2  GENUMRAD001  11

       *

       *  ESBWR/NAPS

       *
```

```
  3  GESPAEND001     1.61      3.22      4.83      6.44      8.05
  4  GESPAEND002     9.65     16.09     32.18     48.27     64.37
  5  GESPAEND003    80.47
     *

*******************************************************************************
     * NUCLIDE DATA BLOCK, LOADED BY INPISO, STORED IN /ISOGRP/, /ISONAM/
     *
     * Number of pseudo-stable nuclides (used to truncate the decay chains)
     *
  6  ISNUMSTB001      27
     *
     * List of pseudo-stable nuclides
     *
     *                NAMSTB
     *
  7  ISNAMSTB001     I-129     (daughter of Te-129 and Te-129m)
  8  ISNAMSTB002     Xe-131m   (daughter of I-131)
  9  ISNAMSTB003     Xe-133m   (daughter of I-133)
 10  ISNAMSTB004     Xe-135m   (daughter of I-135)
 11  ISNAMSTB005     Cs-135    (daughter of Xe-135 and Xe-135m)
 12  ISNAMSTB006     Sm-147    (daughter of Pm-147)
 13  ISNAMSTB007     U-234     (daughter of Pu-238)
 14  ISNAMSTB008     U-235     (daughter of Pu-239)
 15  ISNAMSTB009     U-236     (daughter of Pu-240)
 16  ISNAMSTB010     U-237     (daughter of Pu-241)
 17  ISNAMSTB011     Np-237    (daughter of Am-241)
 18  ISNAMSTB012     Rb-87     (daughter of Kr-87)
 19  ISNAMSTB013     Ba-137m   (daughter of Cs-137)
 20  ISNAMSTB014     Rb-88     (daughter of Kr-88)
 21  ISNAMSTB015     Y-91m     (daughter of Sr-91)
 22  ISNAMSTB016     Zr-93     (daughter of Y-93)
```

```
23  ISNAMSTB017     Nb-93m   (daughter of Zr-93)
24  ISNAMSTB018     Nb-95m   (daughter of Zr-95)
25  ISNAMSTB019     Nb-97    (daughter of Zr-97 and Nb-97m)
26  ISNAMSTB020     Nb-97m   (daughter of Zr-97)
27  ISNAMSTB021     Tc-99    (daughter of Mo-99)
28  ISNAMSTB022     Rh-103m  (daughter of Ru-103)
29  ISNAMSTB023     Rh-106   (daughter of Ru-106)
30  ISNAMSTB024    Te-131    (daughter of Te-131m)
31  ISNAMSTB025     Pr-144   (daughter of Ce-144 and Pr-144m)
32  ISNAMSTB026     Pr-144m  (daughter of Ce-144)
33  ISNAMSTB027     Pm-147   (daughter of Nd-147)
    *
    * Number of radioactive nuclides to be considered
    *
34  ISNUMISO001 60
    *
    * NUMBER OF NUCLIDE GROUPS
    *
35  ISMAXGRP001  9
    *
    * WET AND DRY DEPOSITION FLAGS FOR EACH NUCLIDE GROUP
    *
    *               WETDEP     DRYDEP
    *
36  ISDEPFLA001    .FALSE.    .FALSE.
37  ISDEPFLA002    .TRUE.     .TRUE.
38  ISDEPFLA003    .TRUE.     .TRUE.
39  ISDEPFLA004    .TRUE.     .TRUE.
40  ISDEPFLA005    .TRUE.     .TRUE.
41  ISDEPFLA006    .TRUE.     .TRUE.
42  ISDEPFLA007    .TRUE.     .TRUE.
```

```
43  ISDEPFLA008     .TRUE.     .TRUE.
44  ISDEPFLA009     .TRUE.     .TRUE.
    *
    * NUCLIDE GROUP DATA FOR 9 NUCLIDE GROUPS
    *
    *                NUCNAM     IGROUP
    *
45  ISOTPGRP001      Co-58        6
46  ISOTPGRP002      Co-60        6
47  ISOTPGRP003      Kr-85        1
48  ISOTPGRP004      Kr-85m       1
49  ISOTPGRP005      Kr-87        1
50  ISOTPGRP006      Kr-88        1
51  ISOTPGRP007      Rb-86        3
52  ISOTPGRP008      Sr-89        5
53  ISOTPGRP009      Sr-90        5
54  ISOTPGRP010      Sr-91        5
55  ISOTPGRP011      Sr-92        5
56  ISOTPGRP012      Y-90         7
57  ISOTPGRP013      Y-91         7
58  ISOTPGRP014      Y-92         7
59  ISOTPGRP015      Y-93         7
60  ISOTPGRP016      Zr-95        7
61  ISOTPGRP017      Zr-97        7
62  ISOTPGRP018      Nb-95        7
63  ISOTPGRP019      Mo-99        6
64  ISOTPGRP020      Tc-99m       6
65  ISOTPGRP021      Ru-103       6
66  ISOTPGRP022      Ru-105       6
67  ISOTPGRP023      Ru-106       6
68  ISOTPGRP024      Rh-105       6
69  ISOTPGRP025      Sb-127       4
```

70	ISOTPGRP026	Sb-129	4
71	ISOTPGRP027	Te-127	4
72	ISOTPGRP028	Te-127m	4
73	ISOTPGRP029	Te-129	4
74	ISOTPGRP030	Te-129m	4
75	ISOTPGRP031	Te-131m	4
76	ISOTPGRP032	Te-132	4
77	ISOTPGRP033	I-131	2
78	ISOTPGRP034	I-132	2
79	ISOTPGRP035	I-133	2
80	ISOTPGRP036	I-134	2
81	ISOTPGRP037	I-135	2
82	ISOTPGRP038	Xe-133	1
83	ISOTPGRP039	Xe-135	1
84	ISOTPGRP040	Cs-134	3
85	ISOTPGRP041	Cs-136	3
86	ISOTPGRP042	Cs-137	3
87	ISOTPGRP043	Ba-139	9
88	ISOTPGRP044	Ba-140	9
89	ISOTPGRP045	La-140	7
90	ISOTPGRP046	La-141	7
91	ISOTPGRP047	La-142	7
92	ISOTPGRP048	Ce-141	8
93	ISOTPGRP049	Ce-143	8
94	ISOTPGRP050	Ce-144	8
95	ISOTPGRP051	Pr-143	7
96	ISOTPGRP052	Nd-147	7
97	ISOTPGRP053	Np-239	8
98	ISOTPGRP054	Pu-238	8
99	ISOTPGRP055	Pu-239	8
100	ISOTPGRP056	Pu-240	8

```
101  ISOTPGRP057     Pu-241      8
102  ISOTPGRP058     Am-241      7
103  ISOTPGRP059     Cm-242      7
104  ISOTPGRP060     Cm-244      7

*****************************************************************************
      * WET DEPOSITION DATA BLOCK, LOADED BY INPWET, STORED IN /WETCON/
      *
      * WASHOUT COEFFICIENT NUMBER ONE, LINEAR FACTOR
      *
105  WDCWASH1001  9.5E-5   (JON HELTON AFTER JONES, 1986)
      *
      * WASHOUT COEFFICIENT NUMBER TWO, EXPONENTIAL FACTOR
      *
106  WDCWASH2001  0.8      (JON HELTON AFTER JONES, 1986)

*****************************************************************************
      * DRY DEPOSITION DATA BLOCK, LOADED BY INPDRY, STORED IN /DRYCON/
      *
      * NUMBER OF PARTICLE SIZE GROUPS
      *
107  DDNPSGRP001   1
      *
      * DEPOSITION VELOCITY OF EACH PARTICLE SIZE GROUP (M/S)
      *
108  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)
      *
```

```
 109  NUM_DIST001    50
      *
      * A-stability        Distance (m)  Sigma-y (m)    Sigma-z (m)
 110  A-STB/DIS01          1.000E+00     3.6580E-01     2.5000E-04  Tadmor/Gur (0.5-5
km)
 111  A-STB/DIS02          1.400E+00     4.9569E-01     5.1105E-04  Tadmor/Gur (0.5-5
km)
 112  A-STB/DIS03          2.000E+00     6.8408E-01     1.0905E-03  Tadmor/Gur (0.5-5
km)
 113  A-STB/DIS04          3.000E+00     9.8658E-01     2.5812E-03  Tadmor/Gur (0.5-5
km)
 114  A-STB/DIS05          4.000E+00     1.2793E+00     4.7568E-03  Tadmor/Gur (0.5-5
km)
 115  A-STB/DIS06          5.000E+00     1.5649E+00     7.6428E-03  Tadmor/Gur (0.5-5
km)
 116  A-STB/DIS07          6.000E+00     1.8450E+00     1.1259E-02  Tadmor/Gur (0.5-5
km)
 117  A-STB/DIS08          8.000E+00     2.3923E+00     2.0749E-02  Tadmor/Gur (0.5-5
km)
 118  A-STB/DIS09          1.000E+01     2.9265E+00     3.3338E-02  Tadmor/Gur (0.5-5
km)
 119  A-STB/DIS10          1.000E+02     2.3412E+01     4.4457E+00  Tadmor/Gur (0.5-5
km)
 120  A-STB/DIS11          1.400E+02     3.1726E+01     9.0879E+00  Tadmor/Gur (0.5-5
km)
 121  A-STB/DIS12          2.000E+02     4.3783E+01     1.9392E+01  Tadmor/Gur (0.5-5
km)
 122  A-STB/DIS13          3.000E+02     6.3144E+01     4.5901E+01  Tadmor/Gur (0.5-5
km)
 123  A-STB/DIS14          4.000E+02     8.1877E+01     8.4590E+01  Tadmor/Gur (0.5-5
km)
 124  A-STB/DIS15          5.000E+02     1.0016E+02     1.3591E+02  Tadmor/Gur (0.5-5
km)
 125  A-STB/DIS16          6.000E+02     1.1808E+02     2.0022E+02  Tadmor/Gur (0.5-5
km)
 126  A-STB/DIS17          8.000E+02     1.5312E+02     3.6898E+02  Tadmor/Gur (0.5-5
km)
 127  A-STB/DIS18          1.000E+03     1.8730E+02     5.9284E+02  Tadmor/Gur (0.5-5
km)
 128  A-STB/DIS19          1.400E+03     2.5381E+02     1.2119E+03  Tadmor/Gur (0.5-5
km)
 129  A-STB/DIS20          2.000E+03     3.5027E+02     2.5860E+03  Tadmor/Gur (0.5-5
km)
 130  A-STB/DIS21          3.000E+03     5.0516E+02     6.1210E+03  Tadmor/Gur (0.5-5
km)
 131  A-STB/DIS22          4.000E+03     6.5503E+02     1.1280E+04  Tadmor/Gur (0.5-5
km)
 132  A-STB/DIS23          5.000E+03     8.0128E+02     1.8124E+04  Tadmor/Gur (0.5-5
km)
 133  A-STB/DIS24          6.000E+03     9.4470E+02     2.6700E+04  Tadmor/Gur (0.5-5
km)
 134  A-STB/DIS25          8.000E+03     1.2250E+03     4.9205E+04  Tadmor/Gur (0.5-5
km)
 135  A-STB/DIS26          1.000E+04     1.4985E+03     7.9057E+04  Tadmor/Gur (0.5-5
km)
 136  A-STB/DIS27          1.400E+04     2.0305E+03     1.6161E+05  Tadmor/Gur (0.5-5
km)
 137  A-STB/DIS28          2.000E+04     2.8022E+03     3.4485E+05  Tadmor/Gur (0.5-5
km)
 138  A-STB/DIS29          3.000E+04     4.0414E+03     8.1625E+05  Tadmor/Gur (0.5-5
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139	A--STB/DIS30	4.000E+04	5.2404E+03	1.5042E+06	Tadmor/Gur (0.5-5 km)
140	A--STB/DIS31	5.000E+04	6.4104E+03	2.4169E+06	Tadmor/Gur (0.5-5 km)
141	A--STB/DIS32	6.000E+04	7.5577E+03	3.5605E+06	Tadmor/Gur (0.5-5 km)
142	A--STB/DIS33	8.000E+04	9.8000E+03	6.5615E+06	Tadmor/Gur (0.5-5 km)
143	A--STB/DIS34	1.000E+05	1.1988E+04	1.0542E+07	Tadmor/Gur (0.5-5 km)
144	A--STB/DIS35	1.400E+05	1.6245E+04	2.1551E+07	Tadmor/Gur (0.5-5 km)
145	A--STB/DIS36	2.000E+05	2.2418E+04	4.5986E+07	Tadmor/Gur (0.5-5 km)
146	A--STB/DIS37	3.000E+05	3.2332E+04	1.0885E+08	Tadmor/Gur (0.5-5 km)
147	A--STB/DIS38	4.000E+05	4.1924E+04	2.0059E+08	Tadmor/Gur (0.5-5 km)
148	A--STB/DIS39	5.000E+05	5.1284E+04	3.2229E+08	Tadmor/Gur (0.5-5 km)
149	A-STB/DIS40	6.000E+05	6.0463E+04	4.7480E+08	Tadmor/Gur (0.5-5 km)
150	A-STB/DIS41	8.000E+05	7.8401E+04	8.7500E+08	Tadmor/Gur (0.5-5 km)
151	A-STB/DIS42	1.000E+06	9.5906E+04	1.4059E+09	Tadmor/Gur (0.5-5 km)
152	A-STB/DIS43	1.400E+06	1.2996E+05	2.8738E+09	Tadmor/Gur (0.5-5 km)
153	A-STB/DIS44	2.000E+06	1.7935E+05	6.1324E+09	Tadmor/Gur (0.5-5 km)
154	A-STB/DIS45	3.000E+06	2.5866E+05	1.4515E+10	Tadmor/Gur (0.5-5 km)
155	A-STB/DIS46	4.000E+06	3.3540E+05	2.6750E+10	Tadmor/Gur (0.5-5 km)
156	A-STB/DIS47	5.000E+06	4.1028E+05	4.2979E+10	Tadmor/Gur (0.5-5 km)
157	A-STB/DIS48	6.000E+06	4.8372E+05	6.3316E+10	Tadmor/Gur (0.5-5 km)
158	A-STB/DIS49	8.000E+06	6.2723E+05	1.1668E+11	Tadmor/Gur (0.5-5 km)
159	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)	
160	B-STB/DIS01	1.000E+00	2.7510E-01	1.9000E-03	Tadmor/Gur (0.5-5 km)
161	B-STB/DIS02	1.400E+00	3.7279E-01	3.2574E-03	Tadmor/Gur (0.5-5 km)
162	B-STB/DIS03	2.000E+00	5.1446E-01	5.7681E-03	Tadmor/Gur (0.5-5 km)
163	B-STB/DIS04	3.000E+00	7.4196E-01	1.1045E-02	Tadmor/Gur (0.5-5 km)
164	B-STB/DIS05	4.000E+00	9.6208E-01	1.7511E-02	Tadmor/Gur (0.5-5 km)
165	B-STB/DIS06	5.000E+00	1.1769E+00	2.5036E-02	Tadmor/Gur (0.5-5 km)
166	B-STB/DIS07	6.000E+00	1.3875E+00	3.3530E-02	Tadmor/Gur (0.5-5 km)
167	B-STB/DIS08	8.000E+00	1.7992E+00	5.3161E-02	Tadmor/Gur (0.5-5 km)

168	B-STB/DIS09	1.000E+01	2.2009E+00	7.6007E-02	Tadmor/Gur (0.5-5 km)
169	B-STB/DIS10	1.000E+02	1.7607E+01	3.0406E+00	Tadmor/Gur (0.5-5 km)
170	B-STB/DIS11	1.400E+02	2.3859E+01	5.2127E+00	Tadmor/Gur (0.5-5 km)
171	B-STB/DIS12	2.000E+02	3.2927E+01	9.2307E+00	Tadmor/Gur (0.5-5 km)
172	B-STB/DIS13	3.000E+02	4.7487E+01	1.7675E+01	Tadmor/Gur (0.5-5 km)
173	B-STB/DIS14	4.000E+02	6.1576E+01	2.8023E+01	Tadmor/Gur (0.5-5 km)
174	B-STB/DIS15	5.000E+02	7.5323E+01	4.0066E+01	Tadmor/Gur (0.5-5 km)
175	B-STB/DIS16	6.000E+02	8.8805E+01	5.3657E+01	Tadmor/Gur (0.5-5 km)
176	B-STB/DIS17	8.000E+02	1.1515E+02	8.5073E+01	Tadmor/Gur (0.5-5 km)
177	B-STB/DIS18	1.000E+03	1.4086E+02	1.2163E+02	Tadmor/Gur (0.5-5 km)
178	B-STB/DIS19	1.400E+03	1.9088E+02	2.0853E+02	Tadmor/Gur (0.5-5 km)
179	B-STB/DIS20	2.000E+03	2.6342E+02	3.6926E+02	Tadmor/Gur (0.5-5 km)
180	B-STB/DIS21	3.000E+03	3.7991E+02	7.0705E+02	Tadmor/Gur (0.5-5 km)
181	B-STB/DIS22	4.000E+03	4.9262E+02	1.1210E+03	Tadmor/Gur (0.5-5 km)
182	B-STB/DIS23	5.000E+03	6.0260E+02	1.6028E+03	Tadmor/Gur (0.5-5 km)
183	B-STB/DIS24	6.000E+03	7.1046E+02	2.1465E+03	Tadmor/Gur (0.5-5 km)
184	B-STB/DIS25	8.000E+03	9.2124E+02	3.4033E+03	Tadmor/Gur (0.5-5 km)
185	B-STB/DIS26	1.000E+04	1.1269E+03	4.8658E+03	Tadmor/Gur (0.5-5 km)
186	B-STB/DIS27	1.400E+04	1.5271E+03	8.3419E+03	Tadmor/Gur (0.5-5 km)
187	B-STB/DIS28	2.000E+04	2.1074E+03	1.4772E+04	Tadmor/Gur (0.5-5 km)
188	B-STB/DIS29	3.000E+04	3.0393E+03	2.8285E+04	Tadmor/Gur (0.5-5 km)
189	B-STB/DIS30	4.000E+04	3.9410E+03	4.4845E+04	Tadmor/Gur (0.5-5 km)
190	B-STB/DIS31	5.000E+04	4.8209E+03	6.4117E+04	Tadmor/Gur (0.5-5 km)
191	B-STB/DIS32	6.000E+04	5.6838E+03	8.5868E+04	Tadmor/Gur (0.5-5 km)
192	B-STB/DIS33	8.000E+04	7.3701E+03	1.3614E+05	Tadmor/Gur (0.5-5 km)
193	B-STB/DIS34	1.000E+05	9.0155E+03	1.9465E+05	Tadmor/Gur (0.5-5 km)
194	B-STB/DIS35	1.400E+05	1.2217E+04	3.3371E+05	Tadmor/Gur (0.5-5 km)
195	B-STB/DIS36	2.000E+05	1.6860E+04	5.9093E+05	Tadmor/Gur (0.5-5 km)
196	B-STB/DIS37	3.000E+05	2.4315E+04	1.1315E+06	Tadmor/Gur (0.5-5 km)
197	B-STB/DIS38	4.000E+05	3.1529E+04	1.7940E+06	Tadmor/Gur (0.5-5 km)
198	B-STB/DIS39	5.000E+05	3.8568E+04	2.5649E+06	Tadmor/Gur (0.5-5 km)
199	B-STB/DIS40	6.000E+05	4.5471E+04	3.4350E+06	Tadmor/Gur (0.5-5

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km)
  200  B-STB/DIS41        8.000E+05     5.8962E+04     5.4462E+06  Tadmor/Gur (0.5-5
km)
  201  B-STB/DIS42        1.000E+06     7.2126E+04     7.7867E+06  Tadmor/Gur (0.5-5
km)
  202  B-STB/DIS43        1.400E+06     9.7737E+04     1.3350E+07  Tadmor/Gur (0.5-5
km)
  203  B-STB/DIS44        2.000E+06     1.3488E+05     2.3639E+07  Tadmor/Gur (0.5-5
km)
  204  B-STB/DIS45        3.000E+06     1.9453E+05     4.5264E+07  Tadmor/Gur (0.5-5
km)
  205  B-STB/DIS46        4.000E+06     2.5224E+05     7.1765E+07  Tadmor/Gur (0.5-5
km)
  206  B-STB/DIS47        5.000E+06     3.0855E+05     1.0261E+08  Tadmor/Gur (0.5-5
km)
  207  B-STB/DIS48        6.000E+06     3.6378E+05     1.3741E+08  Tadmor/Gur (0.5-5
km)
  208  B-STB/DIS49        8.000E+06     4.7171E+05     2.1787E+08  Tadmor/Gur (0.5-5
km)
  209  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)
  210  C-STB/DIS01        1.000E+00     2.0890E-01     2.0000E-01  Tadmor/Gur (0.5-5
km)
  211  C-STB/DIS02        1.400E+00     2.8308E-01     2.6660E-01  Tadmor/Gur (0.5-5
km)
  212  C-STB/DIS03        2.000E+00     3.9066E-01     3.6158E-01  Tadmor/Gur (0.5-5
km)
  213  C-STB/DIS04        3.000E+00     5.6341E-01     5.1125E-01  Tadmor/Gur (0.5-5
km)
  214  C-STB/DIS05        4.000E+00     7.3056E-01     6.5369E-01  Tadmor/Gur (0.5-5
km)
  215  C-STB/DIS06        5.000E+00     8.9367E-01     7.9097E-01  Tadmor/Gur (0.5-5
km)
  216  C-STB/DIS07        6.000E+00     1.0536E+00     9.2428E-01  Tadmor/Gur (0.5-5
km)
  217  C-STB/DIS08        8.000E+00     1.3662E+00     1.1818E+00  Tadmor/Gur (0.5-5
km)
  218  C-STB/DIS09        1.000E+01     1.6712E+00     1.4300E+00  Tadmor/Gur (0.5-5
km)
  219  C-STB/DIS10        1.000E+02     1.3370E+01     1.0224E+01  Tadmor/Gur (0.5-5
km)
  220  C-STB/DIS11        1.400E+02     1.8118E+01     1.3629E+01  Tadmor/Gur (0.5-5
km)
  221  C-STB/DIS12        2.000E+02     2.5003E+01     1.8484E+01  Tadmor/Gur (0.5-5
km)
  222  C-STB/DIS13        3.000E+02     3.6060E+01     2.6136E+01  Tadmor/Gur (0.5-5
km)
  223  C-STB/DIS14        4.000E+02     4.6758E+01     3.3417E+01  Tadmor/Gur (0.5-5
km)
  224  C-STB/DIS15        5.000E+02     5.7198E+01     4.0435E+01  Tadmor/Gur (0.5-5
km)
  225  C-STB/DIS16        6.000E+02     6.7435E+01     4.7250E+01  Tadmor/Gur (0.5-5
km)
  226  C-STB/DIS17        8.000E+02     8.7442E+01     6.0414E+01  Tadmor/Gur (0.5-5
km)
  227  C-STB/DIS18        1.000E+03     1.0696E+02     7.3102E+01  Tadmor/Gur (0.5-5
km)
  228  C-STB/DIS19        1.400E+03     1.4495E+02     9.7447E+01  Tadmor/Gur (0.5-5
km)
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229	C-STB/DIS20	2.000E+03	2.0003E+02	1.3216E+02	Tadmor/Gur (0.5-5 km)
230	C-STB/DIS21	3.000E+03	2.8849E+02	1.8687E+02	Tadmor/Gur (0.5-5 km)
231	C-STB/DIS22	4.000E+03	3.7408E+02	2.3893E+02	Tadmor/Gur (0.5-5 km)
232	C-STB/DIS23	5.000E+03	4.5759E+02	2.8911E+02	Tadmor/Gur (0.5-5 km)
233	C-STB/DIS24	6.000E+03	5.3949E+02	3.3784E+02	Tadmor/Gur (0.5-5 km)
234	C-STB/DIS25	8.000E+03	6.9955E+02	4.3196E+02	Tadmor/Gur (0.5-5 km)
235	C-STB/DIS26	1.000E+04	8.5573E+02	5.2267E+02	Tadmor/Gur (0.5-5 km)
236	C-STB/DIS27	1.400E+04	1.1596E+03	6.9673E+02	Tadmor/Gur (0.5-5 km)
237	C-STB/DIS28	2.000E+04	1.6003E+03	9.4493E+02	Tadmor/Gur (0.5-5 km)
238	C-STB/DIS29	3.000E+04	2.3080E+03	1.3361E+03	Tadmor/Gur (0.5-5 km)
239	C-STB/DIS30	4.000E+04	2.9927E+03	1.7083E+03	Tadmor/Gur (0.5-5 km)
240	C-STB/DIS31	5.000E+04	3.6608E+03	2.0671E+03	Tadmor/Gur (0.5-5 km)
241	C-STB/DIS32	6.000E+04	4.3161E+03	2.4155E+03	Tadmor/Gur (0.5-5 km)
242	C-STB/DIS33	8.000E+04	5.5965E+03	3.0884E+03	Tadmor/Gur (0.5-5 km)
243	C-STB/DIS34	1.000E+05	6.8460E+03	3.7371E+03	Tadmor/Gur (0.5-5 km)
244	C-STB/DIS35	1.400E+05	9.2770E+03	4.9816E+03	Tadmor/Gur (0.5-5 km)
245	C-STB/DIS36	2.000E+05	1.2803E+04	6.7562E+03	Tadmor/Gur (0.5-5 km)
246	C-STB/DIS37	3.000E+05	1.8464E+04	9.5529E+03	Tadmor/Gur (0.5-5 km)
247	C-STB/DIS38	4.000E+05	2.3942E+04	1.2214E+04	Tadmor/Gur (0.5-5 km)
248	C-STB/DIS39	5.000E+05	2.9287E+04	1.4780E+04	Tadmor/Gur (0.5-5 km)
249	C-STB/DIS40	6.000E+05	3.4529E+04	1.7270E+04	Tadmor/Gur (0.5-5 km)
250	C-STB/DIS41	8.000E+05	4.4773E+04	2.2082E+04	Tadmor/Gur (0.5-5 km)
251	C-STB/DIS42	1.000E+06	5.4769E+04	2.6720E+04	Tadmor/Gur (0.5-5 km)
252	C-STB/DIS43	1.400E+06	7.4218E+04	3.5618E+04	Tadmor/Gur (0.5-5 km)
253	C-STB/DIS44	2.000E+06	1.0242E+05	4.8306E+04	Tadmor/Gur (0.5-5 km)
254	C-STB/DIS45	3.000E+06	1.4772E+05	6.8302E+04	Tadmor/Gur (0.5-5 km)
255	C-STB/DIS46	4.000E+06	1.9154E+05	8.7331E+04	Tadmor/Gur (0.5-5 km)
256	C-STB/DIS47	5.000E+06	2.3430E+05	1.0567E+05	Tadmor/Gur (0.5-5 km)
257	C-STB/DIS48	6.000E+06	2.7624E+05	1.2348E+05	Tadmor/Gur (0.5-5 km)
258	C-STB/DIS49	8.000E+06	3.5819E+05	1.5788E+05	Tadmor/Gur (0.5-5 km)
259	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)	
260	D-STB/DIS01	1.000E+00	1.4740E-01	3.0000E-01	Tadmor/Gur (0.5-5 km)
261	D-STB/DIS02	1.400E+00	1.9974E-01	3.7374E-01	Tadmor/Gur (0.5-5 km)
262	D-STB/DIS03	2.000E+00	2.7565E-01	4.7180E-01	Tadmor/Gur (0.5-5 km)
263	D-STB/DIS04	3.000E+00	3.9754E-01	6.1486E-01	Tadmor/Gur (0.5-5 km)
264	D-STB/DIS05	4.000E+00	5.1549E-01	7.4197E-01	Tadmor/Gur (0.5-5 km)
265	D-STB/DIS06	5.000E+00	6.3058E-01	8.5840E-01	Tadmor/Gur (0.5-5 km)
266	D-STB/DIS07	6.000E+00	7.4344E-01	9.6696E-01	Tadmor/Gur (0.5-5 km)
267	D-STB/DIS08	8.000E+00	9.6400E-01	1.1669E+00	Tadmor/Gur (0.5-5 km)
268	D-STB/DIS09	1.000E+01	1.1792E+00	1.3500E+00	Tadmor/Gur (0.5-5 km)
269	D-STB/DIS10	1.000E+02	9.4340E+00	6.0746E+00	Tadmor/Gur (0.5-5 km)
270	D-STB/DIS11	1.400E+02	1.2784E+01	7.5678E+00	Tadmor/Gur (0.5-5 km)
271	D-STB/DIS12	2.000E+02	1.7642E+01	9.5533E+00	Tadmor/Gur (0.5-5 km)
272	D-STB/DIS13	3.000E+02	2.5444E+01	1.2450E+01	Tadmor/Gur (0.5-5 km)
273	D-STB/DIS14	4.000E+02	3.2993E+01	1.5024E+01	Tadmor/Gur (0.5-5 km)
274	D-STB/DIS15	5.000E+02	4.0359E+01	1.7382E+01	Tadmor/Gur (0.5-5 km)
275	D-STB/DIS16	6.000E+02	4.7582E+01	1.9580E+01	Tadmor/Gur (0.5-5 km)
276	D-STB/DIS17	8.000E+02	6.1699E+01	2.3628E+01	Tadmor/Gur (0.5-5 km)
277	D-STB/DIS18	1.000E+03	7.5474E+01	2.7335E+01	Tadmor/Gur (0.5-5 km)
278	D-STB/DIS19	1.400E+03	1.0227E+02	3.4054E+01	Tadmor/Gur (0.5-5 km)
279	D-STB/DIS20	2.000E+03	1.4114E+02	4.2989E+01	Tadmor/Gur (0.5-5 km)
280	D-STB/DIS21	3.000E+03	2.0356E+02	5.6024E+01	Tadmor/Gur (0.5-5 km)
281	D-STB/DIS22	4.000E+03	2.6395E+02	6.7606E+01	Tadmor/Gur (0.5-5 km)
282	D-STB/DIS23	5.000E+03	3.2288E+02	7.8215E+01	Tadmor/Gur (0.5-5 km)
283	D-STB/DIS24	6.000E+03	3.8067E+02	8.8107E+01	Tadmor/Gur (0.5-5 km)
284	D-STB/DIS25	8.000E+03	4.9360E+02	1.0632E+02	Tadmor/Gur (0.5-5 km)
285	D-STB/DIS26	1.000E+04	6.0381E+02	1.2300E+02	Tadmor/Gur (0.5-5 km)
286	D-STB/DIS27	1.400E+04	8.1821E+02	1.5324E+02	Tadmor/Gur (0.5-5 km)
287	D-STB/DIS28	2.000E+04	1.1292E+03	1.9344E+02	Tadmor/Gur (0.5-5 km)
288	D-STB/DIS29	3.000E+04	1.6285E+03	2.5210E+02	Tadmor/Gur (0.5-5 km)
289	D-STB/DIS30	4.000E+04	2.1116E+03	3.0422E+02	Tadmor/Gur (0.5-5 km)

290	D-STB/DIS31	5.000E+04	2.5831E+03	3.5196E+02	Tadmor/Gur (0.5-5 km)
291	D-STB/DIS32	6.000E+04	3.0454E+03	3.9647E+02	Tadmor/Gur (0.5-5 km)
292	D-STB/DIS33	8.000E+04	3.9489E+03	4.7843E+02	Tadmor/Gur (0.5-5 km)
293	D-STB/DIS34	1.000E+05	4.8306E+03	5.5350E+02	Tadmor/Gur (0.5-5 km)
294	D-STB/DIS35	1.400E+05	6.5458E+03	6.8956E+02	Tadmor/Gur (0.5-5 km)
295	D-STB/DIS36	2.000E+05	9.0335E+03	8.7047E+02	Tadmor/Gur (0.5-5 km)
296	D-STB/DIS37	3.000E+05	1.3028E+04	1.1344E+03	Tadmor/Gur (0.5-5 km)
297	D-STB/DIS38	4.000E+05	1.6893E+04	1.3689E+03	Tadmor/Gur (0.5-5 km)
298	D-STB/DIS39	5.000E+05	2.0665E+04	1.5838E+03	Tadmor/Gur (0.5-5 km)
299	D-STB/DIS40	6.000E+05	2.4364E+04	1.7841E+03	Tadmor/Gur (0.5-5 km)
300	D-STB/DIS41	8.000E+05	3.1592E+04	2.1529E+03	Tadmor/Gur (0.5-5 km)
301	D-STB/DIS42	1.000E+06	3.8645E+04	2.4907E+03	Tadmor/Gur (0.5-5 km)
302	D-STB/DIS43	1.400E+06	5.2368E+04	3.1029E+03	Tadmor/Gur (0.5-5 km)
303	D-STB/DIS44	2.000E+06	7.2270E+04	3.9170E+03	Tadmor/Gur (0.5-5 km)
304	D-STB/DIS45	3.000E+06	1.0423E+05	5.1048E+03	Tadmor/Gur (0.5-5 km)
305	D-STB/DIS46	4.000E+06	1.3515E+05	6.1601E+03	Tadmor/Gur (0.5-5 km)
306	D-STB/DIS47	5.000E+06	1.6532E+05	7.1267E+03	Tadmor/Gur (0.5-5 km)
307	D-STB/DIS48	6.000E+06	1.9492E+05	8.0280E+03	Tadmor/Gur (0.5-5 km)
308	D-STB/DIS49	8.000E+06	2.5274E+05	9.6877E+03	Tadmor/Gur (0.5-5 km)
309	D-STB/DIS50	1.000E+07	3.0917E+05	1.1208E+04	Tadmor/Gur (0.5-5 km)
	*				
	* E-stability	Distance (m)	Sigma-y (m)	Sigma-z (m)	
310	E-STB/DIS01	1.000E+00	1.0460E-01	4.0000E-01	Tadmor/Gur (0.5-5 km)
311	E-STB/DIS02	1.400E+00	1.4174E-01	4.8983E-01	Tadmor/Gur (0.5-5 km)
312	E-STB/DIS03	2.000E+00	1.9561E-01	6.0717E-01	Tadmor/Gur (0.5-5 km)
313	E-STB/DIS04	3.000E+00	2.8211E-01	7.7506E-01	Tadmor/Gur (0.5-5 km)
314	E-STB/DIS05	4.000E+00	3.6581E-01	9.2164E-01	Tadmor/Gur (0.5-5 km)
315	E-STB/DIS06	5.000E+00	4.4748E-01	1.0542E+00	Tadmor/Gur (0.5-5 km)
316	E-STB/DIS07	6.000E+00	5.2757E-01	1.1765E+00	Tadmor/Gur (0.5-5 km)
317	E-STB/DIS08	8.000E+00	6.8409E-01	1.3990E+00	Tadmor/Gur (0.5-5 km)
318	E-STB/DIS09	1.000E+01	8.3682E-01	1.6001E+00	Tadmor/Gur (0.5-5 km)
319	E-STB/DIS10	1.000E+02	6.6947E+00	6.4012E+00	Tadmor/Gur (0.5-5

320	E-STB/DIS11	1.400E+02	9.0719E+00	7.8387E+00	Tadmor/Gur (0.5-5 km)
321	E-STB/DIS12	2.000E+02	1.2520E+01	9.7165E+00	Tadmor/Gur (0.5-5 km)
322	E-STB/DIS13	3.000E+02	1.8056E+01	1.2403E+01	Tadmor/Gur (0.5-5 km)
323	E-STB/DIS14	4.000E+02	2.3413E+01	1.4749E+01	Tadmor/Gur (0.5-5 km)
324	E-STB/DIS15	5.000E+02	2.8640E+01	1.6870E+01	Tadmor/Gur (0.5-5 km)
325	E-STB/DIS16	6.000E+02	3.3766E+01	1.8827E+01	Tadmor/Gur (0.5-5 km)
326	E-STB/DIS17	8.000E+02	4.3784E+01	2.2388E+01	Tadmor/Gur (0.5-5 km)
327	E-STB/DIS18	1.000E+03	5.3559E+01	2.5607E+01	Tadmor/Gur (0.5-5 km)
328	E-STB/DIS19	1.400E+03	7.2577E+01	3.1358E+01	Tadmor/Gur (0.5-5 km)
329	E-STB/DIS20	2.000E+03	1.0016E+02	3.8870E+01	Tadmor/Gur (0.5-5 km)
330	E-STB/DIS21	3.000E+03	1.4445E+02	4.9617E+01	Tadmor/Gur (0.5-5 km)
331	E-STB/DIS22	4.000E+03	1.8731E+02	5.9001E+01	Tadmor/Gur (0.5-5 km)
332	E-STB/DIS23	5.000E+03	2.2912E+02	6.7485E+01	Tadmor/Gur (0.5-5 km)
333	E-STB/DIS24	6.000E+03	2.7013E+02	7.5316E+01	Tadmor/Gur (0.5-5 km)
334	E-STB/DIS25	8.000E+03	3.5028E+02	8.9559E+01	Tadmor/Gur (0.5-5 km)
335	E-STB/DIS26	1.000E+04	4.2848E+02	1.0244E+02	Tadmor/Gur (0.5-5 km)
336	E-STB/DIS27	1.400E+04	5.8063E+02	1.2544E+02	Tadmor/Gur (0.5-5 km)
337	E-STB/DIS28	2.000E+04	8.0129E+02	1.5549E+02	Tadmor/Gur (0.5-5 km)
338	E-STB/DIS29	3.000E+04	1.1556E+03	1.9849E+02	Tadmor/Gur (0.5-5 km)
339	E-STB/DIS30	4.000E+04	1.4985E+03	2.3603E+02	Tadmor/Gur (0.5-5 km)
340	E-STB/DIS31	5.000E+04	1.8330E+03	2.6997E+02	Tadmor/Gur (0.5-5 km)
341	E-STB/DIS32	6.000E+04	2.1611E+03	3.0129E+02	Tadmor/Gur (0.5-5 km)
342	E-STB/DIS33	8.000E+04	2.8023E+03	3.5827E+02	Tadmor/Gur (0.5-5 km)
343	E-STB/DIS34	1.000E+05	3.4279E+03	4.0979E+02	Tadmor/Gur (0.5-5 km)
344	E-STB/DIS35	1.400E+05	4.6452E+03	5.0182E+02	Tadmor/Gur (0.5-5 km)
345	E-STB/DIS36	2.000E+05	6.4105E+03	6.2203E+02	Tadmor/Gur (0.5-5 km)
346	E-STB/DIS37	3.000E+05	9.2453E+03	7.9403E+02	Tadmor/Gur (0.5-5 km)
347	E-STB/DIS38	4.000E+05	1.1988E+04	9.4419E+02	Tadmor/Gur (0.5-5 km)
348	E-STB/DIS39	5.000E+05	1.4665E+04	1.0800E+03	Tadmor/Gur (0.5-5 km)
349	E-STB/DIS40	6.000E+05	1.7289E+04	1.2053E+03	Tadmor/Gur (0.5-5 km)
350	E-STB/DIS41	8.000E+05	2.2419E+04	1.4332E+03	Tadmor/Gur (0.5-5 km)

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  351  E-STB/DIS42        1.000E+06     2.7424E+04     1.6393E+03  Tadmor/Gur (0.5-5
km)
  352  E-STB/DIS43        1.400E+06     3.7162E+04     2.0074E+03  Tadmor/Gur (0.5-5
km)
  353  E-STB/DIS44        2.000E+06     5.1285E+04     2.4883E+03  Tadmor/Gur (0.5-5
km)
  354  E-STB/DIS45        3.000E+06     7.3964E+04     3.1764E+03  Tadmor/Gur (0.5-5
km)
  355  E-STB/DIS46        4.000E+06     9.5907E+04     3.7771E+03  Tadmor/Gur (0.5-5
km)
  356  E-STB/DIS47        5.000E+06     1.1732E+05     4.3203E+03  Tadmor/Gur (0.5-5
km)
  357  E-STB/DIS48        6.000E+06     1.3832E+05     4.8215E+03  Tadmor/Gur (0.5-5
km)
  358  E-STB/DIS49        8.000E+06     1.7935E+05     5.7334E+03  Tadmor/Gur (0.5-5
km)
  359  E-STB/DIS50        1.000E+07     2.1940E+05     6.5578E+03  Tadmor/Gur (0.5-5
km)
       *
       * F-stability      Distance (m)  Sigma-y (m)    Sigma-z (m)
  360  F-STB/DIS01        1.000E+00     7.2200E-02     2.0000E-01  Tadmor/Gur (0.5-5
km)
  361  F-STB/DIS02        1.400E+00     9.7838E-02     2.4491E-01  Tadmor/Gur (0.5-5
km)
  362  F-STB/DIS03        2.000E+00     1.3502E-01     3.0356E-01  Tadmor/Gur (0.5-5
km)
  363  F-STB/DIS04        3.000E+00     1.9473E-01     3.8749E-01  Tadmor/Gur (0.5-5
km)
  364  F-STB/DIS05        4.000E+00     2.5250E-01     4.6076E-01  Tadmor/Gur (0.5-5
km)
  365  F-STB/DIS06        5.000E+00     3.0887E-01     5.2700E-01  Tadmor/Gur (0.5-5
km)
  366  F-STB/DIS07        6.000E+00     3.6415E-01     5.8814E-01  Tadmor/Gur (0.5-5
km)
  367  F-STB/DIS08        8.000E+00     4.7219E-01     6.9934E-01  Tadmor/Gur (0.5-5
km)
  368  F-STB/DIS09        1.000E+01     5.7761E-01     7.9989E-01  Tadmor/Gur (0.5-5
km)
  369  F-STB/DIS10        1.000E+02     4.6210E+00     3.1991E+00  Tadmor/Gur (0.5-5
km)
  370  F-STB/DIS11        1.400E+02     6.2619E+00     3.9174E+00  Tadmor/Gur (0.5-5
km)
  371  F-STB/DIS12        2.000E+02     8.6417E+00     4.8557E+00  Tadmor/Gur (0.5-5
km)
  372  F-STB/DIS13        3.000E+02     1.2463E+01     6.1981E+00  Tadmor/Gur (0.5-5
km)
  373  F-STB/DIS14        4.000E+02     1.6161E+01     7.3700E+00  Tadmor/Gur (0.5-5
km)
  374  F-STB/DIS15        5.000E+02     1.9769E+01     8.4297E+00  Tadmor/Gur (0.5-5
km)
  375  F-STB/DIS16        6.000E+02     2.3307E+01     9.4076E+00  Tadmor/Gur (0.5-5
km)
  376  F-STB/DIS17        8.000E+02     3.0222E+01     1.1186E+01  Tadmor/Gur (0.5-5
km)
  377  F-STB/DIS18        1.000E+03     3.6969E+01     1.2795E+01  Tadmor/Gur (0.5-5
km)
  378  F-STB/DIS19        1.400E+03     5.0096E+01     1.5667E+01  Tadmor/Gur (0.5-5
km)
  379  F-STB/DIS20        2.000E+03     6.9135E+01     1.9420E+01  Tadmor/Gur (0.5-5
km)
  380  F-STB/DIS21        3.000E+03     9.9707E+01     2.4789E+01  Tadmor/Gur (0.5-5
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381	F-STB/DIS22	4.000E+03	1.2929E+02	2.9476E+01	Tadmor/Gur (0.5-5 km)
382	F-STB/DIS23	5.000E+03	1.5815E+02	3.3714E+01	Tadmor/Gur (0.5-5 km)
383	F-STB/DIS24	6.000E+03	1.8646E+02	3.7625E+01	Tadmor/Gur (0.5-5 km)
384	F-STB/DIS25	8.000E+03	2.4178E+02	4.4739E+01	Tadmor/Gur (0.5-5 km)
385	F-STB/DIS26	1.000E+04	2.9576E+02	5.1172E+01	Tadmor/Gur (0.5-5 km)
386	F-STB/DIS27	1.400E+04	4.0078E+02	6.2661E+01	Tadmor/Gur (0.5-5 km)
387	F-STB/DIS28	2.000E+04	5.5309E+02	7.7669E+01	Tadmor/Gur (0.5-5 km)
388	F-STB/DIS29	3.000E+04	7.9767E+02	9.9142E+01	Tadmor/Gur (0.5-5 km)
389	F-STB/DIS30	4.000E+04	1.0343E+03	1.1789E+02	Tadmor/Gur (0.5-5 km)
390	F-STB/DIS31	5.000E+04	1.2653E+03	1.3484E+02	Tadmor/Gur (0.5-5 km)
391	F-STB/DIS32	6.000E+04	1.4917E+03	1.5048E+02	Tadmor/Gur (0.5-5 km)
392	F-STB/DIS33	8.000E+04	1.9343E+03	1.7893E+02	Tadmor/Gur (0.5-5 km)
393	F-STB/DIS34	1.000E+05	2.3661E+03	2.0466E+02	Tadmor/Gur (0.5-5 km)
394	F-STB/DIS35	1.400E+05	3.2063E+03	2.5061E+02	Tadmor/Gur (0.5-5 km)
395	F-STB/DIS36	2.000E+05	4.4248E+03	3.1063E+02	Tadmor/Gur (0.5-5 km)
396	F-STB/DIS37	3.000E+05	6.3815E+03	3.9651E+02	Tadmor/Gur (0.5-5 km)
397	F-STB/DIS38	4.000E+05	8.2748E+03	4.7149E+02	Tadmor/Gur (0.5-5 km)
398	F-STB/DIS39	5.000E+05	1.0122E+04	5.3927E+02	Tadmor/Gur (0.5-5 km)
399	F-STB/DIS40	6.000E+05	1.1934E+04	6.0183E+02	Tadmor/Gur (0.5-5 km)
400	F-STB/DIS41	8.000E+05	1.5475E+04	7.1563E+02	Tadmor/Gur (0.5-5 km)
401	F-STB/DIS42	1.000E+06	1.8929E+04	8.1852E+02	Tadmor/Gur (0.5-5 km)
402	F-STB/DIS43	1.400E+06	2.5651E+04	1.0023E+03	Tadmor/Gur (0.5-5 km)
403	F-STB/DIS44	2.000E+06	3.5400E+04	1.2424E+03	Tadmor/Gur (0.5-5 km)
404	F-STB/DIS45	3.000E+06	5.1053E+04	1.5858E+03	Tadmor/Gur (0.5-5 km)
405	F-STB/DIS46	4.000E+06	6.6200E+04	1.8857E+03	Tadmor/Gur (0.5-5 km)
406	F-STB/DIS47	5.000E+06	8.0980E+04	2.1568E+03	Tadmor/Gur (0.5-5 km)
407	F-STB/DIS48	6.000E+06	9.5474E+04	2.4070E+03	Tadmor/Gur (0.5-5 km)
408	F-STB/DIS49	8.000E+06	1.2380E+05	2.8621E+03	Tadmor/Gur (0.5-5 km)
409	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

```
      *
  410 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
      *
  411 DPZSCALE001    1.27

******************************************************************************
      * EXPANSION FACTOR DATA BLOCK, LOADED BY INPEXP, STORED IN /EXPAND/
      *
      * TIME BASE FOR EXPANSION FACTOR (SECONDS)
      *
  412 PMTIMBAS001    600.   (10 MINUTES)
      *
      * BREAK POINT FOR FORMULA CHANGE (SECONDS)
      *
  413 PMBRKPNT001   3600.   (1 HOUR)
      *
      * EXPONENTIAL EXPANSION FACTOR NUMBER 1
      *
  414 PMXPFAC1001      0.2
      *
      * EXPONENTIAL EXPANSION FACTOR NUMBER 2
      *
  415 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)
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      *
  416 PRSCLCRW001   1.
      *
      * SCALING FACTOR FOR THE A-D STABILITY PLUME RISE FORMULA
      * (USED BY FUNCTION PLMRIS)
      *
  417 PRSCLADP001   1.
      *
      * SCALING FACTOR FOR THE E-F STABILITY PLUME RISE FORMULA
      * (USED BY FUNCTION PLMRIS)
      *
  418 PRSCLEFP001   1.
*******************************************************************************
      * RELEASE DATA BLOCK, LOADED BY INPREL, STORED IN /ATNAM2/, /MULREL/
*******************************************************************************
  419 RDATNAM2001 'Case 1BOC  ESBWR Specific Source Term Data Used From GE'
*******************************************************************************
      * 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
*******************************************************************************
  420 RDOALARM001      1200.
      *
      * NUMBER OF PLUME SEGMENTS THAT ARE RELEASED
      *
  421 RDNUMREL001          1
      *
      * SELECTION OF RISK DOMINANT PLUME
      *
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422  RDMAXRIS001          1
     *
     * REFERENCE TIME FOR DISPERSION AND RADIOACTIVE DECAY
     *
423  RDREFTIM001       0.0
     *
     * HEAT CONTENT OF THE RELEASE SEGMENTS (W)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
424  RDPLHEAT001        1.0E-6
     *
     * HEIGHT OF THE PLUME SEGMENTS AT RELEASE (M)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
425  RDPLHITE001        49.0
     *
     * DURATION OF THE PLUME SEGMENTS (S)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
426  RDPLUDUR001     9000.
     *
     * TIME OF RELEASE FOR EACH PLUME (S AFTER SCRAM)
     * A VALUE SPECIFIED FOR EACH OF THE RELEASE SEGMENTS
     *
427  RDPDELAY001     2100.
     *
     * Initial value of sigma-y for each plume--Note: values required for each
plume
     *
428  SIGYINIT001  9.302  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
     *
```

```
429  SIGZINIT001  23.26  23.26 (initial sigma-z, calculated for 50 meter high
bldg.)
     *
     * Building height (meters)--Note: values required for each plume
     *
430  WEBUILDH001   50.0  50.0  (Surry)
     *
     * PARTICLE SIZE DISTRIBUTION OF EACH NUCLIDE GROUP
     * YOU MUST SPECIFY A COLUMN OF DATA FOR EACH OF THE PARTICLE SIZE GROUPS
     *
431  RDPSDIST001      1.
432  RDPSDIST002      1.
433  RDPSDIST003      1.
434  RDPSDIST004      1.
435  RDPSDIST005      1.
436  RDPSDIST006      1.
437  RDPSDIST007      1.
438  RDPSDIST008      1.
439  RDPSDIST009      1.
     *
     * ESBWR CORE INVENTORY, END-OF-CYCLE
     *           SUPPLIED BY GE for ESBWR, 4/04/06
     *
     *               NUCNAM        CORINV (Bq/MWt)
     *
440  RDCORINV001      Co-58       5.10E+12
441  RDCORINV002      Co-60       4.92E+12
442  RDCORINV003      Kr-85       1.23E+13
443  RDCORINV004      Kr-85m      2.73E+14
444  RDCORINV005      Kr-87       5.27E+14
445  RDCORINV006      Kr-88       7.42E+14
446  RDCORINV007      Rb-86       2.35E+12
```

447	RDCORINV008	Sr-89	9.93E+14
448	RDCORINV009	Sr-90	9.76E+13
449	RDCORINV010	Sr-91	1.25E+15
450	RDCORINV011	Sr-92	1.34E+15
451	RDCORINV012	Y-90	1.01E+14
452	RDCORINV013	Y-91	1.27E+15
453	RDCORINV014	Y-92	1.34E+15
454	RDCORINV015	Y-93	1.55E+15
455	RDCORINV016	Zr-95	1.70E+15
456	RDCORINV017	Zr-97	1.69E+15
457	RDCORINV018	Nb-95	1.71E+15
458	RDCORINV019	Mo-99	1.89E+15
459	RDCORINV020	Tc-99m	1.68E+15
460	RDCORINV021	Ru-103	1.50E+15
461	RDCORINV022	Ru-105	1.00E+15
462	RDCORINV023	Ru-106	5.21E+14
463	RDCORINV024	Rh-105	9.10E+14
464	RDCORINV025	Sb-127	1.03E+14
465	RDCORINV026	Sb-129	3.15E+14
466	RDCORINV027	Te-127	1.05E+14
467	RDCORINV028	Te-127m	1.37E+13
468	RDCORINV029	Te-129	3.10E+14
469	RDCORINV030	Te-129m	4.60E+13
470	RDCORINV031	Te-131m	1.42E+14
471	RDCORINV032	Te-132	1.41E+15
472	RDCORINV033	I-131	9.90E+14
473	RDCORINV034	I-132	1.44E+15
474	RDCORINV035	I-133	2.04E+15
475	RDCORINV036	I-134	2.25E+15
476	RDCORINV037	I-135	1.91E+15
477	RDCORINV038	Xe-133	2.03E+15
478	RDCORINV039	Xe-135	6.72E+14

```
479  RDCORINV040      Cs-134      1.98E+14
480  RDCORINV041      Cs-136      6.89E+13
481  RDCORINV042      Cs-137      1.28E+14
482  RDCORINV043      Ba-139      1.84E+15
483  RDCORINV044      Ba-140      1.77E+15
484  RDCORINV045      La-140      1.82E+15
485  RDCORINV046      La-141      1.68E+15
486  RDCORINV047      La-142      1.62E+15
487  RDCORINV048      Ce-141      1.68E+15
488  RDCORINV049      Ce-143      1.56E+15
489  RDCORINV050      Ce-144      1.36E+15
490  RDCORINV051      Pr-143      1.53E+15
491  RDCORINV052      Nd-147      6.69E+14
492  RDCORINV053      Np-239      1.93E+16
493  RDCORINV054      Pu-238      3.34E+12
494  RDCORINV055      Pu-239      4.02E+11
495  RDCORINV056      Pu-240      5.21E+11
496  RDCORINV057      Pu-241      1.51E+14
497  RDCORINV058      Am-241      1.70E+11
498  RDCORINV059      Cm-242      4.01E+13
499  RDCORINV060      Cm-244      1.94E+12
     *
     *  SCALING FACTOR TO ADJUST THE CORE INVENTORY FOR POWER LEVEL
     * scaling factor to adjust inventory from Bq/MWt to Bq
     *          enter the total thermal power
     *
500  RDCORSCA001   4500.0  *  ESBWR power level = 4500
     *
     *
501  RDAPLFRC001   PARENT      (apply rel fracs the same as prior versions)
     *
```

```
        * SOURCE TERM NUMBER

        ****** These RELEASE FRACTIONS are for Case 1BOC
*******************************
        ******

        ******

        *

        *  ISOTOPE GROUPS:

        *

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

  502  RDRELFRC001 1.00E+00 8.50E-01 3.80E-01 9.06E-01 1.50E-02 7.20E-02 6.10E-04
3.43E-03 1.50E-02

*******************************************************************************

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

        *

        * FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN

        *

  503  OCENDAT1001  .FALSE. (SET THIS VALUE TO .TRUE. TO SKIP EARLY AND CHRONC)

        *

  504  OCIDEBUG001  0

        *

        * NAME OF THE NUCLIDE TO BE LISTED ON THE DISPERSION LISTINGS

        *

  505  OCNUCOUT001  Cs-137

        *

        *              NUMO

  506  TYPEONUMBER      2

        *

        *              INDREL   INDRAD

  507  TYPEOOUT001      1        9

  508  TYPEOOUT002      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.
     *
509  M1METCOD001  2
     *
     * LAST SPATIAL INTERVAL FOR MEASURED WEATHER
     *
510  M2LIMSPA001  11
     *
     * BOUNDARY WEATHER MIXING LAYER HEIGHT
     *
511  M2BNDMXH001  1000.  (METERS)
     *
     * BOUNDARY WEATHER STABILITY CLASS INDEX
     *
512  M2IBDSTB001  4      (D-STABILITY)
     *
     * BOUNDARY WEATHER RAIN RATE
     *
513  M2BNDRAN001  5.     (MM/HR)
     *
     * BOUNDARY WEATHER WIND SPEED
     *
514  M2BNDWND001  5.     (M/S)
     *
```

```
     * NUMBER OF RAIN DISTANCE INTERVALS FOR BINNING
     *
515  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).
     *
516  M4RNDSTS001  3.22  6.44  8.05  16.09  32.19
     *
     * NUMBER OF RAIN INTENSITIY BREAKPOINTS
     *
517  M4NRINTN001   3
     *
     * RAIN INTENSITY BREAKPOINTS FOR WEATHER BINNING (MILLIMETERS PER HOUR)
     *
518  M4RNRATE001   2.  4.  6.
     *
     * NUMBER OF SAMPLES PER BIN
     *
519  M4NSMPLS001  4  (THIS NUMBER SHOULD BE SET TO 4 FOR RISK ASSESSMENT)
     *
     * INITIAL SEED FOR RANDOM NUMBER GENERATOR
     *
520  M4IRSEED001   79
     ******************************************************************************
     .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                          =  759
NUMBER OF BLANK OR COMMENT RECORDS READ         =  238
```

```
NUMBER OF TERMINATOR RECORDS                    =    1
NUMBER OF RECORDS PROCESSED                     =  520
     NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
     NUMBER OF PROCESSED RECORDS SORTED         =  520
*****************************************************************************************
****************


Decay Chain #  Ba-139

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

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

Decay Chain #  Ce-144

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

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

Decay Chain #  Co-58

Decay Chain #  Co-60

Decay Chain #  Cs-134

Decay Chain #  Cs-136

Decay Chain #  Cs-137

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

Decay Chain #  I-134

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

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

Decay Chain #  Kr-87

Decay Chain #  Kr-88

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

Decay Chain #  La-142

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

Decay Chain #  Nd-147

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

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

Decay Chain #  Rb-86

Decay Chain #  Ru-103

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

Decay Chain #  Ru-106

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

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

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

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

Decay Chain #  Sr-89

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

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

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

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

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

Decay Chain #  Y-93

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

Decay Chain #  Zr-97

Using new table-lookup scheme for sigma-y/sigma-z


RELEASED INVENTORY OF ALL PLUMES
Co-58       1.65E+15
Co-60       1.59E+15
Kr-85       5.54E+16
Kr-85m      1.12E+18
Kr-87       1.73E+18
Kr-88       2.90E+18
```

```
Rb-86       4.01E+15
Sr-89       6.70E+16
Sr-90       6.59E+15
Sr-91       8.09E+16
Sr-92       7.79E+16
Y-90        3.17E+14
Y-91        3.50E+15
Y-92        1.23E+16
Y-93        4.09E+15
Zr-95       4.67E+15
Zr-97       4.53E+15
Nb-95       4.69E+15
Mo-99       6.09E+17
Tc-99m      5.44E+17
Ru-103      4.86E+17
Ru-105      2.96E+17
Ru-106      1.69E+17
Rh-105      2.95E+17
Sb-127      4.18E+17
Sb-129      1.17E+18
Te-127      4.27E+17
Te-127m     5.59E+16
Te-129      1.21E+18
Te-129m     1.88E+17
Te-131m     5.71E+17
Te-132      5.72E+18
I-131       3.78E+18
I-132       5.54E+18
I-133       7.65E+18
I-134       5.43E+18
I-135       6.87E+18
Xe-133      9.13E+18
Xe-135      3.15E+18
Cs-134      3.39E+17
Cs-136      1.18E+17
Cs-137      2.19E+17
Ba-139      9.26E+16
Ba-140      1.19E+17
La-140      6.14E+15
La-141      4.16E+15
La-142      3.42E+15
Ce-141      2.59E+16
Ce-143      2.38E+16
Ce-144      2.10E+16
Pr-143      4.22E+15
Nd-147      1.83E+15
Np-239      2.96E+17
Pu-238      5.16E+13
Pu-239      6.21E+12
Pu-240      8.04E+12
Pu-241      2.33E+15
Am-241      4.67E+11
Cm-242      1.10E+14
Cm-244      5.33E+12

READING FROM A WEATHER FILE WITH THE FOLLOWING HEADER:

     METEOROLOGICAL DATA FILE CONTAINS  551 HOURS OF OBSERVED RAIN DATA.
            ACCUMULATED RAIN MEASUREMENTS TOTALED  30.40 INCHES FOR THE YEAR.
            CONSTANT LID HEIGHTS (M) FOR 4 SEASONS =    1000   1500   1700   1000
            NON-ZERO WINDSPEEDS LESS THAN 0.5 M/S ARE SET TO 0.5 M/S
NUMTRI=          117
```

```
                                        * * * * METEOROLOGICAL BIN SUMMARY * * * *
  BIN PRIORITIES
    RI XX - RAIN INTENSITY I WITHIN THE INTERVAL ENDING AT XX
                INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5
INTERVAL ENDPOINTS ARE    3   6   8  16  32
                RAIN INTENSITIES ARE IN MILLIMETERS OF RAIN PER HOUR, THE 3 INTENSITY
BREAKPOINTS ARE          2.0  4.0  6.0
    S   V - INITIAL WEATHER CONDITIONS WITH STABILITY CLASS S AND WIND SPEED
INTERVAL V
                STABILITY CLASSES ARE B = A/B, D = C/D, E = E, AND F = F
                WIND SPEED INTERVALS ARE IN METERS PER SECOND, 1 (0-1), 2 (1-2), 3
(2-3), 4 (3-5), 5 (5-7), 6 (GT 7)

                                                                WIND DIRECTION
  METBIN     1      2      3      4      5      6      7      8      9     10     11     12
13    14     15     16  TOTAL    PER CENT

 1 B    3  0.076 0.085 0.073 0.031 0.025 0.056 0.107 0.079 0.071 0.037 0.040 0.031
0.056 0.119 0.073 0.040  354      4.0411
 2 B    4  0.076 0.151 0.114 0.072 0.093 0.107 0.094 0.058 0.093 0.035 0.024 0.029
0.009 0.013 0.014 0.016  859      9.8059
 3 D    1  0.015 0.000 0.030 0.075 0.030 0.119 0.060 0.134 0.119 0.045 0.060 0.134
0.045 0.060 0.060 0.015   67      0.7648
 4 D    2  0.017 0.041 0.048 0.035 0.028 0.058 0.093 0.091 0.058 0.060 0.086 0.078
0.125 0.104 0.043 0.035  463      5.2854
 5 D    3  0.076 0.079 0.094 0.033 0.039 0.044 0.054 0.098 0.079 0.088 0.079 0.044
0.054 0.076 0.037 0.028  725      8.2763
 6 D    4  0.065 0.115 0.094 0.037 0.026 0.029 0.049 0.074 0.117 0.117 0.065 0.044
0.046 0.055 0.041 0.026 1399     15.9703
 7 D    5  0.029 0.116 0.103 0.092 0.053 0.068 0.095 0.089 0.134 0.074 0.046 0.033
0.021 0.021 0.020 0.006  717      8.1849
 8 D    6  0.006 0.133 0.144 0.065 0.079 0.234 0.153 0.099 0.048 0.011 0.003 0.000
0.000 0.008 0.017 0.000  354      4.0411
 9 E    1  0.044 0.033 0.055 0.077 0.044 0.055 0.066 0.110 0.066 0.099 0.088 0.066
0.088 0.055 0.044 0.011   91      1.0388
10 E    2  0.036 0.059 0.071 0.059 0.062 0.056 0.104 0.101 0.074 0.033 0.062 0.036
0.065 0.071 0.068 0.042  337      3.8470
11 E    3  0.078 0.110 0.128 0.090 0.043 0.054 0.110 0.112 0.040 0.025 0.025 0.020
0.034 0.038 0.056 0.038  446      5.0913
12 E    4  0.106 0.178 0.189 0.075 0.092 0.083 0.047 0.029 0.028 0.028 0.019 0.009
0.011 0.013 0.043 0.050 1165     13.2991
13 F    1  0.056 0.090 0.090 0.079 0.146 0.034 0.056 0.022 0.056 0.034 0.022 0.056
0.067 0.090 0.056 0.045   89      1.0160
14 F    2  0.061 0.080 0.111 0.115 0.083 0.086 0.067 0.061 0.029 0.035 0.032 0.041
0.051 0.041 0.038 0.070  314      3.5845
15 F    3  0.126 0.065 0.083 0.112 0.090 0.108 0.076 0.072 0.025 0.043 0.029 0.011
0.022 0.018 0.054 0.065  277      3.1621
16 F    4  0.123 0.158 0.135 0.108 0.108 0.135 0.054 0.054 0.023 0.015 0.019 0.012
0.015 0.012 0.008 0.023  260      2.9680
17 R1   3  0.060 0.071 0.041 0.030 0.014 0.046 0.030 0.078 0.186 0.126 0.113 0.078
0.062 0.034 0.018 0.011  435      4.9658
18 R1   6  0.000 0.000 0.000 0.000 0.000 0.100 0.100 0.100 0.000 0.100 0.200 0.100
0.200 0.000 0.000 0.100   10      0.1142
19 R1   8  0.000 0.000 0.000 0.000 0.000 0.100 0.000 0.000 0.000 0.200 0.200 0.100
0.200 0.200 0.000 0.000   10      0.1142
20 R1  16  0.057 0.138 0.069 0.023 0.011 0.023 0.034 0.034 0.126 0.069 0.080 0.126
0.057 0.069 0.034 0.046   87      0.9932
21 R1  32  0.079 0.126 0.053 0.013 0.007 0.020 0.033 0.060 0.132 0.106 0.093 0.099
0.053 0.066 0.033 0.026  151      1.7237
22 R2   3  0.051 0.051 0.025 0.025 0.025 0.025 0.063 0.127 0.114 0.177 0.089 0.101
0.038 0.038 0.013 0.038   79      0.9018
```

```
24 R2  8  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 1.000 0.000
0.000 0.000 0.000 0.000    1     0.0114
25 R2 16  0.286 0.143 0.286 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.143 0.000
0.000 0.000 0.143 0.000    7     0.0799
26 R2 32  0.077 0.154 0.154 0.000 0.000 0.000 0.000 0.000 0.154 0.077 0.000 0.077
0.077 0.000 0.154 0.077   13     0.1484
27 R3  3  0.040 0.040 0.040 0.000 0.000 0.000 0.080 0.280 0.200 0.080 0.120 0.040
0.000 0.000 0.080 0.000   25     0.2854
30 R3 16  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
1.000 0.000 0.000 0.000    1     0.0114
31 R3 32  0.000 0.333 0.000 0.000 0.000 0.000 0.000 0.000 0.333 0.000 0.000 0.000
0.000 0.000 0.333 0.000    3     0.0342
32 R4  3  0.083 0.083 0.000 0.167 0.083 0.000 0.083 0.000 0.083 0.167 0.000 0.167
0.000 0.000 0.083 0.000   12     0.1370
34 R4  8  0.000 0.000 0.000 0.000 0.000 0.000 0.000 1.000 0.000 0.000 0.000 0.000
0.000 0.000 0.000 0.000    1     0.0114
35 R4 16  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.333 0.000 0.333
0.000 0.000 0.000 0.333    3     0.0342
36 R4 32  0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.200 0.200 0.200 0.000
0.000 0.000 0.400 0.000    5     0.0571
37 ALL    0.067 0.111 0.105 0.061 0.056 0.071 0.072 0.074 0.081 0.063 0.050 0.038
0.039 0.043 0.038 0.030 8760
```

* * * * METEOROLOGICAL BIN SUMMARY * * * *

BIN PRIORITIES

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

INTERVAL ENDPOINTS ARE IN KILOMETERS FROM THE ACCIDENT SITE, THE 5 INTERVAL ENDPOINTS ARE 3 6 8 16 32

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

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

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

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

METBIN			WIND DIRECTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16 TOTAL	PER CENT
1 B	3		27	30	26	11	9	20	38	28	25	13	14	11	20	42	26	14	354 4.0411
2 B	4		65	130	98	62	80	92	81	50	80	30	21	25	8	11	12	14	859 9.8059
3 D	1		1	0	2	5	2	8	4	9	8	3	4	9	3	4	4	1	67 0.7648
4 D	2		8	19	22	16	13	27	43	42	27	28	40	36	58	48	20	16	463 5.2854
5 D	3		55	57	68	24	28	32	39	71	57	64	57	32	39	55	27	20	725 8.2763
6 D	4		91	161	131	52	37	41	69	103	163	164	91	61	64	77	58	36	1399 15.9703
7 D	5		21	83	74	66	38	49	68	64	96	53	33	24	15	15	14	4	717 8.1849
8 D	6		2	47	51	23	28	83	54	35	17	4	1	0	0	3	6	0	354 4.0411
9 E	1		4	3	5	7	4	5	6	10	6	9	8	6	8	5	4	1	91 1.0388
10 E	2		12	20	24	20	21	19	35	34	25	11	21	12	22	24	23	14	337 3.8470
11 E	3		35	49	57	40	19	24	49	50	18	11	11	9	15	17	25	17	446 5.0913
12 E	4		123	207	220	87	107	97	55	34	33	33	22	11	13	15	50		

```
  58 1165     13.2991
13 F   1      5    8    8    7   13    3    5    2    5    3    2    5    6    8    5
   4   89      1.0160
14 F   2     19   25   35   36   26   27   21   19    9   11   10   13   16   13   12
  22  314      3.5845
15 F   3     35   18   23   31   25   30   21   20    7   12    8    3    6    5   15
  18  277      3.1621
16 F   4     32   41   35   28   28   35   14   14    6    4    5    3    4    3    2
   6  260      2.9680
17 R1  3     26   31   18   13    6   20   13   34   81   55   49   34   27   15    8
   5  435      4.9658
18 R1  6      0    0    0    0    0    1    1    1    0    1    2    1    2    0    0
   1   10      0.1142
19 R1  8      0    0    0    0    0    1    0    0    0    2    2    1    2    2    0
   0   10      0.1142
20 R1 16      5   12    6    2    1    2    3    3   11    6    7   11    5    6    3
   4   87      0.9932
21 R1 32     12   19    8    2    1    3    5    9   20   16   14   15    8   10    5
   4  151      1.7237
22 R2  3      4    4    2    2    2    2    5   10    9   14    7    8    3    3    1
   3   79      0.9018
23 R2  6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
   0    0      0.0000
24 R2  8      0    0    0    0    0    0    0    0    0    0    1    0    0    0    0
   0    1      0.0114
25 R2 16      2    1    2    0    0    0    0    0    0    0    1    0    0    0    1
   0    7      0.0799
26 R2 32      1    2    2    0    0    0    0    0    2    1    0    1    1    0    2
   1   13      0.1484
27 R3  3      1    1    1    0    0    0    2    7    5    2    3    1    0    0    2
   0   25      0.2854
28 R3  6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
   0    0      0.0000
29 R3  8      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
   0    0      0.0000
30 R3 16      0    0    0    0    0    0    0    0    0    0    0    0    1    0    0
   0    1      0.0114
31 R3 32      0    1    0    0    0    0    0    0    1    0    0    0    0    0    1
   0    3      0.0342
32 R4  3      1    1    0    2    1    0    1    0    1    2    0    2    0    0    1
   0   12      0.1370
33 R4  6      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0
   0    0      0.0000
34 R4  8      0    0    0    0    0    0    0    1    0    0    0    0    0    0    0
   0    1      0.0114
35 R4 16      0    0    0    0    0    0    0    0    0    1    0    1    0    0    0
   1    3      0.0342
36 R4 32      0    0    0    0    0    0    0    0    1    1    1    0    0    0    2
   0    5      0.0571


              * * * * SUMMARIES * * * *

   R         52   72   39   21   11   29   30   65  131  101   87   75   49   36   26
 19  843      9.6233
   B         92  160  124   73   89  112  119   78  105   43   35   36   28   53   38
 28 1213     13.8470
   D        178  367  348  186  146  240  277  324  368  316  226  162  179  202  129
 77 3725     42.5228
   E        174  279  306  154  151  145  145  128   82   64   62   38   58   61  102
 90 2039     23.2763
   F         91   92  101  102   92   95   61   55   27   30   25   24   32   29   34
 50  940     10.7306
```

```
     1    10   11   15   19   19   16   15   21   22   15   14   21   18   17   13
  6  252     2.8767
     2    42   70   87   74   62   79  112  109   69   54   77   63  108  105   62
 55 1228    14.0183
     3   149  148  168  104   79  100  134  155   96   96   84   52   67   99   86
 66 1683    19.2123
     4   263  397  312  140  137  143  147  164  236  212  131   98   84  102  117
107 2790    31.8493
     5    66  198  200  129  121  117  103   91  131   71   40   26   19   19   18
 10 1359    15.5137
     6     5   74   97   49   60  137   91   45   28    5    2    0    1    3    7
  1  605     6.9064
```

```
0                 * * * * * BIN WINDROSE SUMMARY * * * * *

  BIN                                DIRECTION
                                        TOTAL
          1      2      3      4      5      6      7      8      9     10     11
 12     13     14     15     16
    1  0.076  0.085  0.073  0.031  0.025  0.056  0.107  0.079  0.071  0.037  0.040
0.031  0.056  0.119  0.073  0.040  1.000000
    2  0.076  0.151  0.114  0.072  0.093  0.107  0.094  0.058  0.093  0.035  0.024
0.029  0.009  0.013  0.014  0.016  1.000000
    3  0.015  0.000  0.030  0.075  0.030  0.119  0.060  0.134  0.119  0.045  0.060
0.134  0.045  0.060  0.060  0.015  1.000000
    4  0.017  0.041  0.048  0.035  0.028  0.058  0.093  0.091  0.058  0.060  0.086
0.078  0.125  0.104  0.043  0.035  1.000000
    5  0.076  0.079  0.094  0.033  0.039  0.044  0.054  0.098  0.079  0.088  0.079
0.044  0.054  0.076  0.037  0.028  1.000000
    6  0.065  0.115  0.094  0.037  0.026  0.029  0.049  0.074  0.117  0.117  0.065
0.044  0.046  0.055  0.041  0.026  1.000000
    7  0.029  0.116  0.103  0.092  0.053  0.068  0.095  0.089  0.134  0.074  0.046
0.033  0.021  0.021  0.020  0.006  1.000000
    8  0.006  0.133  0.144  0.065  0.079  0.234  0.153  0.099  0.048  0.011  0.003
0.000  0.000  0.008  0.017  0.000  1.000000
    9  0.044  0.033  0.055  0.077  0.044  0.055  0.066  0.110  0.066  0.099  0.088
0.066  0.088  0.055  0.044  0.011  1.000000
   10  0.036  0.059  0.071  0.059  0.062  0.056  0.104  0.101  0.074  0.033  0.062
0.036  0.065  0.071  0.068  0.042  1.000000
   11  0.078  0.110  0.128  0.090  0.043  0.054  0.110  0.112  0.040  0.025  0.025
0.020  0.034  0.038  0.056  0.038  1.000000
   12  0.106  0.178  0.189  0.075  0.092  0.083  0.047  0.029  0.028  0.028  0.019
0.009  0.011  0.013  0.043  0.050  1.000000
   13  0.056  0.090  0.090  0.079  0.146  0.034  0.056  0.022  0.056  0.034  0.022
0.056  0.067  0.090  0.056  0.045  1.000000
   14  0.061  0.080  0.111  0.115  0.083  0.086  0.067  0.061  0.029  0.035  0.032
0.041  0.051  0.041  0.038  0.070  1.000000
   15  0.126  0.065  0.083  0.112  0.090  0.108  0.076  0.072  0.025  0.043  0.029
0.011  0.022  0.018  0.054  0.065  1.000000
   16  0.123  0.158  0.135  0.108  0.108  0.135  0.054  0.054  0.023  0.015  0.019
0.012  0.015  0.012  0.008  0.023  1.000000
   17  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   18  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   19  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   20  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   21  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   22  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
```

```
   23  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   24  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   25  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   26  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   27  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   28  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   29  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   30  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   31  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   32  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   33  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   34  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   35  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   36  0.062  0.085  0.046  0.025  0.013  0.034  0.036  0.077  0.155  0.120  0.103
0.089  0.058  0.043  0.031  0.023  1.000000
   37  0.067  0.111  0.105  0.061  0.056  0.071  0.072  0.074  0.081  0.063  0.050
0.038  0.039  0.043  0.038  0.030  1.000000


******** BEGINNING OF CHANGE CASE   1 USER INPUT ********
       ****** 10 ESBWR STACKED CASES BEGIN
HERE*****************************************
       ******************************************************************************

       *

       * ESBWR Source Term data

       *


*==============================================================================

  521  RDATNAM2001     'Case 2BYP'

********   RECORD NUMBER   521 REPLACES RECORD NUMBER   419   ********
  522  RDDALARM001     1200.0      (time to reach general emergency condition, sec)

********   RECORD NUMBER   522 REPLACES RECORD NUMBER   420   ********
  523  RDPDELAY001     1800.0      (time of release after scram, sec)

********   RECORD NUMBER   523 REPLACES RECORD NUMBER   427   ********
  524  RDPLUDUR001     7800.0      (release duration, sec)

********   RECORD NUMBER   524 REPLACES RECORD NUMBER   426   ********
  525  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   525 REPLACES RECORD NUMBER   424   ********
  526  RDPLHITE001     49.0        (height of the plume segments at release, m)
```

```
********   RECORD NUMBER   526 REPLACES RECORD NUMBER   425   ********
       *

       *                                release fractions by group

       *                1      2      3      4      5      6      7      8      9

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

  527  RDRELFRC001   9.80E-01 4.30E-01 3.70E-01 7.42E-01 1.60E-02 1.20E-01 5.30E-04
3.32E-03 2.90E-02
********   RECORD NUMBER   527 REPLACES RECORD NUMBER   502   ********
       .

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

USER INPUT PROCESSING SUMMARY - CHANGE CASE   1
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*****************************************************************************************
****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       2.75E+15
Co-60       2.66E+15
Kr-85       5.42E+16
Kr-85m      1.11E+18
Kr-87       1.77E+18
Kr-88       2.90E+18
Rb-86       3.91E+15
Sr-89       7.15E+16
Sr-90       7.03E+15
Sr-91       8.68E+16
Sr-92       8.49E+16
Y-90        2.78E+14
Y-91        3.04E+15
Y-92        1.13E+16
Y-93        3.57E+15
Zr-95       4.05E+15
Zr-97       3.95E+15
Nb-95       4.08E+15
Mo-99       1.02E+18
Tc-99m      9.06E+17
Ru-103      8.10E+17
Ru-105      4.99E+17
Ru-106      2.81E+17
Rh-105      4.92E+17
Sb-127      3.43E+17
Sb-129      9.71E+17
Te-127      3.50E+17
Te-127m     4.57E+16
Te-129      9.95E+17
Te-129m     1.54E+17
Te-131m     4.69E+17
Te-132      4.69E+18
I-131       1.91E+18
I-132       3.05E+18
I-133       3.88E+18
```

```
I-134       2.93E+18
I-135       3.51E+18
Xe-133      8.94E+18
Xe-135      2.97E+18
Cs-134      3.30E+17
Cs-136      1.15E+17
Cs-137      2.13E+17
Ba-139      1.87E+17
Ba-140      2.31E+17
La-140      6.28E+15
La-141      3.67E+15
La-142      3.09E+15
Ce-141      2.51E+16
Ce-143      2.31E+16
Ce-144      2.03E+16
Pr-143      3.67E+15
Nd-147      1.59E+15
Np-239      2.87E+17
Pu-238      4.99E+13
Pu-239      6.01E+12
Pu-240      7.78E+12
Pu-241      2.26E+15
Am-241      4.06E+11
Cm-242      9.56E+13
Cm-244      4.63E+12

******** BEGINNING OF CHANGE CASE   2 USER INPUT ********

*==============================================================================

  528  RDATNAM2001     'Case 3CCID'

********   RECORD NUMBER   528 REPLACES RECORD NUMBER   419   ********
  529  RDOALARM001     21100.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   529 REPLACES RECORD NUMBER   420   ********
  530  RDPDELAY001     53100.0     (time of release after scram, sec)

********   RECORD NUMBER   530 REPLACES RECORD NUMBER   427   ********
  531  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   531 REPLACES RECORD NUMBER   426   ********
  532  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   532 REPLACES RECORD NUMBER   424   ********
  533  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   533 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  534  RDRELFRC001   9.20E-01 5.30E-01 3.20E-01 5.95E-01 2.30E-06 5.10E-06 1.40E-07
1.40E-06 2.20E-05
********   RECORD NUMBER   534 REPLACES RECORD NUMBER   502   ********
       .
```

```
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   2 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   2
NUMBER OF RECORDS CHANGED                =    7
NUMBER OF RECORDS ADDED                  =    0
*******************************************************************************
*****************
```

RELEASED INVENTORY OF ALL PLUMES

Co-58	1.16E+11
Co-60	1.13E+11
Kr-85	5.09E+16
Kr-85m	1.15E+17
Kr-87	7.03E+14
Kr-88	8.39E+16
Rb-86	3.31E+15
Sr-89	1.02E+13
Sr-90	1.01E+12
Sr-91	4.41E+12
Sr-92	3.19E+11
Y-90	2.03E+11
Y-91	8.19E+11
Y-92	1.53E+12
Y-93	3.55E+11
Zr-95	1.06E+12
Zr-97	5.81E+11
Nb-95	1.08E+12
Mo-99	3.72E+13
Tc-99m	3.52E+13
Ru-103	3.41E+13
Ru-105	2.29E+12
Ru-106	1.19E+13
Rh-105	1.78E+13
Sb-127	2.47E+17
Sb-129	7.91E+16
Te-127	2.60E+17
Te-127m	3.67E+16
Te-129	1.64E+17
Te-129m	1.23E+17
Te-131m	2.70E+17
Te-132	3.31E+18
I-131	2.25E+18
I-132	3.41E+18
I-133	2.98E+18
I-134	4.62E+13
I-135	9.70E+17
Xe-133	8.04E+18
Xe-135	2.05E+18
Cs-134	2.85E+17
Cs-136	9.60E+16
Cs-137	1.84E+17
Ba-139	1.09E+11
Ba-140	1.69E+14
La-140	3.95E+13
La-141	7.85E+10
La-142	1.35E+09
Ce-141	1.05E+13
Ce-143	7.21E+12
Ce-144	8.56E+12

```
Pr-143      1.20E+12
Nd-147      4.05E+11
Np-239      1.01E+14
Pu-238      2.10E+10
Pu-239      2.54E+09
Pu-240      3.28E+09
Pu-241      9.51E+11
Am-241      1.10E+08
Cm-242      2.52E+10
Cm-244      1.22E+09

******** BEGINNING OF CHANGE CASE   3 USER INPUT ********

*==============================================================================

  535  RDATNAM2001    'Case 4CCIW'

********   RECORD NUMBER   535 REPLACES RECORD NUMBER   419   ********
  536  RDOALARM001     24000.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   536 REPLACES RECORD NUMBER   420   ********
  537  RDPDELAY001     90400.0     (time of release after scram, sec)

********   RECORD NUMBER   537 REPLACES RECORD NUMBER   427   ********
  538  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   538 REPLACES RECORD NUMBER   426   ********
  539  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   539 REPLACES RECORD NUMBER   424   ********
  540  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   540 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  541  RDRELFRC001   1.00E+00 7.30E-05 7.90E-03 1.54E-02 8.20E-08 5.90E-08 1.10E-08
7.49E-08 6.00E-08
********   RECORD NUMBER   541 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   3 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   3
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************



RELEASED INVENTORY OF ALL PLUMES
Co-58       1.34E+09
Co-60       1.31E+09
```

Kr-85	5.54E+16
Kr-85m	2.52E+16
Kr-87	2.70E+12
Kr-88	7.28E+15
Rb-86	8.04E+13
Sr-89	3.61E+11
Sr-90	3.60E+10
Sr-91	7.38E+10
Sr-92	8.03E+08
Y-90	1.24E+10
Y-91	6.32E+10
Y-92	9.68E+09
Y-93	1.37E+10
Zr-95	8.32E+10
Zr-97	2.99E+10
Nb-95	8.46E+10
Mo-99	3.85E+11
Tc-99m	3.69E+11
Ru-103	3.91E+11
Ru-105	5.27E+09
Ru-106	1.38E+11
Rh-105	1.70E+11
Sb-127	5.91E+15
Sb-129	3.88E+14
Te-127	6.32E+15
Te-127m	9.51E+14
Te-129	2.46E+15
Te-129m	3.15E+15
Te-131m	5.51E+15
Te-132	7.82E+16
I-131	7.96E+14
I-132	8.05E+16
I-133	2.90E+14
I-134	1.76E+06
I-135	4.51E+13
Xe-133	7.96E+18
Xe-135	4.46E+17
Cs-134	7.03E+15
Cs-136	2.32E+15
Cs-137	4.55E+15
Ba-139	1.63E+06
Ba-140	4.51E+11
La-140	2.21E+11
La-141	9.92E+08
La-142	1.00E+06
Ce-141	5.54E+11
Ce-143	3.10E+11
Ce-144	4.57E+11
Pr-143	9.30E+10
Nd-147	3.10E+10
Np-239	4.78E+12
Pu-238	1.13E+09
Pu-239	1.36E+08
Pu-240	1.76E+08
Pu-241	5.09E+10
Am-241	8.65E+06
Cm-242	1.98E+09
Cm-244	9.60E+07

******** BEGINNING OF CHANGE CASE 4 USER INPUT ********

*==========

```
  542  RDATNAM2001     'Case 5DCH'

********   RECORD NUMBER   542 REPLACES RECORD NUMBER   419   ********
  543  RDOALARM001     16300.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   543 REPLACES RECORD NUMBER   420   ********
  544  RDPDELAY001     63000.0     (time of release after scram, sec)

********   RECORD NUMBER   544 REPLACES RECORD NUMBER   427   ********
  545  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   545 REPLACES RECORD NUMBER   426   ********
  546  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   546 REPLACES RECORD NUMBER   424   ********
  547  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   547 REPLACES RECORD NUMBER   425   ********
       *

       *                                release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  548  RDRELFRC001   9.00E-01 8.00E-01 1.50E-01 4.90E-01 3.20E-04 2.70E-04 3.20E-04
3.20E-04 3.20E-04
********   RECORD NUMBER   548 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   4 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   4
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       6.15E+12
Co-60       5.98E+12
Kr-85       4.98E+16
Kr-85m      7.37E+16
Kr-87       1.54E+14
Kr-88       4.20E+16
Rb-86       1.54E+15
Sr-89       1.42E+15
Sr-90       1.41E+14
Sr-91       5.02E+14
Sr-92       2.20E+13
Y-90        1.45E+14
Y-91        1.82E+15
Y-92        1.96E+14
Y-93        6.72E+14
Zr-95       2.43E+15
Zr-97       1.19E+15
```

```
Nb-95       2.46E+15
Mo-99       1.91E+15
Tc-99m      1.82E+15
Ru-103      1.80E+15
Ru-105      7.91E+13
Ru-106      6.32E+14
Rh-105      8.97E+14
Sb-127      1.99E+17
Sb-129      4.19E+16
Te-127      2.10E+17
Te-127m     3.02E+16
Te-129      1.10E+17
Te-129m     1.01E+17
Te-131m     2.09E+17
Te-132      2.66E+18
I-131       3.36E+18
I-132       2.75E+18
I-133       4.10E+18
I-134       7.93E+12
I-135       1.10E+18
Xe-133      7.96E+18
Xe-135      2.32E+18
Cs-134      1.34E+17
Cs-136      4.47E+16
Cs-137      8.64E+16
Ba-139      3.99E+11
Ba-140      2.45E+15
La-140      2.59E+15
La-141      1.10E+14
La-142      8.93E+11
Ce-141      2.39E+15
Ce-143      1.56E+15
Ce-144      1.95E+15
Pr-143      2.19E+15
Nd-147      9.20E+14
Np-239      2.24E+16
Pu-238      4.81E+12
Pu-239      5.80E+11
Pu-240      7.50E+11
Pu-241      2.17E+14
Am-241      2.45E+11
Cm-242      5.76E+13
Cm-244      2.79E+12

******** BEGINNING OF CHANGE CASE   5 USER INPUT ********

*==============================================================================

  549  RDATNAM2001     'Case 6EVE'

********   RECORD NUMBER   549 REPLACES RECORD NUMBER   419   ********
  550  RDDALARM001     22400.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   550 REPLACES RECORD NUMBER   420   ********
  551  RDPDELAY001     22500.0     (time of release after scram, sec)

********   RECORD NUMBER   551 REPLACES RECORD NUMBER   427   ********
  552  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   552 REPLACES RECORD NUMBER   426   ********
  553  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)
```

```
********   RECORD NUMBER   553 REPLACES RECORD NUMBER   424   ********
  554  RDPLHITE001     49.0        (height of the plume segments at release, m)

********   RECORD NUMBER   554 REPLACES RECORD NUMBER   425   ********
       *

       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  555  RDRELFRC001   8.40E-01 2.50E-01 3.40E-01 6.90E-01 1.30E-02 1.10E-04 8.20E-04
6.25E-03 5.70E-03
********   RECORD NUMBER   555 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   5 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   5
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
*****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58      2.52E+12
Co-60      2.44E+12
Kr-85      4.65E+16
Kr-85m     3.92E+17
Kr-87      6.60E+16
Kr-88      6.10E+17
Rb-86      3.56E+15
Sr-89      5.79E+16
Sr-90      5.71E+15
Sr-91      4.63E+16
Sr-92      1.58E+16
Y-90       7.22E+14
Y-91       4.75E+15
Y-92       2.50E+16
Y-93       3.72E+15
Zr-95      6.26E+15
Zr-97      4.83E+15
Nb-95      6.31E+15
Mo-99      8.76E+14
Tc-99m     8.10E+14
Ru-103     7.39E+14
Ru-105     1.87E+14
Ru-106     2.58E+14
Rh-105     4.35E+14
Sb-127     3.05E+17
Sb-129     3.59E+17
Te-127     3.16E+17
Te-127m    4.26E+16
Te-129     4.69E+17
Te-129m    1.43E+17
Te-131m    3.82E+17
Te-132     4.14E+18
```

```
I-131       1.10E+18
I-132       3.83E+18
I-133       1.86E+18
I-134       1.81E+16
I-135       1.12E+18
Xe-133      7.48E+18
Xe-135      2.07E+18
Cs-134      3.03E+17
Cs-136      1.04E+17
Cs-137      1.96E+17
Ba-139      2.04E+15
Ba-140      4.48E+16
La-140      1.06E+16
La-141      2.06E+15
La-142      3.60E+14
Ce-141      4.70E+16
Ce-143      3.85E+16
Ce-144      3.82E+16
Pr-143      6.11E+15
Nd-147      2.43E+15
Np-239      5.03E+17
Pu-238      9.39E+13
Pu-239      1.13E+13
Pu-240      1.47E+13
Pu-241      4.25E+15
Am-241      6.32E+11
Cm-242      1.48E+14
Cm-244      7.16E+12

******** BEGINNING OF CHANGE CASE   6 USER INPUT ********

*==============================================================================

  556  RDATNAM2001     'Case 7FR'

********   RECORD NUMBER   556 REPLACES RECORD NUMBER   419   ********
  557  RDOALARM001     9800.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   557 REPLACES RECORD NUMBER   420   ********
  558  RDPDELAY001     102600.0     (time of release after scram, sec)

********   RECORD NUMBER   558 REPLACES RECORD NUMBER   427   ********
  559  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   559 REPLACES RECORD NUMBER   426   ********
  560  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   560 REPLACES RECORD NUMBER   424   ********
  561  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   561 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  562  RDRELFRC001   1.00E+00 9.80E-06 4.60E-05 2.53E-03 1.10E-08 1.90E-07 4.10E-10
1.51E-09 3.20E-08
********   RECORD NUMBER   562 REPLACES RECORD NUMBER   502   ********
```

```
******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   6 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   6
NUMBER OF RECORDS CHANGED                =    7
NUMBER OF RECORDS ADDED                  =    0
*******************************************************************************
*****************
```

RELEASED INVENTORY OF ALL PLUMES

Co-58	4.31E+09
Co-60	4.20E+09
Kr-85	5.54E+16
Kr-85m	1.49E+16
Kr-87	4.25E+11
Kr-88	3.18E+15
Rb-86	4.65E+11
Sr-89	4.84E+10
Sr-90	4.83E+09
Sr-91	7.73E+09
Sr-92	4.53E+07
Y-90	1.42E+09
Y-91	2.46E+09
Y-92	6.78E+08
Y-93	4.04E+08
Zr-95	3.10E+09
Zr-97	9.69E+08
Nb-95	3.15E+09
Mo-99	1.20E+12
Tc-99m	1.15E+12
Ru-103	1.26E+12
Ru-105	9.99E+09
Ru-106	4.44E+11
Rh-105	5.14E+11
Sb-127	9.47E+14
Sb-129	3.70E+13
Te-127	1.02E+15
Te-127m	1.56E+14
Te-129	3.75E+14
Te-129m	5.15E+14
Te-131m	8.37E+14
Te-132	1.25E+16
I-131	1.29E+14
I-132	1.28E+16
I-133	3.48E+13
I-134	1.62E+04
I-135	4.24E+12
Xe-133	7.81E+18
Xe-135	3.44E+17
Cs-134	4.09E+13
Cs-136	1.34E+13
Cs-137	2.65E+13
Ba-139	1.58E+05
Ba-140	2.39E+11
La-140	9.75E+10
La-141	2.03E+07
La-142	8.14E+03
Ce-141	1.11E+10
Ce-143	5.83E+09

```
Ce-144      9.21E+09
Pr-143      3.12E+09
Nd-147      1.15E+09
Np-239      9.25E+10
Pu-238      2.27E+07
Pu-239      2.74E+06
Pu-240      3.54E+06
Pu-241      1.03E+09
Am-241      3.19E+05
Cm-242      7.36E+07
Cm-244      3.58E+06


******** BEGINNING OF CHANGE CASE   7 USER INPUT ********

*==============================================================================

  563  RDATNAM2001    'Case 8-OPVB'

********   RECORD NUMBER   563 REPLACES RECORD NUMBER   419   ********
  564  RDOALARM001     16500.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   564 REPLACES RECORD NUMBER   420   ********
  565  RDPDELAY001     65300.0     (time of release after scram, sec)

********   RECORD NUMBER   565 REPLACES RECORD NUMBER   427   ********
  566  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   566 REPLACES RECORD NUMBER   426   ********
  567  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   567 REPLACES RECORD NUMBER   424   ********
  568  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   568 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  569  RDRELFRC001   9.90E-01 2.80E-01 3.40E-02 1.10E-01 1.70E-03 1.20E-04 1.50E-04
3.11E-04 8.70E-04
********   RECORD NUMBER   569 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   7 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   7
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************


RELEASED INVENTORY OF ALL PLUMES
Co-58       2.73E+12
Co-60       2.66E+12
Kr-85       5.48E+16
```

Kr-85m	7.35E+16
Kr-87	1.19E+14
Kr-88	3.95E+16
Rb-86	3.50E+14
Sr-89	7.52E+15
Sr-90	7.47E+14
Sr-91	2.55E+15
Sr-92	9.91E+13
Y-90	1.89E+14
Y-91	8.70E+14
Y-92	6.62E+14
Y-93	3.01E+14
Zr-95	1.14E+15
Zr-97	5.42E+14
Nb-95	1.15E+15
Mo-99	8.44E+14
Tc-99m	8.04E+14
Ru-103	7.99E+14
Ru-105	3.18E+13
Ru-106	2.81E+14
Rh-105	3.94E+14
Sb-127	4.45E+16
Sb-129	8.49E+15
Te-127	4.71E+16
Te-127m	6.79E+15
Te-129	2.37E+16
Te-129m	2.26E+16
Te-131m	4.62E+16
Te-132	5.94E+17
I-131	1.17E+18
I-132	6.17E+17
I-133	1.40E+18
I-134	1.68E+12
I-135	3.59E+17
Xe-133	8.36E+18
Xe-135	1.30E+18
Cs-134	3.03E+16
Cs-136	1.01E+16
Cs-137	1.96E+16
Ba-139	7.87E+11
Ba-140	6.65E+15
La-140	2.72E+15
La-141	4.63E+13
La-142	3.14E+11
Ce-141	2.32E+15
Ce-143	1.49E+15
Ce-144	1.90E+15
Pr-143	1.06E+15
Nd-147	4.31E+14
Np-239	2.16E+16
Pu-238	4.67E+12
Pu-239	5.64E+11
Pu-240	7.29E+11
Pu-241	2.11E+14
Am-241	1.15E+11
Cm-242	2.70E+13
Cm-244	1.31E+12

******** BEGINNING OF CHANGE CASE 8 USER INPUT ********

*==========

```
  570  RDATNAM2001     'Case 9-OPW1'

********   RECORD NUMBER   570 REPLACES RECORD NUMBER   419   ********
  571  RDOALARM001     16600.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   571 REPLACES RECORD NUMBER   420   ********
  572  RDPDELAY001     91500.0     (time of release after scram, sec)

********   RECORD NUMBER   572 REPLACES RECORD NUMBER   427   ********
  573  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   573 REPLACES RECORD NUMBER   426   ********
  574  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   574 REPLACES RECORD NUMBER   424   ********
  575  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   575 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  576  RDRELFRC001   9.90E-01 6.00E-01 1.40E-01 3.70E-01 1.60E-03 4.30E-07 5.80E-06
1.81E-04 7.50E-04
********   RECORD NUMBER   576 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   8 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   8
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
****************



RELEASED INVENTORY OF ALL PLUMES
Co-58       9.77E+09
Co-60       9.52E+09
Kr-85       5.48E+16
Kr-85m      2.38E+16
Kr-87       2.26E+12
Kr-88       6.69E+15
Rb-86       1.42E+15
Sr-89       7.05E+15
Sr-90       7.03E+14
Sr-91       1.41E+15
Sr-92       1.45E+13
Y-90        1.71E+14
Y-91        5.42E+13
Y-92        1.70E+14
Y-93        7.07E+12
Zr-95       4.39E+13
Zr-97       1.56E+13
Nb-95       4.46E+13
Mo-99       2.80E+12
Tc-99m      2.68E+12
```

```
Ru-103      2.85E+12
Ru-105      3.66E+10
Ru-106      1.01E+12
Rh-105      1.23E+12
Sb-127      1.42E+17
Sb-129      8.88E+15
Te-127      1.52E+17
Te-127m     2.28E+16
Te-129      5.86E+16
Te-129m     7.55E+16
Te-131m     1.31E+17
Te-132      1.87E+18
I-131       2.45E+18
I-132       1.93E+18
I-133       2.36E+18
I-134       1.14E+10
I-135       3.59E+17
Xe-133      8.33E+18
Xe-135      1.30E+18
Cs-134      1.25E+17
Cs-136      4.10E+16
Cs-137      8.06E+16
Ba-139      1.75E+10
Ba-140      5.64E+15
La-140      2.08E+15
La-141      4.96E+11
La-142      4.60E+08
Ce-141      1.34E+15
Ce-143      7.45E+14
Ce-144      1.10E+15
Pr-143      8.96E+13
Nd-147      1.63E+13
Np-239      1.15E+16
Pu-238      2.72E+12
Pu-239      3.29E+11
Pu-240      4.24E+11
Pu-241      1.23E+14
Am-241      5.01E+09
Cm-242      1.04E+12
Cm-244      5.06E+10

******** BEGINNING OF CHANGE CASE   9 USER INPUT ********

*==============================================================================

  577  RDATNAM2001     'Case 10-OPW2'

********   RECORD NUMBER   577 REPLACES RECORD NUMBER   419   ********
  578  RDOALARM001     17600.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   578 REPLACES RECORD NUMBER   420   ********
  579  RDPDELAY001     146900.0    (time of release after scram, sec)

********   RECORD NUMBER   579 REPLACES RECORD NUMBER   427   ********
  580  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   580 REPLACES RECORD NUMBER   426   ********
  581  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   581 REPLACES RECORD NUMBER   424   ********
  582  RDPLHITE001     49.0        (height of the plume segments at release, m)*
```

```
********   RECORD NUMBER   582 REPLACES RECORD NUMBER   425   ********
       *                          release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  583  RDRELFRC001   9.90E-01 3.80E-02 4.30E-02 1.57E-01 1.20E-03 2.00E-07 3.90E-06
1.40E-04 5.70E-04
********   RECORD NUMBER   583 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE   9 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE   9
NUMBER OF RECORDS CHANGED              =    7
NUMBER OF RECORDS ADDED                =    0
*******************************************************************************
*****************
```

```
RELEASED INVENTORY OF ALL PLUMES
Co-58       4.51E+09
Co-60       4.43E+09
Kr-85       5.48E+16
Kr-85m      2.20E+15
Kr-87       5.14E+08
Kr-88       1.56E+14
Rb-86       4.27E+14
Sr-89       5.24E+15
Sr-90       5.27E+14
Sr-91       3.44E+14
Sr-92       2.12E+11
Y-90        1.89E+14
Y-91        3.99E+13
Y-92        7.32E+12
Y-93        1.65E+12
Zr-95       2.93E+13
Zr-97       5.56E+12
Nb-95       3.00E+13
Mo-99       1.11E+12
Tc-99m      1.07E+12
Ru-103      1.31E+12
Ru-105      1.54E+09
Ru-106      4.67E+11
Rh-105      4.26E+11
Sb-127      5.36E+16
Sb-129      3.19E+14
Te-127      5.85E+16
Te-127m     9.69E+15
Te-129      2.09E+16
Te-129m     3.16E+16
Te-131m     3.91E+16
Te-132      6.94E+17
I-131       1.53E+17
I-132       7.15E+17
I-133       8.95E+16
I-134       3.74E+03
I-135       4.53E+15
```

```
Xe-133      7.26E+18
Xe-135      1.56E+17
Cs-134      3.83E+16
Cs-136      1.22E+16
Cs-137      2.48E+16
Ba-139      5.78E+06
Ba-140      4.14E+15
La-140      2.19E+15
La-141      2.21E+10
La-142      3.06E+05
Ce-141      1.02E+15
Ce-143      4.17E+14
Ce-144      8.53E+14
Pr-143      7.92E+13
Nd-147      1.05E+13
Np-239      7.37E+15
Pu-238      2.10E+12
Pu-239      2.55E+11
Pu-240      3.28E+11
Pu-241      9.51E+13
Am-241      3.69E+09
Cm-242      6.99E+11
Cm-244      3.40E+10

******** BEGINNING OF CHANGE CASE  10 USER INPUT ********

*==============================================================================

  584  RDATNAM2001     'Case 11TSL'

********   RECORD NUMBER   584 REPLACES RECORD NUMBER   419   ********
  585  RDOALARM001     21000.0     (time to reach general emergency condition, sec)

********   RECORD NUMBER   585 REPLACES RECORD NUMBER   420   ********
  586  RDPDELAY001     1100.0      (time of release after scram, sec)

********   RECORD NUMBER   586 REPLACES RECORD NUMBER   427   ********
  587  RDPLUDUR001     36000.0     (release duration, sec)

********   RECORD NUMBER   587 REPLACES RECORD NUMBER   426   ********
  588  RDPLHEAT001     1.00E-6     (sensible heat rate, watt)

********   RECORD NUMBER   588 REPLACES RECORD NUMBER   424   ********
  589  RDPLHITE001     49.0        (height of the plume segments at release, m)*

********   RECORD NUMBER   589 REPLACES RECORD NUMBER   425   ********
       *                              release fractions by group

       *              1      2      3      4      5      6      7      8      9

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

  590  RDRELFRC001   2.00E-03 1.50E-04 5.50E-05 2.15E-04 2.10E-06 3.90E-05 7.30E-08
2.00E-07 7.70E-06
********   RECORD NUMBER   590 REPLACES RECORD NUMBER   502   ********
       .

******** TERMINATOR RECORD ENCOUNTERED -- END OF CHANGE CASE  10 USER INPUT ********

USER INPUT PROCESSING SUMMARY - CHANGE CASE  10
```

NUMBER OF RECORDS CHANGED = 7
NUMBER OF RECORDS ADDED = 0
****
****

RELEASED INVENTORY OF ALL PLUMES

Co-58	8.95E+11
Co-60	8.63E+11
Kr-85	1.11E+14
Kr-85m	2.34E+15
Kr-87	4.02E+15
Kr-88	6.20E+15
Rb-86	5.81E+11
Sr-89	9.38E+12
Sr-90	9.22E+11
Sr-91	1.16E+13
Sr-92	1.17E+13
Y-90	3.61E+10
Y-91	4.18E+11
Y-92	1.12E+12
Y-93	4.99E+11
Zr-95	5.58E+11
Zr-97	5.48E+11
Nb-95	5.62E+11
Mo-99	3.31E+14
Tc-99m	2.95E+14
Ru-103	2.63E+14
Ru-105	1.67E+14
Ru-106	9.14E+13
Rh-105	1.60E+14
Sb-127	9.94E+13
Sb-129	2.90E+14
Te-127	1.01E+14
Te-127m	1.33E+13
Te-129	2.93E+14
Te-129m	4.45E+13
Te-131m	1.36E+14
Te-132	1.36E+15
I-131	6.68E+14
I-132	1.01E+15
I-133	1.36E+15
I-134	1.19E+15
I-135	1.25E+15
Xe-133	1.82E+16
Xe-135	5.93E+15
Cs-134	4.90E+13
Cs-136	1.70E+13
Cs-137	3.17E+13
Ba-139	5.47E+13
Ba-140	6.13E+13
La-140	9.16E+11
La-141	5.23E+11
La-142	4.64E+11
Ce-141	1.51E+12
Ce-143	1.40E+12
Ce-144	1.22E+12
Pr-143	5.03E+11
Nd-147	2.20E+11
Np-239	1.73E+13
Pu-238	3.01E+09

```
Pu-239      3.62E+08
Pu-240      4.69E+08
Pu-241      1.36E+11
Am-241      5.59E+07
Cm-242      1.32E+10
Cm-244      6.37E+08


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

RECORD
NUMBER                                    RECORD

       * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "EARLY" INPUT FILE

       * BASE CASE using EZDLTSHL = 7200 seconds and 95% Evacuation

       * Last Modified by MGM 04/10/06

    1  MIEANAM1001 'NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input'

    2  DCF_FILE001 'DOSDATA.INP'  (DCF file of MACCS 1.5.11.1)

       *

       *              ORGNAM          ORGFLG

       *

    3  MIORGDEF001  'A-SKIN'         .TRUE.

    4  MIORGDEF002  'A-RED MARR'     .TRUE.

    5  MIORGDEF003  'A-LUNGS'        .TRUE.

    6  MIORGDEF004  'A-THYROIDH'     .TRUE.

    7  MIORGDEF005  'A-STOMACH'      .TRUE.

    8  MIORGDEF006  'A-LOWER LI'     .FALSE.  (does not contribute to early
fatalities)
    9  MIORGDEF007  'L-EDEWBODY'     .TRUE.

   10  MIORGDEF008  'L-RED MARR'     .TRUE.

   11  MIORGDEF009  'L-BONE SUR'     .TRUE.

   12  MIORGDEF010  'L-BREAST'       .TRUE.

   13  MIORGDEF011  'L-LUNGS'        .TRUE.

   14  MIORGDEF012  'L-THYROID'      .TRUE.

   15  MIORGDEF013  'L-LOWER LI'     .TRUE.

   16  MIORGDEF014  'L-BLAD WAL'     .TRUE.

   17  MIORGDEF015  'L-LIVER'        .FALSE.
```

```
18  MIORGDEF016  'L-THYROIDH'    .TRUE.
    *
    * FLAG TO INDICATE THAT THIS IS THE LAST PROGRAM IN THE SERIES TO BE RUN
    *
19  MIENDAT2001  .FALSE.    (SET THIS VALUE TO .TRUE. TO SKIP CHRONC)
    *
    * DISPERSION MODEL OPTION CODE:  1  *  STRAIGHT LINE
    *                                2  *  WIND-SHIFT WITH ROTATION
    *                                3  *  WIND-SHIFT WITHOUT ROTATION
    *
20  MIIPLUME001  2
    *
    * NUMBER OF FINE GRID SUBDIVISIONS USED BY THE MODEL
    *
21  MINUMFIN001  7    (3, 5 OR 7 ALLOWED)
    *
    * LEVEL OF DEBUG OUTPUT REQUIRED, NORMAL RUNS SHOULD SPECIFY ZERO
    *
22  MIIPRINT001  0
    *
    * LOGICAL FLAG SIGNIFYING THAT THE BREAKDOWN OF RISK BY WEATHER CATEGORY
    * BIN ARE TO BE PRESENTED TO SHOW THEIR RELATIVE CONTRIBUTION TO THE MEAN
    *
    *            RISBIN
    *
23  MIRISCAT001   .FALSE.
    *
    * FLAG INDICATING IF WIND-ROSES FROM ATMOS ARE TO BE OVERRIDDEN
    *
24  MIOVRRID001  .FALSE.  (USE THE WIND ROSE CALCULATED FOR EACH WEATHER BIN)
```

****

```
     * POPULATION DISTRIBUTION DATA BLOCK, LOADED BY INPOPU, STORED IN /POPDAT/
     *
  25 PDPOPFLG001  FILE
     *
     *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 ACTIVTY:
     *
     * ACTIVITY TYPE:
     *     1 - EVACUEES WHILE MOVING
     *     2 - NORMAL ACTIVITY IN SHELTERING AND EVACUATION ZONE
     *     3 - SHELTERED ACTIVITY
     *
     * CLOUD SHIELDING FACTOR
     *
     *    SITE        GG   PB   SEQ  SUR  ZION
     *    SHELTERING  0.7  0.5  0.65 0.6  0.5
     *
     *            EVACUEES  NORMAL  SHELTER
     *
  26 SECSFACT001      1.     0.75     0.6   *  SURRY SHELTERING VALUE
     *
     * PROTECTION FACTOR FOR INHALATION
     *
  27 SEPROTIN001      1.     0.41      0.33  * VALUES FOR NORMAL ACTIVITY AND
     *                                          SHELTERING SELECTED BY NRC STAFF
```

```
     *
     * BREATHING RATE (CUBIC METERS PER SECOND)
     *
28   SEBRRATE001  2.66E-4  2.66E-4  2.66E-4
     *
     * SKIN PROTECTION FACTOR
     *
29   SESKPFAC001  1.0      0.41     0.33    * VALUES FOR NORMAL ACTIVITY AND
     *                                          SHELTERING SELECTED BY NRC STAFF
     *
     * GROUND SHIELDING FACTOR
     *
     *    SITE         GG   PB   SEQ  SUR  ZION
     *    SHELTERING   0.25 0.1  0.2  0.2  0.1
     *
30   SEGSHFAC001      0.5    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.
     *
31   SERESCON001   1.E-4     (RESUSPENSION IS TURNED ON)
     *
     * RESUSPENSION CONCENTRATION COEFFICIENT HALF-LIFE (SEC)
     *
32   SERESHAF001   1.82E5    (2.11 DAYS)
```

****

```
    * EVACUATION ZONE DATA BLOCK, LOADED BY EVNETW, STORED IN /NETWOR/, /EOPTIO/
    *
    * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED
    *
33  EZEANAM2001  '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'
    *
34  EZWTNAME001  'PEOPLE'
    *
    * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO FOR EVACUATION
    *
35  EZWTFRAC001  0.95   (95% of the people within 10 miles evacuate)
    *
    * LAST RING IN THE MOVEMENT ZONE
    *
36  EZLASMOV001     8    (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)
37  TRAVELPOINT   'BOUNDARY'    (functionality derived from MACCS circa 1984)
    *
    * RADIAL EVACUATION SPEED (M/S) or (4 mph) Contains Three Phases
    *  3 Phases: (Initial)  (Middle)    (Late)
38  EZESPEED001    1.8        1.8        1.8          (NAPS)
39  EZEVATYP001     'RADIAL'
40  EZDURBEG001    86400.0
41  EZDURMID001    0.0
42  EZREFPNT001     'ALARM'
43  EZNUMEVA001      7
```

```
44  EZDLTSHL001   7200.  7200.  7200.  7200.  7200.  7200.
45  EZDLTSHL002   7200.  7200.  7200.  7200.  7200.  7200.
46  EZDLTEVA001      0.     0.     0.     0.     0.     0.
47  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)
    *
48  SRENDEMP001  604800.   (ONE WEEK)
    *
    * CRITICAL ORGAN FOR RELOCATION DECISIONS
    *
49  SRCRIORG001 'L-EDEWBODY'
    *
    * HOT SPOT RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
    *
50  SRTIMHOT001  43200.    (ONE-HALF DAY)
    *
    * NORMAL RELOCATION TIME (SECONDS FROM PLUME ARRIVAL)
    *
51  SRTIMNRM001  86400.    (ONE DAY)
    *
    * HOT SPOT RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
    *
52  SRDOSHOT001  0.5    (50 REM DOSE TO WHOLE BODY IN 1 WEEK TRIGGERS RELOCATION)
    *
    * NORMAL RELOCATION DOSE CRITERION THRESHOLD (SIEVERTS)
    *
53  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
      *
   54 EFNUMEFA001   2
      *
      *            ORGNAM        EFFACA   EFFACB   EFFTHR
      *
   55 EFATAGRP001 'A-RED MARR'      3.8      5.0    1.5
   56 EFATAGRP002 'A-LUNGS'        10.0      7.0    5.0
*****************************************************************************
      * EARLY INJURY MODEL PARAMETERS, LOADED BY INEINJ, STORED IN /EINJUR/
      *
      * NUMBER OF EARLY INJURY EFFECTS
      *
   57 EINUMEIN001  7
      *
      *            EINAME            ORGNAM   EISUSC EITHRE EIFACA EIFACB
      *
   58 EINJUGRP001 'PRODROMAL VOMIT' 'A-STOMACH'  1.     .5     2.     3.
   59 EINJUGRP002 'DIARRHEA'        'A-STOMACH'  1.     1.     3.     2.5
   60 EINJUGRP003 'PNEUMONITIS'     'A-LUNGS'    1.     5.    10.     7.
   61 EINJUGRP004 'SKIN ERYTHEMA'   'A-SKIN'     1.     3.     6.     5.
   62 EINJUGRP005 'TRANSEPIDERMAL'  'A-SKIN'     1.    10.    20.     5.
   63 EINJUGRP006 'THYROIDITIS'     'A-THYROIDH' 1.    40.   240.     2.
   64 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
    *
65  LCNUMACA001   7
    *
    * THRESHOLD DOSE FOR APPLYING THE DOSE DEPENDENT REDUCTION FACTOR
    *
66  LCDDTHRE001   0.2  (LOWEST DOSE FOR WHICH DDREFA WILL BE APPLIED)
    *
    * DOSE THRESHOLD FOR LINEAR DOSE RESPONSE (Sv)
    *
67  LCACTHRE001   0.0  (LINEAR-QUADRATIC MODEL IS NOT BEING USED)
    *
    *            ACNAME     ORGNAM  ACSUSC DOSEFA DOSEFB CFRISK   CIRISK  DDREFA
    *
68  LCANCERS001 'LEUKEMIA' 'L-RED MARR'  1.0   1.0   0.0   9.70E-3   0.0     2.0
69  LCANCERS002 'BONE'     'L-BONE SUR'  1.0   1.0   0.0   9.00E-4   0.0     2.0
70  LCANCERS003 'BREAST'   'L-BREAST'    1.0   1.0   0.0   5.40E-3   1.7E-2  1.0
71  LCANCERS004 'LUNG'     'L-LUNGS'     1.0   1.0   0.0   1.55E-2   0.0     2.0
72  LCANCERS005 'THYROID'  'L-THYROIDH'  1.0   1.0   0.0   7.20E-4   7.2E-3  1.0
73  LCANCERS006 'GI'       'L-LOWER LI'  1.0   1.0   0.0   3.36E-2   0.0     2.0
74  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
    *
75  TYPE1NUMBER    27
    *
76  TYPE1OUT001    'ERL FAT/TOTAL'                1  7   NOCCDF (0 TO 10 MILES)
77  TYPE1OUT002    'ERL INJ/PRODROMAL VOMIT'      1  7   NOCCDF
```

```
 78  TYPE1OUT003    'ERL INJ/DIARRHEA'            1  7
 79  TYPE1OUT004    'ERL INJ/PNEUMONITIS'         1  7
 80  TYPE1OUT005    'ERL INJ/THYROIDITIS'         1  7
 81  TYPE1OUT006    'ERL INJ/HYPOTHYROIDISM'      1  7
 82  TYPE1OUT007    'ERL INJ/SKIN ERYTHEMA'       1  7
 83  TYPE1OUT008    'ERL INJ/TRANSEPIDERMAL'      1  7
 84  TYPE1OUT009    'CAN FAT/TOTAL'               1  7   NOCCDF
 85  TYPE1OUT010    'CAN FAT/LUNG'                1  11  (0 TO 50 MILES)
 86  TYPE1OUT011    'CAN FAT/THYROID'             1  11
 87  TYPE1OUT012    'CAN FAT/BREAST'              1  11
 88  TYPE1OUT013    'CAN FAT/GI'                  1  11
 89  TYPE1OUT014    'CAN FAT/LEUKEMIA'            1  11
 90  TYPE1OUT015    'CAN FAT/BONE'                1  11
 91  TYPE1OUT016    'CAN FAT/OTHER'               1  11
 92  TYPE1OUT017    'CAN INJ/THYROID'             1  11
 93  TYPE1OUT018    'CAN INJ/BREAST'              1  11
 94  TYPE1OUT019    'CAN FAT/TOTAL'               1  11  (0 TO 50 MILES)
 95  TYPE1OUT020    'ERL FAT/TOTAL'               1  11
 96  TYPE1OUT021    'ERL INJ/PRODROMAL VOMIT'     1  11
 97  TYPE1OUT022    'ERL INJ/DIARRHEA'            1  11
 98  TYPE1OUT023    'ERL INJ/PNEUMONITIS'         1  11
 99  TYPE1OUT024    'ERL INJ/THYROIDITIS'         1  11
100  TYPE1OUT025    'ERL INJ/HYPOTHYROIDISM'      1  11
101  TYPE1OUT026    'ERL INJ/SKIN ERYTHEMA'       1  11
102  TYPE1OUT027    'ERL INJ/TRANSEPIDERMAL'      1  11

*******************************************************************************
      * 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
      *
```

```
103  TYPE2NUMBER  1
     *
     *            FATALITY RISK THRESHOLD
     *
104  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
     *
105  TYPE3NUMBER  4
     *
     *                ORGAN NAME   DOSE THRESHOLD (Sv)
     *
106  TYPE3OUT001    'A-RED MARR'        1.5
107  TYPE3OUT002    'A-LUNGS'           5.0
108  TYPE3OUT003    'L-EDEWBODY'        2.0
109  TYPE3OUT004    'L-EDEWBODY'        0.25
*****************************************************************************
     * 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
```

```
      *
  110 TYPE4NUMBER  5
      *
      *            RADIAL INDEX   TYPE OF EFFECT
      *
  111 TYPE4OUT001       1         'ERL FAT/TOTAL'
  112 TYPE4OUT002       2         'ERL FAT/TOTAL'
  113 TYPE4OUT003       3         'ERL FAT/TOTAL'
  114 TYPE4OUT004       4         'ERL FAT/TOTAL'
  115 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
      *
  116 TYPE5NUMBER     2
      *
      *             ORGAN      I1DIS5     I2DIS5
      *
  117 TYPE5OUT001 'L-EDEWBODY'      1         7          (0-10 MILES)
  118 TYPE5OUT002 'L-EDEWBODY'      1         11    NOCCDF  (0-50 MILES)
*******************************************************************************
      * RESULT 6 OPTIONS BLOCK, LOADED BY INOUT6, STORED IN /INOUT6/
      *
      * CENTERLINE DOSE TO AN ORGAN VS DIST BY PATHWAY, PATHWAY NAMES ARE AS
FOLLOWS:
      *
      *  PATHWAY NAME:
      *    'CLD'     - CLOUDSHINE
```

```
*    'GRD'      - GROUNDSHINE
*    'INH ACU' - "ACUTE DOSE EQUIVALENT" FROM DIRECT INHALATION OF THE CLOUD
*    'INH LIF' - "LIFETIME DOSE COMMITMENT" FROM DIRECT INHALATION OF THE
CLOUD
*    'RES ACU' - "ACUTE DOSE EQUIVALENT" FROM RESUSPENSION INHALATION
*    'RES LIF' - "LIFETIME DOSE COMMITMENT" FROM RESUSPENSION INHALATION
*    'TOT ACU' - "ACUTE DOSE EQUIVALENT" FROM ALL PATHWAYS
*    'TOT LIF' - "LIFETIME DOSE COMMITMENT" FROM ALL PATHWAYS
*
* NUMBER OF DESIRED RESULTS OF THIS TYPE
*
 119  TYPE6NUMBER     0
*
*              ORGNAM        PATHNM      I1DIS6   I2DIS6
*
*TYPE6OUT001  'A-RED MARR'    'TOT ACU'      1       11     (0-50 MILES)
*TYPE6OUT002  'A-LUNGS'       'TOT ACU'      1       11     (0-50 MILES)
*TYPE6OUT003  'L-EDEWBODY'    'TOT LIF'      1       11     (0-50 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
*
 120  TYPE7NUMBER   0
*
*                    NAME           I1DIS7       I2DIS7
*
*TYPE7OUT001     'ERL FAT/TOTAL'        1           11       (0-50 MILES)
*******************************************************************************
* RESULT 8 OPTIONS BLOCK, LOADED BY INOUT8, STORED IN /INOUT8/
```

```
      *
      * POPULATION WEIGHTED FATALITY RISK BETWEEN 2 DISTANCES
      *
      * NUMBER OF DESIRED RESULTS OF THIS TYPE
      *
  121 TYPE8NUMBER   2
      *
      *                NAME       I1DIS8  I2DIS8
      *
  122 TYPE8OUT001 'ERL FAT/TOTAL'   1       2     NOCCDF  (0-EXCL ZONE + 1 MI)
  123 TYPE8OUT002 'CAN FAT/TOTAL'   1       7     NOCCDF  (0-10 MILES)
*******************************************************************************
      * RESULT A OPTIONS BLOCK, LOADED BY INOUTA, STORED IN /INOUTA/
      *
      * peak dose to a given organ
      *
      *            NUMA
  124 TYPEANUMBER   1
      *
      *              ORGNAM    I1DISA  I2DISA
  125 TYPEAOUT001 'L-EDEWBODY'  1       11
      .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                          =  385
NUMBER OF BLANK OR COMMENT RECORDS READ         =  259
NUMBER OF TERMINATOR RECORDS                    =    1
NUMBER OF RECORDS PROCESSED                     =  125
     NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
     NUMBER OF PROCESSED RECORDS SORTED         =  125
*******************************************************************************
****************

The list of defined organs is as follows (A- is ACUTE and L- is LIFETIME):
```

```
   A-SKIN
   A-RED MARR
   A-LUNGS
   A-THYROIDH
   A-STOMACH
   L-EDEWBODY
   L-RED MARR
   L-BONE SUR
   L-BREAST
   L-LUNGS
   L-THYROID
   L-LOWER LI
   L-BLAD WAL
   L-THYROIDH
Am using a DOSFAC/DOSFAC2/IDCF2 dose factor file

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


USING THE FOLLOWING SITE DATA FILE:

 SECPOP90 V2.3 MACCS Site Data File for North Anna
 Lat: 38d 3'48'' Long:  77d 47'13'' LAST MODIFIED  12-17-1999
  11 SPATIAL INTERVALS
  16 WIND DIRECTIONS
   7 CROP CATEGORIES
   4 WATER PATHWAY ISOTOPES
   1 WATERSHEDS
  80 ECONOMIC REGIONS
 SPATIAL DISTANCES     KILOMETERS
      1.61      3.22      4.83      6.44      8.05      9.65     16.09     32.18
     48.27     64.37     80.47
 POPULATION
        0.       46.      118.      146.      184.      118.      575.     9413.
     6143.    21240.    50387.
        2.       44.       70.      192.      248.      168.     1320.     9192.
    12963.    30219.   211772.
        2.       36.       52.      112.      120.      164.     1186.    46762.
   109366.    45870.    94562.
        0.       18.      124.       48.       76.      242.     1410.     7010.
     8060.    13313.    20186.
        0.       20.      134.       50.       40.      146.     1278.     7379.
     5592.     1986.     4563.
        2.        8.       20.      116.      162.      102.     1042.     6880.
     6707.     5912.     9060.
        0.       19.       86.       10.       12.       55.      645.     3676.
    23788.    72630.    93953.
        3.       55.       32.       30.       44.       29.     1098.     6211.
    18766.   540546.   478477.
        0.       46.       22.       33.       44.       46.      695.     5427.
    14467.    24696.    41914.
        0.       11.       12.       59.       72.      128.      484.     3710.
     6963.     6727.     7333.
        0.        4.       15.       59.       95.      181.     1133.     3207.
     3407.     6302.     4671.
        0.       21.       46.       34.       69.      233.     1296.     5060.
     7737.    10450.     9498.
        0.       34.       26.       26.       32.       34.      482.     3193.
     5315.   128151.    25521.
        0.       33.       87.       58.       32.      149.      567.     3101.
```

```
    9823.     21412.     11862.
       1.        39.        58.       102.        79.       242.       555.      3785.
   14054.     14311.      3690.
       0.        34.        76.        16.        30.        58.       870.      5690.
   10949.     30925.     11980.
LAND FRACTION
0.00 0.97 0.97 0.97 0.97 0.97 0.97 0.99 1.00 1.00 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.98 0.98 0.97
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.91 0.78
0.00 0.97 0.97 0.97 0.00 0.97 0.97 0.98 0.98 0.96 0.90
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.99 0.99 0.95 0.90
0.00 0.97 0.97 0.97 0.97 0.97 0.97 0.99 0.99 0.97 0.95
0.97 0.00 0.97 0.97 0.97 0.97 0.99 1.00 1.00 0.99 0.98
0.97 0.97 0.97 0.97 0.97 0.97 0.97 1.00 0.99 0.97 0.97
0.00 0.97 0.00 0.97 0.97 0.97 0.97 0.98 0.98 0.99 0.98
0.97 0.97 0.97 0.00 0.97 0.97 0.97 0.97 0.98 0.99 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.98 0.99 0.99 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.99 0.99 0.99
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.98 1.00 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.99 1.00 1.00 1.00
0.97 0.97 0.97 0.97 0.97 0.97 0.98 1.00 1.00 1.00 1.00
0.00 0.97 0.97 0.97 0.00 0.97 0.97 0.99 1.00 1.00 1.00
REGION INDEX
1 2 2 2 2 2 2 3 4 5 6
1 2 2 2 2 2 2 7 8 910
1 2 2 2 2 2 211121314
1 2 2 2 2 2 215161718
1 2 2 2 2 2 219202122
1 2 2 2 2 2 223242526
12728293031323334353 6
12727272727273738394 0
12727272727274142434 4
12727272727274546474 8
12727272727274950515 2
12727272727275354555 6
12727272727275758596 0
12727272761626364656 6
16768697071727374757 6
1 2 2 2 2 2 277787980
WATERSHED INDEX
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
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1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
CROP SEASON AND SHARE
  1 PASTURE                 90. 270.   0.41
  2 STORED FORAGE          150. 240.   0.13
  3 GRAINS                 150. 240.   0.21
  4 GRN LEAFY VEGETABLES   150. 240.   0.002
  5 OTHER FOOD CROPS       150. 240.   0.004
  6 LEGUMES AND SEEDS      150. 240.   0.15
```

```
  7 ROOTS AND TUBERS      150. 240.   0.003
WATERSHED DEFINITION                 111111111122222222223333333333444444444444
  1 Sr-89                                5.0E-6    0.0
  2 Sr-90                                5.0E-6    0.0
  3 Cs-134                               5.0E-6    0.0
  4 Cs-137                               5.0E-6    0.0
REGIONAL ECONOMIC DATA
  1 EXCLUSION       0.237 .196      301.     5682.   121231.
  2 REGION_02       0.187 .362      315.     9617.   131822.
  3 REGION_03       0.359 .213      510.     7306.   136163.
  4 REGION_04       0.495 .244      499.     7434.   151560.
  5 REGION_05       0.547 .239      484.     9041.   178741.
  6 REGION_06       0.543 .228      500.     9873.   187870.
  7 REGION_07       0.187 .365      313.     9662.   131866.
  8 REGION_08       0.257 .142      336.    10497.   162264.
  9 REGION_09       0.303 .106      376.    11381.   179934.
 10 REGION_10       0.174 .242      644.    13466.   163079.
 11 REGION_11       0.187 .365      313.     9662.   131866.
 12 REGION_12       0.117 .074      238.    10404.   157487.
 13 REGION_13       0.144 .004      311.    11315.   165761.
 14 REGION_14       0.184 .067      529.    10960.   155691.
 15 REGION_15       0.182 .294      353.     8663.   130899.
 16 REGION_16       0.184 .081      406.     6872.   136128.
 17 REGION_17       0.280 .000      361.     5453.   137948.
 18 REGION_18       0.309 .000      481.     6253.   140558.
 19 REGION_19       0.167 .059      484.     5363.   127707.
 20 REGION_20       0.163 .000      517.     4526.   126897.
 21 REGION_21       0.260 .000      469.     4221.   129440.
 22 REGION_22       0.381 .000      565.     4386.   132106.
 23 REGION_23       0.163 .000      517.     4526.   126897.
 24 REGION_24       0.164 .000      518.     4548.   127178.
 25 REGION_25       0.260 .078      486.     4205.   129697.
 26 REGION_26       0.302 .044      465.     3836.   126644.
 27 REGION_27       0.248 .158      298.     4765.   118786.
 28 REGION_28       0.248 .158      298.     4765.   118782.
 29 REGION_29       0.248 .158      298.     4765.   118782.
 30 REGION_30       0.232 .211      302.     6029.   122159.
 31 REGION_31       0.216 .267      306.     7356.   125704.
 32 REGION_32       0.297 .101      574.     6813.   151359.
 33 REGION_33       0.312 .059      706.     7498.   165179.
 34 REGION_34       0.292 .051      681.     7106.   160138.
 35 REGION_35       0.317 .087      663.     6931.   161577.
 36 REGION_36       0.259 .063      667.     6932.   166318.
 37 REGION_37       0.322 .068      705.     7632.   166437.
 38 REGION_38       0.291 .047      725.     7761.   174110.
 39 REGION_39       0.133 .001      713.     6710.   178269.
 40 REGION_40       0.088 .000      812.     6938.   166779.
 41 REGION_41       0.262 .140      377.     5319.   127984.
 42 REGION_42       0.270 .065      431.     6431.   174439.
 43 REGION_43       0.238 .380      461.     6866.   149780.
 44 REGION_44       0.157 .080     1147.     7335.   147445.
 45 REGION_45       0.249 .136      307.     4962.   128258.
 46 REGION_46       0.257 .041      362.     6189.   182163.
 47 REGION_47       0.272 .334      526.     5967.   140373.
 48 REGION_48       0.318 .174     1251.     4528.   120349.
 49 REGION_49       0.251 .116      314.     5126.   136469.
 50 REGION_50       0.285 .002      334.     5071.   156279.
 51 REGION_51       0.299 .030      649.     3521.   109866.
 52 REGION_52       0.234 .017      695.     3155.   104004.
 53 REGION_53       0.248 .157      298.     4764.   118781.
 54 REGION_54       0.309 .024      268.     3850.   118092.
 55 REGION_55       0.335 .023      276.     5205.   130383.
 56 REGION_56       0.326 .053      375.     6965.   142491.
```

```
  57 REGION_57      0.248 .158      298.     4765.   118782.
  58 REGION_58      0.302 .120      301.     6453.   136149.
  59 REGION_59      0.346 .073      286.     8218.   158406.
  60 REGION_60      0.371 .079      308.     8830.   160018.
  61 REGION_61      0.248 .158      298.     4765.   118782.
  62 REGION_62      0.228 .231      306.     6526.   123614.
  63 REGION_63      0.389 .133      515.     5491.   131831.
  64 REGION_64      0.459 .140      581.     6067.   137365.
  65 REGION_65      0.398 .219      377.     6412.   122434.
  66 REGION_66      0.367 .161     1395.     7574.   127782.
  67 REGION_67      0.220 .252      305.     7004.   124763.
  68 REGION_68      0.187 .365      313.     9662.   131866.
  69 REGION_69      0.248 .158      298.     4765.   118782.
  70 REGION_70      0.187 .365      313.     9662.   131866.
  71 REGION_71      0.187 .365      313.     9662.   131866.
  72 REGION_72      0.238 .320      371.     8964.   133138.
  73 REGION_73      0.464 .121      630.     5877.   138768.
  74 REGION_74      0.477 .262      479.     6073.   125842.
  75 REGION_75      0.484 .312      418.     5941.   117144.
  76 REGION_76      0.431 .183     1413.     6654.   120587.
  77 REGION_77      0.458 .126      623.     5956.   138624.
  78 REGION_78      0.469 .252      501.     6668.   138080.
  79 REGION_79      0.469 .279      454.     6978.   138495.
  80 REGION_80      0.438 .040      234.     8887.   155434.
END
POPULATION

>>The Record Identifier TYPEBNUMBER was not found:
>>Type B results not being generated


******** BEGINNING OF CHANGE CASE   1 USER INPUT ********

*****************************************************************************

       *********** BEGINNING OF CHANGE CASE 1 USER INPUT
******************************

*****************************************************************************

       * EMERGENCY RESPONSE SCENARIO NUMBER 2

       *

       * SPECIFIC DESCRIPTION OF THE EMERGENCY RESPONSE SCENARIO BEING USED

       *

  126  EZEANAM2001  'NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE'

********   RECORD NUMBER   126 REPLACES RECORD NUMBER    33   ********
       *

       * THE TYPE OF WEIGHTING TO BE APPLIED TO THE EMERGENCY RESPONSE SCENARIOS

       *

       * WEIGHTING FRACTION APPLICABLE TO THIS SCENARIO FOR EVACUATION

       *

  127  EZWTFRAC001  0.05   (5% of the people DO NOT evacuate)
```

```
********   RECORD NUMBER   127 REPLACES RECORD NUMBER    35   ********
       *

       * LAST RING IN THE MOVEMENT ZONE

       *

  128  EZLASMOV001      0    (A ZERO TURNS OFF THE EVACUATION MODEL)

********   RECORD NUMBER   128 REPLACES RECORD NUMBER    36   ********
       *


       .

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

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


NO EVACUATION REQUESTED


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

RECORD
NUMBER                                   RECORD

       * GENERAL DESCRIPTIVE TITLE DESCRIBING THIS NAPS "CHRONC" INPUT FILE

       * BASE CASE Using revised Economic data CHEVACST =40, CHRELCST = 40

       * CHDBCST = 42000, CHPOPCST = 7300, CHVALWF = 6979, CHVALWNF = 141206

       *    LAST MODIFIED by MGM  04/10/06

    1  CHCHNAME001 'NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model'

*****************************************************************************

       * EMERGENCY RESPONSE COST DATA BLOCK

       *

       * DAILY COST FOR A PERSON WHO IS EVACUATED (DOLLARS/PERSON-DAY)

       *

    2  CHEVACST001  40.00   (INCLUDES FOOD AND HOUSING COSTS BUT NOT LOST INCOME)

       *

       * DAILY COST FOR A PERSON WHO IS RELOCATED (DOLLARS/PERSON-DAY)
```

```
*
3  CHRELCST001  40.00   (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.
*
4  DUR_INTPHAS   0.0    (in seconds)   (no intermediate phase)
*
* LONG-TERM PHASE DOSE PROJECTION PERIOD, THE DURATION OF THE EXPOSURE
* PERIOD OVER WHICH THE LONG-TERM DOSE CRITERION IS EVALUATED (SECONDS)
*
5  CHTMPACT001   1.58E8              (5 YEARS)
*
* DOSE CRITERION FOR INTERMEDIATE PHASE RELOCATION (Sv)
*
6  CHDSCRTI001   1.0E5               (NO INTERMEDIATE PHASE RELOCATION)
*
* DOSE CRITERION FOR LONG-TERM PHASE RELOCATION (Sv)
*
7  CHDSCRLT001    0.04
*
* CRITICAL ORGAN NAME FOR LONG-TERM ACTIONS
*
8  CHCRTOCR001 'L-EDEWBODY'
*
* Long Term Exposure Period    Previously permanently set to:
*    one million years = 3.15 E13 seconds
*    MACCS2 allowable range is 3.15E7 to 1.E10
```

```
        *
    9   CHEXPTIM001     1.E10
*****************************************************************************
        * DECONTAMINATION PLAN DATA BLOCK
        *
        * NUMBER OF LEVELS OF DECONTAMINATION
        *
   10   CHLVLDEC001  2
        *
        * DECONTAMINATION TIMES CORRESPONDING TO THE LVLDEC LEVELS OF DECONTAMINATION
        *  (SECONDS)
        *
   11   CHTIMDEC001   5.184E6  1.0368E7    (60, 120 DAYS)
        *
        * DOSE REDUCTION FACTORS CORRESPONDING TO THE LVLDEC LEVELS OF
DECONTAMINATION
        *
   12   CHDSRFCT001   3.      15.
        *
        * COST OF FARM DECONTAMINATION PER FARMLAND UNIT AREA (DOLLARS/HECTARE)
        *  FOR THE VARIOUS LEVELS OF DECONTAMINATION
        *
   13   CHCDFRM0001   658.1   1463.
        *
        * COST OF NONFARM DECONTAMINATION PER RESIDENT PERSON (DOLLARS/PERSON)
        *  FOR THE VARIOUS LEVELS OF DECONTAMINATION
        *
   14   CHCDNFRM001   3510.   9360.
        *
        * FRACTION OF FARMLAND DECONTAMINATION COST DUE TO LABOR
        *  FOR THE VARIOUS DECONTAMINATION LEVELS
        *
```

```
15  CHFRFDL0001  .3      .35
    *
    * FRACTION OF NON-FARM DECONTAMINATION COST DUE TO LABOR
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
16  CHFRNFDL001  .7      .5
    *
    * FRACTION OF TIME WORKERS IN FARM AREAS SPEND IN CONTAMINATED AREAS
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
17  CHTFWKF0001  .10     .33
    *
    * FRACTION OF TIME WORKERS IN NON-FARM AREAS SPEND IN CONTAMINATED AREAS
    *  FOR THE VARIOUS DECONTAMINATION LEVELS
    *
18  CHTFWKNF001  .33     .33
    *
    * AVERAGE COST OF DECONTAMINATION LABOR (DOLLARS/MAN-YEAR)
    *
19  CHDLBCST001   42000.
*******************************************************************************
    * INTERDICTION COST DATA BLOCK
    *
    * DEPRECIATION (DETERIORATION) RATE DURING INTERDICTION PERIOD (PER YEAR)
    *
20  CHDPRATE001    .20   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
    *
    * INVESTMENT INCOME RETURN (DISCOUNT RATE) DURING INTERDICTION PERIOD (PER
YEAR)
    * THIS VALUE SHOULD BE DERIVED AS A REAL RETURN RATE ADJUSTED FOR INFLATION
    *
21  CHDSRATE001    .12   (VALUE OBTAINED FROM WASH-1400, APPENDIX 6)
```

```
      *
      * POPULATION RELOCATION COST (DOLLARS/PERSON):
      *  ALTERNATIVE HOUSING, MOVING COSTS, AND LOST INCOME FOR PEOPLE IN
      *  AREAS WHICH REQUIRE DECONTAMINATION, INTERDICTION, OR CONDEMNATION
      *
   22 CHPOPCST001   7300.
*******************************************************************************
      * GROUNDSHINE WEATHERING DEFINITION DATA BLOCK
      *
      * NUMBER OF TERMS IN THE GROUNDSHINE WEATHERING RELATIONSHIP (EITHER 1 OR 2)
      *
   23 CHNGWTRM001   2
      *
      * GROUNDSHINE WEATHERING COEFFICIENTS
      *
   24 CHGWCOEF001   0.5    0.5            (JON HELTON)
      *
      * HALF LIVES CORRESPONDING TO THE GROUNDSHINE WEATHERING COEFFICIENTS (S)
      *
   25 CHTGWHLF001   1.6E7  2.8E9          (JON HELTON)
*******************************************************************************
      * RESUSPENSION WEATHERING DEFINITION DATA BLOCK
      *
      * NUMBER OF TERMS IN THE RESUSPENSION WEATHERING RELATIONSHIP
      *
   26 CHNRWTRM001    3
      *
      * RESUSPENSION CONCENTRATION COEFFICIENTS   (/ METER)
      *  RELATIONSHIP BETWEEN GROUND CONCENTRATION AND INSTANTANEOUS AIR CONC.
      *
   27 CHRWCOEF001  1.0E-5   1.0E-7   1.0E-9  (VALUES HERE SELECTED BY JON HELTON)
```

```
      *
      * HALF-LIVES CORRESPONDING TO THE RESUSPENSION CONCENTRATION COEFFICIENTS (S)
      *
   28 CHTRWHLF001  1.6E7    1.6E8    1.6E9   (6 MONTHS, 5 YEARS, 50 YEARS)
*******************************************************************************
      * SITE REGION DESCRIPTION DATA BLOCK
      *
      * FRACTION OF AREA THAT IS LAND IN THE REGION
      *
   29 CHFRACLD001   0.95   (ROUGH GUESS VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * FRACTION OF LAND DEVOTED TO FARMING IN THE REGION
      *
   30 CHFRCFRM001   0.382  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * AVERAGE VALUE OF ANNUAL FARM PRODUCTION IN THE REGION (DOLLARS/HECTARE)
      *  (CASH RECEIPTS FROM FARMING PLUS VALUE OF HOME CONSUMPTION)/(LAND IN
FARMS)
      *
   31 CHFRMPRD001   371.0  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * FRACTION OF FARM PRODUCTION RESULTING FROM DAIRY PRODUCTION IN THE REGION
      *  (VALUE OF MILK PRODUCED)/(CASH RECEIPTS FROM FARMING PLUS HOME
CONSUMPTION)
      *
   32 CHDPFRCT001   0.198  (VIRGINIA STATE VALUE, SITE FILE OVERRIDES THIS VALUE)
      *
      * VALUE OF FARM WEALTH (DOLLARS/HECTARE)
      *  (AVERAGE VALUE PER HECTARE OF FARM LAND AND BUILDINGS TO 100 MILES)
      *
   33 CHVALWF0001   6979.  *  NAPS
      *
      * FRACTION OF FARM WEALTH IN IMPROVEMENTS FOR THE REGION
```

```
    *
34  CHFRFIM0001   0.25  *  SURRY/NAPS
    *
    * 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
    *
35  CHVALWNF001  141206.  *  NAPS
    *
    * FRACTION OF NON-FARM WEALTH IN IMPROVEMENTS FOR THE REGION
    *
36  CHFRNFIM001   0.8
    ******************************************************************************
37  CHFDPATH001 'NEW'
    *
    * name of the COMIDA2 binary output file
    *
38  BIN_FILE001 '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)
  39 DOSEMILK001    0.025          0.075
  40 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 critera, GCMAXR, used for NUREG-1150 wre based on
     * an ingestion dose integrated from zero to infinity.  It is not possible to
     * translate those parameter values into corresponding annual dose limits, as
is
     * required by the COMIDA2-based food model.  The "total" dose limits used in
     * NUREG-1150 for "root uptake", 0.5 rem effective and 1.5 rem thyroid, are
used
     * here as annual dose limits for interdiction of food production in years the
     * years subsequent to the accident.
     *
     *              effective     thyroid  (doses in sieverts)
  41 DOSELONG001    0.005          0.015
     *
     * NUMBER OF NUCLIDES IN THE WATER INGESTION PATHWAY MODEL
     *
  42 CHNUMWPI001    4
     *
     * TABLE OF NUCLIDE DEFINITIONS IN THE WATER INGESTION PATHWAY MODEL
     *
     * IF A SITE DATA FILE IS DEFINED, THE DATA DEFINING THE WATERSHED INGESTION
     *  FACTOR IS SUPERSEDED BY THE CORRESPONDING DATA IN THE SITE DATA FILE
     *
     *                         INITIAL     ANNUAL     INGESTION FACTOR
```

```
      *              WATER       WASHOFF      WASHOFF     ((Bq INGESTED)/
      *             NUCLIDE      FRACTION      RATE        (Bq IN WATER))
      *
      *              NAMWPI       WSHFRI       WSHRTA          WINGF
   43  CHWTRISO001   Sr-89        0.01         0.004          5.0E-6
   44  CHWTRISO002   Sr-90        0.01         0.004          5.0E-6
   45  CHWTRISO003   Cs-134       0.005        0.001          5.0E-6
   46  CHWTRISO004   Cs-137       0.005        0.001          5.0E-6

*******************************************************************************
      * SPECIAL OPTIONS DATA BLOCK
      *
      * DETAILED PRINT OPTION CONTROL SWITCHES, LOOK AT THE CODE BEFORE TURNING
ON!!
      *          KSWDSC
      *
   47  CHKSWTCH001   0

*******************************************************************************
      * DEFINE THE TYPE 9 RESULTS
      *
      * LONG-TERM POPULATION DOSE IN A GIVEN REGION BROKEN DOWN BY THE 12 PATHWAYS
      *
      * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
      * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 12
      *
   48  TYPE9NUMBER   1      (UP TO 10 ALLOWED)
      *
      *              ORGNAM        INNER      OUTER
      *
   49  TYPE9OUT001   'L-EDEWBODY'       1          11    (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
      *
   50 TYP10NUMBER   1      (UP TO 10 ALLOWED)
      *
      *              INNER      OUTER
      *
   51 TYP10OUT001      1          11    (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.
      *
   52 TYP11FLAG11  .FALSE.

*******************************************************************************
      * IMPACTED AREA/POPULATION RESULTS IN A REGION BROKEN DOWN BY 6 TYPES OF
IMPACTS
      *
      * NUMBER OF RESULTS OF THIS TYPE THAT ARE BEING REQUESTED
      * FOR EACH RESULT YOU REQUEST, THE CODE WILL PRODUCE A SET OF 8
      *
   53 TYP12NUMBER   1      (UP TO 10 ALLOWED)
      *
      *              INNER      OUTER
      *
   54 TYP12OUT001      1          11    (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
        *
   55   TYP13NUMBER   0   (UP TO 10 ALLOWED)
        *
        * IRAD13 is the radial spatial interval at which results are requested
        *
        * ORGN13 is the name of the organ for which results are requested
        *  (allowable values for ORGN13 are 'EFFECTIVE' or 'THYROID')
        *
        .
******** TERMINATOR RECORD ENCOUNTERED -- END OF BASE CASE USER INPUT ********

USER INPUT PROCESSING SUMMARY - BASE CASE

NUMBER OF RECORDS READ                          =  304
NUMBER OF BLANK OR COMMENT RECORDS READ         =  248
NUMBER OF TERMINATOR RECORDS                    =    1
NUMBER OF RECORDS PROCESSED                     =   55
     NUMBER OF PROCESSED RECORDS DUPLICATED     =    0
     NUMBER OF PROCESSED RECORDS SORTED         =   55
*******************************************************************************
*****************

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

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

Seven new organs added with MACCS Version 1.5.11.1

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

 7 CANCER EFFECTS ARE DEFINED IN THE MODEL.
    INDEX  CANCER EFFECT                    ORGAN       ALPHA       BETA      CFRISK
   CIRISK
       1                          LEUKEMIA     L-RED MARR   1.000E+00  0.000E+00
9.700E-03  0.000E+00
       2                          BONE         L-BONE SUR   1.000E+00  0.000E+00
9.000E-04  0.000E+00
       3                          BREAST       L-BREAST     1.000E+00  0.000E+00
5.400E-03  1.700E-02
       4                          LUNG         L-LUNGS      1.000E+00  0.000E+00
```

```
1.550E-02  0.000E+00
       5                          THYROID      L-THYROIDH   1.000E+00  0.000E+00
7.200E-04  7.200E-03
       6                          GI           L-LOWER LI   1.000E+00  0.000E+00
3.360E-02  0.000E+00
       7                          OTHER        L-EDEWBODY   1.000E+00  0.000E+00
2.760E-02  0.000E+00
```

TIME OF HOTSPOT RELOCATION IS 4.3200E+04.
TIME OF NORMAL RETURN IS 8.640E+04 AND THE EMERGENCY PHASE ENDS AT 6.048E+05.

GROUNDSHINE SHIELDING FACTOR = 0.330

RESUSPENSION PROTECTION FACTOR = 0.410

BREATHING RATE (CUBIC M/S) = 2.660E-04

DISPERSION MODEL FLAG IS 2

WINDROSE PROBABILITIES BY WIND DIRECTION AND MET BIN NUMBER

```
 BIN     1      2      3      4      5      6      7      8      9     10     11
12     13     14     15     16
    1 0.0763 0.0847 0.0734 0.0311 0.0254 0.0565 0.1073 0.0791 0.0706 0.0367 0.0395
0.0311 0.0565 0.1186 0.0734 0.0395
    2 0.0757 0.1513 0.1141 0.0722 0.0931 0.1071 0.0943 0.0582 0.0931 0.0349 0.0244
0.0291 0.0093 0.0128 0.0140 0.0163
    3 0.0149 0.0000 0.0299 0.0746 0.0299 0.1194 0.0597 0.1343 0.1194 0.0448 0.0597
0.1343 0.0448 0.0597 0.0597 0.0149
    4 0.0173 0.0410 0.0475 0.0346 0.0281 0.0583 0.0929 0.0907 0.0583 0.0605 0.0864
0.0778 0.1253 0.1037 0.0432 0.0346
    5 0.0759 0.0786 0.0938 0.0331 0.0386 0.0441 0.0538 0.0979 0.0786 0.0883 0.0786
0.0441 0.0538 0.0759 0.0372 0.0276
    6 0.0650 0.1151 0.0936 0.0372 0.0264 0.0293 0.0493 0.0736 0.1165 0.1172 0.0650
0.0436 0.0457 0.0550 0.0415 0.0257
    7 0.0293 0.1158 0.1032 0.0921 0.0530 0.0683 0.0948 0.0893 0.1339 0.0739 0.0460
0.0335 0.0209 0.0209 0.0195 0.0056
    8 0.0056 0.1328 0.1441 0.0650 0.0791 0.2345 0.1525 0.0989 0.0480 0.0113 0.0028
0.0000 0.0000 0.0085 0.0169 0.0000
    9 0.0440 0.0330 0.0549 0.0769 0.0440 0.0549 0.0659 0.1099 0.0659 0.0989 0.0879
0.0659 0.0879 0.0549 0.0440 0.0110
   10 0.0356 0.0593 0.0712 0.0593 0.0623 0.0564 0.1039 0.1009 0.0742 0.0326 0.0623
0.0356 0.0653 0.0712 0.0682 0.0415
   11 0.0785 0.1099 0.1278 0.0897 0.0426 0.0538 0.1099 0.1121 0.0404 0.0247 0.0247
0.0202 0.0336 0.0381 0.0561 0.0381
   12 0.1056 0.1777 0.1888 0.0747 0.0918 0.0833 0.0472 0.0292 0.0283 0.0283 0.0189
0.0094 0.0112 0.0129 0.0429 0.0498
   13 0.0562 0.0899 0.0899 0.0787 0.1461 0.0337 0.0562 0.0225 0.0562 0.0337 0.0225
0.0562 0.0674 0.0899 0.0562 0.0449
   14 0.0605 0.0796 0.1115 0.1146 0.0828 0.0860 0.0669 0.0605 0.0287 0.0350 0.0318
0.0414 0.0510 0.0414 0.0382 0.0701
   15 0.1264 0.0650 0.0830 0.1119 0.0903 0.1083 0.0758 0.0722 0.0253 0.0433 0.0289
0.0108 0.0217 0.0181 0.0542 0.0650
   16 0.1231 0.1577 0.1346 0.1077 0.1077 0.1346 0.0538 0.0538 0.0231 0.0154 0.0192
0.0115 0.0154 0.0115 0.0077 0.0231
   17 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   18 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   19 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   20 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
```

```
   21 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   22 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   23 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   24 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   25 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   26 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   27 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   28 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   29 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   30 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   31 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   32 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   33 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   34 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   35 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   36 0.0617 0.0854 0.0463 0.0249 0.0130 0.0344 0.0356 0.0771 0.1554 0.1198 0.1032
0.0890 0.0581 0.0427 0.0308 0.0225
   37 0.0670 0.1107 0.1048 0.0612 0.0558 0.0709 0.0721 0.0742 0.0814 0.0632 0.0497
0.0382 0.0395 0.0435 0.0376 0.0301
   38 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
   39 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
   40 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000
   41 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
0.0000 0.0000 0.0000 0.0000 0.0000


Processing a Site Data File with Header:  SECPOP90 V2.3 MACCS Site Data File for
North Anna
  Lat: 38d 3'48'' Long:  77d 47'13'' LAST MODIFIED  12-17-1999

 THIS PROGRAM CURRENTLY ALLOWS THE GENERATION OF UP TO  394 RESULTS

YOU HAVE REQUESTED  52 RESULTS FROM "EARLY" COMPOSED OF:

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

YOU HAVE REQUESTED 38 RESULTS FROM "CHRONC" COMPOSED OF:

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

TRIAL	DAY	HOUR	BIN	PRBMET
1	152	18	21	4.31E-03
For Julian Day 152, selecting COMIDA2 results # 4 of 9				
2	154	2	25	2.00E-04
For Julian Day 154, selecting COMIDA2 results # 4 of 9				
3	154	4	32	3.42E-04
For Julian Day 154, selecting COMIDA2 results # 4 of 9				
4	160	6	9	2.60E-03
For Julian Day 160, selecting COMIDA2 results # 4 of 9				
5	160	10	3	1.91E-03
For Julian Day 160, selecting COMIDA2 results # 4 of 9				
6	164	1	6	3.99E-02
For Julian Day 164, selecting COMIDA2 results # 4 of 9				
7	168	17	12	3.32E-02
For Julian Day 168, selecting COMIDA2 results # 5 of 9				
8	168	22	10	9.62E-03
For Julian Day 168, selecting COMIDA2 results # 5 of 9				
9	169	17	31	1.14E-04
For Julian Day 169, selecting COMIDA2 results # 5 of 9				
10	175	15	2	2.45E-02
For Julian Day 175, selecting COMIDA2 results # 5 of 9				
11	176	9	1	1.01E-02
For Julian Day 176, selecting COMIDA2 results # 5 of 9				
12	177	17	36	1.43E-04
For Julian Day 177, selecting COMIDA2 results # 5 of 9				
13	179	9	4	1.32E-02
For Julian Day 179, selecting COMIDA2 results # 5 of 9				
14	186	5	7	2.05E-02
For Julian Day 186, selecting COMIDA2 results # 5 of 9				
15	190	18	20	2.48E-03
For Julian Day 190, selecting COMIDA2 results # 5 of 9				
16	192	2	15	7.91E-03
For Julian Day 192, selecting COMIDA2 results # 6 of 9				
17	197	8	5	2.07E-02
For Julian Day 197, selecting COMIDA2 results # 6 of 9				
18	198	4	11	1.27E-02
For Julian Day 198, selecting COMIDA2 results # 6 of 9				
19	204	12	18	2.85E-04
For Julian Day 204, selecting COMIDA2 results # 6 of 9				
20	204	24	27	7.13E-04
For Julian Day 204, selecting COMIDA2 results # 6 of 9				
21	205	2	22	2.25E-03
For Julian Day 205, selecting COMIDA2 results # 6 of 9				
22	209	4	13	2.54E-03
For Julian Day 209, selecting COMIDA2 results # 6 of 9				
23	216	2	11	1.27E-02
For Julian Day 216, selecting COMIDA2 results # 6 of 9				
24	216	8	36	1.43E-04
For Julian Day 216, selecting COMIDA2 results # 6 of 9				
25	216	9	36	1.43E-04
For Julian Day 216, selecting COMIDA2 results # 6 of 9				
26	216	10	35	1.14E-04
For Julian Day 216, selecting COMIDA2 results # 6 of 9				
27	216	11	35	1.14E-04

```
For Julian Day 216, selecting COMIDA2 results # 6 of 9
        28        216        12        34   1.14E-04
For Julian Day 216, selecting COMIDA2 results # 6 of 9
        29        226        19        20   2.48E-03
For Julian Day 226, selecting COMIDA2 results # 7 of 9
        30        226        23         9   2.60E-03
For Julian Day 226, selecting COMIDA2 results # 7 of 9
        31        229        20        26   3.71E-04
For Julian Day 229, selecting COMIDA2 results # 7 of 9
        32        232         2        31   1.14E-04
For Julian Day 232, selecting COMIDA2 results # 7 of 9
        33        232         3        30   1.14E-04
For Julian Day 232, selecting COMIDA2 results # 7 of 9
        34        232         5        32   3.42E-04
For Julian Day 232, selecting COMIDA2 results # 7 of 9
        35        232         6        32   3.42E-04
For Julian Day 232, selecting COMIDA2 results # 7 of 9
        36        232        13        27   7.13E-04
For Julian Day 232, selecting COMIDA2 results # 7 of 9
        37        233        20        16   7.42E-03
For Julian Day 233, selecting COMIDA2 results # 7 of 9
        38        236         1        10   9.62E-03
For Julian Day 236, selecting COMIDA2 results # 7 of 9
        39        238        10         1   1.01E-02
For Julian Day 238, selecting COMIDA2 results # 7 of 9
        40        245        18        25   2.00E-04
For Julian Day 245, selecting COMIDA2 results # 7 of 9
        41        246         5         5   2.07E-02
For Julian Day 246, selecting COMIDA2 results # 7 of 9
        42        247         9         2   2.45E-02
For Julian Day 247, selecting COMIDA2 results # 7 of 9
        43        251         1        14   8.96E-03
For Julian Day 251, selecting COMIDA2 results # 7 of 9
        44        253        18        36   1.43E-04
For Julian Day 253, selecting COMIDA2 results # 7 of 9
        45        253        20        35   1.14E-04
For Julian Day 253, selecting COMIDA2 results # 7 of 9
        46        256        16         1   1.01E-02
For Julian Day 256, selecting COMIDA2 results # 7 of 9
        47        267         8        21   4.31E-03
For Julian Day 267, selecting COMIDA2 results # 8 of 9
        48        271        12        17   1.24E-02
For Julian Day 271, selecting COMIDA2 results # 8 of 9
        49        273        12         2   2.45E-02
For Julian Day 273, selecting COMIDA2 results # 8 of 9
        50        280         3        15   7.91E-03
For Julian Day 280, selecting COMIDA2 results # 8 of 9

     TRIAL        DAY       HOUR        BIN     PRBMET
        51        281         7         9   2.60E-03
For Julian Day 281, selecting COMIDA2 results # 8 of 9
        52        287        20        31   1.14E-04
For Julian Day 287, selecting COMIDA2 results # 9 of 9
        53        290        11        26   3.71E-04
For Julian Day 290, selecting COMIDA2 results # 9 of 9
        54        290        19        22   2.25E-03
For Julian Day 290, selecting COMIDA2 results # 9 of 9
        55        290        24        27   7.13E-04
For Julian Day 290, selecting COMIDA2 results # 9 of 9
        56        296        19        16   7.42E-03
For Julian Day 296, selecting COMIDA2 results # 9 of 9
        57        299        24        19   2.85E-04
```

```
For Julian Day 299, selecting COMIDA2 results # 9 of 9
         58        303         10          3   1.91E-03
For Julian Day 303, selecting COMIDA2 results # 9 of 9
         59        303         12          4   1.32E-02
For Julian Day 303, selecting COMIDA2 results # 9 of 9
         60        304          4         13   2.54E-03
For Julian Day 304, selecting COMIDA2 results # 9 of 9
         61        305          1         19   2.85E-04
For Julian Day 305, selecting COMIDA2 results # 9 of 9
         62        305         20         12   3.32E-02
For Julian Day 305, selecting COMIDA2 results # 9 of 9
         63        311          9         27   7.13E-04
For Julian Day 311, selecting COMIDA2 results # 9 of 9
         64        315          4         10   9.62E-03
For Julian Day 315, selecting COMIDA2 results # 9 of 9
         65        316         15          6   3.99E-02
For Julian Day 316, selecting COMIDA2 results # 9 of 9
         66        323          1         14   8.96E-03
For Julian Day 323, selecting COMIDA2 results # 9 of 9
         67        325         17         22   2.25E-03
For Julian Day 325, selecting COMIDA2 results # 9 of 9
         68        327         19         18   2.85E-04
For Julian Day 327, selecting COMIDA2 results # 9 of 9
         69        331          5         11   1.27E-02
For Julian Day 331, selecting COMIDA2 results # 9 of 9
         70        339          1          5   2.07E-02
For Julian Day 339, selecting COMIDA2 results # 1 of 9
         71        340         19          7   2.05E-02
For Julian Day 340, selecting COMIDA2 results # 1 of 9
         72        340         21          8   1.01E-02
For Julian Day 340, selecting COMIDA2 results # 1 of 9
         73        344         15          3   1.91E-03
For Julian Day 344, selecting COMIDA2 results # 1 of 9
         74        346          4         18   2.85E-04
For Julian Day 346, selecting COMIDA2 results # 1 of 9
         75        346          6         19   2.85E-04
For Julian Day 346, selecting COMIDA2 results # 1 of 9
         76        356         16         17   1.24E-02
For Julian Day 356, selecting COMIDA2 results # 1 of 9
         77        359         23          9   2.60E-03
For Julian Day 359, selecting COMIDA2 results # 1 of 9
         78        360          7         14   8.96E-03
For Julian Day 360, selecting COMIDA2 results # 1 of 9
         79        360          8         15   7.91E-03
For Julian Day 360, selecting COMIDA2 results # 1 of 9
         80         13          9          4   1.32E-02
For Julian Day  13, selecting COMIDA2 results # 1 of 9
         81         15          1         13   2.54E-03
For Julian Day  15, selecting COMIDA2 results # 1 of 9
         82         18          7         12   3.32E-02
For Julian Day  18, selecting COMIDA2 results # 1 of 9
         83         20         22         16   7.42E-03
For Julian Day  20, selecting COMIDA2 results # 1 of 9
         84         23         21          7   2.05E-02
For Julian Day  23, selecting COMIDA2 results # 1 of 9
         85         23         23          6   3.99E-02
For Julian Day  23, selecting COMIDA2 results # 1 of 9
         86         28          3         20   2.48E-03
For Julian Day  28, selecting COMIDA2 results # 1 of 9
         87         31          1          3   1.91E-03
For Julian Day  31, selecting COMIDA2 results # 1 of 9
         88         36          5         26   3.71E-04
For Julian Day  36, selecting COMIDA2 results # 2 of 9
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        89          36          6          25   2.00E-04
For Julian Day  36, selecting COMIDA2 results # 2 of 9
        90          43          4          11   1.27E-02
For Julian Day  43, selecting COMIDA2 results # 2 of 9
        91          52         21          22   2.25E-03
For Julian Day  52, selecting COMIDA2 results # 2 of 9
        92          53         11           8   1.01E-02
For Julian Day  53, selecting COMIDA2 results # 2 of 9
        93          57         17          21   4.31E-03
For Julian Day  57, selecting COMIDA2 results # 2 of 9
        94          61         21          21   4.31E-03
For Julian Day  61, selecting COMIDA2 results # 2 of 9
        95          61         22          19   2.85E-04
For Julian Day  61, selecting COMIDA2 results # 2 of 9
        96          65         11           2   2.45E-02
For Julian Day  65, selecting COMIDA2 results # 2 of 9
        97          70         13           8   1.01E-02
For Julian Day  70, selecting COMIDA2 results # 2 of 9
        98          73          6          26   3.71E-04
For Julian Day  73, selecting COMIDA2 results # 2 of 9
        99          73          7          24   1.14E-04
For Julian Day  73, selecting COMIDA2 results # 2 of 9
       100          73         10          17   1.24E-02
For Julian Day  73, selecting COMIDA2 results # 2 of 9


     TRIAL        DAY       HOUR        BIN     PRBMET
       101         77         13          25   2.00E-04
For Julian Day  77, selecting COMIDA2 results # 2 of 9
       102         79         15          14   8.96E-03
For Julian Day  79, selecting COMIDA2 results # 2 of 9
       103         79         20          13   2.54E-03
For Julian Day  79, selecting COMIDA2 results # 2 of 9
       104         83         16           4   1.32E-02
For Julian Day  83, selecting COMIDA2 results # 2 of 9
       105         85          5          32   3.42E-04
For Julian Day  85, selecting COMIDA2 results # 2 of 9
       106         92         24          16   7.42E-03
For Julian Day  92, selecting COMIDA2 results # 3 of 9
       107        104          8           7   2.05E-02
For Julian Day 104, selecting COMIDA2 results # 3 of 9
       108        106          5          15   7.91E-03
For Julian Day 106, selecting COMIDA2 results # 3 of 9
       109        113          6          18   2.85E-04
For Julian Day 113, selecting COMIDA2 results # 3 of 9
       110        128         19          17   1.24E-02
For Julian Day 128, selecting COMIDA2 results # 3 of 9
       111        130         21           6   3.99E-02
For Julian Day 130, selecting COMIDA2 results # 3 of 9
       112        132          1          12   3.32E-02
For Julian Day 132, selecting COMIDA2 results # 3 of 9
       113        133         18           5   2.07E-02
For Julian Day 133, selecting COMIDA2 results # 3 of 9
       114        134         21          20   2.48E-03
For Julian Day 134, selecting COMIDA2 results # 3 of 9
       115        135         20           8   1.01E-02
For Julian Day 135, selecting COMIDA2 results # 3 of 9
       116        149          5          10   9.62E-03
For Julian Day 149, selecting COMIDA2 results # 4 of 9
       117        151         12           1   1.01E-02
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▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

                                                PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                          NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
Source Term 1: Plume 1, at 32.2-48.3 km
 Cs-137   Center Air Conc. (Bq-s/m3)     1.0000  7.69E+09  6.95E+09  1.42E+10
2.03E+10 NOT-FOUND NOT-FOUND  2.66E+10  1.27E-02   69
 Cs-137   Ground Air Conc. (Bq-s/m3)     1.0000  7.81E+09  6.95E+09  1.51E+10
2.08E+10 NOT-FOUND NOT-FOUND  2.73E+10  1.27E-02   69
 Cs-137   Center Ground Conc. (Bq/m2)   1.0000  8.76E+07  7.37E+07  1.63E+08
2.10E+08 NOT-FOUND NOT-FOUND  2.72E+08  1.27E-02   69
 Total    Center Ground Conc. (Bq/m2)   1.0000  1.35E+10  1.11E+10  2.64E+10
3.22E+10 NOT-FOUND NOT-FOUND  4.15E+10  1.27E-02   69
 Ground-Level Dilution, X/Q (s/m3)      1.0000  7.42E-08  5.17E-08  1.64E-07
2.19E-07  3.43E-07  4.12E-07  4.93E-07  2.54E-03  103
 Cs-137   Adjusted Source, Q (Bq)       1.0000  1.34E+17  1.16E+17  2.01E+17
2.07E+17 NOT-FOUND NOT-FOUND  2.14E+17  2.45E-02   96
 Plume Sigma-y (m)                      1.0000  4.48E+03  3.61E+03  7.56E+03
9.41E+03  1.01E+04  1.02E+04  1.04E+04  4.57E-04    3
 Plume Sigma-z (m)                      1.0000  4.66E+02  3.57E+02  6.15E+02
1.15E+03 NOT-FOUND NOT-FOUND  2.18E+03  2.05E-02  107
 Plume Height  (m)                      1.0000  4.90E+01 NOT-FOUND NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  4.90E+01  1.00E+00    1
 Plume Arrival Time (s)                 1.0000  1.45E+04  1.18E+04  2.31E+04
2.71E+04  3.43E+04  3.72E+04  4.03E+04  2.54E-03   81
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Source Term 1: Plume 1, at 48.3-64.4 km
 Cs-137    Center Air Conc. (Bq-s/m3)     1.0000  3.89E+09  3.20E+09  8.17E+09
1.08E+10  1.41E+10 NOT-FOUND  1.48E+10  7.42E-03  106
 Cs-137    Ground Air Conc. (Bq-s/m3)     1.0000  3.92E+09  3.23E+09  8.17E+09
1.08E+10  1.45E+10 NOT-FOUND  1.53E+10  7.42E-03  106
 Cs-137    Center Ground Conc. (Bq/m2)    1.0000  4.44E+07  3.41E+07  9.51E+07
1.10E+08  1.45E+08 NOT-FOUND  1.52E+08  7.42E-03  106
 Total     Center Ground Conc. (Bq/m2)    1.0000  6.52E+09  5.48E+09  1.14E+10
1.33E+10  1.88E+10 NOT-FOUND  2.21E+10  7.42E-03  106
 Ground-Level Dilution, X/Q (s/m3)        1.0000  4.11E-08  2.66E-08  8.37E-08
1.18E-07  2.29E-07  2.63E-07  4.12E-07  2.54E-03  103
 Cs-137    Adjusted Source, Q (Bq)        1.0000  1.24E+17  1.10E+17  1.99E+17
2.06E+17 NOT-FOUND NOT-FOUND  2.12E+17  2.45E-02   96
 Plume Sigma-y (m)                        1.0000  6.16E+03  5.42E+03  1.01E+04
1.06E+04  1.16E+04  1.21E+04  1.40E+04  4.57E-04    3
 Plume Sigma-z (m)                        1.0000  5.16E+02  3.71E+02  5.82E+02
6.76E+02 NOT-FOUND NOT-FOUND  2.62E+03  2.05E-02  107
 Plume Height  (m)                        1.0000  4.90E+01 NOT-FOUND NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  4.90E+01  1.00E+00    1
 Plume Arrival Time (s)                   1.0000  1.91E+04  1.57E+04  3.07E+04
3.28E+04  3.83E+04  4.10E+04  4.38E+04  2.54E-03   81
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS'  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY'  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

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


FRACTION OF THE PEOPLE

              ------
    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
               0.950

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
               0.050

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

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


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

10-APR-06  19:11:31    PAGE   1          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH     99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.9388  4.82E+01  2.19E+01  1.20E+02
1.79E+02  3.64E+02  4.46E+02  5.65E+02  5.14E-04   50
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 ERL INJ/PRODROMAL VOMIT      0-16.1 km  0.9928  1.30E+02  9.28E+01  2.73E+02
4.17E+02  8.03E+02  9.45E+02  1.24E+03  1.17E-03   83
 ERL INJ/DIARRHEA             0-16.1 km  0.9413  7.68E+01  4.94E+01  1.75E+02
2.68E+02  5.21E+02  6.00E+02  7.74E+02  1.17E-03   83
 ERL INJ/PNEUMONITIS          0-16.1 km  0.8716  3.81E+01  1.13E+01  1.07E+02
1.64E+02  3.04E+02  3.41E+02  5.37E+02  5.14E-04   50
 ERL INJ/THYROIDITIS          0-16.1 km  0.8658  2.17E+01  7.86E+00  5.92E+01
9.47E+01  1.73E+02  2.06E+02  2.61E+02  5.14E-04   50
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  1.0000  2.07E+02  1.61E+02  4.15E+02
5.63E+02  9.39E+02  1.07E+03  1.30E+03  1.17E-03   83
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  1.0000  1.24E+03  1.09E+03  2.01E+03
2.07E+03  2.21E+03  2.28E+03  2.39E+03  1.63E-03   70
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.9985  1.03E+03  1.00E+03  1.88E+03
2.02E+03  2.10E+03  2.13E+03  2.19E+03  1.63E-03   17
 CAN FAT/TOTAL                0-16.1 km  1.0000  6.74E+02  6.15E+02  1.19E+03
1.48E+03  2.17E+03  2.37E+03  3.00E+03  7.99E-04   83
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.63E+03  1.03E+03  3.71E+03
5.18E+03  7.39E+03  8.34E+03  1.48E+04  9.70E-04    7
 CAN FAT/THYROID              0-80.5 km  1.0000  2.64E+02  1.59E+02  6.51E+02
8.54E+02  1.29E+03  1.50E+03  2.40E+03  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  3.00E+02  1.84E+02  6.29E+02
9.66E+02  1.32E+03  1.49E+03  1.99E+03  9.57E-04   48
 CAN FAT/GI                   0-80.5 km  1.0000  1.01E+03  6.58E+02  2.24E+03
2.94E+03  4.08E+03  4.68E+03  7.37E+03  4.00E-04  106
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  2.81E+02  1.80E+02  5.97E+02
7.83E+02  1.21E+03  1.39E+03  1.95E+03  9.70E-04    7
 CAN FAT/BONE                 0-80.5 km  1.0000  5.60E+01  3.58E+01  1.20E+02
1.64E+02  2.48E+02  2.82E+02  4.75E+02  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  1.54E+03  9.86E+02  3.41E+03
4.67E+03  6.88E+03  7.99E+03  1.29E+04  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  2.64E+03  1.59E+03  6.51E+03
8.54E+03  1.29E+04  1.50E+04  2.40E+04  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  9.43E+02  5.67E+02  1.94E+03
3.02E+03  3.95E+03  4.43E+03  6.28E+03  9.57E-04   48
 CAN FAT/TOTAL                0-80.5 km  1.0000  5.07E+03  3.25E+03  1.08E+04
1.36E+04  2.16E+04  2.46E+04  4.18E+04  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.9388  4.84E+01  2.19E+01  1.20E+02
1.79E+02  3.67E+02  4.47E+02  5.65E+02  5.14E-04   50
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9928  1.53E+02  9.72E+01  3.15E+02
5.23E+02  1.12E+03  1.33E+03  3.43E+03  9.99E-04   83
 ERL INJ/DIARRHEA             0-80.5 km  0.9413  8.23E+01  4.94E+01  1.80E+02
2.92E+02  6.38E+02  7.56E+02  1.48E+03  9.99E-04   83
 ERL INJ/PNEUMONITIS          0-80.5 km  0.8716  3.81E+01  1.13E+01  1.07E+02
1.64E+02  3.04E+02  3.41E+02  5.37E+02  5.14E-04   50
 ERL INJ/THYROIDITIS          0-80.5 km  0.8658  2.17E+01  7.86E+00  5.92E+01
9.47E+01  1.73E+02  2.06E+02  2.61E+02  5.14E-04   50
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  1.0000  3.51E+02  2.36E+02  7.88E+02
1.11E+03  2.08E+03  2.43E+03  3.57E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  1.0000  2.59E+04  1.17E+04  6.27E+04
1.13E+05  2.18E+05  2.89E+05  7.42E+05  4.00E-04  106
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9985  4.64E+03  2.18E+03  9.56E+03
1.52E+04  5.27E+04  6.11E+04  7.67E+04  1.63E-03   69

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.9510  6.01E+00  5.55E+00  7.78E+00
8.53E+00  1.48E+01 NOT-FOUND  3.22E+01  7.42E-03   83

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.9388  1.56E+02  9.58E+01  2.89E+02
4.47E+02  1.33E+03  2.17E+03  8.31E+03  9.99E-04   83
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	PEAK	PEAK	PROB PEAK NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH

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     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv            0.8716  1.02E+02  6.56E+01  2.44E+02
3.78E+02  7.66E+02  9.34E+02  1.27E+03  1.17E-03   83
 EARLY dose L-EDEWBODY > 2.00 Sv         0.9904  1.67E+03  1.06E+03  3.15E+03
4.74E+03  2.02E+04  2.09E+04  2.18E+04  1.94E-03  113
 EARLY dose L-EDEWBODY > 0.250 Sv        1.0000  3.18E+04  1.32E+04  8.99E+04
1.29E+05  2.49E+05  3.14E+05  6.12E+05  9.70E-04    7

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.9510  5.83E-02  5.70E-02  7.94E-02
8.81E-02  1.08E-01  1.15E-01  1.27E-01  1.91E-03    5
 ERL FAT/TOTAL               1.6-3.2 km  0.8571  3.40E-02  2.86E-02  5.22E-02
5.33E-02  5.60E-02  5.72E-02  6.43E-02  1.14E-04   27
 ERL FAT/TOTAL               3.2-4.8 km  0.8341  1.57E-02  4.09E-03  5.00E-02
5.32E-02  6.14E-02 NOT-FOUND  6.17E-02  9.62E-03   38
 ERL FAT/TOTAL               4.8-6.4 km  0.8315  6.55E-03  8.20E-04  2.23E-02
5.02E-02  6.05E-02 NOT-FOUND  6.13E-02  8.96E-03   66
 ERL FAT/TOTAL               6.4-8.1 km  0.7880  2.51E-03  1.11E-04  2.57E-03
1.30E-02  4.64E-02 NOT-FOUND  5.62E-02  7.91E-03   50

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.08E+04  8.94E+03  2.06E+04
2.68E+04  3.99E+04  4.65E+04  5.33E+04  1.17E-03   83
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  8.55E+04  5.54E+04  1.72E+05
2.54E+05  3.68E+05  4.10E+05  6.25E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.9388  3.64E-02  3.01E-02  8.07E-02
9.26E-02  1.03E-01  1.05E-01  1.23E-01  8.80E-06   27
 CAN FAT/TOTAL               0-16.1 km  1.0000  2.79E-02  2.35E-02  5.38E-02
6.63E-02  1.03E-01  1.11E-01  1.34E-01  7.99E-04   83

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.40E+02  9.22E+01  2.83E+02
3.83E+02 NOT-FOUND NOT-FOUND  7.64E+02  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  5.11E+01  3.86E+01  1.07E+02
1.27E+02  1.87E+02  2.27E+02  2.79E+02  2.54E-03  103
 L-EDEWBODY                  3.2-4.8 km  1.0000  2.72E+01  2.05E+01  6.03E+01
7.90E+01  1.11E+02 NOT-FOUND  1.13E+02  8.96E-03   66
 L-EDEWBODY                  4.8-6.4 km  1.0000  1.71E+01  1.27E+01  3.73E+01
5.14E+01  6.73E+01 NOT-FOUND  7.57E+01  7.91E-03   50
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.11E+01  9.02E+00  2.22E+01
3.28E+01  4.74E+01 NOT-FOUND  5.54E+01  7.91E-03   50
 L-EDEWBODY                  8.1-9.7 km  1.0000  7.42E+00  6.27E+00  1.49E+01
2.27E+01  3.33E+01 NOT-FOUND  3.41E+01  7.91E-03   79
 L-EDEWBODY                 9.7-16.1 km  1.0000  3.71E+00  3.30E+00  6.70E+00
9.61E+00  2.03E+01 NOT-FOUND  2.05E+01  7.42E-03   83
 L-EDEWBODY                16.1-32.2 km  1.0000  1.60E+00  1.25E+00  2.90E+00
3.60E+00  5.95E+00 NOT-FOUND  6.60E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  7.18E-01  6.66E-01  1.10E+00
1.29E+00  1.85E+00 NOT-FOUND  1.98E+00  7.42E-03   37
 L-EDEWBODY                48.3-64.4 km  1.0000  4.16E-01  3.40E-01  6.52E-01
9.09E-01  1.15E+00 NOT-FOUND  1.19E+00  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  2.84E-01  2.68E-01  4.31E-01
5.14E-01  8.45E-01 NOT-FOUND  9.74E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input
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SOURCE TERM 1 OF 11:
Case 1BOC ESBWR Specific Source Term Data Used From GE

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

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE

10-APR-06 19:11:31 PAGE 3

		PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.8603	4.49E+01	1.70E+01	1.15E+02	1.73E+02	3.58E+02	4.43E+02	5.58E+02	5.14E-04 50
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9413	1.24E+02	8.29E+01	2.58E+02	4.10E+02	8.03E+02	9.45E+02	1.26E+03	1.17E-03 83
ERL INJ/DIARRHEA	0-16.1 km	0.8926	7.23E+01	4.31E+01	1.66E+02	2.62E+02	5.25E+02	6.02E+02	7.77E+02	1.17E-03 83
ERL INJ/PNEUMONITIS	0-16.1 km	0.8364	3.73E+01	1.06E+01	1.06E+02	1.64E+02	3.04E+02	3.41E+02	5.40E+02	5.14E-04 50
ERL INJ/THYROIDITIS	0-16.1 km	0.8541	2.20E+01	7.87E+00	6.00E+01	9.49E+01	1.73E+02	2.06E+02	2.67E+02	5.14E-04 50
ERL INJ/HYPOTHYROIDISM	0-16.1 km	1.0000	2.10E+02	1.62E+02	4.24E+02	5.74E+02	1.01E+03	1.11E+03	1.34E+03	1.17E-03 83
ERL INJ/SKIN ERYTHEMA	0-16.1 km	1.0000	1.22E+03	1.08E+03	2.00E+03	2.06E+03	2.18E+03	2.24E+03	2.34E+03	1.63E-03 70
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9972	1.02E+03	9.94E+02	1.81E+03	2.02E+03	2.08E+03	2.11E+03	2.15E+03	1.63E-03 17
CAN FAT/TOTAL	0-16.1 km	1.0000	5.76E+02	4.91E+02	1.13E+03	1.43E+03	2.15E+03	2.32E+03	2.88E+03	7.99E-04 83
CAN FAT/LUNG	0-80.5 km	1.0000	1.37E+03	8.12E+02	3.37E+03	4.53E+03	6.87E+03	7.99E+03	1.32E+04	9.70E-04 7
CAN FAT/THYROID	0-80.5 km	1.0000	2.37E+02	1.38E+02	5.80E+02	7.68E+02	1.16E+03	1.36E+03	2.20E+03	9.70E-04 7
CAN FAT/BREAST	0-80.5 km	1.0000	9.49E+01	5.44E+01	2.27E+02	2.93E+02	4.64E+02	5.46E+02	7.67E+02	5.50E-05 36
CAN FAT/GI	0-80.5 km	1.0000	5.10E+02	3.22E+02	1.12E+03	1.39E+03	2.31E+03	2.84E+03	4.49E+03	4.00E-04 106
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.18E+02	7.41E+01	2.99E+02	3.55E+02	5.26E+02	6.26E+02	8.92E+02	9.70E-04 7
CAN FAT/BONE	0-80.5 km	1.0000	3.79E+01	2.29E+01	9.79E+01	1.20E+02	1.86E+02	2.21E+02	3.64E+02	9.70E-04 7
CAN FAT/OTHER	0-80.5 km	1.0000	1.01E+03	6.25E+02	2.55E+03	3.41E+03	5.18E+03	5.84E+03	9.42E+03	9.70E-04 7
CAN INJ/THYROID	0-80.5 km	1.0000	2.37E+03	1.38E+03	5.80E+03	7.68E+03	1.16E+04	1.36E+04	2.20E+04	9.70E-04 7
CAN INJ/BREAST	0-80.5 km	1.0000	2.99E+02	1.70E+02	7.12E+02	9.22E+02	1.37E+03	1.59E+03	2.41E+03	5.50E-05 36
CAN FAT/TOTAL	0-80.5 km	1.0000	3.38E+03	2.10E+03	8.38E+03	1.09E+04	1.49E+04	1.70E+04	3.07E+04	9.70E-04 7
ERL FAT/TOTAL	0-80.5 km	0.8603	4.50E+01	1.70E+01	1.15E+02	1.73E+02	3.61E+02	4.44E+02	5.58E+02	5.14E-04 50
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.9413	1.47E+02	8.54E+01	3.04E+02	5.16E+02	1.12E+03	1.34E+03	3.44E+03	9.99E-04 83
ERL INJ/DIARRHEA	0-80.5 km	0.8926	7.78E+01	4.31E+01	1.71E+02	2.88E+02	6.38E+02	7.56E+02	1.48E+03	9.99E-04 83
ERL INJ/PNEUMONITIS	0-80.5 km	0.8364	3.73E+01	1.06E+01	1.06E+02	1.64E+02	3.04E+02	3.41E+02	5.40E+02	5.14E-04 50
ERL INJ/THYROIDITIS	0-80.5 km	0.8541	2.20E+01	7.87E+00	6.00E+01	9.49E+01	1.73E+02	2.06E+02	2.67E+02	5.14E-04 50
ERL INJ/HYPOTHYROIDISM	0-80.5 km	1.0000	3.54E+02	2.37E+02	7.97E+02					

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1.13E+03  2.12E+03  2.46E+03  3.60E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  1.0000  2.59E+04  1.16E+04  6.27E+04
1.13E+05  2.18E+05  2.89E+05  7.42E+05  4.00E-04  106
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9972  4.63E+03  2.15E+03  9.56E+03
1.52E+04  5.27E+04  6.11E+04  7.67E+04  1.63E-03   69

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8673  5.79E+00  5.49E+00  7.78E+00
8.53E+00  1.48E+01 NOT-FOUND  3.22E+01  7.42E-03   83

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8603  1.48E+02  8.82E+01  2.78E+02
4.15E+02  1.43E+03  2.27E+03  8.35E+03  9.99E-04   83
 EARLY dose A-LUNGS > 5.00 Sv             0.8364  1.00E+02  6.45E+01  2.41E+02
3.76E+02  7.66E+02  9.34E+02  1.29E+03  2.34E-03   83
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9811  1.68E+03  1.07E+03  3.15E+03
4.74E+03  2.02E+04  2.09E+04  2.18E+04  1.94E-03  113
 EARLY dose L-EDEWBODY > 0.250 Sv         1.0000  3.18E+04  1.32E+04  8.99E+04
1.29E+05  2.49E+05  3.14E+05  6.12E+05  9.70E-04    7

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.8673  5.70E-02  5.64E-02  7.85E-02
8.75E-02  1.07E-01  1.15E-01  1.25E-01  1.91E-03    5
 ERL FAT/TOTAL               1.6-3.2 km  0.8325  3.32E-02  2.84E-02 NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  6.25E-02  1.57E-01    4
 ERL FAT/TOTAL               3.2-4.8 km  0.7687  1.49E-02  2.31E-03  5.01E-02
5.89E-02 NOT-FOUND NOT-FOUND  6.25E-02  3.88E-02   22
 ERL FAT/TOTAL               4.8-6.4 km  0.6831  5.99E-03  2.48E-04  2.23E-02
5.02E-02  6.08E-02 NOT-FOUND  6.25E-02  7.91E-03   50
□10-APR-06  19:11:31    PAGE   4          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.2242  2.13E-03  0.00E+00  1.46E-03
1.30E-02  4.64E-02 NOT-FOUND  5.77E-02  7.91E-03   50

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  8.68E+03  7.05E+03  1.75E+04
2.44E+04  3.93E+04  4.62E+04  5.37E+04  1.17E-03   83
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  4.76E+04  3.05E+04  1.08E+05
1.32E+05  2.04E+05  2.34E+05  3.72E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8603  3.55E-02  2.79E-02  8.02E-02
9.20E-02 NOT-FOUND NOT-FOUND  1.21E-01  1.23E-02    4
 CAN FAT/TOTAL               0-16.1 km  1.0000  2.80E-02  2.35E-02  5.46E-02
6.71E-02  1.05E-01  1.13E-01  1.39E-01  7.99E-04   83

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.37E+02  9.18E+01  2.82E+02
3.83E+02 NOT-FOUND NOT-FOUND  7.41E+02  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  5.03E+01  3.86E+01  1.07E+02
1.27E+02  1.87E+02  2.26E+02  2.74E+02  2.54E-03  103
 L-EDEWBODY                  3.2-4.8 km  0.9975  2.68E+01  2.04E+01  5.71E+01
7.86E+01  1.10E+02 NOT-FOUND  1.12E+02  8.96E-03   66
 L-EDEWBODY                  4.8-6.4 km  0.9923  1.68E+01  1.28E+01  3.73E+01
5.14E+01  6.73E+01 NOT-FOUND  7.62E+01  7.91E-03   50
 L-EDEWBODY                  6.4-8.1 km  0.9923  1.08E+01  8.62E+00  1.98E+01
3.20E+01  4.72E+01 NOT-FOUND  5.50E+01  7.91E-03   50
 L-EDEWBODY                  8.1-9.7 km  0.9878  7.18E+00  6.08E+00  1.49E+01
2.27E+01  3.31E+01 NOT-FOUND  3.40E+01  7.42E-03   83
 L-EDEWBODY                 9.7-16.1 km  0.9505  3.56E+00  3.21E+00  6.59E+00
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9.61E+00  2.02E+01 NOT-FOUND  2.04E+01  7.42E-03   83
 L-EDEWBODY                16.1-32.2 km  1.0000  1.53E+00  1.18E+00  2.90E+00
3.60E+00  5.95E+00 NOT-FOUND  6.60E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  5.88E-01  5.05E-01  1.10E+00
1.32E+00 NOT-FOUND NOT-FOUND  1.91E+00  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  3.06E-01  2.54E-01  5.78E-01
7.49E-01  9.56E-01 NOT-FOUND  1.03E+00  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  1.99E-01  2.00E-01  2.99E-01
3.60E-01  6.06E-01 NOT-FOUND  8.33E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31     PAGE   5          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.9388  1.12E+02  8.19E+01  2.55E+02
3.27E+02  4.94E+02  5.39E+02  7.09E+02  1.71E-05  101
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.9928  2.51E+02  2.12E+02  5.28E+02
6.43E+02  8.13E+02  8.79E+02  1.22E+03  1.71E-05  101
 ERL INJ/DIARRHEA               0-16.1 km  0.9413  1.62E+02  1.22E+02  3.50E+02
4.36E+02  6.17E+02  6.99E+02  8.87E+02  1.71E-05  101
 ERL INJ/PNEUMONITIS            0-16.1 km  0.8716  5.37E+01  3.15E+01  1.29E+02
1.77E+02  2.95E+02  3.33E+02  4.82E+02  5.14E-04   50
 ERL INJ/THYROIDITIS            0-16.1 km  0.8658  1.51E+01  6.23E+00  4.14E+01
5.68E+01  1.00E+02  1.10E+02  1.63E+02  2.28E-04   81
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  1.0000  1.58E+02  1.29E+02  3.13E+02
3.65E+02  5.10E+02  5.49E+02  7.11E+02  5.14E-04   50
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  1.0000  1.70E+03  1.43E+03  2.69E+03
3.12E+03  3.97E+03  4.41E+03  6.16E+03  7.42E-04   46
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.9985  1.34E+03  1.21E+03  2.13E+03
2.26E+03  2.60E+03  2.77E+03  3.44E+03  5.42E-04   80
 CAN FAT/TOTAL                  0-16.1 km  1.0000  3.80E+02  3.43E+02  6.24E+02
7.20E+02  9.36E+02  1.01E+03  1.23E+03  1.22E-05   24
 CAN FAT/LUNG                   0-80.5 km  1.0000  1.27E+03  7.33E+02  3.27E+03
4.37E+03  6.79E+03  7.80E+03  1.31E+04  9.70E-04    7
 CAN FAT/THYROID                0-80.5 km  1.0000  2.17E+02  1.22E+02  5.62E+02
7.55E+02  1.14E+03  1.34E+03  2.19E+03  9.70E-04    7
 CAN FAT/BREAST                 0-80.5 km  1.0000  9.67E+01  5.54E+01  2.30E+02
2.99E+02  4.65E+02  5.46E+02  7.73E+02  5.50E-05   36
 CAN FAT/GI                     0-80.5 km  1.0000  4.92E+02  3.05E+02  1.11E+03
1.37E+03  2.26E+03  2.83E+03  4.30E+03  4.00E-04  106
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  1.17E+02  7.25E+01  2.97E+02
3.51E+02  5.08E+02  6.17E+02  8.91E+02  9.70E-04    7
 CAN FAT/BONE                   0-80.5 km  1.0000  3.57E+01  2.11E+01  9.37E+01
1.16E+02  1.72E+02  2.04E+02  3.62E+02  9.70E-04    7
 CAN FAT/OTHER                  0-80.5 km  1.0000  9.57E+02  5.62E+02  2.47E+03
3.32E+03  4.90E+03  5.66E+03  9.37E+03  9.70E-04    7
 CAN INJ/THYROID                0-80.5 km  1.0000  2.17E+03  1.22E+03  5.62E+03
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7.55E+03  1.14E+04  1.34E+04  2.19E+04  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  3.05E+02  1.73E+02  7.16E+02
9.21E+02  1.36E+03  1.59E+03  2.43E+03  5.50E-05   36
 CAN FAT/TOTAL                 0-80.5 km  1.0000  3.18E+03  1.84E+03  8.29E+03
1.08E+04  1.45E+04  1.65E+04  3.05E+04  9.70E-04    7
 ERL FAT/TOTAL                 0-80.5 km  0.9388  1.12E+02  8.19E+01  2.55E+02
3.28E+02  5.03E+02  5.44E+02  7.09E+02  1.71E-05  101
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.9928  2.74E+02  2.17E+02  5.74E+02
7.40E+02  1.17E+03  1.40E+03  3.24E+03  9.99E-04   83
 ERL INJ/DIARRHEA              0-80.5 km  0.9413  1.68E+02  1.22E+02  3.66E+02
4.79E+02  7.16E+02  7.92E+02  1.48E+03  9.99E-04   83
 ERL INJ/PNEUMONITIS           0-80.5 km  0.8716  5.37E+01  3.15E+01  1.29E+02
1.77E+02  2.95E+02  3.33E+02  4.82E+02  5.14E-04   50
 ERL INJ/THYROIDITIS           0-80.5 km  0.8658  1.51E+01  6.23E+00  4.14E+01
5.68E+01  1.00E+02  1.10E+02  1.63E+02  2.28E-04   81
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  1.0000  3.02E+02  2.14E+02  6.18E+02
9.50E+02  2.05E+03  2.29E+03  2.99E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  1.0000  2.63E+04  1.20E+04  6.34E+04
1.13E+05  2.18E+05  2.89E+05  7.42E+05  4.00E-04  106
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.9985  4.95E+03  2.61E+03  9.72E+03
1.53E+04  5.24E+04  5.85E+04  7.69E+04  1.63E-03   69

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9510  1.02E+01  8.36E+00  1.24E+01
1.41E+01  1.89E+01 NOT-FOUND  3.22E+01  7.42E-03   83

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.9388  3.20E+02  2.38E+02  7.09E+02
8.32E+02  1.33E+03  1.69E+03  7.50E+03  9.99E-04   83
 EARLY dose A-LUNGS > 5.00 Sv              0.8716  1.28E+02  9.15E+01  3.04E+02
3.84E+02  6.27E+02  7.26E+02  9.65E+02  5.14E-04   50
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9904  1.53E+03  8.94E+02  3.12E+03
4.62E+03  2.02E+04  2.06E+04  2.20E+04  6.28E-04   59
 EARLY dose L-EDEWBODY > 0.250 Sv          1.0000  3.20E+04  1.33E+04  9.01E+04
1.29E+05  2.49E+05  3.14E+05  6.12E+05  9.70E-04    7

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.9510  8.28E-02  8.81E-02  1.19E-01
1.29E-01  1.57E-01  1.71E-01  2.59E-01  1.14E-04   45
 ERL FAT/TOTAL               1.6-3.2 km  0.8571  5.00E-02  5.16E-02  7.42E-02
7.80E-02  8.76E-02  9.21E-02  1.82E-01  1.14E-04   45
 ERL FAT/TOTAL               3.2-4.8 km  0.8341  3.07E-02  3.15E-02  5.20E-02
5.54E-02  6.43E-02  6.85E-02  1.25E-01  1.14E-04   45
 ERL FAT/TOTAL               4.8-6.4 km  0.8315  1.73E-02  1.11E-02  3.84E-02
4.46E-02  5.25E-02  5.42E-02  6.45E-02  1.14E-04   33
10-APR-06  19:11:31    PAGE   6          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                      NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.7880  9.65E-03  2.12E-03  2.74E-02
3.07E-02  3.36E-02  3.49E-02  4.18E-02  2.00E-04  101

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  7.83E+03  6.59E+03  1.42E+04
1.81E+04  2.41E+04  2.65E+04  4.10E+04  2.28E-04   81
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  4.67E+04  2.99E+04  1.07E+05
1.29E+05  1.96E+05  2.28E+05  3.71E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.9388  5.33E-02  5.22E-02  1.01E-01
1.10E-01  1.32E-01  1.43E-01  2.62E-01  9.75E-06   45
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.84E-02  1.70E-02  3.08E-02
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3.36E-02  4.12E-02  4.50E-02  5.98E-02  1.22E-05   24

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.90E+02  1.44E+02  3.81E+02
4.95E+02 NOT-FOUND NOT-FOUND  1.19E+03  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  6.53E+01  4.37E+01  1.38E+02
1.82E+02  3.23E+02  3.97E+02  4.87E+02  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  3.38E+01  2.46E+01  7.82E+01
1.02E+02  1.47E+02  1.72E+02  2.48E+02  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  2.13E+01  1.43E+01  5.00E+01
6.75E+01  1.01E+02  1.05E+02  1.09E+02  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.44E+01  1.01E+01  3.09E+01
4.11E+01  7.10E+01  7.63E+01  8.19E+01  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.02E+01  7.48E+00  2.21E+01
2.95E+01  4.68E+01 NOT-FOUND  6.98E+01  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  5.23E+00  3.79E+00  1.05E+01
1.55E+01  2.66E+01 NOT-FOUND  2.81E+01  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  1.53E+00  1.18E+00  2.90E+00
3.60E+00  5.95E+00 NOT-FOUND  6.60E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  5.88E-01  5.05E-01  1.10E+00
1.32E+00 NOT-FOUND NOT-FOUND  1.91E+00  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  3.06E-01  2.54E-01  5.78E-01
7.49E-01  9.56E-01 NOT-FOUND  1.03E+00  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  1.99E-01  2.00E-01  2.99E-01
3.60E-01  6.06E-01 NOT-FOUND  8.33E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  1 OF 11:
    Case 1BOC  ESBWR Specific Source Term Data Used From GE

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31    PAGE   7          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.08E+02  6.89E+01  2.26E+02
3.08E+02  5.30E+02  5.88E+02  8.93E+02  1.43E-04   81
 CAN FAT/LUNG                  0-80.5 km  1.0000  2.63E+02  1.61E+02  5.90E+02
8.25E+02  1.22E+03  1.35E+03  1.75E+03  9.57E-04   48
 CAN FAT/THYROID               0-80.5 km  1.0000  2.80E+01  1.71E+01  6.07E+01
8.95E+01  1.30E+02  1.48E+02  2.01E+02  9.57E-04   48
 CAN FAT/BREAST                0-80.5 km  1.0000  2.05E+02  1.21E+02  4.37E+02
6.73E+02  1.00E+03  1.12E+03  1.46E+03  9.57E-04   48
 CAN FAT/GI                    0-80.5 km  1.0000  5.01E+02  3.20E+02  1.09E+03
1.52E+03  2.34E+03  2.60E+03  3.41E+03  9.57E-04   48
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.63E+02  1.04E+02  3.56E+02
5.01E+02  7.60E+02  8.53E+02  1.11E+03  9.57E-04   48
 CAN FAT/BONE                  0-80.5 km  1.0000  1.82E+01  1.15E+01  3.91E+01
5.43E+01  8.04E+01  8.83E+01  1.17E+02  9.57E-04   48
 CAN FAT/OTHER                 0-80.5 km  1.0000  5.24E+02  3.19E+02  1.17E+03
1.70E+03  2.43E+03  2.69E+03  3.66E+03  9.57E-04   48
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 CAN INJ/THYROID                0-80.5 km  1.0000  2.80E+02  1.71E+02  6.07E+02
8.95E+02  1.30E+03  1.48E+03  2.01E+03  9.57E-04   48
 CAN INJ/BREAST                 0-80.5 km  1.0000  6.44E+02  3.97E+02  1.44E+03
2.01E+03  3.01E+03  3.41E+03  4.61E+03  9.57E-04   48
 CAN FAT/TOTAL                  0-80.5 km  1.0000  1.70E+03  1.05E+03  3.76E+03
5.28E+03  7.97E+03  8.79E+03  1.17E+04  9.57E-04   48

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  2.13E+03  1.38E+03  4.78E+03
6.37E+03  1.03E+04  1.12E+04  1.74E+04  1.43E-04   81
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  3.79E+04  2.34E+04  8.27E+04
1.06E+05  1.51E+05  1.77E+05  2.65E+05  9.57E-04   48

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                  0-16.1 km  0.8711  4.41E-04  4.00E-04  9.58E-04
1.08E-03  1.32E-03  1.44E-03  1.82E-03  7.42E-04  117

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  0.0981  1.30E-02  0.00E+00  0.00E+00
1.19E-01 NOT-FOUND NOT-FOUND  1.44E-01  2.45E-02   10
 L-EDEWBODY                     1.6-3.2 km  0.2658  4.67E-02  0.00E+00  1.37E-01
1.72E-01 NOT-FOUND NOT-FOUND  1.96E-01  3.32E-02    7
 L-EDEWBODY                     3.2-4.8 km  0.4296  6.70E-02  0.00E+00  1.21E-01
1.33E-01  1.66E-01  1.82E-01  1.99E-01  2.60E-03   51
 L-EDEWBODY                     4.8-6.4 km  0.4283  7.29E-02  0.00E+00  1.40E-01
1.65E-01 NOT-FOUND NOT-FOUND  1.96E-01  2.45E-02   49
 L-EDEWBODY                     6.4-8.1 km  0.5399  8.41E-02  1.01E-01  1.15E-01
1.21E-01  1.38E-01  1.46E-01  1.99E-01  1.14E-04   33
 L-EDEWBODY                     8.1-9.7 km  0.6054  8.83E-02  1.03E-01  1.38E-01
1.57E-01 NOT-FOUND NOT-FOUND  1.99E-01  1.32E-02   80
 L-EDEWBODY                    9.7-16.1 km  0.6487  6.93E-02  7.49E-02  1.27E-01
1.47E-01 NOT-FOUND NOT-FOUND  1.95E-01  1.24E-02   48
 L-EDEWBODY                   16.1-32.2 km  0.6641  6.76E-02  3.54E-02  1.35E-01
1.60E-01 NOT-FOUND NOT-FOUND  1.98E-01  2.07E-02   17
 L-EDEWBODY                   32.2-48.3 km  0.9473  1.31E-01  1.07E-01  1.35E-01
1.50E-01  1.89E-01 NOT-FOUND  1.98E-01  7.42E-03   37
 L-EDEWBODY                   48.3-64.4 km  1.0000  1.10E-01  1.05E-01  1.36E-01
1.52E-01 NOT-FOUND NOT-FOUND  1.91E-01  1.24E-02   48
 L-EDEWBODY                   64.4-80.5 km  1.0000  8.44E-02  8.04E-02  1.11E-01
1.19E-01  1.37E-01 NOT-FOUND  1.41E-01  7.42E-03  106

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE          1.0000  3.79E+04  2.34E+04  8.27E+04
1.06E+05  1.51E+05  1.77E+05  2.65E+05  9.57E-04   48
 LONG-TERM DIRECT EXPOSURE PATHWAYS     1.0000  2.92E+04  1.68E+04  7.37E+04
1.01E+05  1.26E+05  1.39E+05  1.76E+05  9.57E-04   48
 TOTAL INGESTION PATHWAYS DOSE          1.0000  2.70E+03  2.08E+03  5.19E+03
6.75E+03  1.06E+04  1.15E+04  1.76E+04  1.43E-04   81
 LONG-TERM GROUNDSHINE DOSE             1.0000  2.87E+04  1.67E+04  7.20E+04
1.01E+05  1.26E+05  1.39E+05  1.75E+05  9.57E-04   48
 LONG-TERM RESUSPENSION DOSE            1.0000  4.93E+02  2.67E+02  1.19E+03
1.56E+03  2.20E+03  2.37E+03  2.76E+03  1.11E-03   17
 WATER INGESTION DOSE                   1.0000  2.32E+03  1.58E+03  5.06E+03
6.59E+03  1.04E+04  1.14E+04  1.75E+04  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE    1.0000  5.88E+03  2.55E+03  1.36E+04
2.11E+04  3.91E+04  4.48E+04  8.63E+04  9.57E-04   48
10-APR-06  19:11:31    PAGE   8          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  1.31E+02  1.12E+02  2.19E+02
2.63E+02  3.24E+02  3.40E+02  5.20E+02  7.72E-06   35
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 INGESTION OF GRAINS                          1.0000  7.81E+00  7.12E+00  1.19E+01
1.39E+01  1.98E+01  2.11E+01  3.69E+01  3.22E-06   44
 INGESTION OF LEAF VEG                        1.0000  5.55E+01  5.08E+01  8.96E+01
1.02E+02  1.14E+02  1.19E+02  1.82E+02  7.72E-06   35
 INGESTION OF ROOT CROPS                      1.0000  3.33E+01  3.05E+01  5.36E+01
6.48E+01  7.45E+01  7.69E+01  1.10E+02  7.72E-06   35
 INGESTION OF FRUITS                          1.0000  4.60E+01  4.04E+01  7.41E+01
8.85E+01  1.05E+02  1.08E+02  1.43E+02  7.72E-06   35
 INGESTION OF LEGUMES                         1.0000  6.68E+01  5.99E+01  1.02E+02
1.08E+02  1.22E+02  1.29E+02  2.19E+02  7.72E-06   35
 INGESTION OF BEEF                            1.0000  7.21E+01  2.57E+01  2.11E+02
2.80E+02  3.89E+02  4.41E+02  6.55E+02  4.50E-06   89
 INGESTION OF MILK                            1.0000  6.91E+01  2.87E+01  1.92E+02
2.38E+02  3.32E+02  3.64E+02  5.19E+02  4.57E-04   80
 INGESTION OF POULTRY                         1.0000  1.66E+01  8.22E+00  4.18E+01
5.53E+01  7.97E+01  8.93E+01  1.33E+02  4.57E-04   80
 INGESTION OF OTHER MEAT CROPS                1.0000  1.18E+01  2.22E+00  3.91E+01
5.26E+01  7.52E+01  8.68E+01  1.31E+02  4.57E-04   80

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                         1.0000  1.27E+10  6.61E+09  3.06E+10
4.04E+10  7.53E+10  9.22E+10  1.53E+11  1.43E-03   23
 POP.-DEPENDENT COSTS                         1.0000  1.25E+10  6.34E+09  3.06E+10
4.04E+10  7.53E+10  9.22E+10  1.53E+11  1.43E-03   23
 FARM-DEPENDENT COSTS                         1.0000  2.50E+08  2.16E+08  4.00E+08
4.82E+08  5.97E+08  6.49E+08  7.69E+08  2.80E-04   48
 POP.-DEPENDENT DECONTAMINATION COST          1.0000  2.14E+09  1.05E+09  4.98E+09
8.02E+09  1.04E+10  1.07E+10  1.16E+10  7.99E-04   39
 FARM-DEPENDENT DECONTAMINATION COST          1.0000  6.63E+07  5.78E+07  1.07E+08
1.21E+08  1.59E+08  1.79E+08  2.24E+08  4.00E-04   39
 POP.-DEPENDENT INTERDICTION COST             1.0000  8.76E+09  4.34E+09  2.15E+10
2.84E+10  5.52E+10  6.29E+10  1.04E+11  9.57E-04   48
 FARM-DEPENDENT INTERDICTION COST             1.0000  1.22E+08  9.98E+07  2.11E+08
2.45E+08  3.09E+08  3.18E+08  3.80E+08  9.71E-05   47
 POP.-DEPENDENT CONDEMNATION COST             1.0000  1.56E+09  7.42E+08  3.04E+09
5.41E+09  2.04E+10  2.52E+10  8.45E+10  1.43E-03   23
 FARM-DEPENDENT CONDEMNATION COST             1.0000  3.04E+07  2.60E+07  5.73E+07
8.91E+07  1.35E+08  1.56E+08  2.94E+08  9.99E-04   23
 EMERGENCY PHASE COST                         1.0000  3.70E+07  1.43E+07  8.30E+07
1.58E+08  2.28E+08  2.42E+08  2.84E+08  7.99E-04   46
 INTERMEDIATE PHASE COST                      0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                           1.0000  1.14E+06  7.02E+05  2.59E+06
3.33E+06  5.08E+06  5.21E+06  5.37E+06  2.15E-03    3
 CROP DISPOSAL COST                           1.0000  3.02E+07  2.56E+07  5.65E+07
6.44E+07  7.83E+07  8.37E+07  8.76E+07  3.11E-03    3

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)              1.0000  5.41E+04  4.84E+04  9.23E+04
1.05E+05  1.25E+05  1.35E+05  1.79E+05  4.00E-04   39
 POP. DECONTAMINATION (INDIVIDUALS)           1.0000  2.77E+05  1.49E+05  9.83E+05
1.04E+06  1.15E+06  1.19E+06  1.33E+06  7.99E-04   39
 FARM INTERDICTION (HECTARES)                 1.0000  6.13E+04  5.45E+04  1.03E+05
1.12E+05  1.34E+05  1.45E+05  1.79E+05  7.99E-04   10
 POP. INTERDICTION (INDIVIDUALS)              1.0000  2.77E+05  1.49E+05  9.83E+05
1.04E+06  1.15E+06  1.19E+06  1.33E+06  7.99E-04   39
 FARM CONDEMNATION (HECTARES)                 1.0000  4.43E+03  3.87E+03  9.00E+03
1.15E+04  1.82E+04  2.15E+04  3.13E+04  9.99E-04   23
 POP. CONDEMNATION (INDIVIDUALS)              1.0000  1.06E+04  4.69E+03  2.02E+04
3.37E+04  1.03E+05  1.48E+05  4.86E+05  1.43E-03   23
 MILK DISPOSAL AREA (HECTARES)                1.0000  6.52E+04  5.84E+04  1.05E+05
1.15E+05  1.44E+05  1.59E+05  1.79E+05  2.15E-03    3
 CROP DISPOSAL AREA (HECTARES)                1.0000  6.57E+04  5.91E+04  1.05E+05
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1.16E+05 1.45E+05 1.59E+05 1.79E+05 2.15E-03 3

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XXXX
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"CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

SOURCE TERM 2 OF 11:
Case 2BYP

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

FRACTION OF THE PEOPLE

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

10-APR-06 19:11:31 PAGE 9

		PROB			QUANTILES						
		PEAK CONS	PEAK PROB	PEAK NON-ZERO TRIAL	MEAN	50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.9231	3.98E+01	1.20E+01	1.09E+02	1.70E+02	3.11E+02	3.47E+02	5.51E+02	5.14E-04	50
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9904	9.73E+01	5.92E+01	2.26E+02	3.46E+02	6.38E+02	7.47E+02	9.73E+02	1.17E-03	83
ERL INJ/DIARRHEA	0-16.1 km	0.9396	5.57E+01	2.84E+01	1.33E+02	2.05E+02	3.95E+02	4.74E+02	5.69E+02	1.17E-03	83
ERL INJ/PNEUMONITIS	0-16.1 km	0.8716	3.46E+01	7.67E+00	1.00E+02	1.56E+02	2.98E+02	3.37E+02	5.31E+02	5.14E-04	50
ERL INJ/THYROIDITIS	0-16.1 km	0.8469	1.17E+01	3.08E+00	3.44E+01	5.64E+01	9.86E+01	1.07E+02	1.58E+02	1.43E-04	22
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9976	1.49E+02	1.11E+02	3.13E+02	4.23E+02	7.09E+02	7.87E+02	9.82E+02	1.17E-03	83
ERL INJ/SKIN ERYTHEMA	0-16.1 km	1.0000	1.19E+03	1.07E+03	2.00E+03	2.06E+03	2.20E+03	2.26E+03	2.36E+03	1.63E-03	113
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9947	9.93E+02	9.57E+02	1.80E+03	2.02E+03	2.08E+03	2.10E+03	2.15E+03	1.63E-03	17
CAN FAT/TOTAL	0-16.1 km	1.0000	8.35E+02	7.40E+02	1.53E+03	1.99E+03	3.03E+03	3.23E+03	3.85E+03	7.99E-04	83
CAN FAT/LUNG	0-80.5 km	1.0000	2.19E+03	1.32E+03	5.23E+03	7.03E+03	1.03E+04	1.25E+04	2.00E+04	9.70E-04	7
CAN FAT/THYROID	0-80.5 km	1.0000	1.77E+02	1.11E+02	4.07E+02	5.59E+02	7.91E+02	8.80E+02	1.55E+03	9.70E-04	7
CAN FAT/BREAST	0-80.5 km	1.0000	2.76E+02	1.68E+02	5.82E+02	9.12E+02	1.27E+03	1.42E+03	1.86E+03	9.57E-04	48
CAN FAT/GI	0-80.5 km	1.0000	9.97E+02	6.72E+02	2.12E+03	2.92E+03	4.08E+03	4.68E+03	7.61E+03	9.70E-04	7
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	2.59E+02	1.65E+02	5.48E+02	7.39E+02	1.08E+03	1.19E+03	1.69E+03	4.00E-04	106
CAN FAT/BONE	0-80.5 km	1.0000	5.31E+01	3.44E+01	1.12E+02						

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1.45E+02  2.28E+02  2.58E+02  4.40E+02  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  1.40E+03  9.18E+02  3.16E+03
4.12E+03  6.33E+03  7.37E+03  1.19E+04  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  1.77E+03  1.11E+03  4.07E+03
5.59E+03  7.91E+03  8.80E+03  1.55E+04  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  8.69E+02  5.24E+02  1.78E+03
2.94E+03  3.92E+03  4.41E+03  5.84E+03  9.57E-04   48
 CAN FAT/TOTAL                0-80.5 km  1.0000  5.36E+03  3.43E+03  1.17E+04
1.53E+04  2.33E+04  2.61E+04  4.51E+04  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.9231  3.98E+01  1.20E+01  1.09E+02
1.70E+02  3.11E+02  3.47E+02  5.51E+02  5.14E-04   50
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9904  1.05E+02  5.93E+01  2.44E+02
3.89E+02  7.97E+02  1.02E+03  1.85E+03  9.99E-04   83
 ERL INJ/DIARRHEA             0-80.5 km  0.9396  5.66E+01  2.84E+01  1.33E+02
2.06E+02  4.36E+02  5.28E+02  8.79E+02  9.99E-04   83
 ERL INJ/PNEUMONITIS          0-80.5 km  0.8716  3.46E+01  7.67E+00  1.00E+02
1.56E+02  2.98E+02  3.37E+02  5.31E+02  5.14E-04   50
 ERL INJ/THYROIDITIS          0-80.5 km  0.8469  1.17E+01  3.08E+00  3.44E+01
5.64E+01  9.86E+01  1.07E+02  1.58E+02  1.43E-04   22
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9976  2.03E+02  1.31E+02  4.56E+02
6.70E+02  1.11E+03  1.32E+03  2.09E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  1.0000  1.76E+04  8.43E+03  3.69E+04
7.99E+04  1.52E+05  1.94E+05  6.34E+05  4.00E-04  106
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9947  2.83E+03  1.38E+03  6.03E+03
8.09E+03  3.18E+04  3.54E+04  4.55E+04  9.99E-04   37

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.9467  5.26E+00  5.02E+00  7.61E+00
8.41E+00 NOT-FOUND NOT-FOUND  1.61E+01  1.48E-02   83

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.9231  1.02E+02  6.97E+01  2.44E+02
3.74E+02  6.35E+02  7.45E+02  9.15E+02  2.34E-03   83
10-APR-06  19:11:31    PAGE  10          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                      NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.8716  9.08E+01  5.08E+01  2.27E+02
3.51E+02  6.00E+02  6.90E+02  8.93E+02  2.34E-03   83
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9904  1.35E+03  1.03E+03  2.42E+03
3.22E+03  8.20E+03  9.81E+03  2.17E+04  1.99E-04   94
 EARLY dose L-EDEWBODY > 0.250 Sv         1.0000  2.86E+04  1.17E+04  8.12E+04
1.18E+05  2.44E+05  3.33E+05  6.10E+05  9.70E-04    7

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.9467  5.56E-02  5.56E-02  7.72E-02
8.66E-02  1.06E-01  1.13E-01  1.22E-01  1.91E-03    5
 ERL FAT/TOTAL              1.6-3.2 km   0.8546  2.89E-02  1.83E-02  5.19E-02
5.31E-02  5.57E-02  5.69E-02  6.39E-02  1.14E-04   27
 ERL FAT/TOTAL              3.2-4.8 km   0.8341  1.33E-02  1.57E-03  5.03E-02
5.23E-02  5.71E-02  5.93E-02  6.16E-02  2.54E-03  103
 ERL FAT/TOTAL              4.8-6.4 km   0.8011  5.56E-03  1.36E-04  1.64E-02
4.28E-02  5.51E-02  5.79E-02  6.08E-02  2.54E-03   22
 ERL FAT/TOTAL              6.4-8.1 km   0.7237  1.99E-03  1.36E-05  1.82E-03
1.38E-02  4.20E-02 NOT-FOUND  5.41E-02  7.91E-03   50

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km   1.0000  1.08E+04  8.71E+03  2.14E+04
2.76E+04  3.85E+04  4.37E+04  5.30E+04  7.13E-04   78
 L-EDEWBODY  TOT LIF         0-80.5 km   1.0000  7.96E+04  5.19E+04  1.62E+05
2.34E+05  3.63E+05  4.06E+05  5.84E+05  9.70E-04    7
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POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.9231  3.10E-02  2.04E-02  7.89E-02
9.07E-02  1.03E-01  1.05E-01  1.23E-01  8.80E-06   27
 CAN FAT/TOTAL                 0-16.1 km  1.0000  3.58E-02  3.05E-02  6.80E-02
8.68E-02  1.24E-01  1.40E-01  1.82E-01  1.17E-03  106

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  1.45E+02  9.23E+01  2.94E+02
4.16E+02 NOT-FOUND NOT-FOUND  8.25E+02  1.24E-02  110
 L-EDEWBODY                   1.6-3.2 km  1.0000  5.27E+01  3.86E+01  1.13E+02
1.43E+02  2.28E+02  2.62E+02  3.19E+02  2.54E-03  103
 L-EDEWBODY                   3.2-4.8 km  1.0000  2.79E+01  1.88E+01  6.29E+01
8.41E+01  1.11E+02  1.19E+02  1.27E+02  2.54E-03   22
 L-EDEWBODY                   4.8-6.4 km  1.0000  1.75E+01  1.29E+01  4.11E+01
5.58E+01  7.19E+01  7.39E+01  7.59E+01  2.54E-03   22
 L-EDEWBODY                   6.4-8.1 km  1.0000  1.15E+01  8.45E+00  2.49E+01
3.30E+01  4.74E+01 NOT-FOUND  5.70E+01  7.91E-03   50
 L-EDEWBODY                   8.1-9.7 km  1.0000  7.69E+00  6.11E+00  1.71E+01
2.62E+01  3.55E+01 NOT-FOUND  3.65E+01  7.91E-03   50
 L-EDEWBODY                  9.7-16.1 km  1.0000  3.78E+00  3.22E+00  7.08E+00
1.05E+01  2.05E+01 NOT-FOUND  2.09E+01  7.42E-03  106
 L-EDEWBODY                 16.1-32.2 km  1.0000  1.41E+00  1.16E+00  2.64E+00
3.28E+00  4.68E+00 NOT-FOUND  5.82E+00  7.42E-03   83
 L-EDEWBODY                 32.2-48.3 km  1.0000  6.50E-01  6.23E-01  1.07E+00
1.22E+00  1.66E+00 NOT-FOUND  1.76E+00  7.42E-03   37
 L-EDEWBODY                 48.3-64.4 km  1.0000  3.81E-01  3.25E-01  6.13E-01
7.49E-01  9.56E-01 NOT-FOUND  1.08E+00  7.42E-03  106
 L-EDEWBODY                 64.4-80.5 km  1.0000  2.73E-01  2.38E-01  4.15E-01
5.09E-01  6.66E-01 NOT-FOUND  8.91E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  2 OF 11:
    Case 2BYP

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31    PAGE  11          PROB                              QUANTILES
                         PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.8427  3.82E+01  1.05E+01  1.07E+02
1.70E+02  3.11E+02  3.47E+02  5.51E+02  5.14E-04   50
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.9249  9.36E+01  5.51E+01  2.21E+02
3.42E+02  6.56E+02  7.62E+02  9.85E+02  1.17E-03   83
 ERL INJ/DIARRHEA              0-16.1 km  0.8749  5.31E+01  2.58E+01  1.29E+02
2.01E+02  3.84E+02  4.59E+02  5.71E+02  1.17E-03   83
 ERL INJ/PNEUMONITIS           0-16.1 km  0.8326  3.45E+01  7.20E+00  1.00E+02
1.60E+02  3.00E+02  3.38E+02  5.39E+02  5.14E-04   50
 ERL INJ/THYROIDITIS           0-16.1 km  0.8322  1.20E+01  3.14E+00  3.48E+01
5.85E+01  1.02E+02  1.10E+02  1.64E+02  1.43E-04   22
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9976  1.51E+02  1.12E+02  3.15E+02
4.31E+02  7.24E+02  8.04E+02  1.01E+03  1.17E-03   83
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  1.0000  1.17E+03  1.06E+03  2.00E+03
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2.05E+03  2.17E+03  2.22E+03  2.31E+03  1.63E-03  113
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.9922  9.81E+02  9.54E+02  1.78E+03
2.01E+03  2.07E+03  2.09E+03  2.13E+03  1.63E-03   17
 CAN FAT/TOTAL                0-16.1 km  1.0000  7.45E+02  6.31E+02  1.45E+03
1.89E+03  3.04E+03  3.29E+03  3.90E+03  1.17E-03  106
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.94E+03  1.17E+03  5.09E+03
6.47E+03  9.80E+03  1.18E+04  1.84E+04  9.70E-04    7
 CAN FAT/THYROID              0-80.5 km  1.0000  1.50E+02  9.50E+01  3.49E+02
4.80E+02  7.34E+02  8.31E+02  1.36E+03  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  7.89E+01  4.33E+01  1.82E+02
2.53E+02  3.99E+02  4.69E+02  6.70E+02  5.50E-05   36
 CAN FAT/GI                   0-80.5 km  1.0000  5.13E+02  3.23E+02  1.13E+03
1.42E+03  2.35E+03  2.85E+03  4.53E+03  4.00E-04  106
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  1.01E+02  6.29E+01  2.42E+02
3.19E+02  4.44E+02  5.07E+02  7.58E+02  4.00E-04  106
 CAN FAT/BONE                 0-80.5 km  1.0000  3.56E+01  2.19E+01  9.02E+01
1.16E+02  1.74E+02  2.09E+02  3.29E+02  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  8.96E+02  5.60E+02  2.16E+03
2.89E+03  4.37E+03  5.18E+03  8.37E+03  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  1.50E+03  9.50E+02  3.49E+03
4.80E+03  7.34E+03  8.31E+03  1.36E+04  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  2.48E+02  1.38E+02  5.85E+02
8.15E+02  1.13E+03  1.22E+03  2.11E+03  5.50E-05   36
 CAN FAT/TOTAL                0-80.5 km  1.0000  3.72E+03  2.27E+03  9.41E+03
1.16E+04  1.72E+04  2.04E+04  3.39E+04  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.8427  3.82E+01  1.05E+01  1.07E+02
1.70E+02  3.11E+02  3.47E+02  5.51E+02  5.14E-04   50
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9249  1.01E+02  5.52E+01  2.39E+02
3.85E+02  7.98E+02  1.02E+03  1.86E+03  9.99E-04   83
 ERL INJ/DIARRHEA             0-80.5 km  0.8749  5.40E+01  2.58E+01  1.29E+02
2.02E+02  4.25E+02  5.21E+02  8.80E+02  9.99E-04   83
 ERL INJ/PNEUMONITIS          0-80.5 km  0.8326  3.45E+01  7.20E+00  1.00E+02
1.60E+02  3.00E+02  3.38E+02  5.39E+02  5.14E-04   50
 ERL INJ/THYROIDITIS          0-80.5 km  0.8322  1.20E+01  3.14E+00  3.48E+01
5.85E+01  1.02E+02  1.10E+02  1.64E+02  1.43E-04   22
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9976  2.06E+02  1.32E+02  4.69E+02
6.79E+02  1.11E+03  1.32E+03  2.11E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  1.0000  1.76E+04  8.43E+03  3.69E+04
7.99E+04  1.52E+05  1.94E+05  6.34E+05  4.00E-04  106
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9922  2.81E+03  1.38E+03  6.05E+03
8.11E+03  3.18E+04  3.54E+04  4.56E+04  9.99E-04   37

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8671  5.07E+00  4.34E+00  7.61E+00
8.41E+00 NOT-FOUND NOT-FOUND  1.61E+01  1.48E-02   83

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8427  9.70E+01  6.37E+01  2.34E+02
3.63E+02  6.31E+02  7.44E+02  9.13E+02  2.34E-03   83
 EARLY dose A-LUNGS > 5.00 Sv             0.8326  9.09E+01  4.99E+01  2.30E+02
3.59E+02  6.29E+02  7.43E+02  9.13E+02  2.34E-03   83
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9741  1.36E+03  1.03E+03  2.42E+03
3.22E+03  8.20E+03  9.81E+03  2.17E+04  1.99E-04   94
 EARLY dose L-EDEWBODY > 0.250 Sv         1.0000  2.86E+04  1.17E+04  8.12E+04
1.18E+05  2.44E+05  3.33E+05  6.10E+05  9.70E-04    7

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.8671  5.47E-02  5.50E-02  7.60E-02
8.58E-02  1.06E-01  1.12E-01  1.21E-01  1.91E-03    5
 ERL FAT/TOTAL              1.6-3.2 km  0.8093  2.83E-02  1.76E-02 NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  6.25E-02  1.19E-01    4
 ERL FAT/TOTAL              3.2-4.8 km  0.7408  1.29E-02  7.94E-04  5.08E-02
5.59E-02 NOT-FOUND NOT-FOUND  6.25E-02  2.19E-02   22
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 ERL FAT/TOTAL                4.8-6.4 km  0.4149  5.29E-03  0.00E+00  1.64E-02
4.28E-02  5.59E-02  5.91E-02  6.25E-02  2.54E-03   22
10-APR-06  19:11:31    PAGE  12          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                6.4-8.1 km  0.1803  1.81E-03  0.00E+00  1.05E-03
1.32E-02  4.20E-02 NOT-FOUND  5.56E-02  7.91E-03   50

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  8.80E+03  7.07E+03  1.86E+04
2.51E+04  3.93E+04  4.62E+04  5.32E+04  7.13E-04   78
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  4.28E+04  2.64E+04  1.03E+05
1.22E+05  1.82E+05  2.16E+05  3.29E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8427  3.04E-02  1.81E-02  7.86E-02
9.05E-02  1.20E-01 NOT-FOUND  1.21E-01  9.38E-03    4
 CAN FAT/TOTAL                0-16.1 km  1.0000  3.62E-02  3.07E-02  6.96E-02
9.11E-02  1.28E-01  1.45E-01  1.89E-01  1.17E-03  106

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.44E+02  9.22E+01  2.93E+02
4.16E+02 NOT-FOUND NOT-FOUND  8.14E+02  1.24E-02  110
 L-EDEWBODY                   1.6-3.2 km  1.0000  5.24E+01  3.86E+01  1.11E+02
1.40E+02  2.23E+02  2.59E+02  3.19E+02  2.54E-03  103
 L-EDEWBODY                   3.2-4.8 km  0.9975  2.78E+01  1.88E+01  6.26E+01
8.41E+01  1.12E+02  1.20E+02  1.28E+02  2.54E-03   22
 L-EDEWBODY                   4.8-6.4 km  0.9923  1.73E+01  1.28E+01  4.19E+01
5.58E+01  7.20E+01  7.42E+01  7.63E+01  2.54E-03   22
 L-EDEWBODY                   6.4-8.1 km  0.9923  1.13E+01  8.43E+00  2.49E+01
3.30E+01  4.74E+01 NOT-FOUND  5.71E+01  7.91E-03   50
 L-EDEWBODY                   8.1-9.7 km  0.9878  7.54E+00  6.04E+00  1.71E+01
2.62E+01  3.44E+01 NOT-FOUND  3.53E+01  7.91E-03   50
 L-EDEWBODY                  9.7-16.1 km  0.9524  3.67E+00  3.16E+00  7.08E+00
1.05E+01  2.05E+01 NOT-FOUND  2.10E+01  7.42E-03  106
 L-EDEWBODY                 16.1-32.2 km  1.0000  1.34E+00  1.09E+00  2.64E+00
3.28E+00  4.68E+00 NOT-FOUND  5.82E+00  7.42E-03   83
 L-EDEWBODY                 32.2-48.3 km  1.0000  5.20E-01  4.54E-01  1.01E+00
1.20E+00 NOT-FOUND NOT-FOUND  1.69E+00  1.27E-02   69
 L-EDEWBODY                 48.3-64.4 km  1.0000  2.73E-01  2.25E-01  4.73E-01
7.14E-01  8.86E-01 NOT-FOUND  9.23E-01  7.42E-03  106
 L-EDEWBODY                 64.4-80.5 km  1.0000  1.90E-01  1.57E-01  2.70E-01
3.25E-01  6.06E-01 NOT-FOUND  7.52E-01  7.42E-03  106
  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  2 OF 11:
    Case 2BYP

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31    PAGE  13          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
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                                                NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS        PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.9231  7.09E+01  4.49E+01  1.67E+02
2.28E+02  3.35E+02  3.68E+02  5.53E+02  5.14E-04   50
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.9904  1.68E+02  1.24E+02  3.59E+02
4.58E+02  6.48E+02  7.10E+02  9.38E+02  1.71E-05  101
 ERL INJ/DIARRHEA               0-16.1 km  0.9396  1.05E+02  7.56E+01  2.42E+02
3.10E+02  4.53E+02  5.16E+02  6.70E+02  5.14E-04   50
 ERL INJ/PNEUMONITIS            0-16.1 km  0.8716  3.64E+01  1.80E+01  9.53E+01
1.24E+02  2.11E+02  2.39E+02  3.69E+02  5.14E-04   50
 ERL INJ/THYROIDITIS            0-16.1 km  0.8469  6.61E+00  2.06E+00  1.97E+01
2.75E+01  5.06E+01  5.85E+01  9.80E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  0.9952  9.81E+01  8.21E+01  2.05E+02
2.44E+02  3.34E+02  3.67E+02  4.99E+02  5.14E-04   50
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  1.0000  1.55E+03  1.34E+03  2.37E+03
2.67E+03  3.52E+03  3.97E+03  5.72E+03  7.42E-04   46
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.9946  1.21E+03  1.13E+03  2.06E+03
2.20E+03  2.54E+03  2.71E+03  3.19E+03  5.42E-04   80
 CAN FAT/TOTAL                  0-16.1 km  1.0000  4.44E+02  4.06E+02  7.56E+02
8.48E+02  1.04E+03  1.08E+03  1.56E+03  1.22E-05   24
 CAN FAT/LUNG                   0-80.5 km  1.0000  1.76E+03  1.00E+03  4.82E+03
6.16E+03  9.09E+03  1.08E+04  1.82E+04  9.70E-04    7
 CAN FAT/THYROID                0-80.5 km  1.0000  1.36E+02  7.86E+01  3.33E+02
4.61E+02  6.87E+02  7.99E+02  1.34E+03  9.70E-04    7
 CAN FAT/BREAST                 0-80.5 km  1.0000  7.98E+01  4.44E+01  1.80E+02
2.54E+02  4.00E+02  4.70E+02  6.75E+02  5.50E-05   36
 CAN FAT/GI                     0-80.5 km  1.0000  4.79E+02  2.93E+02  1.11E+03
1.37E+03  2.23E+03  2.67E+03  4.32E+03  9.70E-04    7
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  9.80E+01  6.00E+01  2.36E+02
3.16E+02  4.26E+02  4.85E+02  7.23E+02  4.00E-04  106
 CAN FAT/BONE                   0-80.5 km  1.0000  3.27E+01  1.89E+01  8.59E+01
1.12E+02  1.64E+02  1.94E+02  3.26E+02  9.70E-04    7
 CAN FAT/OTHER                  0-80.5 km  1.0000  8.28E+02  4.88E+02  2.01E+03
2.77E+03  4.35E+03  5.18E+03  8.29E+03  9.70E-04    7
 CAN INJ/THYROID                0-80.5 km  1.0000  1.36E+03  7.86E+02  3.33E+03
4.61E+03  6.87E+03  7.99E+03  1.34E+04  9.70E-04    7
 CAN INJ/BREAST                 0-80.5 km  1.0000  2.51E+02  1.39E+02  5.91E+02
8.13E+02  1.13E+03  1.22E+03  2.12E+03  5.50E-05   36
 CAN FAT/TOTAL                  0-80.5 km  1.0000  3.41E+03  2.00E+03  9.13E+03
1.14E+04  1.65E+04  1.94E+04  3.35E+04  9.70E-04    7
 ERL FAT/TOTAL                  0-80.5 km  0.9231  7.09E+01  4.49E+01  1.67E+02
2.28E+02  3.35E+02  3.68E+02  5.53E+02  5.14E-04   50
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.9904  1.76E+02  1.25E+02  3.82E+02
5.09E+02  7.47E+02  8.22E+02  1.72E+03  9.99E-04   83
 ERL INJ/DIARRHEA               0-80.5 km  0.9396  1.06E+02  7.56E+01  2.43E+02
3.12E+02  4.77E+02  5.42E+02  8.71E+02  9.99E-04   83
 ERL INJ/PNEUMONITIS            0-80.5 km  0.8716  3.64E+01  1.80E+01  9.53E+01
1.24E+02  2.11E+02  2.39E+02  3.69E+02  5.14E-04   50
 ERL INJ/THYROIDITIS            0-80.5 km  0.8469  6.61E+00  2.06E+00  1.97E+01
2.75E+01  5.06E+01  5.85E+01  9.80E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9952  1.52E+02  1.07E+02  3.35E+02
4.41E+02  8.47E+02  1.08E+03  1.61E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  1.0000  1.80E+04  8.96E+03  3.74E+04
8.09E+04  1.53E+05  1.94E+05  6.34E+05  4.00E-04  106
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9946  3.05E+03  1.71E+03  6.04E+03
8.08E+03  3.19E+04  3.54E+04  4.51E+04  9.99E-04   37

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.9467  8.90E+00  7.82E+00 NOT-FOUND
NOT-FOUND NOT-FOUND NOT-FOUND  1.61E+01  2.20E-01   15

POPULATION EXCEEDING DOSE
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 EARLY dose A-RED MARR > 1.50 Sv        0.9231  2.04E+02  1.44E+02  4.56E+02
5.98E+02  8.17E+02  8.96E+02  1.22E+03  4.14E-05   26
 EARLY dose A-LUNGS > 5.00 Sv           0.8716  9.03E+01  6.55E+01  2.14E+02
2.89E+02  4.23E+02  4.95E+02  5.87E+02  7.13E-04   66
 EARLY dose L-EDEWBODY > 2.00 Sv        0.9904  1.12E+03  7.76E+02  2.08E+03
2.92E+03  8.21E+03  9.82E+03  2.13E+04  1.99E-04   94
 EARLY dose L-EDEWBODY > 0.250 Sv       1.0000  2.87E+04  1.17E+04  8.13E+04
1.18E+05  2.44E+05  3.33E+05  6.10E+05  9.70E-04    7

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.9467  7.35E-02  7.43E-02  1.11E-01
1.21E-01  1.51E-01  1.66E-01  2.41E-01  1.14E-04   45
 ERL FAT/TOTAL              1.6-3.2 km  0.8546  4.04E-02  3.79E-02  6.47E-02
7.19E-02  8.09E-02  8.52E-02  1.51E-01  1.14E-04   45
 ERL FAT/TOTAL              3.2-4.8 km  0.8341  2.09E-02  1.55E-02  3.85E-02
4.40E-02  5.30E-02  5.54E-02  8.52E-02  1.14E-04   45
 ERL FAT/TOTAL              4.8-6.4 km  0.8011  1.06E-02  2.40E-03  2.79E-02
3.09E-02  3.43E-02  3.59E-02  4.58E-02  1.14E-04   28
10-APR-06  19:11:31    PAGE  14          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.7237  5.37E-03  3.35E-04  2.00E-02
2.10E-02  2.33E-02  2.43E-02  3.15E-02  2.00E-04  101

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  6.58E+03  5.64E+03  1.22E+04
1.50E+04  2.19E+04  2.41E+04  3.53E+04  2.28E-04   81
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  4.06E+04  2.49E+04  1.02E+05
1.22E+05  1.82E+05  2.13E+05  3.26E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.9231  4.33E-02  3.88E-02  8.70E-02
1.02E-01  1.21E-01  1.31E-01  2.21E-01  9.75E-06   45
 CAN FAT/TOTAL               0-16.1 km  1.0000  2.16E-02  2.05E-02  3.50E-02
3.96E-02  5.07E-02  5.24E-02  7.57E-02  1.22E-05   24

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  1.63E+02  1.20E+02  3.28E+02
4.72E+02 NOT-FOUND NOT-FOUND  1.03E+03  1.24E-02  110
 L-EDEWBODY                 1.6-3.2 km  1.0000  5.62E+01  3.99E+01  1.11E+02
1.36E+02  2.23E+02  3.02E+02  4.26E+02  2.54E-03   81
 L-EDEWBODY                 3.2-4.8 km  1.0000  2.91E+01  2.01E+01  6.41E+01
8.58E+01  1.38E+02  1.67E+02  2.18E+02  2.54E-03  103
 L-EDEWBODY                 4.8-6.4 km  1.0000  1.84E+01  1.27E+01  4.33E+01
5.48E+01  7.46E+01  8.49E+01  9.64E+01  2.54E-03   81
 L-EDEWBODY                 6.4-8.1 km  1.0000  1.25E+01  8.82E+00  2.92E+01
3.70E+01  5.58E+01  6.26E+01  7.29E+01  2.54E-03   81
 L-EDEWBODY                 8.1-9.7 km  1.0000  8.81E+00  6.04E+00  1.82E+01
2.42E+01  4.54E+01 NOT-FOUND  6.07E+01  7.91E-03   50
 L-EDEWBODY                9.7-16.1 km  1.0000  4.54E+00  3.45E+00  9.30E+00
1.25E+01  2.29E+01 NOT-FOUND  2.47E+01  7.91E-03   50
 L-EDEWBODY               16.1-32.2 km  1.0000  1.34E+00  1.09E+00  2.64E+00
3.28E+00  4.68E+00 NOT-FOUND  5.82E+00  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  5.20E-01  4.54E-01  1.01E+00
1.20E+00 NOT-FOUND NOT-FOUND  1.69E+00  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  2.73E-01  2.25E-01  4.73E-01
7.14E-01  8.86E-01 NOT-FOUND  9.23E-01  7.42E-03  106
 L-EDEWBODY               64.4-80.5 km  1.0000  1.90E-01  1.57E-01  2.70E-01
3.25E-01  6.06E-01 NOT-FOUND  7.52E-01  7.42E-03  106
  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
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  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  2 OF 11:
    Case 2BYP

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31     PAGE  15          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                  0-16.1 km  1.0000  1.05E+02  6.67E+01  2.22E+02
3.03E+02  5.29E+02  5.88E+02  8.78E+02  1.43E-04   81
 CAN FAT/LUNG                   0-80.5 km  1.0000  2.61E+02  1.60E+02  5.87E+02
8.32E+02  1.22E+03  1.36E+03  1.77E+03  9.57E-04   48
 CAN FAT/THYROID                0-80.5 km  1.0000  2.70E+01  1.61E+01  5.92E+01
8.68E+01  1.30E+02  1.47E+02  2.03E+02  9.57E-04   48
 CAN FAT/BREAST                 0-80.5 km  1.0000  1.97E+02  1.16E+02  4.21E+02
6.32E+02  1.02E+03  1.14E+03  1.48E+03  9.57E-04   48
 CAN FAT/GI                     0-80.5 km  1.0000  4.86E+02  3.13E+02  1.02E+03
1.44E+03  2.32E+03  2.59E+03  3.45E+03  9.57E-04   48
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  1.58E+02  1.02E+02  3.33E+02
4.95E+02  7.47E+02  8.45E+02  1.12E+03  9.57E-04   48
 CAN FAT/BONE                   0-80.5 km  1.0000  1.76E+01  1.13E+01  3.75E+01
5.34E+01  8.02E+01  8.82E+01  1.18E+02  9.57E-04   48
 CAN FAT/OTHER                  0-80.5 km  1.0000  5.09E+02  3.10E+02  1.10E+03
1.62E+03  2.42E+03  2.69E+03  3.72E+03  9.57E-04   48
 CAN INJ/THYROID                0-80.5 km  1.0000  2.70E+02  1.61E+02  5.92E+02
8.68E+02  1.30E+03  1.47E+03  2.03E+03  9.57E-04   48
 CAN INJ/BREAST                 0-80.5 km  1.0000  6.21E+02  3.70E+02  1.39E+03
1.99E+03  3.14E+03  3.53E+03  4.66E+03  9.57E-04   48
 CAN FAT/TOTAL                  0-80.5 km  1.0000  1.66E+03  1.03E+03  3.67E+03
5.17E+03  7.94E+03  8.77E+03  1.19E+04  9.57E-04   48

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  2.08E+03  1.32E+03  4.63E+03
6.25E+03  1.03E+04  1.12E+04  1.70E+04  1.43E-04   81
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  3.69E+04  2.23E+04  7.98E+04
1.06E+05  1.51E+05  1.76E+05  2.69E+05  9.57E-04   48

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                  0-16.1 km  0.7817  4.05E-04  3.68E-04  8.73E-04
1.05E-03  1.28E-03  1.39E-03  1.75E-03  7.42E-04   39

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  0.0533  7.11E-03  0.00E+00  0.00E+00
1.02E-01  1.55E-01  1.85E-01  1.93E-01  4.31E-03   47
 L-EDEWBODY                    1.6-3.2 km  0.2658  4.44E-02  0.00E+00  1.29E-01
1.55E-01 NOT-FOUND NOT-FOUND  1.87E-01  2.45E-02   49
 L-EDEWBODY                    3.2-4.8 km  0.2251  3.60E-02  0.00E+00  1.21E-01
1.49E-01 NOT-FOUND NOT-FOUND  1.95E-01  2.05E-02   71
 L-EDEWBODY                    4.8-6.4 km  0.4330  7.12E-02  0.00E+00  1.20E-01
1.31E-01  1.60E-01  1.74E-01  1.97E-01  1.91E-03    5
 L-EDEWBODY                    6.4-8.1 km  0.5593  8.48E-02  1.01E-01  1.17E-01
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1.25E-01  1.46E-01  1.56E-01  1.98E-01  3.71E-04   88
 L-EDEWBODY                 8.1-9.7 km  0.6220  8.45E-02  1.02E-01  1.24E-01
1.35E-01  1.65E-01  1.79E-01  1.98E-01  2.25E-03   54
 L-EDEWBODY                9.7-16.1 km  0.6487  6.55E-02  7.12E-02  1.10E-01
1.17E-01  1.34E-01  1.42E-01  1.96E-01  1.14E-04   27
 L-EDEWBODY               16.1-32.2 km  0.6492  6.78E-02  2.96E-02  1.21E-01
1.35E-01  1.73E-01  1.93E-01  1.97E-01  4.31E-03   47
 L-EDEWBODY               32.2-48.3 km  0.9473  1.29E-01  1.07E-01  1.35E-01
1.49E-01  1.88E-01 NOT-FOUND  1.96E-01  7.42E-03   37
 L-EDEWBODY               48.3-64.4 km  1.0000  1.08E-01  1.05E-01  1.34E-01
1.49E-01 NOT-FOUND NOT-FOUND  1.85E-01  1.24E-02   48
 L-EDEWBODY               64.4-80.5 km  0.9873  8.21E-02  7.82E-02  1.11E-01
1.18E-01  1.35E-01 NOT-FOUND  1.39E-01  7.42E-03  106

L-EDEWBODY  POP. DOSE (SV)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  3.69E+04  2.23E+04  7.98E+04
1.06E+05  1.51E+05  1.76E+05  2.69E+05  9.57E-04   48
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  2.80E+04  1.57E+04  7.02E+04
9.80E+04  1.26E+05  1.39E+05  1.77E+05  9.57E-04   48
 TOTAL INGESTION PATHWAYS DOSE           1.0000  2.71E+03  2.09E+03  5.15E+03
6.67E+03  1.05E+04  1.14E+04  1.74E+04  1.43E-04   81
 LONG-TERM GROUNDSHINE DOSE              1.0000  2.74E+04  1.55E+04  6.65E+04
9.51E+04  1.25E+05  1.38E+05  1.76E+05  9.57E-04   48
 LONG-TERM RESUSPENSION DOSE             1.0000  5.82E+02  3.02E+02  1.54E+03
2.04E+03  2.26E+03  2.37E+03  3.22E+03  1.22E-05    3
 WATER INGESTION DOSE                    1.0000  2.28E+03  1.56E+03  4.93E+03
6.53E+03  1.04E+04  1.13E+04  1.71E+04  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE     1.0000  6.11E+03  2.64E+03  1.40E+04
2.29E+04  4.53E+04  5.57E+04  8.95E+04  9.57E-04   48
10-APR-06  19:11:31    PAGE  16          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                     NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (SV)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE     1.0000  1.38E+02  1.15E+02  2.29E+02
2.76E+02  3.98E+02  4.63E+02  5.20E+02  7.72E-06   35
 INGESTION OF GRAINS                     1.0000  7.80E+00  7.06E+00  1.17E+01
1.35E+01  1.88E+01  2.09E+01  6.64E+01  2.57E-06   33
 INGESTION OF LEAF VEG                   1.0000  5.93E+01  5.29E+01  9.65E+01
1.04E+02  1.17E+02  1.24E+02  1.99E+02  7.72E-06   35
 INGESTION OF ROOT CROPS                 1.0000  3.43E+01  3.10E+01  5.53E+01
6.70E+01  7.99E+01  8.51E+01  1.16E+02  7.72E-06   35
 INGESTION OF FRUITS                     1.0000  4.47E+01  3.89E+01  7.18E+01
8.60E+01  1.04E+02  1.08E+02  1.48E+02  2.57E-06   33
 INGESTION OF LEGUMES                    1.0000  7.14E+01  6.50E+01  1.07E+02
1.18E+02  1.49E+02  1.64E+02  2.39E+02  7.72E-06   35
 INGESTION OF BEEF                       1.0000  9.16E+01  2.51E+01  2.43E+02
3.57E+02  7.92E+02  9.11E+02  1.49E+03  4.00E-04   96
 INGESTION OF MILK                       1.0000  8.20E+01  2.88E+01  2.27E+02
2.97E+02  5.49E+02  6.35E+02  1.05E+03  4.00E-04   96
 INGESTION OF POULTRY                    1.0000  2.01E+01  7.76E+00  5.82E+01
7.45E+01  1.05E+02  1.14E+02  1.55E+02  4.00E-04   96
 INGESTION OF OTHER MEAT CROPS           1.0000  1.10E+01  2.19E+00  3.60E+01
4.84E+01  6.67E+01  7.38E+01  1.06E+02  4.00E-04   96

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    1.0000  1.25E+10  6.41E+09  3.02E+10
4.01E+10  7.57E+10  9.22E+10  1.40E+11  1.43E-03   23
 POP.-DEPENDENT COSTS                    1.0000  1.23E+10  6.20E+09  3.02E+10
4.01E+10  7.57E+10  9.22E+10  1.39E+11  1.43E-03   23
 FARM-DEPENDENT COSTS                    1.0000  2.40E+08  2.06E+08  3.84E+08
4.59E+08  5.67E+08  6.07E+08  7.71E+08  2.80E-04   48
 POP.-DEPENDENT DECONTAMINATION COST     1.0000  2.09E+09  9.77E+08  4.97E+09
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7.81E+09  1.02E+10  1.05E+10  1.16E+10  3.32E-04   47
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  6.46E+07  5.61E+07  1.06E+08
1.20E+08  1.58E+08  1.78E+08  2.24E+08  4.00E-04   39
 POP.-DEPENDENT INTERDICTION COST       1.0000  8.59E+09  4.21E+09  2.10E+10
2.84E+10  5.50E+10  6.49E+10  1.06E+11  9.57E-04   48
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.17E+08  9.27E+07  2.09E+08
2.42E+08  3.05E+08  3.11E+08  3.75E+08  7.72E-06    3
 POP.-DEPENDENT CONDEMNATION COST       1.0000  1.56E+09  7.39E+08  3.04E+09
5.41E+09  2.04E+10  2.52E+10  8.45E+10  1.43E-03   23
 FARM-DEPENDENT CONDEMNATION COST       1.0000  2.94E+07  2.58E+07  5.35E+07
7.52E+07  1.32E+08  1.53E+08  2.94E+08  9.99E-04   23
 EMERGENCY PHASE COST                   1.0000  3.42E+07  1.26E+07  7.99E+07
1.33E+08  2.27E+08  2.43E+08  2.84E+08  9.57E-04   48
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                     1.0000  1.06E+06  6.57E+05  2.45E+06
3.13E+06  5.06E+06  5.17E+06  5.37E+06  1.35E-03    3
 CROP DISPOSAL COST                     1.0000  2.83E+07  2.27E+07  5.59E+07
6.37E+07  7.62E+07  8.04E+07  8.76E+07  1.62E-03    3

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)        1.0000  5.20E+04  4.45E+04  8.88E+04
1.03E+05  1.24E+05  1.34E+05  1.79E+05  4.00E-04   39
 POP. DECONTAMINATION (INDIVIDUALS)     1.0000  2.65E+05  1.36E+05  8.48E+05
1.04E+06  1.14E+06  1.19E+06  1.33E+06  7.99E-04   39
 FARM INTERDICTION (HECTARES)           1.0000  5.93E+04  5.15E+04  1.02E+05
1.11E+05  1.34E+05  1.45E+05  1.79E+05  7.99E-04   10
 POP. INTERDICTION (INDIVIDUALS)        1.0000  2.65E+05  1.36E+05  8.48E+05
1.04E+06  1.14E+06  1.19E+06  1.33E+06  7.99E-04   39
 FARM CONDEMNATION (HECTARES)           1.0000  4.29E+03  3.83E+03  8.38E+03
1.10E+04  1.75E+04  2.11E+04  3.13E+04  9.99E-04   23
 POP. CONDEMNATION (INDIVIDUALS)        1.0000  1.06E+04  4.62E+03  2.02E+04
3.37E+04  1.03E+05  1.48E+05  4.86E+05  1.43E-03   23
 MILK DISPOSAL AREA (HECTARES)          1.0000  6.05E+04  4.85E+04  1.03E+05
1.13E+05  1.39E+05  1.51E+05  1.79E+05  1.35E-03    3
 CROP DISPOSAL AREA (HECTARES)          1.0000  6.11E+04  5.06E+04  1.03E+05
1.13E+05  1.38E+05  1.51E+05  1.79E+05  1.34E-03    3
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LATER SECTIONS.

10-APR-06 19:11:31 PAGE 17

	PEAK CONS	PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.8592	7.03E-01	1.12E-01	2.22E+00	3.19E+00	5.46E+00	6.28E+00	1.29E+01
2.28E-04 81									
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.9002	2.38E+00	1.20E+00	6.30E+00	8.34E+00	1.28E+01	1.51E+01	2.18E+01
2.28E-04 81									
ERL INJ/DIARRHEA	0-16.1 km	0.8600	1.30E+00	4.59E-01	3.57E+00	5.04E+00	8.16E+00	9.63E+00	1.56E+01
2.28E-04 81									
ERL INJ/PNEUMONITIS	0-16.1 km	0.6396	1.92E-01	1.03E-02	6.28E-01	1.12E+00	2.40E+00	3.05E+00	5.63E+00
1.43E-04 81									
ERL INJ/THYROIDITIS	0-16.1 km	0.7519	1.06E-01	1.08E-02	3.25E-01	5.28E-01	1.04E+00	1.29E+00	2.85E+00
1.43E-04 81									
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9922	3.13E+00	2.39E+00	6.98E+00	8.71E+00	1.19E+01	1.32E+01	1.84E+01
5.14E-04 50									
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9987	9.11E+01	9.05E+01	1.19E+02	1.28E+02	1.55E+02	1.68E+02	2.07E+02
6.28E-04 80									
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9473	4.26E+01	3.52E+01	8.78E+01	1.03E+02	1.21E+02	1.30E+02	1.59E+02
6.28E-04 59									
CAN FAT/TOTAL	0-16.1 km	1.0000	9.66E+01	7.36E+01	1.89E+02	2.42E+02	3.47E+02	3.87E+02	6.77E+02
1.43E-04 81									
CAN FAT/LUNG	0-80.5 km	1.0000	4.21E+02	2.95E+02	8.24E+02	1.03E+03	1.49E+03	1.75E+03	2.36E+03
5.50E-05 63									
CAN FAT/THYROID	0-80.5 km	1.0000	1.38E+02	8.46E+01	3.18E+02	4.53E+02	6.52E+02	7.50E+02	1.18E+03
9.70E-04 7									
CAN FAT/BREAST	0-80.5 km	1.0000	3.15E+02	2.20E+02	6.24E+02	8.66E+02	1.14E+03	1.21E+03	1.85E+03
5.50E-05 63									
CAN FAT/GI	0-80.5 km	1.0000	7.96E+02	5.56E+02	1.60E+03	2.14E+03	3.19E+03	3.32E+03	4.36E+03
5.50E-05 63									
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	2.42E+02	1.67E+02	4.61E+02	6.82E+02	1.02E+03	1.06E+03	1.39E+03
5.50E-05 63									
CAN FAT/BONE	0-80.5 km	1.0000	2.51E+01	1.75E+01	4.76E+01	7.03E+01	1.08E+02	1.14E+02	1.64E+02
5.50E-05 63									
CAN FAT/OTHER	0-80.5 km	1.0000	9.56E+02	6.52E+02	1.76E+03	2.66E+03	4.34E+03	5.07E+03	6.21E+03
7.99E-04 46									
CAN INJ/THYROID	0-80.5 km	1.0000	1.38E+03	8.46E+02	3.18E+03	4.53E+03	6.52E+03	7.50E+03	1.18E+04
9.70E-04 7									
CAN INJ/BREAST	0-80.5 km	1.0000	9.92E+02	6.97E+02	1.91E+03	2.82E+03	3.81E+03	4.25E+03	5.83E+03
5.50E-05 63									
CAN FAT/TOTAL	0-80.5 km	1.0000	2.89E+03	2.04E+03	5.58E+03	7.73E+03	1.19E+04	1.31E+04	1.69E+04
7.99E-04 46									
ERL FAT/TOTAL	0-80.5 km	0.8592	7.03E-01	1.12E-01	2.22E+00	3.19E+00	5.46E+00	6.28E+00	1.29E+01
2.28E-04 81									
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.9002	2.38E+00	1.20E+00	6.30E+00	8.34E+00	1.28E+01	1.51E+01	2.18E+01
2.28E-04 81									
ERL INJ/DIARRHEA	0-80.5 km	0.8600	1.30E+00	4.59E-01	3.57E+00	5.04E+00	8.16E+00	9.63E+00	1.56E+01
2.28E-04 81									
ERL INJ/PNEUMONITIS	0-80.5 km	0.6396	1.92E-01	1.03E-02	6.28E-01	1.12E+00	2.40E+00	3.05E+00	5.63E+00
1.43E-04 81									
ERL INJ/THYROIDITIS	0-80.5 km	0.7519	1.06E-01	1.08E-02	3.25E-01	5.28E-01	1.04E+00	1.29E+00	2.85E+00
1.43E-04 81									
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.9922	1.40E+01	2.41E+00	3.56E+01	5.70E+01	2.40E+02	3.04E+02	7.09E+02
9.99E-04 83									
ERL INJ/SKIN ERYTHEMA	0-80.5 km	0.9987	4.29E+03	1.13E+03	9.47E+03	1.49E+04	5.26E+04	6.10E+04	1.03E+05
1.63E-03 69									
ERL INJ/TRANSEPIDERMAL	0-80.5 km	0.9473	1.66E+02	3.56E+01	1.50E+02	4.11E+02	3.16E+03	5.12E+03	2.80E+04
9.99E-04 83									

EARLY FATALITY DISTANCE (km)

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 ERL FAT/TOTAL RISK > 0.000                0.8663  2.12E-01  1.71E-01  3.47E-01
3.84E-01  4.83E-01 NOT-FOUND  8.05E-01  7.91E-03   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.8592  2.94E+00  1.45E+00  7.57E+00
1.00E+01  1.61E+01  1.98E+01  2.73E+01  5.14E-04   50
□10-APR-06  19:11:31    PAGE  18          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.6396  7.83E-01  1.05E-01  2.58E+00
3.65E+00  6.34E+00  7.64E+00  1.42E+01  2.28E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9041  1.48E+01  1.07E+01  3.41E+01
4.46E+01  6.44E+01  7.16E+01  8.64E+01  5.71E-04  116
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9974  5.21E+03  2.34E+03  9.71E+03
2.57E+04  7.09E+04  7.36E+04  8.44E+04  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.8663  3.05E-03  3.15E-03  5.36E-03
5.81E-03  7.01E-03  7.60E-03  8.50E-03  1.91E-03    5
 ERL FAT/TOTAL               1.6-3.2 km  0.7916  7.57E-04  9.45E-05  2.29E-03
2.70E-03  3.17E-03  3.28E-03  3.92E-03  1.14E-04   26
 ERL FAT/TOTAL               3.2-4.8 km  0.4364  1.92E-04  0.00E+00  8.59E-04
1.20E-03  2.01E-03  2.24E-03  2.48E-03  2.60E-03    4
 ERL FAT/TOTAL               4.8-6.4 km  0.2778  5.68E-05  0.00E+00  9.44E-05
4.67E-04  1.03E-03  1.20E-03  1.39E-03  2.54E-03   81
 ERL FAT/TOTAL               6.4-8.1 km  0.1579  1.48E-05  0.00E+00  1.43E-05
5.81E-05  5.16E-04  6.02E-04  9.11E-04  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.97E+03  1.41E+03  3.60E+03
4.73E+03  7.41E+03  8.11E+03  1.39E+04  1.43E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  6.48E+04  4.42E+04  1.41E+05
1.91E+05  2.86E+05  3.12E+05  3.64E+05  7.99E-04   46

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.8592  8.41E-04  2.29E-04  2.59E-03
3.30E-03  4.85E-03  5.14E-03  6.93E-03  8.80E-06   26
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.02E-03  9.58E-04  1.30E-03
1.47E-03  1.94E-03  2.12E-03  2.65E-03  7.42E-04   46

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  2.39E+00  1.57E+00  4.27E+00
6.80E+00 NOT-FOUND NOT-FOUND  1.52E+01  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  8.39E-01  5.67E-01  1.63E+00
2.15E+00  3.24E+00  4.04E+00  6.29E+00  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  4.50E-01  2.81E-01  9.11E-01
1.14E+00  1.69E+00  2.02E+00  3.17E+00  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  3.22E-01  2.42E-01  6.67E-01
7.87E-01  1.08E+00  1.25E+00  1.44E+00  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  2.69E-01  2.21E-01  4.78E-01
5.94E-01  8.17E-01  9.05E-01  1.10E+00  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  2.44E-01  2.23E-01  3.62E-01
4.32E-01  6.58E-01 NOT-FOUND  8.84E-01  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.73E-01  1.45E-01  2.33E-01
2.58E-01  3.43E-01 NOT-FOUND  3.62E-01  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  5.11E-01  4.60E-01  7.98E-01
9.21E-01  1.52E+00 NOT-FOUND  1.69E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  3.05E-01  3.09E-01  4.81E-01
5.48E-01 NOT-FOUND NOT-FOUND  6.89E-01  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  2.48E-01  2.51E-01  3.34E-01
3.53E-01  4.02E-01 NOT-FOUND  4.11E-01  7.42E-03  106
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 L-EDEWBODY                    64.4-80.5 km  1.0000  1.84E-01  1.71E-01  2.60E-01
2.95E-01  3.24E-01  3.36E-01  3.71E-01  7.13E-04   63
 DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  3 OF 11:
    Case 3CCID

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31     PAGE  19          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                     0-80.5 km  1.0000  1.45E+02  8.19E+01  3.15E+02
4.79E+02  7.91E+02  8.69E+02  1.21E+03  7.99E-04   46
 CAN FAT/THYROID                  0-80.5 km  1.0000  1.06E+02  5.91E+01  2.64E+02
3.60E+02  5.49E+02  6.05E+02  1.01E+03  9.70E-04    7
 CAN FAT/BREAST                   0-80.5 km  1.0000  8.53E+01  4.79E+01  1.72E+02
2.94E+02  5.61E+02  6.17E+02  8.48E+02  9.57E-04   48
 CAN FAT/GI                       0-80.5 km  1.0000  2.46E+02  1.40E+02  4.90E+02
7.89E+02  1.25E+03  1.42E+03  2.20E+03  7.99E-04   46
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  6.65E+01  3.75E+01  1.42E+02
2.12E+02  4.13E+02  5.00E+02  6.40E+02  7.99E-04   46
 CAN FAT/BONE                     0-80.5 km  1.0000  7.15E+00  4.01E+00  1.51E+01
2.29E+01  4.46E+01  5.31E+01  8.88E+01  9.57E-04   48
 CAN FAT/OTHER                    0-80.5 km  1.0000  3.82E+02  2.13E+02  8.86E+02
1.32E+03  2.21E+03  2.40E+03  3.97E+03  7.99E-04   46
 CAN INJ/THYROID                  0-80.5 km  1.0000  1.06E+03  5.91E+02  2.64E+03
3.60E+03  5.49E+03  6.05E+03  1.01E+04  9.70E-04    7
 CAN INJ/BREAST                   0-80.5 km  1.0000  2.68E+02  1.47E+02  5.21E+02
9.03E+02  1.75E+03  2.10E+03  2.67E+03  9.57E-04   48
 CAN FAT/TOTAL                    0-80.5 km  1.0000  1.04E+03  5.79E+02  2.24E+03
3.40E+03  6.30E+03  7.32E+03  9.62E+03  7.99E-04   46
 ERL FAT/TOTAL                    0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.1995  1.09E+01  0.00E+00  3.01E+01
4.60E+01  2.22E+02  2.83E+02  6.99E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.6192  4.20E+03  1.07E+03  9.46E+03
1.49E+04  5.26E+04  6.10E+04  1.03E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0886  1.23E+02  0.00E+00  0.00E+00
3.25E+02  3.16E+03  5.12E+03  2.79E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.6320  5.13E+03  2.30E+03  9.70E+03
2.57E+04  7.09E+04  7.36E+04  8.43E+04  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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                                PROB                                  QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.33E+04  1.31E+04  4.63E+04
7.70E+04  1.24E+05  1.42E+05  2.01E+05  7.99E-04   46

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 L-EDEWBODY                    3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                    4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                    6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                    8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  16.1-32.2 km  1.0000  4.02E-01  3.23E-01  7.55E-01
9.03E-01  1.52E+00 NOT-FOUND  1.69E+00  7.42E-03   83
 L-EDEWBODY                  32.2-48.3 km  1.0000  1.77E-01  1.36E-01  3.01E-01
3.56E-01 NOT-FOUND NOT-FOUND  4.93E-01  1.27E-02   69
 L-EDEWBODY                  48.3-64.4 km  1.0000  1.46E-01  1.41E-01  2.19E-01
2.31E-01  2.61E-01 NOT-FOUND  2.67E-01  7.42E-03  106
 L-EDEWBODY                  64.4-80.5 km  1.0000  1.07E-01  1.00E-01  1.72E-01
2.02E-01  2.19E-01  2.26E-01  2.48E-01  7.13E-04   63
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  3 OF 11:
    Case 3CCID

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31     PAGE  21          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.8592  1.41E+01  2.22E+00  4.34E+01
6.32E+01  1.08E+02  1.23E+02  2.58E+02  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.9002  4.77E+01  2.33E+01  1.20E+02
1.61E+02  2.54E+02  2.96E+02  4.36E+02  2.28E-04   81
 ERL INJ/DIARRHEA              0-16.1 km  0.8600  2.59E+01  9.28E+00  7.34E+01
1.01E+02  1.58E+02  1.92E+02  3.12E+02  2.28E-04   81
 ERL INJ/PNEUMONITIS           0-16.1 km  0.6396  3.85E+00  2.05E-01  1.19E+01
2.26E+01  4.62E+01  6.19E+01  1.13E+02  1.43E-04   81
 ERL INJ/THYROIDITIS           0-16.1 km  0.7519  2.12E+00  2.17E-01  6.45E+00
1.05E+01  2.13E+01  2.93E+01  5.69E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9922  6.26E+01  4.95E+01  1.31E+02
1.70E+02  2.41E+02  2.69E+02  3.68E+02  5.14E-04   50
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9987  1.82E+03  1.70E+03  3.01E+03
3.15E+03  3.48E+03  3.64E+03  4.15E+03  6.28E-04   80
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.9473  8.52E+02  7.24E+02  1.70E+03
2.10E+03  2.75E+03  3.01E+03  3.18E+03  6.28E-04   59
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.56E+02  1.27E+02  2.91E+02
3.35E+02  4.49E+02  5.06E+02  6.50E+02  5.14E-04   50
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.69E+02  1.08E+02  3.47E+02
5.26E+02  7.97E+02  8.74E+02  1.22E+03  7.99E-04   46
 CAN FAT/THYROID               0-80.5 km  1.0000  1.25E+02  8.02E+01  2.93E+02
3.96E+02  5.73E+02  6.28E+02  1.03E+03  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  9.00E+01  5.34E+01  1.76E+02
2.95E+02  5.61E+02  6.17E+02  8.53E+02  9.57E-04   48
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 CAN FAT/GI                    0-80.5 km  1.0000  2.82E+02  1.80E+02  5.38E+02
8.32E+02  1.35E+03  1.58E+03  2.21E+03  7.99E-04   46
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  7.38E+01  4.51E+01  1.47E+02
2.19E+02  4.44E+02  5.20E+02  6.42E+02  7.99E-04   46
 CAN FAT/BONE                  0-80.5 km  1.0000  7.96E+00  4.90E+00  1.59E+01
2.36E+01  4.48E+01  5.31E+01  8.95E+01  9.57E-04   48
 CAN FAT/OTHER                 0-80.5 km  1.0000  4.46E+02  2.89E+02  9.46E+02
1.35E+03  2.47E+03  2.95E+03  3.99E+03  7.99E-04   46
 CAN INJ/THYROID               0-80.5 km  1.0000  1.25E+03  8.02E+02  2.93E+03
3.96E+03  5.73E+03  6.28E+03  1.03E+04  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  2.83E+02  1.61E+02  5.34E+02
9.19E+02  1.76E+03  2.10E+03  2.68E+03  9.57E-04   48
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.19E+03  7.55E+02  2.47E+03
3.54E+03  6.37E+03  7.35E+03  9.67E+03  7.99E-04   46
 ERL FAT/TOTAL                 0-80.5 km  0.8592  1.41E+01  2.22E+00  4.34E+01
6.32E+01  1.08E+02  1.23E+02  2.58E+02  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.9002  4.77E+01  2.33E+01  1.20E+02
1.61E+02  2.54E+02  2.96E+02  4.36E+02  2.28E-04   81
 ERL INJ/DIARRHEA              0-80.5 km  0.8600  2.59E+01  9.28E+00  7.34E+01
1.01E+02  1.58E+02  1.92E+02  3.12E+02  2.28E-04   81
 ERL INJ/PNEUMONITIS           0-80.5 km  0.6396  3.85E+00  2.05E-01  1.19E+01
2.26E+01  4.62E+01  6.19E+01  1.13E+02  1.43E-04   81
 ERL INJ/THYROIDITIS           0-80.5 km  0.7519  2.12E+00  2.17E-01  6.45E+00
1.05E+01  2.13E+01  2.93E+01  5.69E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.9922  7.36E+01  5.00E+01  1.65E+02
2.38E+02  4.10E+02  4.97E+02  8.95E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.9987  6.02E+03  3.31E+03  1.22E+04
1.74E+04  5.45E+04  6.20E+04  1.06E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.9473  9.75E+02  7.28E+02  2.02E+03
2.47E+03  4.82E+03  6.61E+03  2.96E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.8663  4.24E+00  3.75E+00  7.39E+00
8.03E+00  9.72E+00 NOT-FOUND  1.61E+01  7.91E-03   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.8592  5.88E+01  3.08E+01  1.44E+02
2.00E+02  3.24E+02  3.64E+02  5.45E+02  5.14E-04   50
 EARLY dose A-LUNGS > 5.00 Sv              0.6396  1.57E+01  2.07E+00  5.14E+01
7.50E+01  1.24E+02  1.49E+02  2.85E+02  2.28E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9041  2.96E+02  2.14E+02  7.06E+02
9.01E+02  1.19E+03  1.30E+03  1.73E+03  5.71E-04  116
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9974  6.64E+03  3.67E+03  1.29E+04
2.57E+04  7.10E+04  7.39E+04  8.56E+04  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km   0.8663  6.10E-02  6.18E-02  1.07E-01
1.16E-01  1.40E-01  1.52E-01  1.70E-01  1.91E-03    5
 ERL FAT/TOTAL               1.6-3.2 km   0.7916  1.51E-02  1.85E-03  4.22E-02
5.21E-02  6.88E-02  7.11E-02  7.84E-02  1.14E-04   26
 ERL FAT/TOTAL               3.2-4.8 km   0.4364  3.84E-03  0.00E+00  1.49E-02
2.36E-02  3.61E-02  4.25E-02  4.96E-02  2.60E-03    4
 ERL FAT/TOTAL               4.8-6.4 km   0.2778  1.14E-03  0.00E+00  1.86E-03
9.21E-03  2.06E-02  2.40E-02  2.78E-02  2.54E-03   81
10-APR-06  19:11:31    PAGE  22          PROB                          QUANTILES
                         PEAK       PEAK  PEAK
                                      NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km   0.1579  2.96E-04  0.00E+00  3.31E-04
1.23E-03  1.06E-02  1.39E-02  1.82E-02  2.54E-03   81

POPULATION DOSE (Sv)
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 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  2.73E+03  2.27E+03  5.27E+03
6.41E+03  8.69E+03  9.76E+03  1.49E+04  2.28E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.60E+04  1.60E+04  4.94E+04
7.82E+04  1.25E+05  1.43E+05  2.02E+05  7.99E-04   46

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8592  1.68E-02  4.63E-03  5.41E-02
6.94E-02  9.73E-02  1.03E-01  1.39E-01  8.80E-06   26
 CAN FAT/TOTAL                0-16.1 km  1.0000  7.56E-03  6.79E-03  1.28E-02
1.54E-02  2.14E-02  2.32E-02  3.15E-02  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  4.73E+01  3.41E+01  8.83E+01
1.19E+02 NOT-FOUND NOT-FOUND  3.05E+02  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  1.61E+01  1.14E+01  3.47E+01
4.56E+01  7.39E+01  8.61E+01  1.26E+02  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  8.32E+00  5.86E+00  1.82E+01
2.38E+01  4.01E+01  5.03E+01  6.34E+01  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  5.26E+00  3.71E+00  1.12E+01
1.37E+01  2.15E+01  2.49E+01  2.88E+01  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  3.58E+00  2.46E+00  8.12E+00
1.07E+01  1.50E+01  1.73E+01  2.19E+01  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  2.54E+00  1.65E+00  5.55E+00
7.27E+00  1.52E+01 NOT-FOUND  1.77E+01  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.32E+00  1.04E+00  2.77E+00
3.99E+00  6.61E+00 NOT-FOUND  7.24E+00  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  4.02E-01  3.23E-01  7.55E-01
9.03E-01  1.52E+00 NOT-FOUND  1.69E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  1.77E-01  1.36E-01  3.01E-01
3.56E-01 NOT-FOUND NOT-FOUND  4.93E-01  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  1.46E-01  1.41E-01  2.19E-01
2.31E-01  2.61E-01 NOT-FOUND  2.67E-01  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  1.07E-01  1.00E-01  1.72E-01
2.02E-01  2.19E-01  2.26E-01  2.48E-01  7.13E-04   63
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  3 OF 11:
    Case 3CCID

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31     PAGE  23          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                0-16.1 km  1.0000  8.88E+01  6.41E+01  1.75E+02
2.30E+02  3.40E+02  3.81E+02  6.70E+02  1.43E-04   81
 CAN FAT/LUNG                 0-80.5 km  1.0000  2.75E+02  2.00E+02  5.75E+02
7.15E+02  1.02E+03  1.13E+03  1.43E+03  9.70E-04    7
 CAN FAT/THYROID              0-80.5 km  1.0000  3.15E+01  2.20E+01  6.55E+01
8.49E+01  1.18E+02  1.31E+02  1.66E+02  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  2.30E+02  1.64E+02  4.69E+02
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6.30E+02  8.19E+02  8.87E+02  1.20E+03  9.70E-04    7
 CAN FAT/GI                  0-80.5 km  1.0000  5.49E+02  3.94E+02  1.11E+03
1.33E+03  2.02E+03  2.22E+03  2.80E+03  9.70E-04    7
 CAN FAT/LEUKEMIA            0-80.5 km  1.0000  1.75E+02  1.22E+02  3.67E+02
4.73E+02  6.18E+02  6.83E+02  9.06E+02  9.70E-04    7
 CAN FAT/BONE                0-80.5 km  1.0000  1.79E+01  1.25E+01  3.76E+01
4.85E+01  6.63E+01  7.41E+01  9.35E+01  9.70E-04    7
 CAN FAT/OTHER               0-80.5 km  1.0000  5.71E+02  4.06E+02  1.16E+03
1.43E+03  2.14E+03  2.36E+03  2.97E+03  9.70E-04    7
 CAN INJ/THYROID             0-80.5 km  1.0000  3.15E+02  2.20E+02  6.55E+02
8.49E+02  1.18E+03  1.31E+03  1.66E+03  9.70E-04    7
 CAN INJ/BREAST              0-80.5 km  1.0000  7.23E+02  5.19E+02  1.48E+03
1.94E+03  2.45E+03  2.69E+03  3.79E+03  9.70E-04    7
 CAN FAT/TOTAL               0-80.5 km  1.0000  1.85E+03  1.28E+03  3.85E+03
4.95E+03  6.83E+03  7.58E+03  9.57E+03  9.70E-04    7

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  1.83E+03  1.29E+03  3.49E+03
4.51E+03  7.29E+03  8.00E+03  1.35E+04  1.43E-04   81
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  4.14E+04  3.00E+04  8.53E+04
1.04E+05  1.36E+05  1.53E+05  2.15E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL               0-16.1 km  0.9298  6.42E-04  5.91E-04  1.05E-03
1.19E-03  1.58E-03  1.78E-03  2.45E-03  7.42E-04   46

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.1286  2.31E-02  0.00E+00  1.10E-01
1.43E-01 NOT-FOUND NOT-FOUND  2.00E-01  2.05E-02  107
 L-EDEWBODY                 1.6-3.2 km  0.2100  3.56E-02  0.00E+00  1.07E-01
1.15E-01  1.37E-01  1.48E-01  1.98E-01  3.42E-04   34
 L-EDEWBODY                 3.2-4.8 km  0.1999  3.35E-02  0.00E+00  1.09E-01
1.19E-01  1.44E-01  1.57E-01  2.00E-01  7.13E-04   36
 L-EDEWBODY                 4.8-6.4 km  0.3583  5.91E-02  0.00E+00  1.14E-01
1.22E-01  1.43E-01  1.54E-01  2.00E-01  3.71E-04   31
 L-EDEWBODY                 6.4-8.1 km  0.5572  8.96E-02  1.01E-01  1.15E-01
1.22E-01  1.40E-01  1.48E-01  2.00E-01  1.43E-04   12
 L-EDEWBODY                 8.1-9.7 km  0.7695  1.17E-01  1.05E-01  1.26E-01
1.37E-01  1.65E-01  1.79E-01  2.00E-01  1.91E-03   87
 L-EDEWBODY                9.7-16.1 km  0.9000  1.08E-01  1.03E-01  1.18E-01
1.26E-01  1.45E-01  1.55E-01  1.96E-01  3.42E-04    3
 L-EDEWBODY               16.1-32.2 km  0.9040  1.09E-01  1.01E-01  1.17E-01
1.25E-01  1.45E-01  1.55E-01  1.99E-01  3.42E-04   35
 L-EDEWBODY               32.2-48.3 km  1.0000  1.28E-01  1.08E-01  1.40E-01
1.57E-01 NOT-FOUND NOT-FOUND  1.96E-01  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  1.01E-01  1.04E-01  1.36E-01
1.52E-01 NOT-FOUND NOT-FOUND  1.63E-01  3.32E-02    7
 L-EDEWBODY               64.4-80.5 km  1.0000  7.70E-02  7.56E-02  1.04E-01
1.11E-01  1.27E-01 NOT-FOUND  1.31E-01  7.42E-03  106

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  4.14E+04  3.00E+04  8.53E+04
1.04E+05  1.36E+05  1.53E+05  2.15E+05  9.70E-04    7
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  3.51E+04  2.49E+04  7.85E+04
9.90E+04  1.22E+05  1.34E+05  1.65E+05  9.70E-04    7
 TOTAL INGESTION PATHWAYS DOSE           1.0000  2.13E+03  1.65E+03  3.83E+03
5.00E+03  7.50E+03  8.27E+03  1.39E+04  1.43E-04   81
 LONG-TERM GROUNDSHINE DOSE              1.0000  3.50E+04  2.49E+04  7.85E+04
9.90E+04  1.22E+05  1.34E+05  1.65E+05  9.70E-04    7
 LONG-TERM RESUSPENSION DOSE             1.0000  1.33E+02  8.84E+01  3.12E+02
3.39E+02  4.12E+02  4.48E+02  6.05E+02  2.22E-05   44
 WATER INGESTION DOSE                    1.0000  1.79E+03  1.28E+03  3.54E+03
4.69E+03  7.34E+03  8.04E+03  1.36E+04  1.43E-04   81
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 POP.-DEPENDENT DECONTAMINATION DOSE    1.0000  4.00E+03  2.01E+03  1.02E+04
1.40E+04  2.33E+04  2.65E+04  4.86E+04  9.70E-04    7
10-APR-06  19:11:31    PAGE  24          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)     0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  9.77E+01  8.53E+01  1.53E+02
1.91E+02  3.01E+02  3.07E+02  3.67E+02  7.72E-06   35
 INGESTION OF GRAINS                    1.0000  5.32E+00  4.64E+00  8.93E+00
1.07E+01  1.42E+01  1.60E+01  4.59E+01  3.52E-06   27
 INGESTION OF LEAF VEG                  1.0000  1.69E+01  1.34E+01  2.81E+01
3.17E+01  3.79E+01  4.10E+01  6.59E+01  3.52E-06   27
 INGESTION OF ROOT CROPS                1.0000  9.72E+00  8.60E+00  1.52E+01
1.88E+01  2.33E+01  2.52E+01  6.31E+01  3.52E-06   27
 INGESTION OF FRUITS                    1.0000  4.80E+01  4.17E+01  7.78E+01
9.30E+01  1.09E+02  1.13E+02  1.51E+02  5.08E-05   54
 INGESTION OF LEGUMES                   1.0000  1.90E+01  1.59E+01  3.09E+01
3.48E+01  4.59E+01  5.04E+01  6.60E+01  3.52E-06   27
 INGESTION OF BEEF                      1.0000  1.09E+02  3.60E+01  3.14E+02
3.92E+02  5.66E+02  6.27E+02  1.23E+03  7.72E-06  105
 INGESTION OF MILK                      1.0000  8.53E+01  2.36E+01  2.53E+02
3.15E+02  4.08E+02  4.56E+02  8.91E+02  7.72E-06  105
 INGESTION OF POULTRY                   1.0000  2.58E+01  1.36E+01  6.12E+01
7.46E+01  1.03E+02  1.18E+02  1.45E+02  1.66E-03   82
 INGESTION OF OTHER MEAT CROPS          1.0000  1.35E+01  1.77E+00  4.06E+01
5.25E+01  7.55E+01  8.41E+01  1.04E+02  1.66E-03   82

ECONOMIC COST MEASURES ($)     0-80.5 km
 TOTAL ECONOMIC COSTS                   1.0000  1.36E+10  8.76E+09  2.93E+10
3.50E+10  5.12E+10  5.82E+10  9.56E+10  9.70E-04    7
 POP.-DEPENDENT COSTS                   1.0000  1.33E+10  8.17E+09  2.92E+10
3.49E+10  5.12E+10  5.82E+10  9.52E+10  9.70E-04    7
 FARM-DEPENDENT COSTS                   1.0000  3.23E+08  3.06E+08  5.12E+08
5.65E+08  7.05E+08  7.36E+08  1.02E+09  1.06E-05   35
 POP.-DEPENDENT DECONTAMINATION COST    1.0000  2.75E+09  1.77E+09  5.78E+09
1.00E+10  1.06E+10  1.08E+10  1.27E+10  2.64E-05   35
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  9.08E+07  8.35E+07  1.29E+08
1.49E+08  2.02E+08  2.11E+08  3.02E+08  7.72E-06   35
 POP.-DEPENDENT INTERDICTION COST       1.0000  9.61E+09  5.90E+09  2.14E+10
2.59E+10  4.24E+10  5.21E+10  8.34E+10  9.70E-04    7
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.66E+08  1.32E+08  2.88E+08
3.21E+08  3.87E+08  4.20E+08  5.34E+08  1.06E-05   35
 POP.-DEPENDENT CONDEMNATION COST       0.9928  8.74E+08  3.63E+08  1.51E+09
2.62E+09  5.93E+09  6.43E+09  2.48E+10  1.63E-03   23
 FARM-DEPENDENT CONDEMNATION COST       1.0000  2.17E+07  1.74E+07  4.34E+07
5.23E+07  6.75E+07  1.02E+08  1.45E+08  9.99E-04   23
 EMERGENCY PHASE COST                   1.0000  1.58E+07  6.86E+06  4.05E+07
6.20E+07  1.35E+08  1.76E+08  2.72E+08  4.00E-04  106
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                     1.0000  1.63E+06  1.14E+06  3.53E+06
4.73E+06  6.02E+06  6.57E+06  7.50E+06  9.50E-04    3
 CROP DISPOSAL COST                     1.0000  4.31E+07  4.18E+07  7.15E+07
7.81E+07  9.59E+07  1.04E+08  1.22E+08  1.29E-03    3

AFFECTED AREA/POPULATION       0-80.5 km
 FARM DECONTAMINATION (HECTARES)        1.0000  8.14E+04  7.66E+04  1.11E+05
1.20E+05  1.44E+05  1.56E+05  2.20E+05  7.72E-06   35
 POP. DECONTAMINATION (INDIVIDUALS)     1.0000  4.18E+05  2.55E+05  1.01E+06
1.04E+06  1.10E+06  1.13E+06  1.36E+06  2.64E-05   35
 FARM INTERDICTION (HECTARES)           1.0000  9.41E+04  8.56E+04  1.30E+05
1.50E+05  2.04E+05  2.16E+05  2.68E+05  3.42E-04   42
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 POP. INTERDICTION (INDIVIDUALS)        1.0000  4.18E+05  2.55E+05  1.01E+06
1.04E+06  1.10E+06  1.13E+06  1.36E+06  2.64E-05    35
 FARM CONDEMNATION (HECTARES)           1.0000  3.20E+03  1.91E+03  6.59E+03
7.55E+03  9.88E+03  1.18E+04  2.07E+04  7.13E-04    23
 POP. CONDEMNATION (INDIVIDUALS)        0.9928  6.21E+03  2.46E+03  1.21E+04
1.95E+04  3.89E+04  4.39E+04  1.58E+05  1.63E-03    23
 MILK DISPOSAL AREA (HECTARES)          1.0000  9.33E+04  8.25E+04  1.29E+05
1.49E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03     3
 CROP DISPOSAL AREA (HECTARES)          1.0000  9.37E+04  8.29E+04  1.29E+05
1.49E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03     3
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 CAN FAT/THYROID                0-80.5 km  1.0000  8.73E+00  4.98E+00  1.90E+01
2.92E+01  5.21E+01  5.56E+01  7.47E+01  4.00E-04   83
 CAN FAT/BREAST                 0-80.5 km  1.0000  6.01E+01  3.59E+01  1.28E+02
1.92E+02  3.30E+02  3.61E+02  4.98E+02  4.00E-04   83
 CAN FAT/GI                     0-80.5 km  1.0000  1.47E+02  9.37E+01  2.98E+02
4.60E+02  8.69E+02  1.01E+03  1.17E+03  4.00E-04   83
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  4.60E+01  2.87E+01  9.44E+01
1.58E+02  2.75E+02  3.08E+02  3.75E+02  4.00E-04   83
 CAN FAT/BONE                   0-80.5 km  1.0000  4.71E+00  2.90E+00  9.93E+00
1.61E+01  2.83E+01  3.12E+01  3.87E+01  4.00E-04   83
 CAN FAT/OTHER                  0-80.5 km  1.0000  1.51E+02  9.33E+01  3.14E+02
4.79E+02  9.26E+02  1.03E+03  1.23E+03  4.00E-04   83
 CAN INJ/THYROID                0-80.5 km  1.0000  8.73E+01  4.98E+01  1.90E+02
2.92E+02  5.21E+02  5.56E+02  7.47E+02  4.00E-04   83
 CAN INJ/BREAST                 0-80.5 km  1.0000  1.89E+02  1.10E+02  3.83E+02
5.95E+02  1.08E+03  1.17E+03  1.57E+03  4.00E-04   83
 CAN FAT/TOTAL                  0-80.5 km  1.0000  4.90E+02  3.04E+02  1.03E+03
1.69E+03  2.85E+03  3.14E+03  3.98E+03  4.00E-04   83
 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.0208  6.94E-05  0.00E+00  0.00E+00
0.00E+00  2.01E-03  4.14E-03  2.05E-02  5.71E-05   81
 ERL INJ/DIARRHEA               0-80.5 km  0.0049  1.58E-05  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  5.25E-03  9.57E-04  110
 ERL INJ/PNEUMONITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.1700  5.81E-04  0.00E+00  9.06E-04
2.23E-03  1.27E-02  2.12E-02  5.10E-02  5.71E-05   81
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.6693  3.11E-01  1.80E-02  1.02E+00
1.75E+00  4.03E+00  5.17E+00  9.89E+00  2.57E-04   81
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.1947  8.26E-03  0.00E+00  7.11E-03
2.05E-02  1.71E-01  3.34E-01  1.74E+00  5.71E-05   81

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  26                PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0102  5.34E-04  0.00E+00  0.00E+00
0.00E+00  9.26E-03  4.63E-02  1.07E-01  1.01E-03   81
 EARLY dose L-EDEWBODY > 0.250 Sv          0.5017  3.70E-01  7.73E-03  1.28E+00
2.02E+00  3.91E+00  4.76E+00  1.10E+01  1.43E-04   81

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                1.6-3.2 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                3.2-4.8 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                4.8-6.4 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL FAT/TOTAL                  6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  3.13E+02  3.02E+02  4.06E+02
4.61E+02  5.37E+02  5.60E+02  7.81E+02  3.55E-06   24
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  1.09E+04  6.71E+03  2.24E+04
3.49E+04  6.51E+04  7.21E+04  8.94E+04  4.00E-04   83

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                  0-16.1 km  1.0000  5.08E-04  4.83E-04  7.10E-04
7.56E-04  8.74E-04  9.31E-04  1.25E-03  6.60E-06   24

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  1.43E-01  1.22E-01  2.19E-01
2.46E-01 NOT-FOUND NOT-FOUND  3.47E-01  1.24E-02  110
 L-EDEWBODY                     1.6-3.2 km  1.0000  1.37E-01  1.06E-01  1.43E-01
1.63E-01  2.01E-01  2.02E-01  2.07E-01  3.71E-04   88
 L-EDEWBODY                     3.2-4.8 km  1.0000  1.30E-01  1.13E-01  1.89E-01
2.02E-01  2.10E-01 NOT-FOUND  2.11E-01  9.62E-03   64
 L-EDEWBODY                     4.8-6.4 km  1.0000  1.30E-01  1.12E-01  1.76E-01
2.01E-01  2.08E-01  2.11E-01  2.14E-01  2.54E-03   60
 L-EDEWBODY                     6.4-8.1 km  1.0000  1.12E-01  1.04E-01  1.35E-01
1.51E-01  1.96E-01 NOT-FOUND  2.07E-01  8.96E-03   66
 L-EDEWBODY                     8.1-9.7 km  1.0000  9.32E-02  8.61E-02  1.27E-01
1.44E-01  1.92E-01 NOT-FOUND  2.02E-01  7.91E-03   50
 L-EDEWBODY                    9.7-16.1 km  1.0000  7.33E-02  7.22E-02  1.02E-01
1.05E-01  1.13E-01  1.17E-01  1.35E-01  2.00E-04  101
 L-EDEWBODY                   16.1-32.2 km  1.0000  8.04E-02  7.56E-02  1.09E-01
1.16E-01  1.32E-01  1.40E-01  1.48E-01  2.60E-03   77
 L-EDEWBODY                   32.2-48.3 km  1.0000  5.80E-02  5.13E-02  1.01E-01
1.10E-01 NOT-FOUND NOT-FOUND  1.30E-01  1.27E-02   23
 L-EDEWBODY                   48.3-64.4 km  1.0000  5.04E-02  5.13E-02  7.62E-02
8.20E-02  9.74E-02 NOT-FOUND  1.13E-01  7.42E-03   83
 L-EDEWBODY                   64.4-80.5 km  1.0000  3.39E-02  2.84E-02  5.68E-02
6.95E-02  9.45E-02 NOT-FOUND  1.14E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  4 OF 11:
    Case 4CCIW

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31    PAGE  27          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH     99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                  0-80.5 km  1.0000  4.63E+00  2.53E+00  1.14E+01
1.51E+01  2.33E+01  2.62E+01  4.70E+01  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  1.29E+00  7.27E-01  3.38E+00
4.61E+00  6.81E+00  7.94E+00  1.37E+01  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  3.33E+00  1.87E+00  8.78E+00
1.15E+01  1.78E+01  2.15E+01  3.31E+01  9.70E-04    7
 CAN FAT/GI                    0-80.5 km  1.0000  8.66E+00  4.83E+00  2.16E+01
3.12E+01  4.73E+01  5.56E+01  8.76E+01  9.70E-04    7
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  2.49E+00  1.29E+00  6.45E+00
8.56E+00  1.32E+01  1.57E+01  2.50E+01  9.70E-04    7
 CAN FAT/BONE                  0-80.5 km  1.0000  2.67E-01  1.41E-01  6.91E-01
1.01E+00  1.41E+00  1.62E+00  2.67E+00  9.70E-04    7
 CAN FAT/OTHER                 0-80.5 km  1.0000  8.89E+00  5.04E+00  2.35E+01
3.23E+01  5.18E+01  5.86E+01  8.95E+01  9.70E-04    7
 CAN INJ/THYROID               0-80.5 km  1.0000  1.29E+01  7.27E+00  3.38E+01
4.61E+01  6.81E+01  7.94E+01  1.37E+02  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  1.05E+01  5.78E+00  2.70E+01
3.57E+01  5.51E+01  6.22E+01  1.04E+02  9.70E-04    7
 CAN FAT/TOTAL                 0-80.5 km  1.0000  2.96E+01  1.61E+01  7.51E+01
1.05E+02  1.47E+02  1.69E+02  2.99E+02  9.70E-04    7
 ERL FAT/TOTAL                 0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  28          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                      NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  6.44E+02  3.47E+02  1.59E+03
2.26E+03  3.43E+03  4.00E+03  6.48E+03  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                16.1-32.2 km  1.0000  2.14E-02  2.03E-02  4.21E-02
5.25E-02  6.69E-02 NOT-FOUND  8.83E-02  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  8.21E-03  7.31E-03  1.64E-02
2.09E-02 NOT-FOUND NOT-FOUND  2.60E-02  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  4.05E-03  3.32E-03  8.68E-03
1.08E-02  1.41E-02 NOT-FOUND  1.48E-02  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  2.32E-03  1.86E-03  4.30E-03
5.44E-03  9.08E-03 NOT-FOUND  1.25E-02  7.42E-03  106
  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  4 OF 11:
    Case 4CCIW
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RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE

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10-APR-06  19:11:31     PAGE  29          PROB                                  QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.0208  1.39E-03  0.00E+00  0.00E+00
0.00E+00  3.71E-02  8.03E-02  4.11E-01  5.71E-05   81
 ERL INJ/DIARRHEA                 0-16.1 km  0.0049  3.15E-04  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  1.05E-01  9.57E-04  110
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.1700  1.16E-02  0.00E+00  1.77E-02
4.43E-02  2.49E-01  4.10E-01  1.02E+00  5.71E-05   81
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.6693  6.23E+00  3.54E-01  2.04E+01
3.66E+01  8.06E+01  1.02E+02  1.98E+02  1.43E-04   81
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.1947  1.65E-01  0.00E+00  1.39E-01
3.97E-01  3.31E+00  7.12E+00  3.48E+01  5.71E-05   81
 CAN FAT/TOTAL                    0-16.1 km  1.0000  4.61E+00  4.24E+00  7.92E+00
9.32E+00  1.15E+01  1.24E+01  1.74E+01  2.28E-04   81
 CAN FAT/LUNG                     0-80.5 km  1.0000  5.39E+00  3.31E+00  1.18E+01
1.61E+01  2.38E+01  2.65E+01  4.76E+01  9.70E-04    7
 CAN FAT/THYROID                  0-80.5 km  1.0000  1.54E+00  1.01E+00  3.61E+00
5.11E+00  6.98E+00  8.06E+00  1.39E+01  9.70E-04    7
 CAN FAT/BREAST                   0-80.5 km  1.0000  3.79E+00  2.26E+00  9.14E+00
1.18E+01  1.88E+01  2.23E+01  3.35E+01  9.70E-04    7
 CAN FAT/GI                       0-80.5 km  1.0000  1.00E+01  6.31E+00  2.48E+01
3.35E+01  5.12E+01  5.80E+01  8.86E+01  9.70E-04    7
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  2.85E+00  1.72E+00  6.81E+00
9.61E+00  1.39E+01  1.61E+01  2.52E+01  9.70E-04    7
 CAN FAT/BONE                     0-80.5 km  1.0000  3.06E-01  1.92E-01  7.34E-01
1.03E+00  1.42E+00  1.64E+00  2.70E+00  9.70E-04    7
 CAN FAT/OTHER                    0-80.5 km  1.0000  1.03E+01  6.51E+00  2.54E+01
3.39E+01  5.19E+01  5.86E+01  9.06E+01  9.70E-04    7
 CAN INJ/THYROID                  0-80.5 km  1.0000  1.54E+01  1.01E+01  3.61E+01
5.11E+01  6.98E+01  8.06E+01  1.39E+02  9.70E-04    7
 CAN INJ/BREAST                   0-80.5 km  1.0000  1.19E+01  7.20E+00  2.90E+01
3.70E+01  5.76E+01  6.67E+01  1.05E+02  9.70E-04    7
 CAN FAT/TOTAL                    0-80.5 km  1.0000  3.42E+01  2.10E+01  8.55E+01
1.09E+02  1.49E+02  1.71E+02  3.02E+02  9.70E-04    7
 ERL FAT/TOTAL                    0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT          0-80.5 km  0.0208  1.39E-03  0.00E+00  0.00E+00
0.00E+00  3.71E-02  8.03E-02  4.11E-01  5.71E-05   81
 ERL INJ/DIARRHEA                 0-80.5 km  0.0049  3.15E-04  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  1.05E-01  9.57E-04  110
 ERL INJ/PNEUMONITIS              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM           0-80.5 km  0.1700  1.16E-02  0.00E+00  1.77E-02
4.43E-02  2.49E-01  4.10E-01  1.02E+00  5.71E-05   81
 ERL INJ/SKIN ERYTHEMA            0-80.5 km  0.6693  6.23E+00  3.54E-01  2.04E+01
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3.66E+01  8.06E+01  1.02E+02  1.98E+02  1.43E-04   81
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.1947  1.65E-01  0.00E+00  1.39E-01
3.97E-01  3.31E+00  7.12E+00  3.48E+01  5.71E-05   81

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0102  1.07E-02  0.00E+00  0.00E+00
0.00E+00  1.72E-01  9.47E-01  2.14E+00  1.01E-03   81
 EARLY dose L-EDEWBODY > 0.250 Sv         0.5017  7.40E+00  1.21E-01  2.56E+01
4.03E+01  7.85E+01  9.54E+01  2.19E+02  1.43E-04   81

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
□10-APR-06  19:11:31    PAGE  30          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  9.47E+01  8.98E+01  1.50E+02
1.81E+02  2.18E+02  2.29E+02  3.72E+02  6.60E-06   44
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  7.39E+02  4.61E+02  1.78E+03
2.35E+03  3.51E+03  4.06E+03  6.56E+03  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  1.0000  2.24E-04  2.11E-04  3.76E-04
4.48E-04  5.46E-04  5.74E-04  8.46E-04  2.28E-04   81

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  5.80E-01  4.01E-01  1.16E+00
1.66E+00 NOT-FOUND NOT-FOUND  3.76E+00  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  2.23E-01  1.69E-01  4.22E-01
5.30E-01  1.07E+00  1.31E+00  1.60E+00  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  1.56E-01  1.37E-01  2.70E-01
3.24E-01  4.70E-01  5.70E-01  8.19E-01  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  1.41E-01  1.22E-01  2.16E-01
2.40E-01  3.09E-01  3.55E-01  4.07E-01  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.12E-01  1.10E-01  1.80E-01
2.09E-01  2.54E-01  2.76E-01  3.36E-01  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  9.90E-02  9.07E-02  1.86E-01
2.10E-01  2.46E-01 NOT-FOUND  2.47E-01  9.62E-03  116
 L-EDEWBODY                 9.7-16.1 km  1.0000  6.26E-02  5.34E-02  1.14E-01
1.34E-01  1.96E-01 NOT-FOUND  2.38E-01  8.96E-03   78
 L-EDEWBODY                16.1-32.2 km  1.0000  2.14E-02  2.03E-02  4.21E-02
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5.25E-02  6.69E-02 NOT-FOUND  8.83E-02  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  8.21E-03  7.31E-03  1.64E-02
2.09E-02 NOT-FOUND NOT-FOUND  2.60E-02  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  4.05E-03  3.32E-03  8.68E-03
1.08E-02  1.41E-02 NOT-FOUND  1.48E-02  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  2.32E-03  1.86E-03  4.30E-03
5.44E-03  9.08E-03 NOT-FOUND  1.25E-02  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  4 OF 11:
    Case 4CCIW

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31     PAGE  31          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.40E+01  1.18E+01  1.92E+01
2.08E+01  2.32E+01  2.44E+01  3.50E+01  3.55E-06   24
 CAN FAT/LUNG                  0-80.5 km  1.0000  6.83E+01  4.10E+01  1.42E+02
2.15E+02  3.96E+02  4.59E+02  5.64E+02  4.00E-04   83
 CAN FAT/THYROID               0-80.5 km  1.0000  7.43E+00  4.24E+00  1.54E+01
2.54E+01  4.68E+01  5.22E+01  6.54E+01  4.00E-04   83
 CAN FAT/BREAST                0-80.5 km  1.0000  5.68E+01  3.37E+01  1.18E+02
1.84E+02  3.24E+02  3.52E+02  4.75E+02  4.00E-04   83
 CAN FAT/GI                    0-80.5 km  1.0000  1.38E+02  8.58E+01  2.74E+02
4.49E+02  7.86E+02  8.88E+02  1.11E+03  4.00E-04   83
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  4.35E+01  2.70E+01  8.62E+01
1.44E+02  2.71E+02  3.05E+02  3.58E+02  4.00E-04   83
 CAN FAT/BONE                  0-80.5 km  1.0000  4.45E+00  2.73E+00  9.02E+00
1.50E+01  2.74E+01  3.07E+01  3.69E+01  4.00E-04   83
 CAN FAT/OTHER                 0-80.5 km  1.0000  1.42E+02  8.62E+01  2.87E+02
4.56E+02  8.45E+02  1.00E+03  1.17E+03  4.00E-04   83
 CAN INJ/THYROID               0-80.5 km  1.0000  7.43E+01  4.24E+01  1.54E+02
2.54E+02  4.68E+02  5.22E+02  6.54E+02  4.00E-04   83
 CAN INJ/BREAST                0-80.5 km  1.0000  1.79E+02  1.05E+02  3.66E+02
5.80E+02  1.06E+03  1.14E+03  1.50E+03  4.00E-04   83
 CAN FAT/TOTAL                 0-80.5 km  1.0000  4.60E+02  2.91E+02  9.31E+02
1.56E+03  2.75E+03  3.08E+03  3.78E+03  4.00E-04   83

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  3.08E+02  2.95E+02  3.96E+02
4.47E+02  5.30E+02  5.52E+02  7.68E+02  3.55E-06   24
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  1.03E+04  6.31E+03  2.09E+04
3.17E+04  6.43E+04  7.16E+04  8.50E+04  4.00E-04   83

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                 0-16.1 km  1.0000  4.97E-04  4.68E-04  7.04E-04
7.50E-04  8.67E-04  9.23E-04  1.21E-03  6.60E-06   24

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
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 L-EDEWBODY                    0-1.6 km  0.8467  1.14E-01  1.05E-01  1.36E-01
1.53E-01 NOT-FOUND NOT-FOUND  1.99E-01  1.01E-02  115
 L-EDEWBODY                  1.6-3.2 km  1.0000  1.25E-01  1.03E-01  1.19E-01
1.27E-01  1.47E-01  1.57E-01  2.00E-01  3.71E-04   88
 L-EDEWBODY                  3.2-4.8 km  0.9221  1.23E-01  1.06E-01  1.38E-01
1.54E-01  1.99E-01 NOT-FOUND  2.00E-01  9.62E-03   64
 L-EDEWBODY                  4.8-6.4 km  0.9885  1.23E-01  1.05E-01  1.28E-01
1.39E-01  1.69E-01  1.84E-01  2.00E-01  2.54E-03   60
 L-EDEWBODY                  6.4-8.1 km  0.9975  1.06E-01  1.01E-01  1.31E-01
1.47E-01  1.91E-01 NOT-FOUND  1.94E-01  8.96E-03   66
 L-EDEWBODY                  8.1-9.7 km  1.0000  8.82E-02  8.07E-02  1.24E-01
1.39E-01  1.83E-01 NOT-FOUND  1.91E-01  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  7.02E-02  7.13E-02  1.01E-01
1.07E-01  1.23E-01 NOT-FOUND  1.26E-01  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  5.91E-02  5.81E-02  1.00E-01
1.02E-01  1.08E-01 NOT-FOUND  1.09E-01  7.91E-03  108
 L-EDEWBODY                32.2-48.3 km  1.0000  4.98E-02  4.21E-02  8.42E-02
1.00E-01 NOT-FOUND NOT-FOUND  1.09E-01  1.27E-02   23
 L-EDEWBODY                48.3-64.4 km  1.0000  4.63E-02  4.91E-02  7.39E-02
8.02E-02  9.71E-02 NOT-FOUND  1.01E-01  7.42E-03   83
 L-EDEWBODY                64.4-80.5 km  1.0000  3.15E-02  2.80E-02  5.52E-02
6.94E-02  9.45E-02 NOT-FOUND  1.01E-01  7.42E-03  106

L-EDEWBODY  POP. DOSE (SV)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  1.03E+04  6.31E+03  2.09E+04
3.17E+04  6.43E+04  7.16E+04  8.50E+04  4.00E-04   83
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  9.53E+03  5.21E+03  2.04E+04
3.07E+04  6.26E+04  7.13E+04  8.46E+04  4.00E-04   83
 TOTAL INGESTION PATHWAYS DOSE           1.0000  6.89E+02  5.22E+02  1.22E+03
1.58E+03  2.63E+03  3.04E+03  3.57E+03  4.00E-04   42
 LONG-TERM GROUNDSHINE DOSE              1.0000  9.48E+03  5.21E+03  2.04E+04
3.06E+04  6.03E+04  7.06E+04  8.41E+04  4.00E-04   83
 LONG-TERM RESUSPENSION DOSE             1.0000  4.79E+01  2.72E+01  9.76E+01
1.73E+02  3.04E+02  3.29E+02  4.34E+02  4.00E-04   83
 WATER INGESTION DOSE                    1.0000  4.43E+01  3.36E+01  8.96E+01
1.15E+02  1.88E+02  2.17E+02  3.36E+02  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE     1.0000  5.18E+01  3.33E+01  1.03E+02
1.84E+02  3.64E+02  4.33E+02  6.13E+02  1.63E-03   23
10-APR-06  19:11:31    PAGE  32          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (SV)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE     1.0000  2.42E+00  1.90E+00  5.09E+00
5.75E+00  7.33E+00  7.82E+00  9.37E+00  7.13E-04   23
 INGESTION OF GRAINS                     1.0000  2.10E+01  9.22E+00  5.90E+01
7.79E+01  1.10E+02  1.21E+02  1.76E+02  4.00E-04   42
 INGESTION OF LEAF VEG                   1.0000  3.35E+01  1.12E+01  9.29E+01
1.36E+02  2.38E+02  2.75E+02  3.88E+02  4.00E-04   49
 INGESTION OF ROOT CROPS                 1.0000  2.78E+01  1.20E+01  7.66E+01
1.06E+02  1.53E+02  1.78E+02  2.28E+02  4.00E-04   42
 INGESTION OF FRUITS                     1.0000  4.36E+01  2.09E+01  1.08E+02
1.37E+02  2.26E+02  2.66E+02  3.38E+02  4.00E-04   42
 INGESTION OF LEGUMES                    1.0000  2.45E+01  1.08E+01  6.67E+01
8.78E+01  1.21E+02  1.34E+02  1.95E+02  4.00E-04   42
 INGESTION OF BEEF                       1.0000  2.26E+02  1.83E+02  4.26E+02
5.33E+02  7.28E+02  8.17E+02  1.09E+03  4.00E-04   10
 INGESTION OF MILK                       1.0000  1.83E+02  1.30E+02  3.54E+02
4.51E+02  7.33E+02  8.03E+02  1.46E+03  9.71E-05   47
 INGESTION OF POULTRY                    1.0000  7.12E+01  4.86E+01  1.54E+02
2.28E+02  3.41E+02  3.77E+02  5.65E+02  4.00E-04   49
 INGESTION OF OTHER MEAT CROPS           1.0000  1.35E+01  1.05E+01  2.73E+01
3.54E+01  5.52E+01  6.31E+01  8.65E+01  4.00E-04   49
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ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                        1.0000  6.24E+08  3.34E+08  1.02E+09
2.49E+09  4.33E+09  1.00E+10  1.04E+10  1.43E-03   23
 POP.-DEPENDENT COSTS                        1.0000  5.65E+08  2.88E+08  9.28E+08
2.48E+09  4.33E+09  1.00E+10  1.03E+10  5.50E-05   63
 FARM-DEPENDENT COSTS                        1.0000  5.87E+07  3.53E+07  1.23E+08
1.48E+08  2.06E+08  2.16E+08  3.19E+08  1.06E-05   35
 POP.-DEPENDENT DECONTAMINATION COST         1.0000  1.22E+08  6.11E+07  1.97E+08
5.96E+08  1.01E+09  2.00E+09  2.04E+09  5.50E-05   63
 FARM-DEPENDENT DECONTAMINATION COST         1.0000  8.22E+06  6.96E+06  1.52E+07
1.94E+07  2.95E+07  3.03E+07  3.30E+07  2.20E-05   63
 POP.-DEPENDENT INTERDICTION COST            1.0000  4.39E+08  2.19E+08  8.18E+08
2.16E+09  3.45E+09  7.04E+09  8.22E+09  5.50E-05   63
 FARM-DEPENDENT INTERDICTION COST            1.0000  4.03E+07  2.17E+07  1.00E+08
1.07E+08  1.26E+08  1.35E+08  2.28E+08  7.72E-06   35
 POP.-DEPENDENT CONDEMNATION COST            0.5907  2.99E+06  2.45E+05  9.03E+06
1.37E+07  2.36E+07  2.68E+07  7.73E+07  2.28E-04   81
 FARM-DEPENDENT CONDEMNATION COST            0.7144  1.98E+05  6.26E+04  5.89E+05
7.60E+05  9.98E+05  1.24E+06  2.20E+06  8.28E-04   81
 EMERGENCY PHASE COST                        0.8601  5.14E+04  3.07E+04  1.12E+05
1.74E+05  3.58E+05  4.09E+05  5.06E+05  1.23E-03   50
 INTERMEDIATE PHASE COST                     0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                          1.0000  3.32E+05  8.89E+04  1.01E+06
1.51E+06  2.34E+06  2.58E+06  3.32E+06  7.42E-04  117
 CROP DISPOSAL COST                          1.0000  9.65E+06  4.82E+06  2.43E+07
3.05E+07  4.14E+07  4.73E+07  6.66E+07  2.11E-05   34

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)             1.0000  9.80E+03  8.37E+03  2.04E+04
2.40E+04  3.10E+04  3.20E+04  4.01E+04  4.40E-05   63
 POP. DECONTAMINATION (INDIVIDUALS)          1.0000  2.82E+04  1.20E+04  4.80E+04
1.23E+05  2.49E+05  5.02E+05  5.69E+05  5.50E-05   63
 FARM INTERDICTION (HECTARES)                1.0000  2.55E+04  1.91E+04  5.34E+04
6.86E+04  8.57E+04  9.37E+04  1.43E+05  1.54E-05   34
 POP. INTERDICTION (INDIVIDUALS)             1.0000  2.82E+04  1.20E+04  4.80E+04
1.23E+05  2.49E+05  5.02E+05  5.69E+05  5.50E-05   63
 FARM CONDEMNATION (HECTARES)                0.7144  3.01E+01  1.59E+01  8.29E+01
1.02E+02  1.45E+02  1.68E+02  3.06E+02  6.56E-04   81
 POP. CONDEMNATION (INDIVIDUALS)             0.5907  2.24E+01  2.45E+00  6.45E+01
1.07E+02  1.66E+02  2.00E+02  5.56E+02  2.28E-04   81
 MILK DISPOSAL AREA (HECTARES)               1.0000  1.85E+04  6.36E+03  4.79E+04
6.09E+04  7.78E+04  8.27E+04  9.79E+04  7.42E-04  117
 CROP DISPOSAL AREA (HECTARES)               1.0000  2.23E+04  1.20E+04  5.34E+04
6.86E+04  8.57E+04  9.37E+04  1.43E+05  1.54E-05   34
XXXX
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XXXX

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XXXX
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0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

10-APR-06 19:11:31 PAGE 33

	PEAK CONS	PROB PEAK PROB	NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.8520	5.91E-01	8.74E-02	1.86E+00	2.76E+00	4.98E+00	6.01E+00	1.16E+01
	2.28E-04	81							
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.8928	2.13E+00	9.86E-01	5.52E+00	7.48E+00	1.13E+01	1.25E+01	2.03E+01
	2.28E-04	81							
ERL INJ/DIARRHEA	0-16.1 km	0.8600	1.14E+00	3.89E-01	3.25E+00	4.32E+00	7.57E+00	8.58E+00	1.44E+01
	2.28E-04	81							
ERL INJ/PNEUMONITIS	0-16.1 km	0.6394	1.86E-01	9.46E-03	6.19E-01	1.10E+00	2.26E+00	3.01E+00	5.47E+00
	1.43E-04	81							
ERL INJ/THYROIDITIS	0-16.1 km	0.8195	1.37E-01	2.24E-02	4.18E-01	6.64E-01	1.29E+00	1.66E+00	3.31E+00
	1.43E-04	81							
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9922	3.57E+00	2.81E+00	7.73E+00	9.83E+00	1.34E+01	1.53E+01	2.06E+01
	5.14E-04	50							
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9987	9.21E+01	9.17E+01	1.20E+02	1.31E+02	1.60E+02	1.74E+02	2.14E+02
	6.28E-04	80							
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9720	4.56E+01	3.92E+01	9.24E+01	1.05E+02	1.26E+02	1.35E+02	1.70E+02
	6.28E-04	59							
CAN FAT/TOTAL	0-16.1 km	1.0000	5.74E+01	4.77E+01	1.02E+02	1.24E+02	1.92E+02	2.14E+02	3.23E+02
	1.43E-04	81							
CAN FAT/LUNG	0-80.5 km	1.0000	3.64E+02	2.43E+02	7.69E+02	9.89E+02	1.26E+03	1.39E+03	1.82E+03
	7.99E-04	46							
CAN FAT/THYROID	0-80.5 km	1.0000	1.52E+02	9.43E+01	3.56E+02	4.97E+02	7.46E+02	8.39E+02	1.34E+03
	9.70E-04	7							
CAN FAT/BREAST	0-80.5 km	1.0000	2.59E+02	1.78E+02	5.62E+02	7.15E+02	1.00E+03	1.05E+03	1.44E+03
	5.50E-05	63							
CAN FAT/GI	0-80.5 km	1.0000	6.43E+02	4.45E+02	1.33E+03	1.71E+03	2.36E+03	2.60E+03	3.37E+03
	5.50E-05	63							
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.99E+02	1.35E+02	4.26E+02	5.43E+02	7.55E+02	8.22E+02	1.08E+03
	5.50E-05	63							
CAN FAT/BONE	0-80.5 km	1.0000	2.31E+01	1.57E+01	4.65E+01	6.16E+01	8.38E+01	9.22E+01	1.24E+02
	5.50E-05	63							
CAN FAT/OTHER	0-80.5 km	1.0000	8.63E+02	5.77E+02	1.70E+03	2.25E+03	3.42E+03	3.83E+03	5.07E+03
	9.70E-04	7							
CAN INJ/THYROID	0-80.5 km	1.0000	1.52E+03	9.43E+02	3.56E+03	4.97E+03	7.46E+03	8.39E+03	1.34E+04
	9.70E-04	7							
CAN INJ/BREAST	0-80.5 km	1.0000	8.16E+02	5.56E+02	1.75E+03	2.18E+03	3.01E+03	3.18E+03	4.53E+03
	5.50E-05	63							
CAN FAT/TOTAL	0-80.5 km	1.0000	2.50E+03	1.69E+03	5.23E+03	6.86E+03	1.01E+04	1.09E+04	1.33E+04
	9.70E-04	7							
ERL FAT/TOTAL	0-80.5 km	0.8520	5.91E-01	8.74E-02	1.86E+00	2.76E+00	4.98E+00	6.01E+00	1.16E+01
	2.28E-04	81							
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.8928	2.13E+00	9.86E-01	5.52E+00	7.48E+00	1.13E+01	1.25E+01	2.03E+01
	2.28E-04	81							
ERL INJ/DIARRHEA	0-80.5 km	0.8600	1.14E+00	3.89E-01	3.25E+00	4.32E+00	7.57E+00	8.58E+00	1.44E+01
	2.28E-04	81							
ERL INJ/PNEUMONITIS	0-80.5 km	0.6394	1.86E-01	9.46E-03	6.19E-01	1.10E+00	2.26E+00	3.01E+00	5.47E+00
	1.43E-04	81							
ERL INJ/THYROIDITIS	0-80.5 km	0.8195	1.37E-01	2.24E-02	4.18E-01				

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6.64E-01  1.29E+00  1.66E+00  3.31E+00  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9922  1.77E+01  2.95E+00  4.86E+01
6.77E+01  3.00E+02  3.55E+02  8.17E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9987  4.94E+03  1.54E+03  1.10E+04
1.66E+04  5.79E+04  6.59E+04  1.16E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9720  2.11E+02  4.00E+01  1.99E+02
6.05E+02  3.93E+03  6.05E+03  3.37E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8663  2.05E-01  1.58E-01  3.47E-01
3.83E-01  4.83E-01 NOT-FOUND  8.05E-01  7.91E-03   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8520  2.63E+00  1.28E+00  6.77E+00
9.18E+00  1.53E+01  1.89E+01  2.73E+01  5.14E-04   50
10-APR-06  19:11:31    PAGE  34            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.6394  7.73E-01  1.04E-01  2.56E+00
3.63E+00  6.29E+00  7.59E+00  1.42E+01  2.28E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9233  1.78E+01  1.24E+01  4.07E+01
5.26E+01  7.12E+01  7.51E+01  8.88E+01  5.71E-04  116
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9987  6.46E+03  2.90E+03  1.21E+04
3.34E+04  7.55E+04  8.33E+04  1.58E+05  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.8663  2.87E-03  3.03E-03  4.90E-03
5.44E-03  6.78E-03  7.37E-03  8.22E-03  1.91E-03    5
 ERL FAT/TOTAL               1.6-3.2 km  0.7710  6.61E-04  6.33E-05  2.08E-03
2.45E-03  3.10E-03  3.18E-03  3.71E-03  1.14E-04   26
 ERL FAT/TOTAL               3.2-4.8 km  0.4005  1.57E-04  0.00E+00  6.07E-04
1.03E-03  2.01E-03  2.16E-03  2.31E-03  2.60E-03    4
 ERL FAT/TOTAL               4.8-6.4 km  0.2755  4.24E-05  0.00E+00  6.60E-05
2.84E-04  1.02E-03  1.13E-03  1.26E-03  2.54E-03   81
 ERL FAT/TOTAL               6.4-8.1 km  0.1404  1.04E-05  0.00E+00  1.13E-05
3.72E-05  3.15E-04  3.98E-04  7.37E-04  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.19E+03  1.01E+03  2.07E+03
2.62E+03  3.57E+03  3.95E+03  6.73E+03  1.43E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  5.74E+04  3.85E+04  1.24E+05
1.59E+05  2.31E+05  2.57E+05  3.13E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8520  7.39E-04  1.77E-04  2.40E-03
3.15E-03  4.39E-03  5.01E-03  6.70E-03  8.80E-06   26
 CAN FAT/TOTAL                0-16.1 km  1.0000  9.58E-04  8.74E-04  1.21E-03
1.34E-03  1.68E-03  1.86E-03  2.14E-03  8.53E-06   34

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  2.74E+00  1.63E+00  5.30E+00
6.92E+00 NOT-FOUND NOT-FOUND  1.75E+01  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  9.70E-01  6.58E-01  2.13E+00
2.59E+00  4.11E+00  5.04E+00  7.22E+00  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  5.35E-01  3.84E-01  1.06E+00
1.25E+00  1.87E+00  2.34E+00  3.64E+00  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  4.04E-01  3.48E-01  7.53E-01
9.70E-01  1.30E+00  1.46E+00  1.64E+00  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  3.17E-01  2.52E-01  5.30E-01
6.56E-01  1.02E+00  1.13E+00  1.25E+00  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  2.52E-01  2.26E-01  3.89E-01
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4.62E-01  8.95E-01 NOT-FOUND  1.01E+00  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.63E-01  1.30E-01  2.39E-01
2.75E-01  3.92E-01 NOT-FOUND  4.14E-01  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  5.87E-01  5.33E-01  1.06E+00
1.25E+00  1.80E+00 NOT-FOUND  1.93E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  3.02E-01  3.04E-01  4.80E-01
5.51E-01 NOT-FOUND NOT-FOUND  7.06E-01  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  2.24E-01  2.08E-01  3.22E-01
3.46E-01  4.06E-01 NOT-FOUND  4.19E-01  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  1.65E-01  1.36E-01  2.27E-01
2.52E-01  3.30E-01 NOT-FOUND  3.52E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  5 OF 11:
    Case 5DCH

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31    PAGE  35          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.40E+02  7.87E+01  3.09E+02
4.70E+02  7.64E+02  8.22E+02  1.12E+03  7.99E-04   46
 CAN FAT/THYROID               0-80.5 km  1.0000  1.26E+02  7.10E+01  3.12E+02
4.40E+02  6.51E+02  7.51E+02  1.22E+03  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  7.36E+01  4.15E+01  1.52E+02
2.39E+02  4.56E+02  5.48E+02  7.58E+02  9.57E-04   48
 CAN FAT/GI                    0-80.5 km  1.0000  2.04E+02  1.16E+02  4.15E+02
6.72E+02  1.18E+03  1.34E+03  1.84E+03  7.99E-04   46
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  5.79E+01  3.28E+01  1.20E+02
2.01E+02  3.60E+02  4.11E+02  5.62E+02  9.57E-04   48
 CAN FAT/BONE                  0-80.5 km  1.0000  8.22E+00  4.80E+00  1.70E+01
2.70E+01  4.53E+01  5.29E+01  6.99E+01  9.57E-04   48
 CAN FAT/OTHER                 0-80.5 km  1.0000  3.99E+02  2.23E+02  9.55E+02
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1.34E+03  2.19E+03  2.39E+03  3.46E+03  7.99E-04   46
 CAN INJ/THYROID              0-80.5 km  1.0000  1.26E+03  7.10E+02  3.12E+03
4.40E+03  6.51E+03  7.51E+03  1.22E+04  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  2.32E+02  1.32E+02  4.59E+02
7.68E+02  1.34E+03  1.57E+03  2.39E+03  9.57E-04   48
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.01E+03  5.66E+02  2.26E+03
3.39E+03  5.98E+03  6.91E+03  8.56E+03  7.99E-04   46
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.2330  1.41E+01  0.00E+00  3.79E+01
5.87E+01  2.73E+02  3.44E+02  8.06E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.6638  4.85E+03  1.45E+03  1.06E+04
1.64E+04  5.79E+04  6.59E+04  1.16E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.1140  1.66E+02  0.00E+00  1.27E+02
5.13E+02  3.60E+03  5.94E+03  3.36E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.7281  6.38E+03  2.86E+03  1.20E+04
3.34E+04  7.55E+04  8.33E+04  1.58E+05  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  36          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.39E+04  1.34E+04  5.19E+04
7.90E+04  1.25E+05  1.41E+05  1.96E+05  7.99E-04   46

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY               16.1-32.2 km  1.0000  4.53E-01  3.46E-01  8.74E-01
1.10E+00  1.77E+00 NOT-FOUND  1.93E+00  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  2.02E-01  1.74E-01  3.28E-01
3.94E-01 NOT-FOUND NOT-FOUND  5.63E-01  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  1.49E-01  1.37E-01  2.26E-01
2.43E-01  2.90E-01 NOT-FOUND  3.05E-01  7.42E-03  106
 L-EDEWBODY               64.4-80.5 km  1.0000  1.05E-01  1.01E-01  1.55E-01
1.87E-01  2.41E-01 NOT-FOUND  2.52E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  5 OF 11:
    Case 5DCH

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31    PAGE  37          PROB                              QUANTILES
                         PEAK      PEAK  PEAK
                                    NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL               0-16.1 km  0.8520  1.18E+01  1.67E+00  3.76E+01
5.65E+01  9.97E+01  1.15E+02  2.31E+02  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT     0-16.1 km  0.8928  4.26E+01  1.96E+01  1.09E+02
1.44E+02  2.42E+02  2.85E+02  4.06E+02  2.28E-04   81
 ERL INJ/DIARRHEA            0-16.1 km  0.8600  2.28E+01  8.02E+00  6.41E+01
8.66E+01  1.36E+02  1.62E+02  2.88E+02  2.28E-04   81
 ERL INJ/PNEUMONITIS         0-16.1 km  0.6394  3.72E+00  1.89E-01  1.17E+01
2.22E+01  4.58E+01  6.08E+01  1.09E+02  1.43E-04   81
 ERL INJ/THYROIDITIS         0-16.1 km  0.8195  2.74E+00  4.42E-01  8.46E+00
1.27E+01  2.62E+01  3.21E+01  6.63E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM      0-16.1 km  0.9922  7.14E+01  5.65E+01  1.46E+02
1.96E+02  2.76E+02  3.11E+02  4.12E+02  5.14E-04   50
 ERL INJ/SKIN ERYTHEMA       0-16.1 km  0.9987  1.84E+03  1.74E+03  3.03E+03
3.18E+03  3.55E+03  3.72E+03  4.29E+03  6.28E-04   80
 ERL INJ/TRANSEPIDERMAL      0-16.1 km  0.9720  9.12E+02  7.93E+02  1.82E+03
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2.18E+03  2.92E+03  3.08E+03  3.40E+03  6.28E-04   59
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.64E+02  1.32E+02  3.07E+02
3.53E+02  4.87E+02  5.35E+02  7.04E+02  5.14E-04   50
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.65E+02  1.08E+02  3.42E+02
5.18E+02  7.67E+02  8.25E+02  1.12E+03  7.99E-04   46
 CAN FAT/THYROID              0-80.5 km  1.0000  1.49E+02  9.56E+01  3.45E+02
4.85E+02  6.69E+02  7.79E+02  1.24E+03  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  7.76E+01  4.49E+01  1.54E+02
2.39E+02  5.21E+02  5.86E+02  7.62E+02  9.57E-04   48
 CAN FAT/GI                   0-80.5 km  1.0000  2.32E+02  1.48E+02  4.59E+02
7.04E+02  1.19E+03  1.34E+03  1.84E+03  7.99E-04   46
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  6.42E+01  3.96E+01  1.34E+02
2.01E+02  3.60E+02  4.11E+02  5.68E+02  9.57E-04   48
 CAN FAT/BONE                 0-80.5 km  1.0000  9.52E+00  6.17E+00  1.82E+01
2.88E+01  4.85E+01  5.47E+01  7.06E+01  9.57E-04   48
 CAN FAT/OTHER                0-80.5 km  1.0000  4.74E+02  3.11E+02  1.05E+03
1.40E+03  2.22E+03  2.45E+03  3.49E+03  7.99E-04   46
 CAN INJ/THYROID              0-80.5 km  1.0000  1.49E+03  9.56E+02  3.45E+03
4.85E+03  6.69E+03  7.79E+03  1.24E+04  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  2.44E+02  1.42E+02  4.76E+02
7.69E+02  1.34E+03  1.58E+03  2.40E+03  9.57E-04   48
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.17E+03  7.50E+02  2.49E+03
3.55E+03  6.02E+03  6.91E+03  8.61E+03  7.99E-04   46
 ERL FAT/TOTAL                0-80.5 km  0.8520  1.18E+01  1.67E+00  3.76E+01
5.65E+01  9.97E+01  1.15E+02  2.31E+02  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.8928  4.26E+01  1.96E+01  1.09E+02
1.44E+02  2.42E+02  2.85E+02  4.06E+02  2.28E-04   81
 ERL INJ/DIARRHEA             0-80.5 km  0.8600  2.28E+01  8.02E+00  6.41E+01
8.66E+01  1.36E+02  1.62E+02  2.88E+02  2.28E-04   81
 ERL INJ/PNEUMONITIS          0-80.5 km  0.6394  3.72E+00  1.89E-01  1.17E+01
2.22E+01  4.58E+01  6.08E+01  1.09E+02  1.43E-04   81
 ERL INJ/THYROIDITIS          0-80.5 km  0.8195  2.74E+00  4.42E-01  8.46E+00
1.27E+01  2.62E+01  3.21E+01  6.63E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9922  8.56E+01  5.79E+01  1.93E+02
2.69E+02  4.82E+02  5.76E+02  1.03E+03  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9987  6.69E+03  3.59E+03  1.32E+04
1.88E+04  5.80E+04  6.59E+04  1.19E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9720  1.08E+03  8.04E+02  2.15E+03
2.73E+03  5.44E+03  8.20E+03  3.53E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8663  4.10E+00  3.72E+00  7.30E+00
7.96E+00  9.71E+00 NOT-FOUND  1.61E+01  7.91E-03   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8520  5.26E+01  2.60E+01  1.31E+02
1.82E+02  3.14E+02  3.56E+02  5.45E+02  5.14E-04   50
 EARLY dose A-LUNGS > 5.00 Sv             0.6394  1.55E+01  2.06E+00  5.12E+01
7.47E+01  1.23E+02  1.48E+02  2.85E+02  2.28E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9233  3.57E+02  2.54E+02  8.30E+02
1.03E+03  1.25E+03  1.36E+03  1.78E+03  5.71E-04  116
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9987  7.96E+03  4.60E+03  1.49E+04
3.45E+04  7.55E+04  8.33E+04  1.59E+05  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.8663  5.74E-02  5.74E-02  9.83E-02
1.08E-01  1.33E-01  1.45E-01  1.64E-01  1.91E-03    5
 ERL FAT/TOTAL              1.6-3.2 km   0.7710  1.32E-02  1.25E-03  3.94E-02
4.92E-02  5.52E-02  5.76E-02  7.43E-02  1.14E-04   26
 ERL FAT/TOTAL              3.2-4.8 km   0.4005  3.14E-03  0.00E+00  1.17E-02
2.04E-02  3.21E-02  3.87E-02  4.61E-02  2.60E-03    4
 ERL FAT/TOTAL              4.8-6.4 km   0.2755  8.47E-04  0.00E+00  1.67E-03
6.17E-03  2.04E-02  2.27E-02  2.51E-02  2.54E-03   81
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                                          PROB                                QUANTILES
                                PEAK      PEAK  PEAK
                                             NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.1404  2.08E-04  0.00E+00  2.16E-04
7.78E-04  7.24E-03  8.52E-03  1.47E-02  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  3.13E+03  2.58E+03  6.05E+03
7.39E+03  1.04E+04  1.14E+04  1.71E+04  2.28E-04   81
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  2.70E+04  1.70E+04  5.57E+04
8.14E+04  1.26E+05  1.42E+05  1.97E+05  7.99E-04   46

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.8520  1.48E-02  3.65E-03  4.94E-02
6.33E-02  8.90E-02  1.00E-01  1.34E-01  8.80E-06   26
 CAN FAT/TOTAL                 0-16.1 km  1.0000  7.95E-03  7.17E-03  1.37E-02
1.69E-02  2.22E-02  2.39E-02  3.41E-02  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  5.44E+01  3.95E+01  1.08E+02
1.54E+02 NOT-FOUND NOT-FOUND  3.49E+02  1.24E-02  110
 L-EDEWBODY                   1.6-3.2 km  1.0000  1.84E+01  1.37E+01  4.08E+01
5.30E+01  7.69E+01  1.01E+02  1.44E+02  2.54E-03   81
 L-EDEWBODY                   3.2-4.8 km  1.0000  9.54E+00  6.29E+00  2.22E+01
3.05E+01  4.32E+01  5.04E+01  7.28E+01  2.54E-03  103
 L-EDEWBODY                   4.8-6.4 km  1.0000  6.01E+00  3.95E+00  1.33E+01
1.91E+01  3.03E+01  3.16E+01  3.29E+01  2.54E-03   81
 L-EDEWBODY                   6.4-8.1 km  1.0000  4.10E+00  2.78E+00  9.71E+00
1.24E+01  2.04E+01  2.26E+01  2.50E+01  2.54E-03   81
 L-EDEWBODY                   8.1-9.7 km  1.0000  2.90E+00  2.04E+00  6.02E+00
7.99E+00  1.76E+01 NOT-FOUND  2.03E+01  7.91E-03   50
 L-EDEWBODY                  9.7-16.1 km  1.0000  1.50E+00  1.18E+00  3.17E+00
4.91E+00  6.70E+00 NOT-FOUND  8.28E+00  7.91E-03   50
 L-EDEWBODY                 16.1-32.2 km  1.0000  4.53E-01  3.46E-01  8.74E-01
1.10E+00  1.77E+00 NOT-FOUND  1.93E+00  7.42E-03   83
 L-EDEWBODY                 32.2-48.3 km  1.0000  2.02E-01  1.74E-01  3.28E-01
3.94E-01 NOT-FOUND NOT-FOUND  5.63E-01  1.27E-02   69
 L-EDEWBODY                 48.3-64.4 km  1.0000  1.49E-01  1.37E-01  2.26E-01
2.43E-01  2.90E-01 NOT-FOUND  3.05E-01  7.42E-03  106
 L-EDEWBODY                 64.4-80.5 km  1.0000  1.05E-01  1.01E-01  1.55E-01
1.87E-01  2.41E-01 NOT-FOUND  2.52E-01  7.42E-03  106
  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  5 OF 11:
    Case 5DCH

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model
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                                          PROB                                QUANTILES
                                PEAK      PEAK  PEAK
                                             NON-ZERO   MEAN       50TH       90TH       95TH
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     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                0-16.1 km  1.0000  4.93E+01  3.81E+01  9.10E+01
1.13E+02  1.71E+02  2.02E+02  3.15E+02  1.43E-04   81
 CAN FAT/LUNG                 0-80.5 km  1.0000  2.23E+02  1.58E+02  4.95E+02
5.55E+02  7.13E+02  7.89E+02  1.06E+03  9.70E-04    7
 CAN FAT/THYROID              0-80.5 km  1.0000  2.56E+01  1.82E+01  5.64E+01
6.82E+01  8.18E+01  8.79E+01  1.22E+02  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  1.85E+02  1.31E+02  3.88E+02
4.96E+02  6.07E+02  6.61E+02  8.89E+02  9.70E-04    7
 CAN FAT/GI                   0-80.5 km  1.0000  4.37E+02  3.10E+02  9.74E+02
1.10E+03  1.40E+03  1.56E+03  2.06E+03  9.70E-04    7
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  1.41E+02  9.85E+01  3.08E+02
3.39E+02  4.25E+02  4.68E+02  6.70E+02  9.70E-04    7
 CAN FAT/BONE                 0-80.5 km  1.0000  1.49E+01  1.03E+01  3.15E+01
3.49E+01  4.42E+01  4.90E+01  7.04E+01  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  4.60E+02  3.28E+02  1.01E+03
1.12E+03  1.42E+03  1.58E+03  2.19E+03  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  2.56E+02  1.82E+02  5.64E+02
6.82E+02  8.18E+02  8.79E+02  1.22E+03  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  5.83E+02  4.18E+02  1.12E+03
1.28E+03  1.71E+03  1.95E+03  2.80E+03  9.70E-04    7
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.49E+03  1.04E+03  3.15E+03
3.49E+03  4.42E+03  4.90E+03  7.07E+03  9.70E-04    7

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.03E+03  8.28E+02  1.90E+03
2.37E+03  3.41E+03  3.82E+03  6.36E+03  1.43E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  3.33E+04  2.40E+04  7.25E+04
8.19E+04  1.08E+05  1.21E+05  1.59E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                0-16.1 km  0.9809  5.60E-04  5.28E-04  9.60E-04
1.04E-03  1.17E-03  1.23E-03  1.96E-03  8.53E-06   35

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.1542  2.47E-02  0.00E+00  1.17E-01
1.50E-01 NOT-FOUND NOT-FOUND  1.94E-01  2.45E-02   10
 L-EDEWBODY                  1.6-3.2 km  0.3176  4.78E-02  0.00E+00  1.41E-01
1.76E-01 NOT-FOUND NOT-FOUND  2.00E-01  3.32E-02  112
 L-EDEWBODY                  3.2-4.8 km  0.3787  5.77E-02  0.00E+00  1.35E-01
1.59E-01 NOT-FOUND NOT-FOUND  1.96E-01  2.05E-02   71
 L-EDEWBODY                  4.8-6.4 km  0.6801  1.04E-01  1.02E-01  1.18E-01
1.26E-01  1.45E-01  1.55E-01  1.97E-01  3.42E-04  105
 L-EDEWBODY                  6.4-8.1 km  0.8246  1.12E-01  1.03E-01  1.18E-01
1.24E-01  1.42E-01  1.50E-01  2.00E-01  1.43E-04   44
 L-EDEWBODY                  8.1-9.7 km  0.8973  1.08E-01  1.03E-01  1.26E-01
1.37E-01  1.67E-01  1.81E-01  2.00E-01  2.25E-03   54
 L-EDEWBODY                 9.7-16.1 km  0.9159  8.81E-02  9.08E-02  1.40E-01
1.64E-01 NOT-FOUND NOT-FOUND  2.00E-01  2.05E-02   84
 L-EDEWBODY                16.1-32.2 km  0.9811  1.34E-01  1.07E-01  1.32E-01
1.45E-01  1.81E-01  1.99E-01  2.00E-01  2.48E-03   15
 L-EDEWBODY                32.2-48.3 km  1.0000  9.97E-02  1.03E-01  1.28E-01
1.40E-01 NOT-FOUND NOT-FOUND  1.68E-01  1.27E-02   23
 L-EDEWBODY                48.3-64.4 km  1.0000  7.51E-02  7.23E-02  1.00E-01
1.12E-01 NOT-FOUND NOT-FOUND  1.20E-01  3.32E-02    7
 L-EDEWBODY                64.4-80.5 km  1.0000  5.92E-02  5.59E-02  8.17E-02
8.97E-02  1.03E-01  1.05E-01  1.08E-01  2.60E-03   77

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  3.33E+04  2.40E+04  7.25E+04
8.19E+04  1.08E+05  1.21E+05  1.59E+05  9.70E-04    7
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  2.96E+04  2.07E+04  6.70E+04
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7.51E+04  9.07E+04  9.84E+04  1.30E+05  9.70E-04    7
 TOTAL INGESTION PATHWAYS DOSE           1.0000  1.03E+03  8.45E+02  1.94E+03
2.44E+03  3.47E+03  3.86E+03  6.53E+03  1.43E-04   81
 LONG-TERM GROUNDSHINE DOSE              1.0000  2.93E+04  2.06E+04  6.67E+04
7.50E+04  9.07E+04  9.84E+04  1.29E+05  9.70E-04    7
 LONG-TERM RESUSPENSION DOSE             1.0000  2.26E+02  1.50E+02  5.41E+02
6.80E+02  7.40E+02  7.59E+02  9.63E+02  7.11E-06   89
 WATER INGESTION DOSE                    1.0000  8.45E+02  6.63E+02  1.66E+03
2.21E+03  3.33E+03  3.75E+03  6.40E+03  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE     1.0000  2.68E+03  1.36E+03  6.94E+03
1.02E+04  1.42E+04  1.63E+04  2.87E+04  9.70E-04    7
□10-APR-06  19:11:31    PAGE  40          PROB                          QUANTILES
                              PEAK      PEAK  PEAK
                                          NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE     1.0000  7.38E+01  6.87E+01  1.21E+02
1.42E+02  2.03E+02  2.19E+02  2.93E+02  3.83E-04   48
 INGESTION OF GRAINS                     1.0000  5.08E+00  3.72E+00  9.20E+00
1.25E+01  2.05E+01  2.12E+01  3.00E+01  4.40E-06   25
 INGESTION OF LEAF VEG                   1.0000  1.49E+01  1.20E+01  2.52E+01
3.08E+01  3.67E+01  3.96E+01  5.93E+01  4.40E-05   63
 INGESTION OF ROOT CROPS                 1.0000  9.34E+00  7.58E+00  1.60E+01
2.10E+01  3.05E+01  3.14E+01  4.18E+01  4.40E-06   25
 INGESTION OF FRUITS                     1.0000  3.56E+01  3.16E+01  5.88E+01
7.06E+01  7.90E+01  8.29E+01  1.62E+02  4.40E-05   63
 INGESTION OF LEGUMES                    1.0000  1.63E+01  1.34E+01  2.71E+01
3.10E+01  3.56E+01  3.78E+01  7.02E+01  4.40E-05   63
 INGESTION OF BEEF                       1.0000  4.50E+01  2.42E+01  1.09E+02
1.43E+02  2.35E+02  2.72E+02  3.67E+02  4.57E-04  104
 INGESTION OF MILK                       1.0000  3.66E+01  1.70E+01  1.03E+02
1.26E+02  1.98E+02  2.18E+02  3.07E+02  4.57E-04  104
 INGESTION OF POULTRY                    1.0000  1.30E+01  8.97E+00  2.75E+01
3.44E+01  5.07E+01  5.25E+01  6.80E+01  2.85E-05   30
 INGESTION OF OTHER MEAT CROPS           1.0000  7.38E+00  1.45E+00  2.72E+01
3.33E+01  4.58E+01  5.21E+01  1.01E+02  1.14E-04   60

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    1.0000  8.50E+09  4.97E+09  1.99E+10
3.01E+10  3.59E+10  3.87E+10  4.63E+10  9.70E-04    7
 POP.-DEPENDENT COSTS                    1.0000  8.22E+09  4.67E+09  1.93E+10
3.01E+10  3.58E+10  3.86E+10  4.60E+10  9.70E-04    7
 FARM-DEPENDENT COSTS                    1.0000  2.86E+08  2.60E+08  4.33E+08
5.07E+08  5.91E+08  6.31E+08  9.32E+08  1.06E-05   35
 POP.-DEPENDENT DECONTAMINATION COST     1.0000  1.97E+09  1.10E+09  4.17E+09
7.84E+09  1.03E+10  1.05E+10  1.18E+10  2.64E-05   35
 FARM-DEPENDENT DECONTAMINATION COST     1.0000  6.83E+07  6.19E+07  1.04E+08
1.14E+08  1.39E+08  1.51E+08  2.64E+08  7.72E-06   35
 POP.-DEPENDENT INTERDICTION COST        1.0000  6.02E+09  3.41E+09  1.47E+10
2.04E+10  2.39E+10  2.56E+10  3.53E+10  9.70E-04    7
 FARM-DEPENDENT INTERDICTION COST        1.0000  1.62E+08  1.31E+08  2.68E+08
3.06E+08  3.41E+08  3.57E+08  5.30E+08  1.06E-05   35
 POP.-DEPENDENT CONDEMNATION COST        0.9680  2.10E+08  1.43E+08  3.13E+08
4.31E+08  1.39E+09  1.84E+09  6.91E+09  1.32E-05   19
 FARM-DEPENDENT CONDEMNATION COST        0.9821  7.96E+06  7.32E+06  1.42E+07
1.86E+07  3.70E+07  4.29E+07  5.57E+07  7.83E-05   19
 EMERGENCY PHASE COST                    1.0000  1.53E+07  6.64E+06  3.85E+07
6.11E+07  1.34E+08  1.75E+08  2.72E+08  4.00E-04  106
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      1.0000  1.73E+06  1.30E+06  3.70E+06
5.02E+06  6.07E+06  6.59E+06  7.50E+06  9.50E-04    3
 CROP DISPOSAL COST                      1.0000  4.59E+07  5.00E+07  7.26E+07
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7.90E+07  9.61E+07  1.04E+08  1.22E+08  1.29E-03    3

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)          1.0000  6.17E+04  5.63E+04  9.72E+04
1.06E+05  1.22E+05  1.30E+05  2.29E+05  7.72E-06   35
 POP. DECONTAMINATION (INDIVIDUALS)       1.0000  2.95E+05  1.72E+05  8.92E+05
1.02E+06  1.09E+06  1.12E+06  1.36E+06  2.64E-05   35
 FARM INTERDICTION (HECTARES)             1.0000  9.75E+04  8.73E+04  1.31E+05
1.51E+05  2.04E+05  2.16E+05  2.68E+05  3.42E-04   42
 POP. INTERDICTION (INDIVIDUALS)          1.0000  2.95E+05  1.72E+05  8.92E+05
1.02E+06  1.09E+06  1.12E+06  1.36E+06  2.64E-05   35
 FARM CONDEMNATION (HECTARES)             0.9821  1.13E+03  1.03E+03  1.62E+03
1.96E+03  5.90E+03  6.92E+03  8.87E+03  7.83E-05   19
 POP. CONDEMNATION (INDIVIDUALS)          0.9680  1.54E+03  1.08E+03  2.26E+03
2.77E+03  1.06E+04  1.73E+04  4.97E+04  1.32E-05   19
 MILK DISPOSAL AREA (HECTARES)            1.0000  9.86E+04  8.74E+04  1.31E+05
1.51E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
 CROP DISPOSAL AREA (HECTARES)            1.0000  9.86E+04  8.74E+04  1.31E+05
1.51E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
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4.69E+01  7.47E+01  8.21E+01  1.08E+02  1.17E-03   83
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.9987  5.91E+02  5.03E+02  1.16E+03
1.36E+03  2.00E+03  2.03E+03  2.10E+03  1.40E-03   69
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.9473  1.56E+02  1.09E+02  3.41E+02
4.85E+02  8.16E+02  1.00E+03  1.41E+03  1.17E-03   83
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.91E+02  1.53E+02  3.38E+02
4.09E+02  5.45E+02  5.83E+02  8.30E+02  1.43E-04   81
 CAN FAT/LUNG                 0-80.5 km  1.0000  7.78E+02  5.13E+02  1.64E+03
2.30E+03  3.54E+03  4.00E+03  6.41E+03  9.70E-04    7
 CAN FAT/THYROID              0-80.5 km  1.0000  1.22E+02  7.75E+01  2.78E+02
3.69E+02  5.54E+02  6.08E+02  9.85E+02  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  3.13E+02  2.19E+02  6.12E+02
9.06E+02  1.16E+03  1.25E+03  1.64E+03  3.32E-04   94
 CAN FAT/GI                   0-80.5 km  1.0000  8.42E+02  5.90E+02  1.62E+03
2.16E+03  3.33E+03  3.59E+03  4.29E+03  9.70E-04    7
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  2.79E+02  1.94E+02  5.40E+02
7.35E+02  1.10E+03  1.19E+03  1.41E+03  9.70E-04    7
 CAN FAT/BONE                 0-80.5 km  1.0000  7.26E+01  4.66E+01  1.49E+02
2.14E+02  3.50E+02  3.96E+02  5.96E+02  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  1.04E+03  7.11E+02  2.07E+03
2.94E+03  3.96E+03  4.48E+03  6.26E+03  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  1.22E+03  7.75E+02  2.78E+03
3.69E+03  5.54E+03  6.08E+03  9.85E+03  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  9.84E+02  6.74E+02  1.91E+03
3.00E+03  3.53E+03  3.79E+03  5.15E+03  3.32E-04   94
 CAN FAT/TOTAL                0-80.5 km  1.0000  3.45E+03  2.34E+03  6.67E+03
9.91E+03  1.33E+04  1.50E+04  2.15E+04  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.8594  8.99E-01  1.60E-01  2.77E+00
3.90E+00  6.77E+00  7.98E+00  1.61E+01  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.9109  3.41E+00  1.47E+00  9.41E+00
1.24E+01  2.09E+01  2.35E+01  3.38E+01  5.14E-04   50
 ERL INJ/DIARRHEA             0-80.5 km  0.8601  1.69E+00  6.28E-01  4.71E+00
6.63E+00  1.09E+01  1.21E+01  2.00E+01  2.28E-04   81
 ERL INJ/PNEUMONITIS          0-80.5 km  0.6681  2.88E-01  2.25E-02  9.81E-01
1.53E+00  3.32E+00  4.08E+00  8.07E+00  3.71E-04   81
 ERL INJ/THYROIDITIS          0-80.5 km  0.6978  1.14E-01  7.66E-03  3.23E-01
5.84E-01  1.35E+00  1.80E+00  3.41E+00  5.71E-05  103
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9903  2.19E+01  8.79E+00  5.24E+01
8.83E+01  2.37E+02  3.14E+02  5.97E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9987  5.08E+03  1.86E+03  1.16E+04
1.69E+04  5.65E+04  6.31E+04  1.10E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9473  2.90E+02  1.09E+02  4.06E+02
8.06E+02  4.13E+03  6.58E+03  3.11E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8663  6.93E-01  2.17E-01  2.02E+00
2.32E+00 NOT-FOUND NOT-FOUND  3.54E+00  1.15E-02   66

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.8594  3.79E+00  1.94E+00  9.88E+00
1.30E+01  2.19E+01  2.47E+01  3.96E+01  2.28E-04  103
10-APR-06  19:11:31    PAGE  42          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.6681  1.10E+00  1.20E-01  3.49E+00
5.24E+00  9.72E+00  1.12E+01  1.62E+01  7.13E-04   66
 EARLY dose L-EDEWBODY > 2.00 Sv          0.9358  1.08E+02  6.07E+01  2.35E+02
3.47E+02  7.12E+02  1.17E+03  7.21E+03  9.99E-04   83
 EARLY dose L-EDEWBODY > 0.250 Sv         1.0000  8.69E+03  4.55E+03  1.76E+04
3.60E+04  7.71E+04  8.45E+04  1.59E+05  4.00E-04  106
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AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.8663  5.21E-03  3.45E-03  8.39E-03
1.66E-02  3.80E-02  4.36E-02  5.11E-02  2.54E-03   81
 ERL FAT/TOTAL              1.6-3.2 km  0.8019  8.94E-04  1.82E-04  2.39E-03
2.78E-03  3.23E-03  3.36E-03  4.18E-03  1.14E-04   26
 ERL FAT/TOTAL              3.2-4.8 km  0.5439  2.48E-04  3.65E-06  1.06E-03
1.31E-03  2.10E-03  2.38E-03  2.68E-03  2.60E-03    4
 ERL FAT/TOTAL              4.8-6.4 km  0.3479  8.15E-05  0.00E+00  1.86E-04
6.63E-04  1.04E-03  1.25E-03  1.50E-03  2.54E-03   81
 ERL FAT/TOTAL              6.4-8.1 km  0.2049  2.35E-05  0.00E+00  3.65E-05
1.23E-04  7.24E-04  8.52E-04  1.15E-03  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  3.09E+03  2.58E+03  5.51E+03
6.91E+03  9.90E+03  1.07E+04  1.60E+04  1.43E-04   81
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  6.90E+04  4.66E+04  1.50E+05
2.01E+05  2.72E+05  3.07E+05  3.92E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.8594  1.03E-03  3.05E-04  3.15E-03
3.94E-03  6.08E-03  7.07E-03  1.12E-02  2.85E-04   77
 CAN FAT/TOTAL               0-16.1 km  1.0000  5.00E-03  4.20E-03  8.98E-03
1.10E-02  1.63E-02  1.93E-02  2.40E-02  1.17E-03   83

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  1.54E+01  1.16E+01  3.25E+01
4.33E+01  7.36E+01  8.01E+01  8.71E+01  2.54E-03   81
 L-EDEWBODY                 1.6-3.2 km  1.0000  5.55E+00  3.95E+00  1.10E+01
1.32E+01  2.01E+01  2.29E+01  2.61E+01  2.54E-03  103
 L-EDEWBODY                 3.2-4.8 km  1.0000  2.97E+00  2.36E+00  6.61E+00
8.40E+00  1.14E+01 NOT-FOUND  1.16E+01  8.96E-03   66
 L-EDEWBODY                 4.8-6.4 km  1.0000  1.92E+00  1.35E+00  4.49E+00
5.58E+00  7.39E+00 NOT-FOUND  7.47E+00  8.96E-03   66
 L-EDEWBODY                 6.4-8.1 km  1.0000  1.32E+00  1.10E+00  2.61E+00
3.28E+00  4.74E+00 NOT-FOUND  5.93E+00  7.91E-03   50
 L-EDEWBODY                 8.1-9.7 km  1.0000  9.66E-01  8.27E-01  1.72E+00
2.55E+00  3.99E+00 NOT-FOUND  4.19E+00  7.91E-03   50
 L-EDEWBODY                9.7-16.1 km  1.0000  5.33E-01  4.92E-01  8.32E-01
1.07E+00  1.81E+00 NOT-FOUND  2.15E+00  7.42E-03   83
 L-EDEWBODY               16.1-32.2 km  1.0000  6.04E-01  5.41E-01  1.04E+00
1.24E+00  1.86E+00 NOT-FOUND  2.15E+00  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  3.45E-01  3.27E-01  5.30E-01
5.98E-01 NOT-FOUND NOT-FOUND  8.26E-01  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  2.47E-01  2.25E-01  3.28E-01
3.65E-01  4.68E-01 NOT-FOUND  4.90E-01  7.42E-03  106
 L-EDEWBODY               64.4-80.5 km  1.0000  2.03E-01  2.05E-01  3.18E-01
3.42E-01  4.05E-01 NOT-FOUND  4.18E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  6 OF 11:
    Case 6EVE

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
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                                          PROB                                    QUANTILES
                                PEAK      PEAK  PEAK
                                                NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.1126  2.23E-02  0.00E+00  1.06E-02
5.82E-02  7.02E-01  1.16E+00  2.38E+00  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.5412  6.10E-01  3.13E-02  2.07E+00
3.55E+00  6.99E+00  7.94E+00  1.36E+01  5.71E-05  103
 ERL INJ/DIARRHEA                 0-16.1 km  0.2262  1.47E-01  0.00E+00  4.36E-01
9.93E-01  2.23E+00  2.75E+00  6.47E+00  5.71E-05  103
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0650  1.21E-02  0.00E+00  0.00E+00
5.68E-03  3.73E-01  9.98E-01  2.11E+00  5.71E-05   81
 ERL INJ/THYROIDITIS              0-16.1 km  0.1674  2.87E-02  0.00E+00  6.61E-02
1.58E-01  5.49E-01  7.10E-01  2.00E+00  5.71E-05  103
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.8835  1.13E+01  6.90E+00  2.71E+01
4.02E+01  6.84E+01  7.77E+01  1.02E+02  1.17E-03   83
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.9410  5.26E+02  3.98E+02  1.10E+03
1.32E+03  2.00E+03  2.01E+03  2.05E+03  7.13E-04   78
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.8755  1.18E+02  7.90E+01  2.65E+02
3.94E+02  7.70E+02  1.00E+03  1.37E+03  1.17E-03   83
 CAN FAT/TOTAL                    0-16.1 km  1.0000  8.09E+01  6.84E+01  1.58E+02
2.12E+02  3.32E+02  3.73E+02  4.75E+02  1.17E-03   83
 CAN FAT/LUNG                     0-80.5 km  1.0000  4.89E+02  2.80E+02  1.17E+03
1.60E+03  2.44E+03  2.76E+03  4.95E+03  9.70E-04    7
 CAN FAT/THYROID                  0-80.5 km  1.0000  9.07E+01  5.38E+01  2.21E+02
3.02E+02  4.06E+02  4.60E+02  8.18E+02  9.70E-04    7
 CAN FAT/BREAST                   0-80.5 km  1.0000  8.54E+01  5.13E+01  1.77E+02
2.93E+02  4.86E+02  5.14E+02  6.89E+02  8.80E-06   52
 CAN FAT/GI                       0-80.5 km  1.0000  2.89E+02  1.75E+02  6.39E+02
9.74E+02  1.39E+03  1.60E+03  1.79E+03  2.94E-03   65
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  9.65E+01  5.90E+01  2.14E+02
3.13E+02  4.51E+02  5.06E+02  5.90E+02  1.91E-04   29
 CAN FAT/BONE                     0-80.5 km  1.0000  5.09E+01  2.84E+01  1.21E+02
1.76E+02  2.49E+02  2.79E+02  4.97E+02  9.70E-04    7
 CAN FAT/OTHER                    0-80.5 km  1.0000  4.61E+02  2.82E+02  1.06E+03
1.37E+03  2.38E+03  2.91E+03  3.29E+03  4.00E-04  106
 CAN INJ/THYROID                  0-80.5 km  1.0000  9.07E+02  5.38E+02  2.21E+03
3.02E+03  4.06E+03  4.60E+03  8.18E+03  9.70E-04    7
 CAN INJ/BREAST                   0-80.5 km  1.0000  2.69E+02  1.54E+02  5.58E+02
9.03E+02  1.48E+03  1.79E+03  2.17E+03  8.80E-06   52
 CAN FAT/TOTAL                    0-80.5 km  1.0000  1.56E+03  9.64E+02  3.61E+03
5.15E+03  7.70E+03  8.49E+03  1.18E+04  9.70E-04    7
 ERL FAT/TOTAL                    0-80.5 km  0.1126  2.23E-02  0.00E+00  1.06E-02
5.82E-02  7.02E-01  1.16E+00  2.38E+00  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT          0-80.5 km  0.5412  6.10E-01  3.13E-02  2.07E+00
3.55E+00  6.99E+00  7.94E+00  1.36E+01  5.71E-05  103
 ERL INJ/DIARRHEA                 0-80.5 km  0.2262  1.47E-01  0.00E+00  4.36E-01
9.93E-01  2.23E+00  2.75E+00  6.47E+00  5.71E-05  103
 ERL INJ/PNEUMONITIS              0-80.5 km  0.0650  1.21E-02  0.00E+00  0.00E+00
5.68E-03  3.73E-01  9.98E-01  2.11E+00  5.71E-05   81
 ERL INJ/THYROIDITIS              0-80.5 km  0.1674  2.87E-02  0.00E+00  6.61E-02
1.58E-01  5.49E-01  7.10E-01  2.00E+00  5.71E-05  103
 ERL INJ/HYPOTHYROIDISM           0-80.5 km  0.8835  1.96E+01  6.96E+00  4.98E+01
8.37E+01  2.37E+02  3.14E+02  5.92E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA            0-80.5 km  0.9410  5.02E+03  1.75E+03  1.16E+04
1.69E+04  5.65E+04  6.31E+04  1.10E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL           0-80.5 km  0.8755  2.53E+02  7.92E+01  3.27E+02
7.66E+02  3.95E+03  6.58E+03  3.10E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                  0.2836  4.79E-01  0.00E+00  1.27E+00
1.49E+00 NOT-FOUND NOT-FOUND  3.22E+00  1.40E-02   22
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POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.1126  2.36E-01  0.00E+00  7.25E-01
1.93E+00  4.06E+00  7.04E+00  2.66E+01  5.71E-05  103
 EARLY dose A-LUNGS > 5.00 Sv             0.0650  7.70E-02  0.00E+00  0.00E+00
4.76E-01  2.29E+00  2.83E+00  3.00E+00  4.11E-03    4
 EARLY dose L-EDEWBODY > 2.00 Sv          0.8296  9.22E+01  4.40E+01  1.93E+02
3.12E+02  7.12E+02  1.17E+03  7.17E+03  9.99E-04   83
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9432  8.65E+03  4.52E+03  1.76E+04
3.60E+04  7.71E+04  8.45E+04  1.59E+05  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.2836  2.04E-03  0.00E+00  3.55E-03
1.22E-02  3.72E-02  4.30E-02  4.96E-02  2.54E-03   81
 ERL FAT/TOTAL               1.6-3.2 km  0.0140  1.75E-06  0.00E+00  0.00E+00
0.00E+00  7.51E-05  8.68E-05  3.01E-04  2.54E-03  103
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  44          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  9.35E+02  7.85E+02  1.79E+03
2.34E+03  3.48E+03  3.92E+03  5.26E+03  1.17E-03   83
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.70E+04  1.61E+04  5.81E+04
8.87E+04  1.16E+05  1.25E+05  1.75E+05  1.91E-04   29

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.1126  4.67E-05  0.00E+00  2.12E-05
1.32E-04  1.44E-03  2.35E-03  4.98E-03  5.71E-05   81
 CAN FAT/TOTAL               0-16.1 km  1.0000  3.93E-03  3.23E-03  7.61E-03
1.02E-02  1.50E-02  1.77E-02  2.30E-02  1.17E-03   83

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.30E+01  8.84E+00  2.61E+01
3.50E+01  5.73E+01  6.34E+01  7.15E+01  2.54E-03   81
 L-EDEWBODY                  1.6-3.2 km  1.0000  4.74E+00  3.87E+00  1.06E+01
1.20E+01  1.58E+01  1.78E+01  2.12E+01  2.54E-03  103
 L-EDEWBODY                  3.2-4.8 km  0.9975  2.55E+00  2.15E+00  5.68E+00
7.45E+00  9.77E+00 NOT-FOUND  9.95E+00  8.96E-03   66
 L-EDEWBODY                  4.8-6.4 km  0.9975  1.61E+00  1.28E+00  3.38E+00
4.59E+00  6.44E+00 NOT-FOUND  6.72E+00  7.91E-03   50
 L-EDEWBODY                  6.4-8.1 km  0.9923  1.07E+00  9.43E-01  2.01E+00
2.92E+00  4.68E+00 NOT-FOUND  5.19E+00  7.91E-03   50
 L-EDEWBODY                  8.1-9.7 km  0.9923  7.27E-01  6.37E-01  1.45E+00
2.06E+00  3.18E+00 NOT-FOUND  3.30E+00  7.42E-03   83
 L-EDEWBODY                 9.7-16.1 km  0.9613  3.57E-01  3.20E-01  6.78E-01
9.63E-01  1.68E+00 NOT-FOUND  1.86E+00  7.42E-03   83
 L-EDEWBODY                16.1-32.2 km  1.0000  5.03E-01  4.03E-01  9.66E-01
1.19E+00  1.84E+00 NOT-FOUND  2.15E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  2.13E-01  2.01E-01  3.29E-01
3.94E-01 NOT-FOUND NOT-FOUND  6.27E-01  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  1.44E-01  1.22E-01  2.14E-01
2.34E-01  2.89E-01 NOT-FOUND  3.42E-01  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  1.25E-01  1.13E-01  2.10E-01
2.28E-01  2.74E-01 NOT-FOUND  2.84E-01  7.42E-03  106
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0  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  6 OF 11:
    Case 6EVE

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31     PAGE  45          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.8594  1.75E+01  3.07E+00  5.40E+01
7.63E+01  1.27E+02  1.51E+02  2.91E+02  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.9109  5.66E+01  2.94E+01  1.41E+02
1.99E+02  3.16E+02  3.52E+02  5.08E+02  5.14E-04   50
 ERL INJ/DIARRHEA              0-16.1 km  0.8601  3.09E+01  1.26E+01  8.35E+01
1.12E+02  2.00E+02  2.27E+02  3.46E+02  2.28E-04   81
 ERL INJ/PNEUMONITIS           0-16.1 km  0.6681  5.53E+00  4.07E-01  1.91E+01
3.19E+01  5.93E+01  7.41E+01  1.45E+02  1.43E-04   81
 ERL INJ/THYROIDITIS           0-16.1 km  0.6978  1.73E+00  1.42E-01  5.35E+00
8.50E+00  1.79E+01  2.38E+01  4.93E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9903  5.59E+01  4.19E+01  1.19E+02
1.49E+02  2.22E+02  2.48E+02  3.33E+02  5.14E-04   50
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9987  1.83E+03  1.72E+03  3.02E+03
3.15E+03  3.49E+03  3.64E+03  4.15E+03  6.28E-04   80
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.9473  8.72E+02  7.43E+02  1.76E+03
2.14E+03  2.79E+03  3.03E+03  3.26E+03  6.28E-04   59
 CAN FAT/TOTAL                 0-16.1 km  1.0000  2.58E+02  2.26E+02  4.73E+02
5.56E+02  7.32E+02  7.87E+02  1.02E+03  5.14E-04   50
 CAN FAT/LUNG                  0-80.5 km  1.0000  5.47E+02  3.41E+02  1.21E+03
1.68E+03  2.47E+03  2.78E+03  5.00E+03  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  1.00E+02  6.45E+01  2.30E+02
3.08E+02  4.27E+02  4.92E+02  8.26E+02  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  8.95E+01  5.52E+01  1.79E+02
2.94E+02  4.86E+02  5.14E+02  6.93E+02  8.80E-06   52
 CAN FAT/GI                    0-80.5 km  1.0000  3.23E+02  2.15E+02  6.60E+02
1.02E+03  1.42E+03  1.63E+03  1.82E+03  2.94E-03   65
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.08E+02  7.22E+01  2.33E+02
3.20E+02  4.72E+02  5.44E+02  5.99E+02  2.94E-03   65
 CAN FAT/BONE                  0-80.5 km  1.0000  5.64E+01  3.41E+01  1.25E+02
1.83E+02  2.51E+02  2.79E+02  5.01E+02  9.70E-04    7
 CAN FAT/OTHER                 0-80.5 km  1.0000  5.15E+02  3.41E+02  1.09E+03
1.42E+03  2.43E+03  2.92E+03  3.36E+03  4.00E-04  106
 CAN INJ/THYROID               0-80.5 km  1.0000  1.00E+03  6.45E+02  2.30E+03
3.08E+03  4.27E+03  4.92E+03  8.26E+03  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  2.82E+02  1.67E+02  5.81E+02
9.06E+02  1.49E+03  1.79E+03  2.18E+03  8.80E-06   52
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.74E+03  1.13E+03  3.84E+03
5.35E+03  7.74E+03  8.52E+03  1.19E+04  9.70E-04    7
 ERL FAT/TOTAL                 0-80.5 km  0.8594  1.75E+01  3.07E+00  5.40E+01
7.63E+01  1.27E+02  1.51E+02  2.91E+02  2.28E-04   81
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.9109  5.66E+01  2.94E+01  1.41E+02
1.99E+02  3.16E+02  3.52E+02  5.08E+02  5.14E-04   50
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 ERL INJ/DIARRHEA              0-80.5 km  0.8601  3.09E+01  1.26E+01  8.35E+01
1.12E+02  2.00E+02  2.27E+02  3.46E+02  2.28E-04   81
 ERL INJ/PNEUMONITIS           0-80.5 km  0.6681  5.53E+00  4.07E-01  1.91E+01
3.19E+01  5.93E+01  7.41E+01  1.45E+02  1.43E-04   81
 ERL INJ/THYROIDITIS           0-80.5 km  0.6978  1.73E+00  1.42E-01  5.35E+00
8.50E+00  1.79E+01  2.38E+01  4.93E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.9903  6.43E+01  4.22E+01  1.43E+02
2.01E+02  3.40E+02  4.06E+02  6.91E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.9987  6.32E+03  3.47E+03  1.24E+04
1.77E+04  5.67E+04  6.32E+04  1.11E+05  1.63E-03   69
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.9473  1.01E+03  7.49E+02  2.06E+03
2.55E+03  5.08E+03  7.17E+03  3.17E+04  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.8663  4.76E+00  4.01E+00  7.86E+00
8.80E+00 NOT-FOUND NOT-FOUND  1.61E+01  2.27E-02   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.8594  7.14E+01  3.84E+01  1.79E+02
2.54E+02  3.80E+02  4.33E+02  6.48E+02  5.14E-04   50
 EARLY dose A-LUNGS > 5.00 Sv              0.6681  2.05E+01  2.28E+00  6.68E+01
9.10E+01  1.67E+02  2.08E+02  2.96E+02  7.13E-04   66
 EARLY dose L-EDEWBODY > 2.00 Sv           0.9358  4.13E+02  2.90E+02  9.44E+02
1.15E+03  1.73E+03  2.06E+03  7.94E+03  9.99E-04   83
 EARLY dose L-EDEWBODY > 0.250 Sv          1.0000  9.34E+03  5.46E+03  1.79E+04
3.68E+04  7.71E+04  8.45E+04  1.59E+05  4.00E-04  106

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.8663  6.54E-02  7.04E-02  1.08E-01
1.18E-01  1.45E-01  1.58E-01  1.78E-01  1.91E-03    5
 ERL FAT/TOTAL              1.6-3.2 km  0.8019  1.78E-02  3.53E-03  5.08E-02
5.62E-02  7.03E-02  7.22E-02  8.37E-02  1.14E-04   26
 ERL FAT/TOTAL              3.2-4.8 km  0.5439  4.95E-03  7.34E-05  2.13E-02
2.69E-02  3.85E-02  4.40E-02  5.37E-02  2.60E-03    4
 ERL FAT/TOTAL              4.8-6.4 km  0.3479  1.63E-03  0.00E+00  4.43E-03
1.16E-02  2.08E-02  2.50E-02  3.01E-02  2.54E-03   81
□10-APR-06  19:11:31    PAGE  46          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.2049  4.70E-04  0.00E+00  8.03E-04
2.26E-03  1.07E-02  1.47E-02  2.30E-02  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  3.43E+03  2.90E+03  6.64E+03
8.04E+03  1.11E+04  1.22E+04  1.89E+04  2.28E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.95E+04  1.94E+04  6.06E+04
9.05E+04  1.24E+05  1.38E+05  1.76E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.8594  1.97E-02  6.51E-03  6.03E-02
7.56E-02  1.02E-01  1.06E-01  1.44E-01  8.80E-06   26
 CAN FAT/TOTAL               0-16.1 km  1.0000  1.25E-02  1.09E-02  2.28E-02
2.74E-02  3.49E-02  3.79E-02  4.97E-02  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  5.94E+01  4.11E+01  1.23E+02
1.70E+02 NOT-FOUND NOT-FOUND  3.83E+02  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  2.02E+01  1.43E+01  4.25E+01
5.50E+01  1.07E+02  1.31E+02  1.59E+02  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  1.05E+01  7.00E+00  2.39E+01
3.24E+01  4.70E+01  5.70E+01  8.02E+01  2.54E-03  103
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 L-EDEWBODY                    4.8-6.4 km  1.0000  6.62E+00  4.24E+00  1.58E+01
2.16E+01  3.06E+01  3.35E+01  3.66E+01  2.54E-03   81
 L-EDEWBODY                    6.4-8.1 km  1.0000  4.51E+00  3.16E+00  1.02E+01
1.27E+01  2.06E+01  2.40E+01  2.79E+01  2.54E-03   81
 L-EDEWBODY                    8.1-9.7 km  1.0000  3.20E+00  2.30E+00  6.74E+00
9.79E+00  1.83E+01 NOT-FOUND  2.23E+01  7.91E-03   50
 L-EDEWBODY                    9.7-16.1 km  1.0000  1.66E+00  1.25E+00  3.33E+00
4.92E+00  8.64E+00 NOT-FOUND  9.18E+00  7.91E-03   50
 L-EDEWBODY                   16.1-32.2 km  1.0000  5.03E-01  4.03E-01  9.66E-01
1.19E+00  1.84E+00 NOT-FOUND  2.15E+00  7.42E-03   83
 L-EDEWBODY                   32.2-48.3 km  1.0000  2.13E-01  2.01E-01  3.29E-01
3.94E-01 NOT-FOUND NOT-FOUND  6.27E-01  1.27E-02   69
 L-EDEWBODY                   48.3-64.4 km  1.0000  1.44E-01  1.22E-01  2.14E-01
2.34E-01  2.89E-01 NOT-FOUND  3.42E-01  7.42E-03  106
 L-EDEWBODY                   64.4-80.5 km  1.0000  1.25E-01  1.13E-01  2.10E-01
2.28E-01  2.74E-01 NOT-FOUND  2.84E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  6 OF 11:
    Case 6EVE

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31     PAGE  47          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.01E+02  7.38E+01  2.06E+02
2.66E+02  4.19E+02  5.01E+02  7.72E+02  1.43E-04   81
 CAN FAT/LUNG                  0-80.5 km  1.0000  2.86E+02  2.01E+02  5.89E+02
7.46E+02  1.08E+03  1.18E+03  1.45E+03  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  3.10E+01  2.19E+01  6.53E+01
8.74E+01  1.20E+02  1.32E+02  1.67E+02  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  2.27E+02  1.59E+02  4.81E+02
6.49E+02  8.22E+02  8.89E+02  1.21E+03  9.70E-04    7
 CAN FAT/GI                    0-80.5 km  1.0000  5.51E+02  3.94E+02  1.10E+03
1.34E+03  2.06E+03  2.26E+03  2.82E+03  9.70E-04    7
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  1.82E+02  1.30E+02  3.67E+02
4.75E+02  6.42E+02  7.19E+02  9.20E+02  9.70E-04    7
 CAN FAT/BONE                  0-80.5 km  1.0000  2.14E+01  1.55E+01  4.38E+01
5.56E+01  7.63E+01  8.24E+01  9.86E+01  9.70E-04    7
 CAN FAT/OTHER                 0-80.5 km  1.0000  5.77E+02  4.14E+02  1.17E+03
1.48E+03  2.21E+03  2.42E+03  3.01E+03  9.70E-04    7
 CAN INJ/THYROID               0-80.5 km  1.0000  3.10E+02  2.19E+02  6.53E+02
8.74E+02  1.20E+03  1.32E+03  1.67E+03  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  7.15E+02  5.02E+02  1.46E+03
1.91E+03  2.59E+03  2.91E+03  3.82E+03  9.70E-04    7
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.88E+03  1.32E+03  3.85E+03
4.99E+03  7.15E+03  7.83E+03  9.68E+03  9.70E-04    7

POPULATION DOSE (SV)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  2.03E+03  1.42E+03  3.87E+03
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5.18E+03  8.30E+03  9.92E+03  1.50E+04  1.43E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  4.18E+04  2.95E+04  8.48E+04
1.04E+05  1.36E+05  1.53E+05  2.18E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                0-16.1 km  0.9298  6.42E-04  5.89E-04  1.04E-03
1.18E-03  1.57E-03  1.78E-03  2.44E-03  8.53E-06    3

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.1082  1.94E-02  0.00E+00  1.04E-01
1.43E-01 NOT-FOUND NOT-FOUND  1.98E-01  2.45E-02   96
 L-EDEWBODY                  1.6-3.2 km  0.2096  3.64E-02  0.00E+00  1.16E-01
1.35E-01 NOT-FOUND NOT-FOUND  1.95E-01  1.01E-02   46
 L-EDEWBODY                  3.2-4.8 km  0.1455  2.29E-02  0.00E+00  1.09E-01
1.30E-01 NOT-FOUND NOT-FOUND  1.95E-01  1.01E-02   11
 L-EDEWBODY                  4.8-6.4 km  0.3478  5.76E-02  0.00E+00  1.28E-01
1.46E-01 NOT-FOUND NOT-FOUND  2.00E-01  1.01E-02   72
 L-EDEWBODY                  6.4-8.1 km  0.5075  8.15E-02  1.00E-01  1.26E-01
1.39E-01  1.75E-01  1.94E-01  1.98E-01  4.31E-03   94
 L-EDEWBODY                  8.1-9.7 km  0.7467  1.15E-01  1.04E-01  1.20E-01
1.29E-01  1.50E-01  1.60E-01  2.00E-01  3.42E-04  105
 L-EDEWBODY                 9.7-16.1 km  0.9000  1.11E-01  1.03E-01  1.19E-01
1.27E-01  1.47E-01  1.56E-01  2.00E-01  3.42E-04    3
 L-EDEWBODY                16.1-32.2 km  0.9040  1.01E-01  9.30E-02  1.50E-01
1.80E-01 NOT-FOUND NOT-FOUND  2.00E-01  3.32E-02   82
 L-EDEWBODY                32.2-48.3 km  1.0000  1.31E-01  1.08E-01  1.41E-01
1.58E-01 NOT-FOUND NOT-FOUND  1.99E-01  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  1.03E-01  1.03E-01  1.38E-01
1.56E-01 NOT-FOUND NOT-FOUND  1.68E-01  3.32E-02    7
 L-EDEWBODY                64.4-80.5 km  1.0000  7.80E-02  7.77E-02  1.08E-01
1.14E-01  1.31E-01 NOT-FOUND  1.34E-01  7.42E-03  106

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE          1.0000  4.18E+04  2.95E+04  8.48E+04
1.04E+05  1.36E+05  1.53E+05  2.18E+05  9.70E-04    7
 LONG-TERM DIRECT EXPOSURE PATHWAYS     1.0000  3.48E+04  2.46E+04  7.75E+04
9.69E+04  1.22E+05  1.33E+05  1.65E+05  9.70E-04    7
 TOTAL INGESTION PATHWAYS DOSE          1.0000  2.66E+03  2.29E+03  4.74E+03
6.00E+03  8.88E+03  1.02E+04  1.55E+04  1.43E-04   81
 LONG-TERM GROUNDSHINE DOSE             1.0000  3.42E+04  2.43E+04  7.62E+04
9.66E+04  1.21E+05  1.33E+05  1.64E+05  9.70E-04    7
 LONG-TERM RESUSPENSION DOSE            1.0000  6.48E+02  4.27E+02  1.41E+03
1.93E+03  2.11E+03  2.16E+03  2.65E+03  1.22E-05  105
 WATER INGESTION DOSE                   1.0000  2.04E+03  1.48E+03  4.01E+03
5.31E+03  8.35E+03  1.00E+04  1.51E+04  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE    1.0000  4.27E+03  2.17E+03  1.07E+04
1.46E+04  2.59E+04  3.15E+04  5.18E+04  9.70E-04    7
□10-APR-06  19:11:31    PAGE  48          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  1.03E+02  9.23E+01  1.68E+02
2.09E+02  3.01E+02  3.09E+02  3.97E+02  7.72E-06   35
 INGESTION OF GRAINS                    1.0000  9.33E+00  8.27E+00  1.41E+01
1.69E+01  2.37E+01  2.67E+01  8.22E+01  3.52E-06   27
 INGESTION OF LEAF VEG                  1.0000  5.91E+01  5.40E+01  9.51E+01
1.04E+02  1.16E+02  1.22E+02  1.92E+02  7.72E-06   35
 INGESTION OF ROOT CROPS                1.0000  3.75E+01  3.29E+01  5.88E+01
7.04E+01  9.13E+01  1.01E+02  1.40E+02  3.52E-06   27
 INGESTION OF FRUITS                    1.0000  5.61E+01  5.02E+01  8.98E+01
1.02E+02  1.14E+02  1.20E+02  2.03E+02  3.52E-06   27
 INGESTION OF LEGUMES                   1.0000  7.02E+01  6.27E+01  1.06E+02
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1.19E+02  1.54E+02  1.73E+02  2.31E+02  7.72E-06   35
 INGESTION OF BEEF                      1.0000  1.65E+02  4.11E+01  4.76E+02
6.12E+02  9.36E+02  1.06E+03  1.54E+03  4.00E-04   96
 INGESTION OF MILK                      1.0000  1.68E+02  4.47E+01  4.80E+02
6.26E+02  9.75E+02  1.08E+03  1.52E+03  4.00E-04   96
 INGESTION OF POULTRY                   1.0000  3.97E+01  1.50E+01  1.05E+02
1.27E+02  1.98E+02  2.13E+02  2.73E+02  4.00E-04   64
 INGESTION OF OTHER MEAT CROPS          1.0000  1.82E+01  3.74E+00  5.47E+01
6.96E+01  9.90E+01  1.07E+02  1.40E+02  4.00E-04   64

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                   1.0000  1.44E+10  9.50E+09  3.08E+10
3.66E+10  5.44E+10  6.45E+10  1.00E+11  9.70E-04    7
 POP.-DEPENDENT COSTS                   1.0000  1.41E+10  8.95E+09  3.08E+10
3.65E+10  5.42E+10  6.44E+10  9.99E+10  9.70E-04    7
 FARM-DEPENDENT COSTS                   1.0000  3.25E+08  3.08E+08  5.18E+08
5.76E+08  7.14E+08  7.44E+08  1.02E+09  1.06E-05   35
 POP.-DEPENDENT DECONTAMINATION COST    1.0000  2.89E+09  1.91E+09  6.49E+09
1.01E+10  1.08E+10  1.12E+10  1.26E+10  3.32E-04   47
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  9.49E+07  8.79E+07  1.35E+08
1.57E+08  2.08E+08  2.20E+08  3.02E+08  9.71E-05   47
 POP.-DEPENDENT INTERDICTION COST       1.0000  1.03E+10  6.47E+09  2.24E+10
2.74E+10  4.54E+10  5.41E+10  8.68E+10  9.70E-04    7
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.63E+08  1.30E+08  2.89E+08
3.22E+08  3.90E+08  4.24E+08  5.34E+08  1.06E-05   35
 POP.-DEPENDENT CONDEMNATION COST       0.9928  9.64E+08  5.07E+08  1.60E+09
5.01E+09  5.98E+09  6.46E+09  2.48E+10  1.63E-03   23
 FARM-DEPENDENT CONDEMNATION COST       1.0000  2.43E+07  2.15E+07  4.66E+07
5.53E+07  1.02E+08  1.19E+08  1.45E+08  2.00E-03   23
 EMERGENCY PHASE COST                   1.0000  2.08E+07  8.68E+06  5.60E+07
8.37E+07  1.62E+08  2.03E+08  2.72E+08  7.99E-04   37
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                     1.0000  1.50E+06  9.68E+05  3.33E+06
4.63E+06  6.01E+06  6.56E+06  7.50E+06  9.50E-04    3
 CROP DISPOSAL COST                     1.0000  4.10E+07  3.80E+07  7.13E+07
7.80E+07  9.58E+07  1.04E+08  1.22E+08  1.29E-03    3

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)        1.0000  8.32E+04  7.85E+04  1.13E+05
1.23E+05  1.49E+05  1.62E+05  2.30E+05  9.71E-05   47
 POP. DECONTAMINATION (INDIVIDUALS)     1.0000  4.34E+05  2.64E+05  1.03E+06
1.06E+06  1.15E+06  1.19E+06  1.37E+06  3.32E-04   47
 FARM INTERDICTION (HECTARES)           1.0000  9.47E+04  8.64E+04  1.31E+05
1.51E+05  2.04E+05  2.16E+05  2.68E+05  3.42E-04   42
 POP. INTERDICTION (INDIVIDUALS)        1.0000  4.34E+05  2.64E+05  1.03E+06
1.06E+06  1.15E+06  1.19E+06  1.37E+06  3.32E-04   47
 FARM CONDEMNATION (HECTARES)           1.0000  3.56E+03  3.25E+03  6.92E+03
8.04E+03  1.18E+04  1.42E+04  2.07E+04  1.43E-03   23
 POP. CONDEMNATION (INDIVIDUALS)        0.9928  6.85E+03  3.13E+03  1.33E+04
3.01E+04  3.94E+04  4.43E+04  1.58E+05  1.63E-03   23
 MILK DISPOSAL AREA (HECTARES)          1.0000  8.58E+04  7.66E+04  1.26E+05
1.47E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
 CROP DISPOSAL AREA (HECTARES)          1.0000  8.88E+04  7.90E+04  1.27E+05
1.48E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
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FRACTION OF THE PEOPLE

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

10-APR-06 19:11:31 PAGE 49

	PEAK CONS	PROB PEAK	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.0041	1.79E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-04
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.0310	6.16E-04	0.00E+00	0.00E+00	0.00E+00	1.42E-02	2.81E-02	1.15E-01
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-16.1 km	1.0000	1.25E+00	1.10E+00	2.05E+00	2.26E+00	2.84E+00	3.05E+00	4.38E+00
CAN FAT/LUNG	0-80.5 km	1.0000	1.69E+00	1.09E+00	3.79E+00	5.28E+00	7.60E+00	8.63E+00	1.42E+01
CAN FAT/THYROID	0-80.5 km	1.0000	2.99E-01	1.71E-01	7.47E-01	1.05E+00	1.46E+00	1.68E+00	2.92E+00
CAN FAT/BREAST	0-80.5 km	1.0000	1.33E+00	8.52E-01	3.04E+00	3.94E+00	6.47E+00	7.62E+00	1.11E+01
CAN FAT/GI	0-80.5 km	1.0000	4.28E+00	3.13E+00	8.68E+00	1.08E+01	1.56E+01	1.82E+01	2.86E+01
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.02E+00	6.89E-01	2.22E+00	3.07E+00	4.52E+00	5.31E+00	8.06E+00
CAN FAT/BONE	0-80.5 km	1.0000	1.19E-01	8.24E-02	2.61E-01	3.42E-01	5.24E-01	5.90E-01	8.99E-01
CAN FAT/OTHER	0-80.5 km	1.0000	3.64E+00	2.50E+00	8.14E+00	1.09E+01	1.58E+01	1.86E+01	2.86E+01
CAN INJ/THYROID	0-80.5 km	1.0000	2.99E+00	1.71E+00	7.47E+00	1.05E+01	1.46E+01	1.68E+01	2.92E+01
CAN INJ/BREAST	0-80.5 km	1.0000	4.18E+00	2.68E+00	9.78E+00	1.24E+01	2.04E+01	2.33E+01	3.48E+01
CAN FAT/TOTAL	0-80.5 km	1.0000	1.24E+01	8.64E+00	2.72E+01	3.47E+01	5.25E+01	5.90E+01	9.44E+01

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 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.0041  1.79E-06  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  6.12E-04  5.71E-05   81
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.0310  6.16E-04  0.00E+00  0.00E+00
0.00E+00  1.42E-02  2.81E-02  1.15E-01  5.71E-05   81
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  50            PROB                          QUANTILES
                          PEAK        PEAK  PEAK
                                         NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0254  3.42E-03  0.00E+00  0.00E+00
0.00E+00  8.67E-02  1.59E-01  1.29E+00  5.71E-05   81

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  2.66E+01  2.46E+01  4.25E+01
5.05E+01  6.09E+01  6.61E+01  9.57E+01  1.22E-05   24
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  2.64E+02  1.72E+02  5.86E+02
7.78E+02  1.18E+03  1.42E+03  2.08E+03  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  1.0000  4.31E-05  3.73E-05  7.80E-05
9.23E-05  1.21E-04  1.34E-04  1.87E-04  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  6.07E-02  5.69E-02  1.01E-01
1.06E-01  1.18E-01 NOT-FOUND  1.19E-01  8.96E-03  102
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 L-EDEWBODY                    1.6-3.2 km  1.0000  4.58E-02  4.63E-02  7.30E-02
7.86E-02  9.32E-02  1.01E-01  1.14E-01  2.60E-03   77
 L-EDEWBODY                    3.2-4.8 km  1.0000  3.54E-02  3.40E-02  6.61E-02
7.26E-02  8.15E-02 NOT-FOUND  8.33E-02  7.42E-03  106
 L-EDEWBODY                    4.8-6.4 km  1.0000  2.78E-02  2.42E-02  5.44E-02
6.62E-02  8.19E-02 NOT-FOUND  8.22E-02  9.62E-03    8
 L-EDEWBODY                    6.4-8.1 km  1.0000  2.03E-02  1.61E-02  4.05E-02
5.03E-02  6.71E-02 NOT-FOUND  7.19E-02  7.91E-03   50
 L-EDEWBODY                    8.1-9.7 km  1.0000  1.48E-02  1.26E-02  3.00E-02
3.73E-02  6.42E-02 NOT-FOUND  7.92E-02  7.91E-03   50
 L-EDEWBODY                   9.7-16.1 km  1.0000  7.65E-03  6.61E-03  1.51E-02
1.98E-02  2.85E-02 NOT-FOUND  3.12E-02  7.91E-03   50
 L-EDEWBODY                  16.1-32.2 km  1.0000  6.02E-03  5.50E-03  1.14E-02
1.32E-02  1.87E-02 NOT-FOUND  2.31E-02  7.42E-03   83
 L-EDEWBODY                  32.2-48.3 km  1.0000  2.37E-03  2.12E-03  4.85E-03
5.56E-03 NOT-FOUND NOT-FOUND  7.00E-03  1.27E-02   69
 L-EDEWBODY                  48.3-64.4 km  1.0000  1.20E-03  1.08E-03  2.48E-03
3.12E-03  3.69E-03  3.97E-03  4.26E-03  2.54E-03  103
 L-EDEWBODY                  64.4-80.5 km  1.0000  6.94E-04  5.65E-04  1.23E-03
1.57E-03  2.99E-03 NOT-FOUND  3.81E-03  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  7 OF 11:
    Case 7FR

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31     PAGE  51          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                  0-80.5 km  1.0000  7.10E-01  3.81E-01  1.83E+00
2.47E+00  3.70E+00  4.25E+00  7.13E+00  4.00E-04  106
 CAN FAT/THYROID               0-80.5 km  1.0000  2.04E-01  1.12E-01  5.36E-01
7.52E-01  1.12E+00  1.37E+00  2.13E+00  9.70E-04    7
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 CAN FAT/BREAST                0-80.5 km  1.0000  5.45E-01  3.09E-01  1.27E+00
1.87E+00  3.03E+00  3.61E+00  5.64E+00  4.00E-04  106
 CAN FAT/GI                    0-80.5 km  1.0000  1.27E+00  7.23E-01  3.15E+00
4.26E+00  7.06E+00  8.12E+00  1.26E+01  4.00E-04  106
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  3.61E-01  2.06E-01  9.36E-01
1.22E+00  2.05E+00  2.34E+00  3.53E+00  4.00E-04  106
 CAN FAT/BONE                  0-80.5 km  1.0000  4.31E-02  2.36E-02  1.05E-01
1.36E-01  2.24E-01  2.57E-01  4.44E-01  4.00E-04  106
 CAN FAT/OTHER                 0-80.5 km  1.0000  1.38E+00  7.65E-01  3.51E+00
5.18E+00  7.50E+00  8.58E+00  1.39E+01  4.00E-04  106
 CAN INJ/THYROID               0-80.5 km  1.0000  2.04E+00  1.12E+00  5.36E+00
7.52E+00  1.12E+01  1.37E+01  2.13E+01  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  1.72E+00  9.74E-01  4.40E+00
5.89E+00  9.25E+00  1.08E+01  1.77E+01  4.00E-04  106
 CAN FAT/TOTAL                 0-80.5 km  1.0000  4.52E+00  2.53E+00  1.10E+01
1.47E+01  2.32E+01  2.62E+01  4.53E+01  4.00E-04  106
 ERL FAT/TOTAL                 0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL                4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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                                PROB                                QUANTILES
                        PEAK      PEAK  PEAK
                                     NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.00E+02  5.54E+01  2.60E+02
3.48E+02  5.38E+02  6.09E+02  1.01E+03  4.00E-04  106

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY               16.1-32.2 km  1.0000  3.90E-03  3.28E-03  8.08E-03
1.03E-02  1.57E-02 NOT-FOUND  1.70E-02  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  1.56E-03  1.16E-03  3.28E-03
4.03E-03  5.31E-03 NOT-FOUND  5.35E-03  8.96E-03   66
 L-EDEWBODY               48.3-64.4 km  1.0000  7.92E-04  7.03E-04  1.76E-03
2.20E-03  3.00E-03  3.33E-03  3.69E-03  2.54E-03  103
 L-EDEWBODY               64.4-80.5 km  1.0000  4.61E-04  3.67E-04  8.47E-04
1.12E-03  2.00E-03 NOT-FOUND  3.06E-03  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  7 OF 11:
    Case 7FR

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31    PAGE  53          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT     0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL INJ/PNEUMONITIS          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  0.0041  3.58E-05  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  1.22E-02  5.71E-05   81
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.0310  1.23E-02  0.00E+00  0.00E+00
0.00E+00  3.15E-01  6.18E-01  2.30E+00  5.71E-05   81
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  1.0000  9.25E-01  8.06E-01  1.68E+00
2.08E+00  2.67E+00  2.97E+00  3.94E+00  5.14E-04   50
 CAN FAT/LUNG                 0-80.5 km  1.0000  8.57E-01  5.59E-01  2.02E+00
2.65E+00  3.81E+00  4.33E+00  7.40E+00  4.00E-04  106
 CAN FAT/THYROID              0-80.5 km  1.0000  2.49E-01  1.54E-01  6.03E-01
7.76E-01  1.15E+00  1.39E+00  2.17E+00  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  6.52E-01  4.04E-01  1.48E+00
2.14E+00  3.10E+00  3.68E+00  5.83E+00  4.00E-04  106
 CAN FAT/GI                   0-80.5 km  1.0000  1.54E+00  1.02E+00  3.48E+00
4.87E+00  7.27E+00  8.26E+00  1.31E+01  4.00E-04  106
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  4.35E-01  2.84E-01  1.01E+00
1.28E+00  2.11E+00  2.39E+00  3.66E+00  4.00E-04  106
 CAN FAT/BONE                 0-80.5 km  1.0000  5.17E-02  3.33E-02  1.14E-01
1.50E-01  2.33E-01  2.62E-01  4.60E-01  4.00E-04  106
 CAN FAT/OTHER                0-80.5 km  1.0000  1.66E+00  1.09E+00  3.88E+00
5.40E+00  7.73E+00  8.72E+00  1.44E+01  4.00E-04  106
 CAN INJ/THYROID              0-80.5 km  1.0000  2.49E+00  1.54E+00  6.03E+00
7.76E+00  1.15E+01  1.39E+01  2.17E+01  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  2.05E+00  1.26E+00  4.81E+00
6.50E+00  1.00E+01  1.14E+01  1.83E+01  4.00E-04  106
 CAN FAT/TOTAL                0-80.5 km  1.0000  5.44E+00  3.47E+00  1.18E+01
1.59E+01  2.37E+01  2.65E+01  4.70E+01  4.00E-04  106
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.0041  3.58E-05  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  1.22E-02  5.71E-05   81
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.0310  1.23E-02  0.00E+00  0.00E+00
0.00E+00  3.15E-01  6.18E-01  2.30E+00  5.71E-05   81
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.0254  6.83E-02  0.00E+00  0.00E+00
0.00E+00  1.60E+00  2.74E+00  2.57E+01  5.71E-05   81
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AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
□10-APR-06  19:11:31    PAGE  54          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  2.02E+01  1.71E+01  3.70E+01
4.51E+01  5.85E+01  6.38E+01  8.64E+01  5.14E-04   50
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  1.20E+02  7.78E+01  2.81E+02
3.62E+02  5.49E+02  6.15E+02  1.04E+03  4.00E-04  106

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  1.0000  4.49E-05  3.77E-05  8.47E-05
1.02E-04  1.27E-04  1.40E-04  1.91E-04  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  1.81E-01  1.56E-01  2.61E-01
2.98E-01 NOT-FOUND NOT-FOUND  7.97E-01  1.24E-02  110
 L-EDEWBODY                 1.6-3.2 km  1.0000  9.80E-02  8.75E-02  1.74E-01
2.09E-01  2.54E-01  2.76E-01  3.66E-01  2.54E-03   81
 L-EDEWBODY                 3.2-4.8 km  1.0000  6.54E-02  4.41E-02  1.38E-01
1.76E-01  2.20E-01  2.32E-01  2.45E-01  2.54E-03   22
 L-EDEWBODY                 4.8-6.4 km  1.0000  4.46E-02  3.06E-02  1.01E-01
1.23E-01  1.94E-01 NOT-FOUND  2.25E-01  8.96E-03   66
 L-EDEWBODY                 6.4-8.1 km  1.0000  3.15E-02  2.15E-02  7.16E-02
8.86E-02  1.39E-01  1.67E-01  2.20E-01  2.54E-03   81
 L-EDEWBODY                 8.1-9.7 km  1.0000  2.27E-02  1.44E-02  4.90E-02
6.87E-02  1.36E-01 NOT-FOUND  1.52E-01  7.91E-03   50
 L-EDEWBODY                9.7-16.1 km  1.0000  1.22E-02  9.09E-03  2.40E-02
3.46E-02  6.34E-02 NOT-FOUND  6.75E-02  7.91E-03   50
 L-EDEWBODY               16.1-32.2 km  1.0000  3.90E-03  3.28E-03  8.08E-03
1.03E-02  1.57E-02 NOT-FOUND  1.70E-02  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  1.56E-03  1.16E-03  3.28E-03
4.03E-03  5.31E-03 NOT-FOUND  5.35E-03  8.96E-03   66
 L-EDEWBODY               48.3-64.4 km  1.0000  7.92E-04  7.03E-04  1.76E-03
2.20E-03  3.00E-03  3.33E-03  3.69E-03  2.54E-03  103
 L-EDEWBODY               64.4-80.5 km  1.0000  4.61E-04  3.67E-04  8.47E-04
1.12E-03  2.00E-03 NOT-FOUND  3.06E-03  7.42E-03  106
□  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  7 OF 11:
    Case 7FR
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RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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10-APR-06  19:11:31     PAGE  55            PROB                                QUANTILES
                          PEAK       PEAK   PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB   TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                    0-16.1 km  1.0000  1.20E+00  1.08E+00  1.95E+00
2.16E+00  2.62E+00  2.85E+00  4.20E+00  1.22E-05   24
 CAN FAT/LUNG                     0-80.5 km  1.0000  9.75E-01  6.89E-01  2.06E+00
2.67E+00  4.21E+00  5.04E+00  7.24E+00  9.70E-04    7
 CAN FAT/THYROID                  0-80.5 km  1.0000  9.24E-02  5.78E-02  2.13E-01
3.11E-01  4.66E-01  5.44E-01  7.90E-01  9.70E-04    7
 CAN FAT/BREAST                   0-80.5 km  1.0000  7.77E-01  5.44E-01  1.71E+00
2.23E+00  3.25E+00  3.78E+00  5.89E+00  9.70E-04    7
 CAN FAT/GI                       0-80.5 km  1.0000  2.99E+00  2.33E+00  5.86E+00
7.21E+00  1.01E+01  1.16E+01  1.61E+01  9.70E-04    7
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  6.51E-01  4.70E-01  1.26E+00
1.66E+00  2.66E+00  3.15E+00  4.55E+00  9.70E-04    7
 CAN FAT/BONE                     0-80.5 km  1.0000  7.49E-02  5.54E-02  1.40E-01
1.86E-01  2.87E-01  3.37E-01  4.88E-01  9.70E-04    7
 CAN FAT/OTHER                    0-80.5 km  1.0000  2.25E+00  1.65E+00  4.74E+00
5.86E+00  8.86E+00  1.05E+01  1.53E+01  9.70E-04    7
 CAN INJ/THYROID                  0-80.5 km  1.0000  9.24E-01  5.78E-01  2.13E+00
3.11E+00  4.66E+00  5.44E+00  7.90E+00  9.70E-04    7
 CAN INJ/BREAST                   0-80.5 km  1.0000  2.45E+00  1.66E+00  5.28E+00
7.19E+00  1.07E+01  1.26E+01  1.85E+01  9.70E-04    7
 CAN FAT/TOTAL                    0-80.5 km  1.0000  7.81E+00  5.87E+00  1.44E+01
1.91E+01  3.01E+01  3.50E+01  5.04E+01  9.70E-04    7

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF              0-16.1 km  1.0000  2.56E+01  2.35E+01  4.04E+01
4.81E+01  5.90E+01  6.38E+01  9.17E+01  1.22E-05   24
 L-EDEWBODY  TOT LIF              0-80.5 km  1.0000  1.63E+02  1.16E+02  3.25E+02
4.12E+02  6.36E+02  7.46E+02  1.11E+03  9.70E-04    7

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                    0-16.1 km  1.0000  4.09E-05  3.57E-05  7.41E-05
8.69E-05  1.16E-04  1.28E-04  1.78E-04  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                        0-1.6 km  1.0000  5.17E-02  4.83E-02  8.39E-02
9.67E-02  1.07E-01 NOT-FOUND  1.07E-01  8.96E-03  102
 L-EDEWBODY                      1.6-3.2 km  1.0000  4.09E-02  3.97E-02  6.91E-02
7.46E-02  8.75E-02  9.37E-02  1.03E-01  2.60E-03   77
 L-EDEWBODY                      3.2-4.8 km  1.0000  3.22E-02  3.12E-02  6.26E-02
7.04E-02  7.24E-02  7.33E-02  7.67E-02  3.71E-04   53
 L-EDEWBODY                      4.8-6.4 km  1.0000  2.56E-02  2.13E-02  5.10E-02
5.99E-02  7.59E-02 NOT-FOUND  7.61E-02  9.62E-03    8
 L-EDEWBODY                      6.4-8.1 km  1.0000  1.88E-02  1.55E-02  3.53E-02
4.30E-02  6.23E-02 NOT-FOUND  6.53E-02  7.91E-03   50
 L-EDEWBODY                      8.1-9.7 km  1.0000  1.37E-02  1.02E-02  2.62E-02
3.26E-02  6.31E-02 NOT-FOUND  7.16E-02  7.91E-03   50
 L-EDEWBODY                     9.7-16.1 km  1.0000  7.04E-03  6.03E-03  1.38E-02
1.73E-02  2.63E-02 NOT-FOUND  2.78E-02  7.91E-03   50
 L-EDEWBODY                    16.1-32.2 km  1.0000  2.12E-03  2.07E-03  3.65E-03
4.32E-03 NOT-FOUND NOT-FOUND  6.39E-03  1.27E-02   23
 L-EDEWBODY                    32.2-48.3 km  1.0000  8.12E-04  7.67E-04  1.25E-03
1.46E-03 NOT-FOUND NOT-FOUND  2.77E-03  1.27E-02   23
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 L-EDEWBODY                    48.3-64.4 km  1.0000  4.05E-04  3.48E-04  6.92E-04
8.76E-04 NOT-FOUND NOT-FOUND  1.21E-03  3.32E-02    7
 L-EDEWBODY                    64.4-80.5 km  1.0000  2.33E-04  2.05E-04  4.00E-04
4.96E-04  6.64E-04 NOT-FOUND  7.48E-04  7.42E-03  106

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE              1.0000  1.63E+02  1.16E+02  3.25E+02
4.12E+02  6.36E+02  7.46E+02  1.11E+03  9.70E-04    7
 LONG-TERM DIRECT EXPOSURE PATHWAYS         1.0000  1.19E+02  7.49E+01  2.76E+02
3.59E+02  5.89E+02  7.17E+02  1.02E+03  9.70E-04    7
 TOTAL INGESTION PATHWAYS DOSE              1.0000  4.41E+01  2.75E+01  1.02E+02
1.19E+02  1.67E+02  1.93E+02  2.45E+02  7.72E-06   35
 LONG-TERM GROUNDSHINE DOSE                 1.0000  1.18E+02  7.42E+01  2.73E+02
3.56E+02  5.78E+02  7.06E+02  1.01E+03  9.70E-04    7
 LONG-TERM RESUSPENSION DOSE                1.0000  1.14E+00  7.23E-01  2.67E+00
3.50E+00  5.35E+00  6.04E+00  9.79E+00  9.70E-04    7
 WATER INGESTION DOSE                       1.0000  2.58E-01  2.06E-01  5.21E-01
6.78E-01  1.05E+00  1.17E+00  1.96E+00  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE        0.6070  1.14E-01  1.08E-02  3.57E-01
5.16E-01  1.01E+00  1.16E+00  2.54E+00  2.28E-04   81
010-APR-06  19:11:31    PAGE  56          PROB                                QUANTILES
                                PEAK      PEAK  PEAK
                                                NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE        0.7146  7.05E-03  1.57E-03  2.23E-02
3.60E-02  5.86E-02  6.55E-02  1.48E-01  6.56E-04   81
 INGESTION OF GRAINS                        1.0000  1.05E+00  7.26E-01  2.64E+00
3.31E+00  5.04E+00  5.20E+00  6.96E+00  7.72E-06   35
 INGESTION OF LEAF VEG                      1.0000  1.58E+00  1.01E+00  3.69E+00
5.36E+00  1.18E+01  1.48E+01  2.28E+01  2.80E-04   48
 INGESTION OF ROOT CROPS                    1.0000  1.28E+00  8.41E-01  3.31E+00
3.98E+00  5.60E+00  6.21E+00  7.95E+00  7.72E-06   35
 INGESTION OF FRUITS                        1.0000  2.06E+00  1.31E+00  5.36E+00
6.50E+00  9.55E+00  1.02E+01  1.34E+01  7.72E-06   35
 INGESTION OF LEGUMES                       1.0000  1.18E+00  8.07E-01  3.09E+00
3.74E+00  5.14E+00  5.33E+00  7.73E+00  7.72E-06   35
 INGESTION OF BEEF                          1.0000  2.31E+01  1.34E+01  5.50E+01
6.57E+01  9.79E+01  1.02E+02  1.30E+02  7.72E-06   35
 INGESTION OF MILK                          1.0000  9.07E+00  4.82E+00  2.16E+01
2.66E+01  3.71E+01  4.20E+01  5.40E+01  7.13E-04   23
 INGESTION OF POULTRY                       1.0000  2.38E+00  1.28E+00  4.88E+00
6.89E+00  1.30E+01  1.56E+01  2.68E+01  2.80E-04   48
 INGESTION OF OTHER MEAT CROPS              1.0000  2.15E+00  1.82E+00  3.47E+00
4.38E+00  8.30E+00  1.03E+01  1.54E+01  2.80E-04   48

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                       0.9666  1.93E+06  8.96E+05  5.26E+06
8.44E+06  1.13E+07  1.21E+07  1.70E+07  1.43E-04   22
 POP.-DEPENDENT COSTS                       0.6070  5.27E+05  4.07E+04  1.65E+06
2.41E+06  4.89E+06  5.65E+06  1.06E+07  2.28E-04   81
 FARM-DEPENDENT COSTS                       0.9580  1.41E+06  2.49E+05  2.90E+06
7.46E+06  1.12E+07  1.20E+07  1.56E+07  3.83E-04   48
 POP.-DEPENDENT DECONTAMINATION COST        0.6070  1.04E+05  8.66E+03  3.46E+05
5.06E+05  9.66E+05  1.14E+06  2.22E+06  2.28E-04   81
 FARM-DEPENDENT DECONTAMINATION COST        0.7146  2.49E+04  8.93E+03  6.94E+04
8.41E+04  1.35E+05  1.68E+05  2.40E+05  6.56E-04   81
 POP.-DEPENDENT INTERDICTION COST           0.6070  4.21E+05  2.55E+04  1.28E+06
2.08E+06  3.16E+06  3.76E+06  8.26E+06  2.28E-04   81
 FARM-DEPENDENT INTERDICTION COST           0.9580  1.09E+06  1.69E+05  2.64E+06
5.44E+06  7.91E+06  8.54E+06  1.09E+07  3.83E-04   48
 POP.-DEPENDENT CONDEMNATION COST           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 FARM-DEPENDENT CONDEMNATION COST        0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EMERGENCY PHASE COST                    0.3027  1.59E+03  0.00E+00  5.24E+03
1.04E+04  2.48E+04  3.17E+04  7.58E+04  1.43E-04   81
 INTERMEDIATE PHASE COST                 0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                      0.5987  3.50E+03  1.72E+02  8.81E+03
1.55E+04  2.48E+04  2.78E+04  3.72E+04  4.40E-06   25
 CROP DISPOSAL COST                      0.9580  2.92E+05  3.74E+04  6.30E+05
1.40E+06  3.28E+06  3.53E+06  4.64E+06  3.83E-04   48

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)         0.7146  3.61E+01  1.60E+01  9.70E+01
1.22E+02  2.04E+02  2.50E+02  3.06E+02  2.68E-03   66
 POP. DECONTAMINATION (INDIVIDUALS)      0.6070  2.93E+01  2.55E+00  9.97E+01
1.36E+02  2.83E+02  3.42E+02  5.56E+02  9.42E-04   66
 FARM INTERDICTION (HECTARES)            0.9580  9.54E+02  1.58E+02  1.93E+03
5.19E+03  7.43E+03  7.91E+03  1.02E+04  3.83E-04   48
 POP. INTERDICTION (INDIVIDUALS)         0.6070  2.93E+01  2.55E+00  9.97E+01
1.36E+02  2.83E+02  3.42E+02  5.56E+02  9.42E-04   66
 FARM CONDEMNATION (HECTARES)            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 POP. CONDEMNATION (INDIVIDUALS)         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL AREA (HECTARES)           0.5987  1.79E+02  1.72E+01  4.58E+02
7.44E+02  1.06E+03  1.10E+03  1.67E+03  5.08E-06   25
 CROP DISPOSAL AREA (HECTARES)           0.9580  9.54E+02  1.58E+02  1.93E+03
5.19E+03  7.43E+03  7.91E+03  1.02E+04  3.83E-04   48
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 ERL INJ/PRODROMAL VOMIT      0-16.1 km  0.8230  1.84E-01  2.28E-02  5.57E-01
9.17E-01  1.89E+00  2.47E+00  4.93E+00  1.43E-04   81
 ERL INJ/DIARRHEA             0-16.1 km  0.5548  7.43E-02  4.62E-03  2.17E-01
3.82E-01  9.62E-01  1.23E+00  2.82E+00  1.43E-04   81
 ERL INJ/PNEUMONITIS          0-16.1 km  0.1541  4.01E-03  0.00E+00  1.37E-03
8.11E-03  1.04E-01  1.63E-01  9.79E-01  4.28E-04   81
 ERL INJ/THYROIDITIS          0-16.1 km  0.3471  6.56E-03  0.00E+00  1.52E-02
3.41E-02  1.17E-01  1.87E-01  4.40E-01  5.71E-05   81
 ERL INJ/HYPOTHYROIDISM       0-16.1 km  0.9339  7.44E-01  4.24E-01  1.87E+00
2.47E+00  3.64E+00  4.13E+00  6.39E+00  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA        0-16.1 km  0.9707  4.48E+01  3.79E+01  8.98E+01
1.04E+02  1.25E+02  1.35E+02  1.70E+02  6.28E-04   59
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.8930  1.22E+01  8.25E+00  2.79E+01
3.92E+01  7.15E+01  7.73E+01  1.02E+02  5.14E-04   50
 CAN FAT/TOTAL                0-16.1 km  1.0000  2.90E+01  2.59E+01  4.22E+01
5.02E+01  6.36E+01  7.03E+01  9.87E+01  2.00E-04   81
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.84E+02  1.19E+02  3.98E+02
5.79E+02  8.31E+02  9.22E+02  1.10E+03  1.91E-04   29
 CAN FAT/THYROID              0-80.5 km  1.0000  5.75E+01  3.35E+01  1.29E+02
1.82E+02  2.83E+02  3.35E+02  5.15E+02  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  1.34E+02  9.15E+01  2.75E+02
4.26E+02  6.02E+02  6.61E+02  8.10E+02  5.50E-05   63
 CAN FAT/GI                   0-80.5 km  1.0000  3.22E+02  2.19E+02  6.42E+02
1.02E+03  1.23E+03  1.33E+03  1.91E+03  1.91E-04   29
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  1.05E+02  7.13E+01  2.04E+02
3.24E+02  4.78E+02  5.15E+02  6.22E+02  1.91E-04   29
 CAN FAT/BONE                 0-80.5 km  1.0000  1.33E+01  8.94E+00  2.76E+01
3.93E+01  5.93E+01  6.58E+01  7.81E+01  1.91E-04   29
 CAN FAT/OTHER                0-80.5 km  1.0000  3.98E+02  2.61E+02  8.49E+02
1.11E+03  1.65E+03  1.96E+03  2.34E+03  1.91E-04   29
 CAN INJ/THYROID              0-80.5 km  1.0000  5.75E+02  3.35E+02  1.29E+03
1.82E+03  2.83E+03  3.35E+03  5.15E+03  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  4.22E+02  2.87E+02  8.60E+02
1.16E+03  1.89E+03  2.05E+03  2.55E+03  5.50E-05   63
 CAN FAT/TOTAL                0-80.5 km  1.0000  1.21E+03  8.02E+02  2.53E+03
3.56E+03  5.28E+03  5.55E+03  7.21E+03  1.91E-04   29
 ERL FAT/TOTAL                0-80.5 km  0.4391  1.98E-02  0.00E+00  3.73E-02
8.49E-02  3.59E-01  7.56E-01  1.63E+00  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.8230  1.84E-01  2.28E-02  5.57E-01
9.17E-01  1.89E+00  2.47E+00  4.93E+00  1.43E-04   81
 ERL INJ/DIARRHEA             0-80.5 km  0.5548  7.43E-02  4.62E-03  2.17E-01
3.82E-01  9.62E-01  1.23E+00  2.82E+00  1.43E-04   81
 ERL INJ/PNEUMONITIS          0-80.5 km  0.1541  4.01E-03  0.00E+00  1.37E-03
8.11E-03  1.04E-01  1.63E-01  9.79E-01  4.28E-04   81
 ERL INJ/THYROIDITIS          0-80.5 km  0.3471  6.56E-03  0.00E+00  1.52E-02
3.41E-02  1.17E-01  1.87E-01  4.40E-01  5.71E-05   81
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9339  8.63E-01  4.24E-01  1.89E+00
2.59E+00  4.84E+00  1.08E+01  6.29E+01  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9707  2.11E+02  3.88E+01  1.93E+02
6.05E+02  3.93E+03  6.05E+03  3.39E+04  9.99E-04   83
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.8930  1.22E+01  8.25E+00  2.79E+01
3.92E+01  7.15E+01  7.73E+01  1.02E+02  5.14E-04   50

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.6967  7.79E-02  7.71E-02  1.45E-01
2.04E-01 NOT-FOUND NOT-FOUND  3.22E-01  1.15E-02   66

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.4391  1.89E-01  0.00E+00  7.36E-01
1.17E+00  2.25E+00  2.92E+00  5.23E+00  1.43E-04   81
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	PEAK	PEAK	PROB PEAK NON-ZERO	MEAN	QUANTILES 50TH	90TH	95TH

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     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv            0.1541  3.09E-02  0.00E+00  5.98E-02
1.31E-01  8.64E-01  1.15E+00  2.49E+00  1.43E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv         0.8539  4.29E+00  2.29E+00  1.06E+01
1.41E+01  2.65E+01  3.21E+01  5.48E+01  5.14E-04   50
 EARLY dose L-EDEWBODY > 0.250 Sv        0.9791  4.35E+02  5.07E+01  9.19E+02
2.13E+03  5.85E+03  2.00E+04  2.01E+04  2.00E-03   83

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.6967  5.16E-04  2.11E-05  1.94E-03
2.85E-03  3.69E-03  4.06E-03  4.63E-03  1.91E-03   87
 ERL FAT/TOTAL               1.6-3.2 km  0.2059  2.55E-05  0.00E+00  3.45E-05
8.51E-05  8.31E-04  1.20E-03  1.60E-03  2.54E-03   81
 ERL FAT/TOTAL               3.2-4.8 km  0.0541  1.67E-06  0.00E+00  0.00E+00
3.26E-06  3.15E-05  1.02E-04  3.27E-04  2.54E-03  103
 ERL FAT/TOTAL               4.8-6.4 km  0.0115  5.11E-08  0.00E+00  0.00E+00
0.00E+00  3.15E-06  3.98E-06  6.61E-06  2.54E-03   81
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  6.13E+02  5.61E+02  8.93E+02
1.02E+03  1.24E+03  1.34E+03  1.96E+03  2.00E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.83E+04  1.85E+04  5.85E+04
8.96E+04  1.15E+05  1.23E+05  1.70E+05  1.91E-04   29

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.4391  3.74E-05  0.00E+00  7.76E-05
1.70E-04  7.25E-04  1.15E-03  3.26E-03  5.71E-05   81
 CAN FAT/TOTAL                0-16.1 km  1.0000  7.63E-04  7.23E-04  1.04E-03
1.10E-03  1.25E-03  1.33E-03  2.14E-03  5.28E-06   33

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  9.44E-01  6.41E-01  1.69E+00
2.41E+00 NOT-FOUND NOT-FOUND  5.70E+00  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  4.10E-01  3.36E-01  7.67E-01
8.93E-01  1.36E+00  1.65E+00  2.51E+00  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  2.63E-01  2.36E-01  4.20E-01
5.07E-01  7.05E-01  8.41E-01  1.19E+00  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  2.13E-01  2.11E-01  3.08E-01
3.60E-01  5.03E-01  5.20E-01  5.37E-01  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.82E-01  1.79E-01  2.36E-01
2.55E-01  3.09E-01  3.55E-01  4.08E-01  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.65E-01  1.28E-01  2.19E-01
2.38E-01  2.91E-01 NOT-FOUND  3.31E-01  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  1.46E-01  1.23E-01  2.12E-01
2.34E-01  2.93E-01 NOT-FOUND  2.97E-01  8.96E-03   66
 L-EDEWBODY                16.1-32.2 km  1.0000  2.64E-01  2.44E-01  3.91E-01
4.57E-01  6.55E-01 NOT-FOUND  7.57E-01  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  1.66E-01  1.39E-01  2.12E-01
2.20E-01  2.41E-01  2.50E-01  3.11E-01  2.00E-04   40
 L-EDEWBODY                48.3-64.4 km  1.0000  1.25E-01  1.07E-01  1.66E-01
2.00E-01  2.46E-01 NOT-FOUND  2.55E-01  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  8.80E-02  8.06E-02  1.24E-01
1.41E-01  1.89E-01 NOT-FOUND  2.07E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input
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SOURCE TERM 8 OF 11:
Case 8-OPVB

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

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE

10-APR-05 19:11:31 PAGE 59

		PROB			QUANTILES					
		PEAK CONS	PEAK PROB	PEAK NON-ZERO TRIAL	MEAN	50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/LUNG	0-80.5 km	1.0000	5.43E+01	9.70E-04	7	3.00E+01	1.29E+02	1.88E+02	3.13E+02	3.69E+02
CAN FAT/THYROID	0-80.5 km	1.0000	4.26E+01	9.70E-04	7	2.30E+01	1.10E+02	1.41E+02	2.26E+02	2.57E+02
CAN FAT/BREAST	0-80.5 km	1.0000	2.96E+01	9.70E-04	7	1.61E+01	6.97E+01	9.68E+01	1.83E+02	2.23E+02
CAN FAT/GI	0-80.5 km	1.0000	7.52E+01	9.70E-04	7	4.05E+01	1.67E+02	2.61E+02	4.30E+02	5.14E+02
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	2.36E+01	9.70E-04	7	1.23E+01	5.37E+01	8.07E+01	1.36E+02	1.59E+02
CAN FAT/BONE	0-80.5 km	1.0000	3.97E+00	4.00E-04	106	2.16E+00	1.00E+01	1.28E+01	2.16E+01	2.51E+01
CAN FAT/OTHER	0-80.5 km	1.0000	1.33E+02	4.00E-04	106	7.38E+01	3.28E+02	4.77E+02	7.24E+02	8.24E+02
CAN INJ/THYROID	0-80.5 km	1.0000	4.26E+02	9.70E-04	7	2.30E+02	1.10E+03	1.41E+03	2.26E+03	2.57E+03
CAN INJ/BREAST	0-80.5 km	1.0000	9.31E+01	9.70E-04	7	4.97E+01	2.10E+02	2.97E+02	5.39E+02	6.16E+02
CAN FAT/TOTAL	0-80.5 km	1.0000	3.62E+02	9.70E-04	7	2.01E+02	8.54E+02	1.15E+03	2.04E+03	2.38E+03
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.0000	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.0074	1.19E-01			0.00E+00	0.00E+00			

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0.00E+00  0.00E+00  7.83E+00  6.02E+01  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.1140  1.66E+02  0.00E+00  1.19E+02
5.15E+02  3.60E+03  5.94E+03  3.38E+04  9.99E-04   83
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.1497  3.88E+02  0.00E+00  8.58E+02
2.07E+03  5.85E+03 NOT-FOUND  2.00E+04  6.11E-03   22

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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                          PEAK      PEAK  PROB  PEAK                          QUANTILES
                                          NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  9.19E+03  5.08E+03  2.29E+04
3.11E+04  5.16E+04  5.83E+04  1.07E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                16.1-32.2 km  1.0000  1.85E-01  1.49E-01  2.93E-01
3.40E-01  4.71E-01 NOT-FOUND  6.33E-01  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  1.11E-01  1.07E-01  1.82E-01
2.03E-01  2.15E-01  2.21E-01  2.48E-01  2.00E-04   40
 L-EDEWBODY                48.3-64.4 km  1.0000  6.26E-02  5.47E-02  1.06E-01
1.25E-01  1.86E-01 NOT-FOUND  2.27E-01  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  3.56E-02  2.98E-02  6.98E-02
8.24E-02  1.56E-01 NOT-FOUND  1.84E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  8 OF 11:
    Case 8-OPVB

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31     PAGE  61          PROB                              QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.4391  3.97E-01  0.00E+00  7.39E-01
1.70E+00  7.40E+00  1.40E+01  3.26E+01  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.8230  3.68E+00  4.65E-01  1.10E+01
1.82E+01  4.01E+01  5.17E+01  9.85E+01  2.57E-04   81
 ERL INJ/DIARRHEA              0-16.1 km  0.5548  1.49E+00  9.36E-02  4.41E+00
7.93E+00  1.92E+01  2.74E+01  5.63E+01  1.43E-04   81
 ERL INJ/PNEUMONITIS           0-16.1 km  0.1541  8.02E-02  0.00E+00  3.05E-02
1.47E-01  2.06E+00  2.87E+00  1.96E+01  5.71E-05   81
 ERL INJ/THYROIDITIS           0-16.1 km  0.3471  1.31E-01  0.00E+00  3.07E-01
6.87E-01  2.30E+00  3.45E+00  8.79E+00  4.28E-04   81
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.9339  1.49E+01  8.58E+00  3.70E+01
5.04E+01  7.49E+01  8.40E+01  1.28E+02  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9707  8.97E+02  7.79E+02  1.74E+03
2.15E+03  3.01E+03  3.10E+03  3.41E+03  6.28E-04   59
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.8930  2.43E+02  1.56E+02  5.63E+02
7.79E+02  1.21E+03  1.36E+03  2.04E+03  5.14E-04   50
 CAN FAT/TOTAL                 0-16.1 km  1.0000  5.64E+01  4.64E+01  1.07E+02
1.26E+02  1.81E+02  2.07E+02  2.74E+02  7.13E-04   66
 CAN FAT/LUNG                  0-80.5 km  1.0000  6.41E+01  4.01E+01  1.34E+02
1.91E+02  3.23E+02  3.85E+02  6.40E+02  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  5.09E+01  3.25E+01  1.13E+02
1.48E+02  2.31E+02  2.60E+02  4.85E+02  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  3.09E+01  1.76E+01  7.13E+01
9.71E+01  1.83E+02  2.23E+02  3.57E+02  9.70E-04    7
 CAN FAT/GI                    0-80.5 km  1.0000  8.25E+01  4.98E+01  1.82E+02
2.71E+02  4.74E+02  5.52E+02  9.04E+02  9.70E-04    7
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  2.57E+01  1.46E+01  5.69E+01
8.45E+01  1.36E+02  1.59E+02  2.85E+02  9.70E-04    7
 CAN FAT/BONE                  0-80.5 km  1.0000  4.71E+00  3.05E+00  1.08E+01
1.43E+01  2.29E+01  2.59E+01  4.93E+01  4.00E-04  106
 CAN FAT/OTHER                 0-80.5 km  1.0000  1.60E+02  1.04E+02  3.53E+02
5.08E+02  7.46E+02  8.52E+02  1.62E+03  4.00E-04  106
 CAN INJ/THYROID               0-80.5 km  1.0000  5.09E+02  3.25E+02  1.13E+03
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1.48E+03  2.31E+03  2.60E+03  4.85E+03  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  9.73E+01  5.43E+01  2.16E+02
3.13E+02  5.39E+02  6.16E+02  1.12E+03  9.70E-04    7
 CAN FAT/TOTAL                 0-80.5 km  1.0000  4.19E+02  2.61E+02  9.90E+02
1.25E+03  2.08E+03  2.41E+03  4.22E+03  9.70E-04    7
 ERL FAT/TOTAL                 0-80.5 km  0.4391  3.97E-01  0.00E+00  7.39E-01
1.70E+00  7.40E+00  1.40E+01  3.26E+01  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.8230  3.68E+00  4.65E-01  1.10E+01
1.82E+01  4.01E+01  5.17E+01  9.85E+01  2.57E-04   81
 ERL INJ/DIARRHEA              0-80.5 km  0.5548  1.49E+00  9.36E-02  4.41E+00
7.93E+00  1.92E+01  2.74E+01  5.63E+01  1.43E-04   81
 ERL INJ/PNEUMONITIS           0-80.5 km  0.1541  8.02E-02  0.00E+00  3.05E-02
1.47E-01  2.06E+00  2.87E+00  1.96E+01  5.71E-05   81
 ERL INJ/THYROIDITIS           0-80.5 km  0.3471  1.31E-01  0.00E+00  3.07E-01
6.87E-01  2.30E+00  3.45E+00  8.79E+00  4.28E-04   81
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.9339  1.50E+01  8.58E+00  3.72E+01
5.08E+01  7.78E+01  8.90E+01  1.28E+02  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.9707  1.06E+03  7.90E+02  2.11E+03
2.73E+03  5.58E+03  8.40E+03  3.55E+04  9.99E-04   83
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.8930  2.43E+02  1.56E+02  5.63E+02
7.79E+02  1.21E+03  1.36E+03  2.04E+03  5.14E-04   50

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.6967  1.56E+00  1.21E+00  3.41E+00
3.85E+00 NOT-FOUND NOT-FOUND  6.44E+00  1.15E-02   66

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.4391  3.78E+00  0.00E+00  1.21E+01
2.38E+01  4.65E+01  5.80E+01  1.05E+02  1.43E-04   81
 EARLY dose A-LUNGS > 5.00 Sv              0.1541  6.17E-01  0.00E+00  1.12E+00
2.60E+00  1.59E+01  2.43E+01  4.97E+01  1.43E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv           0.8539  8.57E+01  4.42E+01  2.16E+02
3.05E+02  5.12E+02  6.46E+02  1.10E+03  5.14E-04   50
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9791  1.32E+03  1.01E+03  2.30E+03
3.38E+03  8.26E+03  2.03E+04  2.17E+04  2.00E-03   83

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.6967  1.03E-02  4.03E-04  3.51E-02
5.09E-02  7.10E-02  7.94E-02  9.27E-02  1.91E-03   87
 ERL FAT/TOTAL               1.6-3.2 km  0.2059  5.10E-04  0.00E+00  7.03E-04
1.53E-03  1.39E-02  2.34E-02  3.20E-02  2.54E-03   81
 ERL FAT/TOTAL               3.2-4.8 km  0.0541  3.34E-05  0.00E+00  0.00E+00
7.42E-05  5.16E-04  2.02E-03  6.54E-03  2.54E-03  103
 ERL FAT/TOTAL               4.8-6.4 km  0.0115  1.02E-06  0.00E+00  0.00E+00
0.00E+00  7.24E-05  8.52E-05  1.32E-04  2.54E-03   81
□10-APR-06  19:11:31    PAGE  62          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.05E+03  8.79E+02  2.03E+03
2.42E+03  3.27E+03  3.54E+03  5.57E+03  2.28E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.02E+04  6.10E+03  2.36E+04
3.14E+04  5.18E+04  5.94E+04  1.08E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.4391  7.49E-04  0.00E+00  1.54E-03
3.34E-03  1.44E-02  2.43E-02  6.52E-02  5.71E-05   81
 CAN FAT/TOTAL                0-16.1 km  1.0000  2.74E-03  2.24E-03  5.35E-03
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6.55E-03  9.00E-03  1.02E-02  1.33E-02  7.13E-04   66

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  1.0000  1.77E+01  1.32E+01  3.57E+01
4.93E+01 NOT-FOUND NOT-FOUND  1.14E+02  1.24E-02  110
 L-EDEWBODY                  1.6-3.2 km  1.0000  6.02E+00  4.05E+00  1.24E+01
1.63E+01  3.21E+01  3.90E+01  4.71E+01  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  3.12E+00  2.14E+00  6.80E+00
1.01E+01  1.46E+01  1.71E+01  2.38E+01  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  1.97E+00  1.38E+00  4.75E+00
6.27E+00  1.01E+01  1.04E+01  1.07E+01  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  1.34E+00  8.80E-01  3.09E+00
4.02E+00  7.10E+00  7.62E+00  8.16E+00  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  9.50E-01  6.57E-01  2.11E+00
2.88E+00  4.67E+00 NOT-FOUND  6.62E+00  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  4.95E-01  3.57E-01  1.03E+00
1.40E+00  2.53E+00 NOT-FOUND  2.71E+00  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  1.85E-01  1.49E-01  2.93E-01
3.40E-01  4.71E-01 NOT-FOUND  6.33E-01  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  1.11E-01  1.07E-01  1.82E-01
2.03E-01  2.15E-01  2.21E-01  2.48E-01  2.00E-04   40
 L-EDEWBODY                48.3-64.4 km  1.0000  6.26E-02  5.47E-02  1.06E-01
1.25E-01  1.86E-01 NOT-FOUND  2.27E-01  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  3.56E-02  2.98E-02  6.98E-02
8.24E-02  1.56E-01 NOT-FOUND  1.84E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM  8 OF 11:
    Case 8-OPVB

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31    PAGE  63          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  2.61E+01  2.34E+01  3.82E+01
4.51E+01  5.86E+01  6.44E+01  8.87E+01  2.00E-04   81
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.29E+02  8.99E+01  2.78E+02
3.86E+02  5.55E+02  5.95E+02  7.48E+02  1.91E-04   29
 CAN FAT/THYROID               0-80.5 km  1.0000  1.45E+01  1.00E+01  2.96E+01
5.03E+01  6.47E+01  7.07E+01  8.37E+01  1.91E-04   29
 CAN FAT/BREAST                0-80.5 km  1.0000  1.04E+02  7.25E+01  2.19E+02
3.19E+02  4.52E+02  5.06E+02  6.06E+02  1.91E-04   29
 CAN FAT/GI                    0-80.5 km  1.0000  2.46E+02  1.71E+02  4.94E+02
7.68E+02  1.06E+03  1.11E+03  1.41E+03  1.91E-04   29
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  8.12E+01  5.67E+01  1.75E+02
2.48E+02  3.32E+02  3.52E+02  4.62E+02  1.91E-04   29
 CAN FAT/BONE                  0-80.5 km  1.0000  9.34E+00  6.56E+00  1.91E+01
3.05E+01  3.73E+01  4.08E+01  5.27E+01  1.91E-04   29
 CAN FAT/OTHER                 0-80.5 km  1.0000  2.64E+02  1.83E+02  5.53E+02
8.11E+02  1.09E+03  1.16E+03  1.52E+03  1.91E-04   29
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 CAN INJ/THYROID                0-80.5 km  1.0000  1.45E+02  1.00E+02  2.96E+02
5.03E+02  6.47E+02  7.07E+02  8.37E+02  1.91E-04   29
 CAN INJ/BREAST                 0-80.5 km  1.0000  3.29E+02  2.25E+02  6.81E+02
1.02E+03  1.22E+03  1.32E+03  1.91E+03  1.91E-04   29
 CAN FAT/TOTAL                  0-80.5 km  1.0000  8.49E+02  5.92E+02  1.86E+03
2.70E+03  3.41E+03  3.63E+03  4.88E+03  1.91E-04   29

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  5.60E+02  5.24E+02  8.13E+02
9.51E+02  1.16E+03  1.25E+03  1.77E+03  2.00E-04   81
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  1.91E+04  1.26E+04  4.11E+04
5.92E+04  8.34E+04  9.22E+04  1.10E+05  1.91E-04   29

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                  0-16.1 km  1.0000  6.26E-04  5.89E-04  8.78E-04
9.93E-04  1.15E-03  1.22E-03  2.05E-03  5.28E-06   33

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  0.3598  5.81E-02  0.00E+00  1.44E-01
1.76E-01 NOT-FOUND NOT-FOUND  1.99E-01  3.32E-02   82
 L-EDEWBODY                    1.6-3.2 km  0.8134  1.09E-01  1.04E-01  1.29E-01
1.42E-01  1.78E-01  1.96E-01  2.00E-01  4.31E-03    1
 L-EDEWBODY                    3.2-4.8 km  0.8890  1.07E-01  1.02E-01  1.18E-01
1.26E-01  1.45E-01  1.54E-01  1.99E-01  2.85E-04   19
 L-EDEWBODY                    4.8-6.4 km  0.8924  1.15E-01  1.04E-01  1.58E-01
1.89E-01 NOT-FOUND NOT-FOUND  2.00E-01  3.99E-02   65
 L-EDEWBODY                    6.4-8.1 km  0.9014  1.15E-01  1.04E-01  1.45E-01
1.67E-01  2.00E-01  2.00E-01  2.01E-01  1.43E-04   44
 L-EDEWBODY                    8.1-9.7 km  0.9129  1.17E-01  1.03E-01  1.18E-01
1.26E-01  1.45E-01  1.55E-01  2.00E-01  2.85E-04  109
 L-EDEWBODY                   9.7-16.1 km  0.9773  1.21E-01  1.07E-01  1.38E-01
1.53E-01  1.97E-01 NOT-FOUND  2.00E-01  8.96E-03   66
 L-EDEWBODY                  16.1-32.2 km  1.0000  7.93E-02  7.61E-02  1.05E-01
1.12E-01 NOT-FOUND NOT-FOUND  1.25E-01  1.27E-02   23
 L-EDEWBODY                  32.2-48.3 km  1.0000  5.50E-02  5.16E-02  8.41E-02
9.60E-02 NOT-FOUND NOT-FOUND  1.07E-01  3.99E-02  111
 L-EDEWBODY                  48.3-64.4 km  1.0000  6.24E-02  6.16E-02  8.04E-02
8.60E-02  1.00E-01  1.01E-01  1.06E-01  2.00E-04   40
 L-EDEWBODY                  64.4-80.5 km  1.0000  5.23E-02  4.99E-02  7.31E-02
7.64E-02  8.46E-02  8.84E-02  1.07E-01  7.13E-04   63

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  1.91E+04  1.26E+04  4.11E+04
5.92E+04  8.34E+04  9.22E+04  1.10E+05  1.91E-04   29
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  1.80E+04  1.16E+04  3.99E+04
5.83E+04  7.88E+04  8.46E+04  1.07E+05  1.91E-04   29
 TOTAL INGESTION PATHWAYS DOSE            1.0000  4.35E+02  3.82E+02  6.69E+02
7.84E+02  1.05E+03  1.13E+03  1.68E+03  1.14E-04   81
 LONG-TERM GROUNDSHINE DOSE               1.0000  1.77E+04  1.14E+04  3.94E+04
5.71E+04  7.81E+04  8.41E+04  1.05E+05  1.91E-04   29
 LONG-TERM RESUSPENSION DOSE              1.0000  3.03E+02  2.07E+02  6.73E+02
9.78E+02  1.26E+03  1.39E+03  1.81E+03  7.99E-04   39
 WATER INGESTION DOSE                     1.0000  2.08E+02  1.53E+02  4.05E+02
5.35E+02  8.41E+02  1.00E+03  1.53E+03  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE      1.0000  6.39E+02  3.43E+02  1.65E+03
2.29E+03  3.87E+03  5.04E+03  7.34E+03  9.70E-04    7
10-APR-06  19:11:31     PAGE  64          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE      1.0000  1.99E+01  1.82E+01  3.59E+01
4.42E+01  6.07E+01  6.78E+01  8.83E+01  7.13E-04   23
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 INGESTION OF GRAINS                          1.0000  7.79E+00  5.15E+00  1.58E+01
2.04E+01  2.54E+01  2.80E+01  4.11E+01  4.40E-06   44
 INGESTION OF LEAF VEG                        1.0000  2.32E+01  2.12E+01  3.61E+01
4.22E+01  5.50E+01  5.94E+01  9.73E+01  4.40E-06   44
 INGESTION OF ROOT CROPS                      1.0000  1.69E+01  1.38E+01  2.86E+01
3.22E+01  3.95E+01  4.31E+01  6.97E+01  4.40E-06   44
 INGESTION OF FRUITS                          1.0000  2.51E+01  2.27E+01  3.93E+01
4.68E+01  5.79E+01  6.24E+01  9.79E+01  4.40E-06   44
 INGESTION OF LEGUMES                         1.0000  2.45E+01  2.24E+01  3.57E+01
4.08E+01  5.18E+01  5.40E+01  8.24E+01  4.40E-06   44
 INGESTION OF BEEF                            1.0000  4.81E+01  2.49E+01  1.13E+02
1.46E+02  2.33E+02  2.68E+02  3.54E+02  4.00E-04   96
 INGESTION OF MILK                            1.0000  4.86E+01  2.08E+01  1.16E+02
1.42E+02  2.11E+02  2.32E+02  3.51E+02  4.00E-04   96
 INGESTION OF POULTRY                         1.0000  1.79E+01  1.35E+01  3.18E+01
4.34E+01  6.28E+01  7.07E+01  1.06E+02  4.00E-04   49
 INGESTION OF OTHER MEAT CROPS                1.0000  1.54E+01  5.39E+00  3.96E+01
4.99E+01  6.37E+01  7.06E+01  9.46E+01  4.00E-04   96

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                         1.0000  3.45E+09  1.68E+09  7.92E+09
1.07E+10  1.78E+10  2.20E+10  3.14E+10  9.70E-04    7
 POP.-DEPENDENT COSTS                         1.0000  3.25E+09  1.41E+09  7.91E+09
1.07E+10  1.78E+10  2.20E+10  3.13E+10  4.00E-04  106
 FARM-DEPENDENT COSTS                         1.0000  1.98E+08  1.86E+08  3.18E+08
3.51E+08  4.42E+08  4.87E+08  7.09E+08  1.06E-05   34
 POP.-DEPENDENT DECONTAMINATION COST          1.0000  7.53E+08  3.02E+08  2.11E+09
2.97E+09  4.75E+09  6.64E+09  9.79E+09  9.70E-04    7
 FARM-DEPENDENT DECONTAMINATION COST          1.0000  3.17E+07  3.05E+07  5.26E+07
6.04E+07  7.83E+07  8.57E+07  1.23E+08  7.72E-06   35
 POP.-DEPENDENT INTERDICTION COST             1.0000  2.47E+09  9.87E+08  5.66E+09
9.76E+09  1.39E+10  1.61E+10  2.14E+10  4.00E-04   37
 FARM-DEPENDENT INTERDICTION COST             1.0000  1.24E+08  1.05E+08  2.25E+08
2.60E+08  3.16E+08  3.28E+08  4.57E+08  1.06E-05   35
 POP.-DEPENDENT CONDEMNATION COST             0.8717  2.92E+07  2.00E+07  7.03E+07
9.10E+07  2.03E+08  2.11E+08  2.85E+08  1.71E-05  101
 FARM-DEPENDENT CONDEMNATION COST             0.8829  1.59E+06  1.22E+06  3.21E+06
4.20E+06  7.27E+06  7.47E+06  9.80E+06  6.16E-06  101
 EMERGENCY PHASE COST                         0.9961  2.78E+06  1.45E+06  4.96E+06
1.13E+07  3.15E+07  3.44E+07  3.98E+07  1.63E-03   23
 INTERMEDIATE PHASE COST                      0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                           1.0000  1.49E+06  9.54E+05  3.31E+06
4.62E+06  6.01E+06  6.56E+06  7.50E+06  9.50E-04    3
 CROP DISPOSAL COST                           1.0000  3.90E+07  3.40E+07  7.12E+07
7.79E+07  9.58E+07  1.04E+08  1.22E+08  1.28E-03    3

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)              1.0000  3.34E+04  3.19E+04  5.71E+04
7.01E+04  7.74E+04  8.07E+04  1.43E+05  7.72E-06   35
 POP. DECONTAMINATION (INDIVIDUALS)           1.0000  1.51E+05  5.76E+04  3.83E+05
6.38E+05  1.04E+06  1.06E+06  1.20E+06  2.64E-05   35
 FARM INTERDICTION (HECTARES)                 1.0000  8.41E+04  7.56E+04  1.26E+05
1.47E+05  2.06E+05  2.24E+05  2.68E+05  1.22E-03   39
 POP. INTERDICTION (INDIVIDUALS)              1.0000  1.51E+05  5.76E+04  3.83E+05
6.38E+05  1.04E+06  1.06E+06  1.20E+06  2.64E-05   35
 FARM CONDEMNATION (HECTARES)                 0.8829  2.28E+02  1.74E+02  4.39E+02
5.70E+02  9.88E+02  1.03E+03  1.35E+03  7.11E-06  101
 POP. CONDEMNATION (INDIVIDUALS)              0.8717  2.17E+02  1.38E+02  5.02E+02
6.43E+02  1.28E+03  1.64E+03  2.05E+03  1.71E-05  101
 MILK DISPOSAL AREA (HECTARES)                1.0000  8.49E+04  7.59E+04  1.26E+05
1.47E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
 CROP DISPOSAL AREA (HECTARES)                1.0000  8.44E+04  7.56E+04  1.26E+05
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1.47E+05 2.06E+05 2.25E+05 2.68E+05 1.28E-03 3

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XXXX
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"CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

SOURCE TERM 9 OF 11:
Case 9-OPW1

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

FRACTION OF THE PEOPLE

COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE
0.950

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE
0.050

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

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

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

10-APR-06 19:11:31 PAGE 65

		PEAK CONS	PROB PEAK PROB	PROB PEAK NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES										
ERL FAT/TOTAL	0-16.1 km	0.7261	2.25E-01	1.85E-02	7.49E-01	1.21E+00	2.55E+00	3.17E+00	6.36E+00	1.43E-04 81
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.8713	1.03E+00	3.12E-01	3.05E+00	4.09E+00	7.14E+00	8.12E+00	1.44E+01	2.28E-04 81
ERL INJ/DIARRHEA	0-16.1 km	0.8447	5.04E-01	1.16E-01	1.48E+00	2.24E+00	3.91E+00	4.78E+00	9.20E+00	1.43E-04 81
ERL INJ/PNEUMONITIS	0-16.1 km	0.4981	5.31E-02	0.00E+00	1.14E-01	2.37E-01	9.73E-01	1.55E+00	3.48E+00	1.43E-04 103
ERL INJ/THYROIDITIS	0-16.1 km	0.6309	4.92E-02	3.49E-03	1.44E-01	2.46E-01	5.97E-01	8.36E-01	1.70E+00	1.43E-04 81
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.9553	2.06E+00	1.43E+00	4.84E+00	6.06E+00	8.33E+00	9.26E+00	1.32E+01	2.28E-04 81
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.9987	8.28E+01	8.25E+01	1.15E+02	1.24E+02	1.48E+02	1.60E+02	2.02E+02	6.28E-04 80
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.9457	2.92E+01	2.29E+01	6.57E+01	7.82E+01	1.04E+02	1.12E+02	1.43E+02	5.71E-04 116
CAN FAT/TOTAL	0-16.1 km	1.0000	5.28E+01	4.16E+01	9.79E+01	1.18E+02	1.76E+02	2.04E+02	3.07E+02	1.43E-04 81
CAN FAT/LUNG	0-80.5 km	1.0000	3.20E+02	2.22E+02	6.55E+02	8.58E+02	1.23E+03	1.39E+03	1.84E+03	9.70E-04 7
CAN FAT/THYROID	0-80.5 km	1.0000	1.14E+02	7.06E+01	2.69E+02	3.55E+02	5.42E+02	6.01E+02	1.04E+03	9.70E-04 7
CAN FAT/BREAST	0-80.5 km	1.0000	2.42E+02	1.65E+02	5.35E+02	6.91E+02	9.22E+02	1.03E+03	1.30E+03	9.70E-04 7
CAN FAT/GI	0-80.5 km	1.0000	5.94E+02	4.05E+02	1.22E+03	1.56E+03	2.24E+03	2.44E+03	3.27E+03	9.70E-04 7
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.86E+02	1.30E+02	3.88E+02	5.07E+02	6.94E+02	7.75E+02	9.99E+02	9.70E-04 7
CAN FAT/BONE	0-80.5 km	1.0000	2.02E+01	1.40E+01	4.27E+01					

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5.47E+01  7.62E+01  8.26E+01  1.11E+02  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  7.43E+02  5.04E+02  1.48E+03
1.96E+03  2.72E+03  3.17E+03  5.21E+03  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  1.14E+03  7.06E+02  2.69E+03
3.55E+03  5.42E+03  6.01E+03  1.04E+04  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  7.63E+02  5.28E+02  1.60E+03
2.07E+03  2.78E+03  3.14E+03  4.11E+03  9.70E-04    7
 CAN FAT/TOTAL                0-80.5 km  1.0000  2.22E+03  1.52E+03  4.50E+03
5.88E+03  8.62E+03  9.78E+03  1.38E+04  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.7261  2.25E-01  1.85E-02  7.49E-01
1.21E+00  2.55E+00  3.17E+00  6.36E+00  1.43E-04   81
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.8713  1.03E+00  3.12E-01  3.05E+00
4.09E+00  7.14E+00  8.12E+00  1.44E+01  2.28E-04   81
 ERL INJ/DIARRHEA             0-80.5 km  0.8447  5.04E-01  1.16E-01  1.48E+00
2.24E+00  3.91E+00  4.78E+00  9.20E+00  1.43E-04   81
 ERL INJ/PNEUMONITIS          0-80.5 km  0.4981  5.31E-02  0.00E+00  1.14E-01
2.37E-01  9.73E-01  1.55E+00  3.48E+00  1.43E-04  103
 ERL INJ/THYROIDITIS          0-80.5 km  0.6309  4.92E-02  3.49E-03  1.44E-01
2.46E-01  5.97E-01  8.36E-01  1.70E+00  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.9553  5.86E+00  1.44E+00  9.48E+00
2.30E+01  7.03E+01  1.26E+02  3.84E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.9987  1.96E+03  2.04E+02  5.21E+03
8.08E+03  3.14E+04  3.61E+04  5.65E+04  9.99E-04   37
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.9457  4.99E+01  2.29E+01  6.95E+01
9.00E+01  4.84E+02  1.17E+03  6.99E+03  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.8432  1.47E-01  1.03E-01  3.10E-01
3.74E-01 NOT-FOUND NOT-FOUND  4.82E-01  1.94E-02   50

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.7261  1.25E+00  1.70E-01  3.74E+00
5.20E+00  9.89E+00  1.11E+01  1.82E+01  2.28E-04   81
10-APR-06  19:11:31    PAGE  66          PROB                          QUANTILES
                         PEAK       PEAK  PEAK
                                      NON-ZERO    MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.4981  2.98E-01  0.00E+00  1.09E+00
1.60E+00  3.49E+00  4.17E+00  7.20E+00  1.43E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv          0.8863  1.12E+01  7.91E+00  2.61E+01
3.43E+01  5.32E+01  5.86E+01  8.39E+01  5.14E-04   50
 EARLY dose L-EDEWBODY > 0.250 Sv         0.9961  3.52E+03  1.17E+03  6.38E+03
2.20E+04  3.73E+04  4.34E+04  8.04E+04  2.63E-03   69

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.8432  1.85E-03  1.36E-03  3.62E-03
4.06E-03  5.30E-03  5.91E-03  6.88E-03  1.91E-03    5
 ERL FAT/TOTAL               1.6-3.2 km  0.5125  2.93E-04  2.32E-06  1.18E-03
1.63E-03  2.40E-03  2.67E-03  2.95E-03  2.60E-03   77
 ERL FAT/TOTAL               3.2-4.8 km  0.2758  4.79E-05  0.00E+00  7.21E-05
3.15E-04  1.01E-03  1.31E-03  1.70E-03  2.54E-03  103
 ERL FAT/TOTAL               4.8-6.4 km  0.1132  7.78E-06  0.00E+00  5.49E-06
4.45E-05  3.14E-04  3.94E-04  4.92E-04  2.54E-03   81
 ERL FAT/TOTAL               6.4-8.1 km  0.0610  1.40E-06  0.00E+00  0.00E+00
3.49E-06  5.16E-05  6.02E-05  1.74E-04  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  1.08E+03  8.88E+02  1.97E+03
2.41E+03  3.43E+03  3.83E+03  6.26E+03  1.43E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  5.13E+04  3.47E+04  1.06E+05
1.30E+05  2.04E+05  2.29E+05  3.15E+05  9.70E-04    7
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POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                    0-3.2 km  0.7261  3.39E-04  3.83E-05  1.06E-03
1.74E-03  3.13E-03  3.43E-03  5.70E-03  2.85E-04   77
 CAN FAT/TOTAL                   0-16.1 km  1.0000  8.27E-04  7.60E-04  1.11E-03
1.21E-03  1.47E-03  1.60E-03  2.03E-03  7.42E-04   46

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                       0-1.6 km  1.0000  1.90E+00  1.39E+00  3.74E+00
4.94E+00 NOT-FOUND NOT-FOUND  1.21E+01  1.24E-02  110
 L-EDEWBODY                     1.6-3.2 km  1.0000  6.85E-01  4.33E-01  1.41E+00
1.97E+00  3.24E+00  4.03E+00  4.99E+00  2.54E-03   81
 L-EDEWBODY                     3.2-4.8 km  1.0000  3.92E-01  3.19E-01  7.55E-01
1.02E+00  1.64E+00  2.01E+00  2.52E+00  2.54E-03  103
 L-EDEWBODY                     4.8-6.4 km  1.0000  3.11E-01  2.52E-01  5.52E-01
7.17E-01  1.01E+00  1.08E+00  1.14E+00  2.54E-03   81
 L-EDEWBODY                     6.4-8.1 km  1.0000  2.53E-01  2.32E-01  4.00E-01
4.81E-01  7.14E-01  7.88E-01  8.67E-01  2.54E-03   81
 L-EDEWBODY                     8.1-9.7 km  1.0000  2.06E-01  1.71E-01  3.19E-01
3.60E-01  4.80E-01 NOT-FOUND  7.00E-01  7.91E-03   50
 L-EDEWBODY                    9.7-16.1 km  1.0000  1.37E-01  1.16E-01  2.10E-01
2.28E-01  2.79E-01 NOT-FOUND  2.87E-01  7.91E-03   50
 L-EDEWBODY                   16.1-32.2 km  1.0000  4.53E-01  3.76E-01  7.90E-01
9.18E-01  1.26E+00 NOT-FOUND  1.34E+00  7.42E-03   83
 L-EDEWBODY                   32.2-48.3 km  1.0000  2.58E-01  2.33E-01  3.51E-01
3.95E-01 NOT-FOUND NOT-FOUND  5.30E-01  1.27E-02   69
 L-EDEWBODY                   48.3-64.4 km  1.0000  1.97E-01  2.06E-01  2.76E-01
3.06E-01 NOT-FOUND NOT-FOUND  3.40E-01  1.27E-02   23
 L-EDEWBODY                   64.4-80.5 km  1.0000  1.45E-01  1.18E-01  2.10E-01
2.76E-01 NOT-FOUND NOT-FOUND  3.24E-01  3.32E-02    7
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  9 OF 11:
    Case 9-OPW1

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31    PAGE  67          PROB                              QUANTILES
                         PEAK      PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                   0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS             0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS             0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                 0-80.5 km  1.0000  1.03E+02  5.69E+01  2.26E+02
3.45E+02  6.24E+02  7.04E+02  8.47E+02  9.70E-04    7
 CAN FAT/THYROID              0-80.5 km  1.0000  8.85E+01  4.95E+01  2.24E+02
2.99E+02  4.80E+02  5.53E+02  9.21E+02  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  6.21E+01  3.38E+01  1.30E+02
2.10E+02  4.23E+02  5.02E+02  5.65E+02  1.43E-03   23
 CAN FAT/GI                   0-80.5 km  1.0000  1.67E+02  9.05E+01  3.48E+02
5.74E+02  1.04E+03  1.10E+03  1.40E+03  1.91E-04   29
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  4.80E+01  2.63E+01  9.55E+01
1.71E+02  3.23E+02  3.55E+02  4.20E+02  1.43E-03   23
 CAN FAT/BONE                 0-80.5 km  1.0000  5.78E+00  3.06E+00  1.25E+01
1.97E+01  3.62E+01  4.06E+01  5.30E+01  1.43E-03   23
 CAN FAT/OTHER                0-80.5 km  1.0000  2.92E+02  1.61E+02  7.22E+02
1.00E+03  1.46E+03  1.72E+03  3.15E+03  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  8.85E+02  4.95E+02  2.24E+03
2.99E+03  4.80E+03  5.53E+03  9.21E+03  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  1.96E+02  1.04E+02  3.98E+02
6.72E+02  1.25E+03  1.42E+03  1.78E+03  1.43E-03   23
 CAN FAT/TOTAL                0-80.5 km  1.0000  7.66E+02  4.17E+02  1.71E+03
2.78E+03  4.29E+03  5.05E+03  7.13E+03  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.1183  3.80E+00  0.00E+00  5.46E+00
1.75E+01  6.48E+01  1.26E+02  3.78E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.5127  1.88E+03  1.18E+02  5.17E+03
7.91E+03  3.14E+04  3.61E+04  5.65E+04  9.99E-04   37
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0263  2.07E+01  0.00E+00  0.00E+00
0.00E+00  4.13E+02  1.17E+03  6.91E+03  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATICN EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.5431  3.45E+03  1.16E+03  6.33E+03
2.20E+04  3.73E+04  4.34E+04  8.03E+04  2.63E-03   37

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL FAT/TOTAL                 4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
□10-APR-06  19:11:31    PAGE  68          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  1.87E+04  1.03E+04  3.93E+04
6.25E+04  1.12E+05  1.26E+05  1.66E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                 9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                16.1-32.2 km  1.0000  3.20E-01  2.66E-01  6.13E-01
7.64E-01  1.22E+00 NOT-FOUND  1.34E+00  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  1.60E-01  1.32E-01  2.32E-01
2.59E-01 NOT-FOUND NOT-FOUND  3.90E-01  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  1.26E-01  1.10E-01  1.97E-01
2.04E-01  2.15E-01  2.20E-01  2.44E-01  2.00E-04   40
 L-EDEWBODY                64.4-80.5 km  1.0000  8.31E-02  7.14E-02  1.46E-01
1.86E-01 NOT-FOUND NOT-FOUND  2.39E-01  3.32E-02    7
□  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM  9 OF 11:
    Case 9-OPW1

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31    PAGE  69          PROB                          QUANTILES
                          PEAK       PEAK  PEAK
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                                                NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.7261  4.51E+00  3.76E-01  1.38E+01
2.43E+01  4.84E+01  6.25E+01  1.27E+02  1.43E-04   81
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.8713  2.05E+01  6.20E+00  5.91E+01
8.15E+01  1.31E+02  1.54E+02  2.88E+02  2.28E-04   81
 ERL INJ/DIARRHEA               0-16.1 km  0.8447  1.01E+01  2.31E+00  3.08E+01
4.41E+01  7.95E+01  9.59E+01  1.84E+02  1.43E-04   81
 ERL INJ/PNEUMONITIS            0-16.1 km  0.4981  1.06E+00  0.00E+00  2.26E+00
4.87E+00  1.94E+01  3.01E+01  6.95E+01  1.43E-04  103
 ERL INJ/THYROIDITIS            0-16.1 km  0.6309  9.83E-01  7.54E-02  3.06E+00
5.10E+00  1.16E+01  1.63E+01  3.40E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  0.9553  4.12E+01  3.03E+01  9.70E+01
1.14E+02  1.57E+02  1.81E+02  2.63E+02  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  0.9987  1.66E+03  1.49E+03  2.77E+03
3.07E+03  3.40E+03  3.55E+03  4.04E+03  6.28E-04   80
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.9457  5.83E+02  4.55E+02  1.17E+03
1.42E+03  2.08E+03  2.25E+03  2.87E+03  5.71E-04  116
 CAN FAT/TOTAL                  0-16.1 km  1.0000  1.18E+02  1.02E+02  2.25E+02
2.73E+02  3.50E+02  3.80E+02  5.40E+02  5.14E-04   50
 CAN FAT/LUNG                   0-80.5 km  1.0000  1.20E+02  7.68E+01  2.41E+02
3.75E+02  6.25E+02  7.04E+02  8.60E+02  9.70E-04    7
 CAN FAT/THYROID                0-80.5 km  1.0000  1.05E+02  6.82E+01  2.48E+02
3.31E+02  5.06E+02  5.76E+02  9.34E+02  9.70E-04    7
 CAN FAT/BREAST                 0-80.5 km  1.0000  6.51E+01  3.71E+01  1.32E+02
2.11E+02  4.23E+02  5.02E+02  5.69E+02  1.43E-03   23
 CAN FAT/GI                     0-80.5 km  1.0000  1.87E+02  1.11E+02  3.87E+02
5.78E+02  1.05E+03  1.10E+03  1.40E+03  1.91E-04   29
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  5.25E+01  3.05E+01  1.03E+02
1.76E+02  3.26E+02  3.58E+02  4.26E+02  1.43E-03   23
 CAN FAT/BONE                   0-80.5 km  1.0000  6.50E+00  3.94E+00  1.39E+01
2.07E+01  3.65E+01  4.09E+01  5.40E+01  1.43E-03   23
 CAN FAT/OTHER                  0-80.5 km  1.0000  3.48E+02  2.22E+02  7.78E+02
1.06E+03  1.61E+03  1.94E+03  3.19E+03  9.70E-04    7
 CAN INJ/THYROID                0-80.5 km  1.0000  1.05E+03  6.82E+02  2.48E+03
3.31E+03  5.06E+03  5.76E+03  9.34E+03  9.70E-04    7
 CAN INJ/BREAST                 0-80.5 km  1.0000  2.05E+02  1.12E+02  4.12E+02
6.91E+02  1.26E+03  1.43E+03  1.79E+03  1.43E-03   23
 CAN FAT/TOTAL                  0-80.5 km  1.0000  8.84E+02  5.51E+02  1.88E+03
2.85E+03  4.29E+03  5.05E+03  7.22E+03  9.70E-04    7
 ERL FAT/TOTAL                  0-80.5 km  0.7261  4.51E+00  3.76E-01  1.38E+01
2.43E+01  4.84E+01  6.25E+01  1.27E+02  1.43E-04   81
 ERL INJ/PRODROMAL VOMIT        0-80.5 km  0.8713  2.05E+01  6.20E+00  5.91E+01
8.15E+01  1.31E+02  1.54E+02  2.88E+02  2.28E-04   81
 ERL INJ/DIARRHEA               0-80.5 km  0.8447  1.01E+01  2.31E+00  3.08E+01
4.41E+01  7.95E+01  9.59E+01  1.84E+02  1.43E-04   81
 ERL INJ/PNEUMONITIS            0-80.5 km  0.4981  1.06E+00  0.00E+00  2.26E+00
4.87E+00  1.94E+01  3.01E+01  6.95E+01  1.43E-04  103
 ERL INJ/THYROIDITIS            0-80.5 km  0.6309  9.83E-01  7.54E-02  3.06E+00
5.10E+00  1.16E+01  1.63E+01  3.40E+01  1.43E-04   81
 ERL INJ/HYPOTHYROIDISM         0-80.5 km  0.9553  4.50E+01  3.04E+01  1.05E+02
1.39E+02  2.35E+02  2.75E+02  5.11E+02  9.99E-04   83
 ERL INJ/SKIN ERYTHEMA          0-80.5 km  0.9987  3.53E+03  2.25E+03  7.02E+03
9.77E+03  3.27E+04  4.18E+04  5.82E+04  9.99E-04   37
 ERL INJ/TRANSEPIDERMAL         0-80.5 km  0.9457  6.04E+02  4.55E+02  1.22E+03
1.54E+03  2.39E+03  2.77E+03  8.59E+03  9.99E-04   83

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.8432  2.94E+00  3.03E+00  5.35E+00
7.40E+00 NOT-FOUND NOT-FOUND  9.65E+00  1.94E-02   50

POPULATION EXCEEDING DOSE
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 EARLY dose A-RED MARR > 1.50 Sv        0.7261  2.51E+01  3.18E+00  7.71E+01
1.03E+02  1.97E+02  2.24E+02  3.64E+02  2.28E-04   81
 EARLY dose A-LUNGS > 5.00 Sv           0.4981  5.96E+00  0.00E+00  2.17E+01
3.20E+01  7.25E+01  8.51E+01  1.44E+02  1.43E-04   81
 EARLY dose L-EDEWBODY > 2.00 Sv        0.8863  2.23E+02  1.48E+02  5.29E+02
6.91E+02  1.07E+03  1.19E+03  1.68E+03  5.14E-04   50
 EARLY dose L-EDEWBODY > 0.250 Sv       0.9961  4.85E+03  2.61E+03  8.50E+03
2.20E+04  4.10E+04  5.15E+04  8.22E+04  1.63E-03   69

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.8432  3.71E-02  2.59E-02  7.76E-02
8.51E-02  1.06E-01  1.18E-01  1.38E-01  1.91E-03    5
 ERL FAT/TOTAL              1.6-3.2 km  0.5125  5.87E-03  5.28E-05  2.34E-02
3.09E-02  4.34E-02  5.03E-02  5.90E-02  2.60E-03   77
 ERL FAT/TOTAL              3.2-4.8 km  0.2758  9.59E-04  0.00E+00  1.74E-03
7.25E-03  2.02E-02  2.46E-02  3.40E-02  2.54E-03  103
 ERL FAT/TOTAL              4.8-6.4 km  0.1132  1.56E-04  0.00E+00  1.21E-04
8.40E-04  5.16E-03  6.02E-03  9.85E-03  2.54E-03   81
10-APR-06  19:11:31    PAGE  70          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0610  2.79E-05  0.00E+00  0.00E+00
6.15E-05  1.07E-03  1.47E-03  3.47E-03  2.54E-03   81

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  2.18E+03  1.72E+03  4.09E+03
5.16E+03  7.18E+03  7.96E+03  1.19E+04  2.28E-04   81
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.09E+04  1.21E+04  4.34E+04
6.61E+04  1.14E+05  1.27E+05  1.67E+05  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.7261  6.77E-03  7.10E-04  2.22E-02
3.68E-02  6.29E-02  7.21E-02  1.14E-01  2.85E-04   77
 CAN FAT/TOTAL               0-16.1 km  1.0000  5.71E-03  4.96E-03  1.06E-02
1.20E-02  1.61E-02  1.82E-02  2.62E-02  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  3.75E+01  2.59E+01  7.45E+01
9.88E+01 NOT-FOUND NOT-FOUND  2.41E+02  1.24E-02  110
 L-EDEWBODY                 1.6-3.2 km  1.0000  1.27E+01  8.62E+00  2.87E+01
3.51E+01  5.47E+01  7.06E+01  9.98E+01  2.54E-03   81
 L-EDEWBODY                 3.2-4.8 km  1.0000  6.58E+00  4.32E+00  1.48E+01
2.03E+01  2.84E+01  3.66E+01  5.03E+01  2.54E-03  103
 L-EDEWBODY                 4.8-6.4 km  1.0000  4.16E+00  2.66E+00  9.58E+00
1.23E+01  2.02E+01  2.15E+01  2.28E+01  2.54E-03   81
 L-EDEWBODY                 6.4-8.1 km  1.0000  2.83E+00  1.97E+00  6.81E+00
8.60E+00  1.28E+01  1.49E+01  1.73E+01  2.54E-03   81
 L-EDEWBODY                 8.1-9.7 km  1.0000  2.01E+00  1.36E+00  4.15E+00
5.65E+00  9.35E+00 NOT-FOUND  1.40E+01  7.91E-03   50
 L-EDEWBODY                9.7-16.1 km  1.0000  1.04E+00  7.76E-01  2.09E+00
2.96E+00  4.68E+00 NOT-FOUND  5.73E+00  7.91E-03   50
 L-EDEWBODY               16.1-32.2 km  1.0000  3.20E-01  2.66E-01  6.13E-01
7.64E-01  1.22E+00 NOT-FOUND  1.34E+00  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  1.60E-01  1.32E-01  2.32E-01
2.59E-01 NOT-FOUND NOT-FOUND  3.90E-01  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  1.26E-01  1.10E-01  1.97E-01
2.04E-01  2.15E-01  2.20E-01  2.44E-01  2.00E-04   40
 L-EDEWBODY               64.4-80.5 km  1.0000  8.31E-02  7.14E-02  1.46E-01
1.86E-01 NOT-FOUND NOT-FOUND  2.39E-01  3.32E-02    7
  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
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"ATMOS" DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

"EARLY" DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1 EARLY input

"CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

SOURCE TERM 9 OF 11:
Case 9-OPW1

RESULTS FROM THE "CHRONC" MODULE ALONE

COHORT 3 = NAPS ESBWR CHRONC.INP, "New" COMIDA2-Based Food Model

10-APR-06 19:11:31 PAGE 71

	PEAK CONS	PROB PEAK	PROB NON-ZERO TRIAL	MEAN	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
CAN FAT/TOTAL	0-16.1 km	1.0000	4.70E+01	3.65E+01	8.49E+01	1.09E+02	1.67E+02	2.00E+02	3.00E+02
		1.43E-04	81						
CAN FAT/LUNG	0-80.5 km	1.0000	2.16E+02	1.53E+02	4.79E+02	5.51E+02	7.13E+02	7.87E+02	9.92E+02
		9.70E-04	7						
CAN FAT/THYROID	0-80.5 km	1.0000	2.48E+01	1.82E+01	5.38E+01	6.26E+01	7.97E+01	8.64E+01	1.15E+02
		9.70E-04	7						
CAN FAT/BREAST	0-80.5 km	1.0000	1.80E+02	1.26E+02	3.63E+02	4.41E+02	5.88E+02	6.48E+02	8.36E+02
		9.70E-04	7						
CAN FAT/GI	0-80.5 km	1.0000	4.26E+02	3.06E+02	9.50E+02	1.09E+03	1.38E+03	1.53E+03	1.94E+03
		9.70E-04	7						
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	1.38E+02	9.91E+01	3.04E+02	3.35E+02	4.20E+02	4.63E+02	6.30E+02
		9.70E-04	7						
CAN FAT/BONE	0-80.5 km	1.0000	1.44E+01	1.02E+01	3.10E+01	3.47E+01	4.52E+01	5.06E+01	6.57E+01
		9.70E-04	7						
CAN FAT/OTHER	0-80.5 km	1.0000	4.48E+02	3.15E+02	1.01E+03	1.11E+03	1.41E+03	1.57E+03	2.06E+03
		9.70E-04	7						
CAN INJ/THYROID	0-80.5 km	1.0000	2.48E+02	1.82E+02	5.38E+02	6.26E+02	7.97E+02	8.64E+02	1.15E+03
		9.70E-04	7						
CAN INJ/BREAST	0-80.5 km	1.0000	5.67E+02	4.07E+02	1.12E+03	1.29E+03	1.77E+03	2.02E+03	2.63E+03
		9.70E-04	7						
CAN FAT/TOTAL	0-80.5 km	1.0000	1.45E+03	1.02E+03	3.10E+03	3.47E+03	4.52E+03	5.06E+03	6.64E+03
		9.70E-04	7						
POPULATION DOSE (Sv)									
L-EDEWBODY TOT LIF	0-16.1 km	1.0000	9.75E+02	7.83E+02	1.75E+03	2.24E+03	3.29E+03	3.69E+03	5.99E+03
		1.43E-04	81						
L-EDEWBODY TOT LIF	0-80.5 km	1.0000	3.25E+04	2.33E+04	7.19E+04	8.19E+04	1.08E+05	1.19E+05	1.50E+05
		9.70E-04	7						
POPULATION WEIGHTED RISK									
CAN FAT/TOTAL	0-16.1 km	0.9898	5.42E-04	5.18E-04	9.22E-04	1.03E-03	1.16E-03	1.21E-03	1.92E-03
		8.53E-06	35						
PEAK DOSE FOUND ON SPATIAL GRID (Sv)									
L-EDEWBODY	0-1.6 km	0.1543	2.52E-02	0.00E+00	1.12E-01	1.33E-01	NOT-FOUND	NOT-FOUND	2.00E-01
		1.01E-02	39						
L-EDEWBODY	1.6-3.2 km	0.3265	4.93E-02	0.00E+00	1.26E-01	1.44E-01	NOT-FOUND	NOT-FOUND	2.00E-01
		1.01E-02	39						
L-EDEWBODY	3.2-4.8 km	0.4120	6.27E-02	0.00E+00	1.32E-01	1.52E-01	NOT-FOUND	NOT-FOUND	2.00E-01
		1.27E-02	90						
L-EDEWBODY	4.8-6.4 km	0.6910	1.03E-01	1.03E-01	1.21E-01	1.30E-01	1.53E-01	1.64E-01	2.00E-01
		7.13E-04	63						
L-EDEWBODY	6.4-8.1 km	0.8373	1.12E-01	1.03E-01	1.19E-01				

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1.26E-01  1.46E-01  1.55E-01  1.99E-01  2.85E-04  109
 L-EDEWBODY                  8.1-9.7 km  0.8976  1.06E-01  1.02E-01  1.18E-01
1.26E-01  1.45E-01  1.54E-01  1.99E-01  2.85E-04   19
 L-EDEWBODY                 9.7-16.1 km  0.9159  8.47E-02  8.36E-02  1.38E-01
1.61E-01 NOT-FOUND NOT-FOUND  1.96E-01  2.05E-02   84
 L-EDEWBODY                16.1-32.2 km  0.9900  1.33E-01  1.04E-01  1.20E-01
1.27E-01  1.46E-01  1.55E-01  1.99E-01  2.85E-04   19
 L-EDEWBODY                32.2-48.3 km  1.0000  9.73E-02  9.82E-02  1.24E-01
1.36E-01 NOT-FOUND NOT-FOUND  1.63E-01  1.27E-02   23
 L-EDEWBODY                48.3-64.4 km  1.0000  7.14E-02  6.88E-02  1.03E-01
1.13E-01 NOT-FOUND NOT-FOUND  1.19E-01  3.32E-02    7
 L-EDEWBODY                64.4-80.5 km  1.0000  6.15E-02  5.94E-02  9.54E-02
1.03E-01 NOT-FOUND NOT-FOUND  1.05E-01  3.32E-02   82

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE           1.0000  3.25E+04  2.33E+04  7.19E+04
8.19E+04  1.08E+05  1.19E+05  1.50E+05  9.70E-04    7
 LONG-TERM DIRECT EXPOSURE PATHWAYS      1.0000  2.91E+04  2.06E+04  6.75E+04
7.67E+04  9.73E+04  1.02E+05  1.26E+05  1.54E-05    2
 TOTAL INGESTION PATHWAYS DOSE           1.0000  1.05E+03  8.80E+02  1.89E+03
2.35E+03  3.37E+03  3.75E+03  6.24E+03  1.43E-04   81
 LONG-TERM GROUNDSHINE DOSE              1.0000  2.89E+04  2.05E+04  6.71E+04
7.65E+04  9.73E+04  1.02E+05  1.25E+05  1.54E-05    2
 LONG-TERM RESUSPENSION DOSE             1.0000  1.78E+02  1.19E+02  4.16E+02
5.07E+02  5.43E+02  5.59E+02  8.28E+02  1.54E-05    2
 WATER INGESTION DOSE                    1.0000  8.01E+02  6.28E+02  1.52E+03
2.07E+03  3.24E+03  3.64E+03  6.04E+03  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE     1.0000  2.27E+03  1.15E+03  6.19E+03
8.29E+03  1.27E+04  1.49E+04  2.44E+04  9.70E-04    7
□10-APR-06  19:11:31    PAGE  72          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE     1.0000  6.26E+01  5.74E+01  1.06E+02
1.22E+02  1.68E+02  1.93E+02  2.48E+02  3.83E-04   48
 INGESTION OF GRAINS                     1.0000  5.55E+00  4.34E+00  1.01E+01
1.36E+01  2.20E+01  2.42E+01  3.60E+01  4.00E-04    8
 INGESTION OF LEAF VEG                   1.0000  2.04E+01  1.82E+01  3.19E+01
3.63E+01  4.93E+01  5.25E+01  8.22E+01  1.06E-05   35
 INGESTION OF ROOT CROPS                 1.0000  1.31E+01  1.10E+01  2.19E+01
2.66E+01  3.44E+01  3.73E+01  5.56E+01  4.00E-04    8
 INGESTION OF FRUITS                     1.0000  3.57E+01  3.13E+01  5.88E+01
7.12E+01  8.89E+01  9.78E+01  1.57E+02  4.40E-05   63
 INGESTION OF LEGUMES                    1.0000  2.31E+01  2.12E+01  3.75E+01
4.47E+01  5.48E+01  5.78E+01  9.34E+01  4.40E-05   63
 INGESTION OF BEEF                       1.0000  6.55E+01  2.61E+01  1.71E+02
2.23E+02  3.27E+02  3.73E+02  6.16E+02  9.71E-05   94
 INGESTION OF MILK                       1.0000  5.54E+01  2.02E+01  1.43E+02
1.91E+02  2.47E+02  2.71E+02  5.00E+02  2.57E-06   99
 INGESTION OF POULTRY                    1.0000  1.66E+01  1.16E+01  3.31E+01
3.81E+01  5.09E+01  5.32E+01  6.83E+01  9.71E-05   94
 INGESTION OF OTHER MEAT CROPS           1.0000  1.26E+01  2.27E+00  3.61E+01
4.59E+01  6.13E+01  6.79E+01  9.37E+01  9.71E-05   94

ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                    1.0000  8.11E+09  4.85E+09  1.84E+10
2.88E+10  3.50E+10  3.75E+10  4.41E+10  9.70E-04    7
 POP.-DEPENDENT COSTS                    1.0000  7.84E+09  4.47E+09  1.83E+10
2.88E+10  3.49E+10  3.73E+10  4.38E+10  9.70E-04    7
 FARM-DEPENDENT COSTS                    1.0000  2.73E+08  2.44E+08  4.26E+08
5.05E+08  5.89E+08  6.29E+08  8.72E+08  7.72E-06   34
 POP.-DEPENDENT DECONTAMINATION COST     1.0000  1.88E+09  1.04E+09  4.01E+09
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7.44E+09  1.03E+10  1.04E+10  1.18E+10  2.64E-05   35
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  6.59E+07  6.01E+07  1.02E+08
1.09E+08  1.28E+08  1.37E+08  2.48E+08  7.72E-06   35
 POP.-DEPENDENT INTERDICTION COST       1.0000  5.75E+09  3.29E+09  1.37E+10
2.00E+10  2.37E+10  2.55E+10  3.32E+10  9.70E-04    7
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.55E+08  1.21E+08  2.65E+08
3.04E+08  3.35E+08  3.48E+08  5.21E+08  1.06E-05    3
 POP.-DEPENDENT CONDEMNATION COST       0.9663  1.95E+08  1.41E+08  2.97E+08
3.92E+08  1.25E+09  1.65E+09  6.85E+09  1.72E-05   53
 FARM-DEPENDENT CONDEMNATION COST       0.9821  7.68E+06  7.20E+06  1.37E+07
1.78E+07  3.60E+07  4.16E+07  5.57E+07  8.80E-06   19
 EMERGENCY PHASE COST                   1.0000  9.44E+06  4.86E+06  2.38E+07
3.82E+07  6.87E+07  1.11E+08  2.62E+08  4.00E-04  106
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                     1.0000  1.64E+06  1.15E+06  3.53E+06
4.73E+06  6.02E+06  6.57E+06  7.50E+06  9.50E-04    3
 CROP DISPOSAL COST                     1.0000  4.30E+07  4.17E+07  7.15E+07
7.81E+07  9.59E+07  1.04E+08  1.22E+08  1.29E-03    3

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)        1.0000  6.04E+04  5.55E+04  9.42E+04
1.04E+05  1.19E+05  1.26E+05  2.04E+05  7.72E-06   35
 POP. DECONTAMINATION (INDIVIDUALS)     1.0000  2.86E+05  1.66E+05  7.72E+05
1.02E+06  1.08E+06  1.11E+06  1.35E+06  2.64E-05   35
 FARM INTERDICTION (HECTARES)           1.0000  9.23E+04  8.23E+04  1.29E+05
1.49E+05  2.04E+05  2.16E+05  2.68E+05  3.42E-04   42
 POP. INTERDICTION (INDIVIDUALS)        1.0000  2.86E+05  1.66E+05  7.72E+05
1.02E+06  1.08E+06  1.11E+06  1.35E+06  2.64E-05   35
 FARM CONDEMNATION (HECTARES)           0.9821  1.09E+03  1.02E+03  1.58E+03
1.90E+03  5.69E+03  6.75E+03  8.87E+03  8.80E-06   19
 POP. CONDEMNATION (INDIVIDUALS)        0.9663  1.43E+03  1.07E+03  2.18E+03
2.61E+03  9.27E+03  1.44E+04  4.93E+04  1.72E-05   53
 MILK DISPOSAL AREA (HECTARES)          1.0000  9.37E+04  8.29E+04  1.29E+05
1.49E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
 CROP DISPOSAL AREA (HECTARES)          1.0000  9.34E+04  8.27E+04  1.29E+05
1.49E+05  2.06E+05  2.25E+05  2.68E+05  1.29E-03    3
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LATER SECTIONS.

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10-APR-06  19:11:31     PAGE  73          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO    MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                    0-16.1 km  0.1965  4.15E-03  0.00E+00  3.00E-03
1.15E-02  1.07E-01  1.66E-01  8.47E-01  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT          0-16.1 km  0.6252  5.07E-02  2.84E-03  1.36E-01
2.44E-01  6.77E-01  1.04E+00  2.34E+00  1.43E-04   81
 ERL INJ/DIARRHEA                 0-16.1 km  0.3261  1.73E-02  0.00E+00  3.81E-02
8.43E-02  3.03E-01  5.23E-01  1.21E+00  5.71E-05   81
 ERL INJ/PNEUMONITIS              0-16.1 km  0.0250  3.78E-04  0.00E+00  0.00E+00
0.00E+00  8.98E-03  2.44E-02  9.72E-02  5.71E-05   81
 ERL INJ/THYROIDITIS              0-16.1 km  0.0432  1.73E-04  0.00E+00  0.00E+00
0.00E+00  5.30E-03  8.71E-03  5.05E-02  5.71E-05   81
 ERL INJ/HYPOTHYROIDISM           0-16.1 km  0.8540  1.36E-01  5.70E-02  3.68E-01
5.33E-01  8.97E-01  1.06E+00  1.87E+00  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA            0-16.1 km  0.9355  1.67E+01  1.15E+01  3.73E+01
5.16E+01  8.39E+01  9.44E+01  1.03E+02  5.14E-04   50
 ERL INJ/TRANSEPIDERMAL           0-16.1 km  0.8586  3.08E+00  9.74E-01  8.52E+00
1.17E+01  2.15E+01  2.53E+01  3.83E+01  5.14E-04   50
 CAN FAT/TOTAL                    0-16.1 km  1.0000  2.89E+01  2.51E+01  4.28E+01
5.15E+01  7.13E+01  7.69E+01  1.09E+02  2.00E-04   81
 CAN FAT/LUNG                     0-80.5 km  1.0000  1.84E+02  1.19E+02  4.06E+02
5.59E+02  7.80E+02  8.42E+02  9.40E+02  1.83E-03   84
 CAN FAT/THYROID                  0-80.5 km  1.0000  3.02E+01  1.93E+01  6.76E+01
9.20E+01  1.30E+02  1.48E+02  2.00E+02  9.70E-04    7
 CAN FAT/BREAST                   0-80.5 km  1.0000  1.43E+02  9.77E+01  2.99E+02
4.46E+02  5.82E+02  6.28E+02  7.34E+02  1.83E-03   84
 CAN FAT/GI                       0-80.5 km  1.0000  3.47E+02  2.33E+02  7.01E+02
1.03E+03  1.33E+03  1.49E+03  1.76E+03  1.83E-03   84
 CAN FAT/LEUKEMIA                 0-80.5 km  1.0000  1.10E+02  7.51E+01  2.24E+02
3.18E+02  4.33E+02  4.95E+02  5.61E+02  1.83E-03   84
 CAN FAT/BONE                     0-80.5 km  1.0000  1.23E+01  8.35E+00  2.66E+01
3.35E+01  4.92E+01  5.44E+01  6.22E+01  1.83E-03   84
 CAN FAT/OTHER                    0-80.5 km  1.0000  3.71E+02  2.51E+02  7.62E+02
1.06E+03  1.41E+03  1.59E+03  1.89E+03  1.83E-03   84
 CAN INJ/THYROID                  0-80.5 km  1.0000  3.02E+02  1.93E+02  6.76E+02
9.20E+02  1.30E+03  1.48E+03  2.00E+03  9.70E-04    7
 CAN INJ/BREAST                   0-80.5 km  1.0000  4.49E+02  3.07E+02  9.64E+02
1.16E+03  1.72E+03  2.02E+03  2.31E+03  1.83E-03   84
 CAN FAT/TOTAL                    0-80.5 km  1.0000  1.20E+03  7.98E+02  2.58E+03
3.29E+03  4.70E+03  5.30E+03  6.11E+03  1.83E-03   84
 ERL FAT/TOTAL                    0-80.5 km  0.1965  4.15E-03  0.00E+00  3.00E-03
1.15E-02  1.07E-01  1.66E-01  8.47E-01  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT          0-80.5 km  0.6252  5.07E-02  2.84E-03  1.36E-01
2.44E-01  6.77E-01  1.04E+00  2.34E+00  1.43E-04   81
 ERL INJ/DIARRHEA                 0-80.5 km  0.3261  1.73E-02  0.00E+00  3.81E-02
8.43E-02  3.03E-01  5.23E-01  1.21E+00  5.71E-05   81
 ERL INJ/PNEUMONITIS              0-80.5 km  0.0250  3.78E-04  0.00E+00  0.00E+00
0.00E+00  8.98E-03  2.44E-02  9.72E-02  5.71E-05   81
 ERL INJ/THYROIDITIS              0-80.5 km  0.0432  1.73E-04  0.00E+00  0.00E+00
0.00E+00  5.30E-03  8.71E-03  5.05E-02  5.71E-05   81
 ERL INJ/HYPOTHYROIDISM           0-80.5 km  0.8540  1.36E-01  5.70E-02  3.68E-01
5.33E-01  8.97E-01  1.06E+00  1.87E+00  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA            0-80.5 km  0.9355  1.67E+01  1.15E+01  3.73E+01
5.16E+01  8.39E+01  9.44E+01  1.03E+02  5.14E-04   50
 ERL INJ/TRANSEPIDERMAL           0-80.5 km  0.8586  3.08E+00  9.74E-01  8.52E+00
1.17E+01  2.15E+01  2.53E+01  3.83E+01  5.14E-04   50

EARLY FATALITY DISTANCE (km)
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 ERL FAT/TOTAL RISK > 0.000                0.3965  3.79E-02  0.00E+00  9.22E-02
1.10E-01  1.84E-01 NOT-FOUND  2.42E-01  7.68E-03   77

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.1965  5.16E-02  0.00E+00  1.05E-01
2.24E-01  1.13E+00  1.56E+00  4.17E+00  1.43E-04  103
10-APR-06  19:11:31    PAGE  74            PROB                          QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS       PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv              0.0250  3.22E-03  0.00E+00  0.00E+00
0.00E+00  8.80E-02  1.33E-01  1.29E+00  5.71E-05   81
 EARLY dose L-EDEWBODY > 2.00 Sv           0.6113  6.71E-01  7.83E-02  2.31E+00
3.41E+00  5.79E+00  7.04E+00  1.42E+01  2.28E-04   81
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9090  1.51E+01  1.08E+01  3.47E+01
4.49E+01  6.44E+01  7.16E+01  8.64E+01  5.71E-04  116

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.3965  1.72E-04  0.00E+00  3.52E-04
1.04E-03  2.38E-03  2.62E-03  3.32E-03  1.91E-03   87
 ERL FAT/TOTAL               1.6-3.2 km  0.0666  4.50E-06  0.00E+00  0.00E+00
4.74E-06  1.20E-04  2.02E-04  8.22E-04  2.54E-03   81
 ERL FAT/TOTAL               3.2-4.8 km  0.0077  1.29E-07  0.00E+00  0.00E+00
0.00E+00  0.00E+00  1.02E-05  3.75E-05  2.54E-03  103
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  6.11E+02  5.56E+02  9.08E+02
1.05E+03  1.31E+03  1.44E+03  2.16E+03  2.00E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.68E+04  1.82E+04  5.43E+04
8.10E+04  1.13E+05  1.22E+05  1.37E+05  1.83E-03   84

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.1965  8.36E-06  0.00E+00  6.55E-06
2.30E-05  2.03E-04  2.88E-04  1.76E-03  5.71E-05   81
 CAN FAT/TOTAL                0-16.1 km  1.0000  7.11E-04  7.00E-04  1.01E-03
1.08E-03  1.24E-03  1.32E-03  2.18E-03  2.84E-06   33

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  3.43E-01  2.28E-01  6.81E-01
8.80E-01 NOT-FOUND NOT-FOUND  1.93E+00  1.24E-02  110
 L-EDEWBODY                   1.6-3.2 km  1.0000  2.14E-01  2.01E-01  3.31E-01
3.80E-01  5.47E-01  7.05E-01  9.81E-01  2.54E-03   81
 L-EDEWBODY                   3.2-4.8 km  1.0000  1.65E-01  1.44E-01  2.28E-01
2.48E-01  3.02E-01  3.55E-01  4.13E-01  2.60E-03   77
 L-EDEWBODY                   4.8-6.4 km  1.0000  1.33E-01  1.14E-01  2.01E-01
2.06E-01  2.18E-01  2.24E-01  2.54E-01  1.43E-04   25
 L-EDEWBODY                   6.4-8.1 km  1.0000  1.45E-01  1.32E-01  2.09E-01
2.14E-01 NOT-FOUND NOT-FOUND  2.18E-01  3.32E-02    7
 L-EDEWBODY                   8.1-9.7 km  1.0000  1.33E-01  1.09E-01  1.74E-01
2.01E-01  2.10E-01  2.14E-01  2.19E-01  1.91E-03   58
 L-EDEWBODY                  9.7-16.1 km  1.0000  1.35E-01  1.13E-01  1.81E-01
2.02E-01  2.09E-01  2.12E-01  2.16E-01  2.54E-03   60
 L-EDEWBODY                 16.1-32.2 km  1.0000  2.16E-01  2.12E-01  3.02E-01
3.22E-01 NOT-FOUND NOT-FOUND  3.66E-01  1.24E-02   48
 L-EDEWBODY                 32.2-48.3 km  1.0000  1.31E-01  1.15E-01  2.04E-01
2.33E-01 NOT-FOUND NOT-FOUND  3.06E-01  1.27E-02   69
 L-EDEWBODY                 48.3-64.4 km  1.0000  9.89E-02  9.35E-02  1.19E-01
1.30E-01  1.57E-01 NOT-FOUND  1.63E-01  7.42E-03  106
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 L-EDEWBODY                    64.4-80.5 km  1.0000  7.93E-02  7.68E-02  1.11E-01
1.21E-01  1.49E-01 NOT-FOUND  1.54E-01  7.42E-03   83
 DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 10 OF 11:
    Case 10-OPW2

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31     PAGE  75          PROB                                QUANTILES
                          PEAK       PEAK  PEAK
                                        NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH      CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS            0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/LUNG                   0-80.5 km  1.0000  4.19E+01  2.28E+01  1.07E+02
1.34E+02  2.15E+02  2.46E+02  4.53E+02  9.70E-04    7
 CAN FAT/THYROID                0-80.5 km  1.0000  1.42E+01  7.79E+00  3.67E+01
5.18E+01  7.23E+01  8.38E+01  1.56E+02  9.70E-04    7
 CAN FAT/BREAST                 0-80.5 km  1.0000  2.56E+01  1.35E+01  6.36E+01
9.15E+01  1.37E+02  1.60E+02  2.79E+02  9.70E-04    7
 CAN FAT/GI                     0-80.5 km  1.0000  6.83E+01  3.59E+01  1.64E+02
2.34E+02  3.59E+02  4.11E+02  7.45E+02  9.70E-04    7
 CAN FAT/LEUKEMIA               0-80.5 km  1.0000  2.01E+01  1.07E+01  5.02E+01
7.01E+01  1.11E+02  1.32E+02  2.19E+02  9.70E-04    7
 CAN FAT/BONE                   0-80.5 km  1.0000  2.65E+00  1.40E+00  6.78E+00
1.00E+01  1.40E+01  1.62E+01  2.85E+01  9.70E-04    7
 CAN FAT/OTHER                  0-80.5 km  1.0000  7.79E+01  4.15E+01  1.93E+02
2.94E+02  3.90E+02  4.38E+02  8.38E+02  9.70E-04    7
 CAN INJ/THYROID                0-80.5 km  1.0000  1.42E+02  7.79E+01  3.67E+02
5.18E+02  7.23E+02  8.38E+02  1.56E+03  9.70E-04    7
 CAN INJ/BREAST                 0-80.5 km  1.0000  8.07E+01  4.33E+01  2.02E+02
2.79E+02  4.37E+02  5.21E+02  8.79E+02  9.70E-04    7
 CAN FAT/TOTAL                  0-80.5 km  1.0000  2.51E+02  1.32E+02  6.35E+02
9.14E+02  1.37E+03  1.60E+03  2.72E+03  9.70E-04    7
 ERL FAT/TOTAL                  0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                 0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  76          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  5.56E+03  3.02E+03  1.32E+04
2.01E+04  3.11E+04  3.67E+04  6.07E+04  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                 0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                    0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 L-EDEWBODY                    3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                    4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                    6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                    8.1-9.7 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                   9.7-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 L-EDEWBODY                  16.1-32.2 km  1.0000  1.26E-01  1.13E-01  2.01E-01
2.15E-01 NOT-FOUND NOT-FOUND  2.45E-01  1.24E-02   48
 L-EDEWBODY                  32.2-48.3 km  1.0000  7.29E-02  7.01E-02  1.19E-01
1.49E-01 NOT-FOUND NOT-FOUND  2.31E-01  1.27E-02   69
 L-EDEWBODY                  48.3-64.4 km  1.0000  3.57E-02  3.16E-02  7.46E-02
9.35E-02  1.22E-01 NOT-FOUND  1.27E-01  7.42E-03  106
 L-EDEWBODY                  64.4-80.5 km  1.0000  2.04E-02  1.65E-02  3.68E-02
5.14E-02  8.58E-02 NOT-FOUND  1.04E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 10 OF 11:
    Case 10-OPW2

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

    COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE


10-APR-06  19:11:31    PAGE  77          PROB                                QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                 0-16.1 km  0.1965  8.29E-02  0.00E+00  5.99E-02
2.22E-01  2.13E+00  3.22E+00  1.69E+01  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT       0-16.1 km  0.6252  1.01E+00  5.40E-02  2.81E+00
5.02E+00  1.42E+01  2.16E+01  4.67E+01  1.43E-04   81
 ERL INJ/DIARRHEA              0-16.1 km  0.3261  3.46E-01  0.00E+00  7.72E-01
1.66E+00  6.49E+00  1.03E+01  2.43E+01  5.71E-05   81
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0250  7.57E-03  0.00E+00  0.00E+00
0.00E+00  1.74E-01  5.69E-01  1.94E+00  5.71E-05   81
 ERL INJ/THYROIDITIS           0-16.1 km  0.0432  3.46E-03  0.00E+00  0.00E+00
0.00E+00  1.05E-01  1.69E-01  1.01E+00  5.71E-05   81
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.8540  2.71E+00  1.17E+00  7.62E+00
1.05E+01  1.76E+01  2.09E+01  3.74E+01  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.9355  3.34E+02  2.38E+02  7.65E+02
1.01E+03  1.53E+03  1.83E+03  2.06E+03  5.14E-04   50
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.8586  6.17E+01  1.94E+01  1.66E+02
2.31E+02  4.14E+02  5.11E+02  7.66E+02  5.14E-04   50
 CAN FAT/TOTAL                 0-16.1 km  1.0000  2.66E+01  2.16E+01  5.15E+01
6.38E+01  8.61E+01  9.61E+01  1.37E+02  2.28E-04   81
 CAN FAT/LUNG                  0-80.5 km  1.0000  4.77E+01  2.89E+01  1.12E+02
1.44E+02  2.28E+02  2.58E+02  4.56E+02  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  1.66E+01  1.03E+01  3.86E+01
5.37E+01  7.70E+01  8.68E+01  1.58E+02  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  2.68E+01  1.46E+01  6.57E+01
9.22E+01  1.37E+02  1.60E+02  2.80E+02  9.70E-04    7
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 CAN FAT/GI                    0-80.5 km  1.0000  7.49E+01  4.33E+01  1.78E+02
2.42E+02  3.62E+02  4.13E+02  7.50E+02  9.70E-04    7
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  2.16E+01  1.18E+01  5.48E+01
7.19E+01  1.11E+02  1.32E+02  2.20E+02  9.70E-04    7
 CAN FAT/BONE                  0-80.5 km  1.0000  2.99E+00  1.78E+00  7.29E+00
1.00E+01  1.40E+01  1.62E+01  2.87E+01  9.70E-04    7
 CAN FAT/OTHER                 0-80.5 km  1.0000  8.68E+01  5.12E+01  2.05E+02
2.95E+02  4.08E+02  4.68E+02  8.44E+02  9.70E-04    7
 CAN INJ/THYROID               0-80.5 km  1.0000  1.66E+02  1.03E+02  3.86E+02
5.37E+02  7.70E+02  8.68E+02  1.58E+03  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  8.43E+01  4.78E+01  2.16E+02
2.85E+02  4.58E+02  5.41E+02  8.81E+02  9.70E-04    7
 CAN FAT/TOTAL                 0-80.5 km  1.0000  2.77E+02  1.61E+02  6.52E+02
9.40E+02  1.38E+03  1.61E+03  2.74E+03  9.70E-04    7
 ERL FAT/TOTAL                 0-80.5 km  0.1965  8.29E-02  0.00E+00  5.99E-02
2.22E-01  2.13E+00  3.22E+00  1.69E+01  5.71E-05   81
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.6252  1.01E+00  5.40E-02  2.81E+00
5.02E+00  1.42E+01  2.16E+01  4.67E+01  1.43E-04   81
 ERL INJ/DIARRHEA              0-80.5 km  0.3261  3.46E-01  0.00E+00  7.72E-01
1.66E+00  6.49E+00  1.03E+01  2.43E+01  5.71E-05   81
 ERL INJ/PNEUMONITIS           0-80.5 km  0.0250  7.57E-03  0.00E+00  0.00E+00
0.00E+00  1.74E-01  5.69E-01  1.94E+00  5.71E-05   81
 ERL INJ/THYROIDITIS           0-80.5 km  0.0432  3.46E-03  0.00E+00  0.00E+00
0.00E+00  1.05E-01  1.69E-01  1.01E+00  5.71E-05   81
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.8540  2.71E+00  1.17E+00  7.62E+00
1.05E+01  1.76E+01  2.09E+01  3.74E+01  2.28E-04   81
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.9355  3.34E+02  2.38E+02  7.65E+02
1.01E+03  1.53E+03  1.83E+03  2.06E+03  5.14E-04   50
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.8586  6.17E+01  1.94E+01  1.66E+02
2.31E+02  4.14E+02  5.11E+02  7.66E+02  5.14E-04   50

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.3965  7.58E-01  0.00E+00  1.71E+00
3.20E+00  4.56E+00 NOT-FOUND  4.83E+00  7.68E-03   77

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.1965  1.03E+00  0.00E+00  2.07E+00
4.32E+00  2.27E+01  3.15E+01  8.34E+01  1.43E-04  103
 EARLY dose A-LUNGS > 5.00 Sv              0.0250  6.43E-02  0.00E+00  0.00E+00
0.00E+00  1.64E+00  2.40E+00  2.57E+01  5.71E-05   81
 EARLY dose L-EDEWBODY > 2.00 Sv           0.6113  1.34E+01  1.35E+00  4.74E+01
7.00E+01  1.10E+02  1.24E+02  2.85E+02  2.28E-04   81
 EARLY dose L-EDEWBODY > 0.250 Sv          0.9090  3.03E+02  2.18E+02  7.20E+02
9.09E+02  1.19E+03  1.30E+03  1.73E+03  5.71E-04  116

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.3965  3.44E-03  0.00E+00  6.55E-03
3.01E-02  4.23E-02  4.89E-02  6.64E-02  1.91E-03   87
 ERL FAT/TOTAL                1.6-3.2 km  0.0666  9.01E-05  0.00E+00  0.00E+00
9.64E-05  2.43E-03  5.04E-03  1.64E-02  2.54E-03   81
 ERL FAT/TOTAL               3.2-4.8 km  0.0077  2.57E-06  0.00E+00  0.00E+00
0.00E+00  0.00E+00  2.02E-04  7.50E-04  2.54E-03  103
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  78          PROB                          QUANTILES
                         PEAK      PEAK  PEAK
                                        NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
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 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  4.09E+02  3.50E+02  7.12E+02
8.34E+02  1.12E+03  1.24E+03  1.92E+03  2.28E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  5.97E+03  3.38E+03  1.34E+04
2.03E+04  3.11E+04  3.67E+04  6.10E+04  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.1965  1.67E-04  0.00E+00  1.26E-04
4.41E-04  4.03E-03  6.11E-03  3.52E-02  5.71E-05   81
 CAN FAT/TOTAL               0-16.1 km  1.0000  1.29E-03  1.06E-03  2.45E-03
3.05E-03  4.11E-03  4.68E-03  6.66E-03  2.28E-04   81

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  5.98E+00  4.11E+00  1.23E+01
1.70E+01 NOT-FOUND NOT-FOUND  3.86E+01  1.24E-02  110
 L-EDEWBODY                 1.6-3.2 km  1.0000  2.05E+00  1.47E+00  4.25E+00
5.57E+00  1.07E+01  1.32E+01  1.61E+01  2.54E-03   81
 L-EDEWBODY                 3.2-4.8 km  1.0000  1.07E+00  7.54E-01  2.44E+00
3.24E+00  4.70E+00  5.70E+00  8.10E+00  2.54E-03  103
 L-EDEWBODY                 4.8-6.4 km  1.0000  6.83E-01  4.32E-01  1.61E+00
2.16E+00  3.06E+00  3.39E+00  3.74E+00  2.54E-03   81
 L-EDEWBODY                 6.4-8.1 km  1.0000  4.69E-01  3.33E-01  1.03E+00
1.36E+00  2.25E+00  2.55E+00  2.88E+00  2.54E-03   81
 L-EDEWBODY                 8.1-9.7 km  1.0000  3.38E-01  2.36E-01  7.10E-01
9.82E-01  1.83E+00 NOT-FOUND  2.26E+00  7.91E-03   50
 L-EDEWBODY                9.7-16.1 km  1.0000  1.97E-01  1.48E-01  3.33E-01
4.92E-01  8.77E-01 NOT-FOUND  9.36E-01  7.91E-03   50
 L-EDEWBODY               16.1-32.2 km  1.0000  1.26E-01  1.13E-01  2.01E-01
2.15E-01 NOT-FOUND NOT-FOUND  2.45E-01  1.24E-02   48
 L-EDEWBODY               32.2-48.3 km  1.0000  7.29E-02  7.01E-02  1.19E-01
1.49E-01 NOT-FOUND NOT-FOUND  2.31E-01  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  3.57E-02  3.16E-02  7.46E-02
9.35E-02  1.22E-01 NOT-FOUND  1.27E-01  7.42E-03  106
 L-EDEWBODY               64.4-80.5 km  1.0000  2.04E-02  1.65E-02  3.68E-02
5.14E-02  8.58E-02 NOT-FOUND  1.04E-01  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM 10 OF 11:
    Case 10-OPW2

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31    PAGE  79          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                          NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL               0-16.1 km  1.0000  2.76E+01  2.40E+01  4.11E+01
5.00E+01  7.01E+01  7.54E+01  1.05E+02  1.43E-04   81
 CAN FAT/LUNG                0-80.5 km  1.0000  1.42E+02  1.00E+02  3.00E+02
4.36E+02  5.81E+02  6.27E+02  7.22E+02  1.83E-03   84
 CAN FAT/THYROID             0-80.5 km  1.0000  1.59E+01  1.06E+01  3.49E+01
5.05E+01  6.91E+01  7.45E+01  8.24E+01  1.83E-03   84
 CAN FAT/BREAST              0-80.5 km  1.0000  1.17E+02  8.08E+01  2.56E+02
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3.35E+02  5.03E+02  5.41E+02  6.00E+02  1.83E-03   84
 CAN FAT/GI                  0-80.5 km  1.0000  2.79E+02  1.99E+02  6.02E+02
8.46E+02  1.15E+03  1.25E+03  1.40E+03  1.83E-03   84
 CAN FAT/LEUKEMIA            0-80.5 km  1.0000  9.01E+01  6.30E+01  1.92E+02
2.75E+02  3.63E+02  3.98E+02  4.55E+02  1.83E-03   84
 CAN FAT/BONE                0-80.5 km  1.0000  9.63E+00  6.87E+00  2.01E+01
3.01E+01  3.80E+01  4.19E+01  4.84E+01  1.83E-03   84
 CAN FAT/OTHER               0-80.5 km  1.0000  2.93E+02  2.04E+02  6.22E+02
8.90E+02  1.20E+03  1.31E+03  1.49E+03  1.83E-03   84
 CAN INJ/THYROID             0-80.5 km  1.0000  1.59E+02  1.06E+02  3.49E+02
5.05E+02  6.91E+02  7.45E+02  8.24E+02  1.83E-03   84
 CAN INJ/BREAST              0-80.5 km  1.0000  3.68E+02  2.53E+02  7.96E+02
1.05E+03  1.40E+03  1.58E+03  1.89E+03  1.83E-03   84
 CAN FAT/TOTAL               0-80.5 km  1.0000  9.46E+02  6.63E+02  2.00E+03
3.01E+03  3.78E+03  4.17E+03  4.80E+03  1.83E-03   84

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  5.91E+02  5.40E+02  8.74E+02
1.02E+03  1.27E+03  1.39E+03  2.10E+03  2.00E-04   81
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.12E+04  1.45E+04  4.59E+04
6.54E+04  8.27E+04  8.94E+04  1.08E+05  1.83E-03   84

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL               0-16.1 km  1.0000  6.47E-04  6.25E-04  9.19E-04
1.02E-03  1.19E-03  1.27E-03  2.11E-03  2.84E-06   33

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  0.2819  4.44E-02  0.00E+00  1.18E-01
1.32E-01  1.74E-01  1.95E-01  2.01E-01  4.31E-03   47
 L-EDEWBODY                 1.6-3.2 km  0.7779  1.12E-01  1.08E-01  1.60E-01
1.89E-01 NOT-FOUND NOT-FOUND  1.99E-01  3.99E-02    6
 L-EDEWBODY                 3.2-4.8 km  0.8680  1.11E-01  1.04E-01  1.36E-01
1.53E-01  2.00E-01  2.00E-01  2.00E-01  2.85E-04   61
 L-EDEWBODY                 4.8-6.4 km  0.8924  9.91E-02  1.02E-01  1.18E-01
1.26E-01  1.45E-01  1.55E-01  1.98E-01  3.42E-04   34
 L-EDEWBODY                 6.4-8.1 km  0.9014  1.21E-01  1.02E-01  1.18E-01
1.26E-01  1.46E-01  1.56E-01  2.00E-01  3.42E-04   34
 L-EDEWBODY                 8.1-9.7 km  0.9103  1.17E-01  1.03E-01  1.25E-01
1.35E-01  1.64E-01  1.78E-01  2.00E-01  1.91E-03   58
 L-EDEWBODY                9.7-16.1 km  0.9514  1.25E-01  1.04E-01  1.20E-01
1.28E-01  1.48E-01  1.58E-01  2.00E-01  3.71E-04   53
 L-EDEWBODY               16.1-32.2 km  1.0000  8.96E-02  8.92E-02  1.14E-01
1.22E-01 NOT-FOUND NOT-FOUND  1.39E-01  1.27E-02   23
 L-EDEWBODY               32.2-48.3 km  1.0000  5.85E-02  5.34E-02  7.87E-02
8.61E-02  1.01E-01  1.02E-01  1.07E-01  3.42E-04   35
 L-EDEWBODY               48.3-64.4 km  1.0000  6.32E-02  6.50E-02  8.64E-02
9.51E-02 NOT-FOUND NOT-FOUND  1.08E-01  2.05E-02   84
 L-EDEWBODY               64.4-80.5 km  1.0000  5.89E-02  5.65E-02  8.36E-02
9.34E-02  1.01E-01  1.01E-01  1.02E-01  1.91E-03    5

L-EDEWBODY  POP. DOSE (Sv)      0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE            1.0000  2.12E+04  1.45E+04  4.59E+04
6.54E+04  8.27E+04  8.94E+04  1.08E+05  1.83E-03   84
 LONG-TERM DIRECT EXPOSURE PATHWAYS       1.0000  1.99E+04  1.25E+04  4.38E+04
6.30E+04  8.23E+04  8.92E+04  1.06E+05  2.64E-05    3
 TOTAL INGESTION PATHWAYS DOSE            1.0000  7.41E+02  7.16E+02  1.15E+03
1.29E+03  1.71E+03  1.92E+03  2.80E+03  2.57E-06   99
 LONG-TERM GROUNDSHINE DOSE               1.0000  1.97E+04  1.24E+04  4.35E+04
6.27E+04  8.23E+04  8.92E+04  1.05E+05  2.64E-05    3
 LONG-TERM RESUSPENSION DOSE              1.0000  1.67E+02  1.08E+02  3.74E+02
5.27E+02  7.21E+02  7.47E+02  9.77E+02  2.64E-05    3
 WATER INGESTION DOSE                     1.0000  2.53E+02  2.05E+02  5.13E+02
6.57E+02  1.03E+03  1.14E+03  1.89E+03  1.43E-04   81
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 POP.-DEPENDENT DECONTAMINATION DOSE    1.0000  5.85E+02  3.15E+02  1.45E+03
2.19E+03  3.43E+03  4.00E+03  6.83E+03  9.70E-04    7
10-APR-06  19:11:31    PAGE  80          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (Sv)     0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    1.0000  1.85E+01  1.65E+01  3.31E+01
3.96E+01  5.63E+01  6.31E+01  8.23E+01  7.13E-04   23
 INGESTION OF GRAINS                    1.0000  1.15E+01  4.21E+00  3.07E+01
3.90E+01  5.67E+01  6.26E+01  8.55E+01  2.57E-06   27
 INGESTION OF LEAF VEG                  1.0000  2.77E+01  1.78E+01  5.40E+01
9.00E+01  1.27E+02  1.43E+02  2.22E+02  2.85E-05   51
 INGESTION OF ROOT CROPS                1.0000  1.99E+01  1.27E+01  4.55E+01
5.73E+01  7.91E+01  8.74E+01  1.21E+02  3.22E-06   44
 INGESTION OF FRUITS                    1.0000  3.40E+01  2.49E+01  6.87E+01
8.45E+01  1.07E+02  1.12E+02  1.84E+02  3.22E-06   44
 INGESTION OF LEGUMES                   1.0000  2.52E+01  2.13E+01  4.66E+01
5.63E+01  7.58E+01  8.24E+01  1.22E+02  3.22E-06   44
 INGESTION OF BEEF                      1.0000  1.71E+02  1.40E+02  3.43E+02
4.08E+02  6.41E+02  7.28E+02  9.83E+02  2.28E-04  104
 INGESTION OF MILK                      1.0000  1.37E+02  1.04E+02  3.05E+02
3.57E+02  5.10E+02  5.74E+02  8.78E+02  5.71E-05   92
 INGESTION OF POULTRY                   1.0000  4.51E+01  3.50E+01  8.97E+01
1.20E+02  2.04E+02  2.21E+02  3.00E+02  3.42E-04   49
 INGESTION OF OTHER MEAT CROPS          1.0000  1.71E+01  1.13E+01  3.68E+01
4.50E+01  6.20E+01  6.99E+01  9.63E+01  8.36E-06   53

ECONOMIC COST MEASURES ($)     0-80.5 km
 TOTAL ECONOMIC COSTS                   1.0000  3.84E+09  1.93E+09  8.45E+09
1.18E+10  2.21E+10  2.50E+10  3.23E+10  5.50E-05   63
 POP.-DEPENDENT COSTS                   1.0000  3.66E+09  1.74E+09  8.40E+09
1.17E+10  2.21E+10  2.50E+10  3.22E+10  5.50E-05   63
 FARM-DEPENDENT COSTS                   1.0000  1.74E+08  1.48E+08  3.06E+08
3.41E+08  4.40E+08  4.91E+08  6.58E+08  7.72E-06   34
 POP.-DEPENDENT DECONTAMINATION COST    1.0000  8.68E+08  3.54E+08  2.26E+09
3.13E+09  7.07E+09  7.40E+09  9.96E+09  5.50E-05   63
 FARM-DEPENDENT DECONTAMINATION COST    1.0000  3.50E+07  3.25E+07  5.60E+07
6.51E+07  8.52E+07  9.49E+07  1.23E+08  7.72E-06   35
 POP.-DEPENDENT INTERDICTION COST       1.0000  2.76E+09  1.16E+09  6.11E+09
1.02E+10  1.41E+10  1.63E+10  2.22E+10  5.50E-05   63
 FARM-DEPENDENT INTERDICTION COST       1.0000  1.08E+08  8.79E+07  2.14E+08
2.52E+08  3.12E+08  3.21E+08  4.27E+08  7.72E-06   34
 POP.-DEPENDENT CONDEMNATION COST       0.8867  3.91E+07  2.43E+07  8.86E+07
1.40E+08  2.14E+08  2.24E+08  3.20E+08  3.66E-05   19
 FARM-DEPENDENT CONDEMNATION COST       0.9169  1.98E+06  1.52E+06  4.02E+06
6.57E+06  8.22E+06  8.83E+06  1.10E+07  9.42E-05   19
 EMERGENCY PHASE COST                   0.9915  1.11E+06  5.53E+05  2.26E+06
2.85E+06  1.05E+07  1.09E+07  1.29E+07  1.99E-04   94
 INTERMEDIATE PHASE COST                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                     1.0000  1.12E+06  6.11E+05  2.85E+06
3.90E+06  5.28E+06  5.46E+06  7.50E+06  1.54E-05   34
 CROP DISPOSAL COST                     1.0000  2.85E+07  2.30E+07  5.83E+07
6.66E+07  7.76E+07  8.19E+07  1.08E+08  1.54E-04   34

AFFECTED AREA/POPULATION       0-80.5 km
 FARM DECONTAMINATION (HECTARES)        1.0000  3.59E+04  3.33E+04  5.94E+04
7.06E+04  7.78E+04  8.11E+04  1.43E+05  7.72E-06   35
 POP. DECONTAMINATION (INDIVIDUALS)     1.0000  1.64E+05  6.98E+04  4.01E+05
1.00E+06  1.04E+06  1.06E+06  1.20E+06  2.64E-05   35
 FARM INTERDICTION (HECTARES)           1.0000  6.65E+04  5.83E+04  1.08E+05
1.18E+05  1.46E+05  1.60E+05  2.31E+05  9.71E-05   47
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 POP. INTERDICTION (INDIVIDUALS)        1.0000  1.64E+05  6.98E+04  4.01E+05
1.00E+06  1.04E+06  1.06E+06  1.20E+06  2.64E-05   35
 FARM CONDEMNATION (HECTARES)           0.9169  2.84E+02  2.25E+02  5.57E+02
7.89E+02  1.08E+03  1.14E+03  1.52E+03  1.09E-04   19
 POP. CONDEMNATION (INDIVIDUALS)        0.8867  2.89E+02  2.08E+02  6.30E+02
9.68E+02  1.65E+03  2.00E+03  2.30E+03  3.66E-05   19
 MILK DISPOSAL AREA (HECTARES)          1.0000  6.40E+04  5.46E+04  1.14E+05
1.28E+05  1.67E+05  1.88E+05  2.68E+05  2.11E-05   34
 CROP DISPOSAL AREA (HECTARES)          1.0000  6.33E+04  5.42E+04  1.08E+05
1.18E+05  1.46E+05  1.60E+05  2.31E+05  1.13E-04   34
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 CAN FAT/THYROID              0-80.5 km  1.0000  1.55E-01  1.00E-01  3.65E-01
5.18E-01  7.36E-01  8.32E-01  1.37E+00  9.70E-04    7
 CAN FAT/BREAST               0-80.5 km  1.0000  9.10E-01  6.22E-01  1.98E+00
2.53E+00  3.91E+00  4.62E+00  7.03E+00  9.70E-04    7
 CAN FAT/GI                   0-80.5 km  1.0000  2.63E+00  1.86E+00  5.43E+00
6.97E+00  1.04E+01  1.22E+01  1.78E+01  9.70E-04    7
 CAN FAT/LEUKEMIA             0-80.5 km  1.0000  7.25E-01  5.10E-01  1.45E+00
2.08E+00  3.18E+00  3.73E+00  5.39E+00  9.70E-04    7
 CAN FAT/BONE                 0-80.5 km  1.0000  7.76E-02  5.44E-02  1.67E-01
2.21E-01  3.24E-01  3.78E-01  5.85E-01  9.70E-04    7
 CAN FAT/OTHER                0-80.5 km  1.0000  2.79E+00  1.96E+00  5.88E+00
7.62E+00  1.11E+01  1.32E+01  2.01E+01  9.70E-04    7
 CAN INJ/THYROID              0-80.5 km  1.0000  1.55E+00  1.00E+00  3.65E+00
5.18E+00  7.36E+00  8.32E+00  1.37E+01  9.70E-04    7
 CAN INJ/BREAST               0-80.5 km  1.0000  2.87E+00  1.97E+00  6.42E+00
8.20E+00  1.24E+01  1.47E+01  2.21E+01  9.70E-04    7
 CAN FAT/TOTAL                0-80.5 km  1.0000  9.04E+00  6.33E+00  2.01E+01
2.50E+01  3.64E+01  4.14E+01  6.64E+01  9.70E-04    7
 ERL FAT/TOTAL                0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT      0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA             0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS          0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000               0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  82          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                          NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH     CONS      PROB  TRIAL
POPULATION EXCEEDING DOSE
 EARLY dose A-LUNGS > 5.00 Sv             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv         0.0007  9.99E-06  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  2.14E-02  5.71E-05   81

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km   0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL FAT/TOTAL                  6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF            0-16.1 km  1.0000  2.93E+01  2.73E+01  4.91E+01
5.60E+01  7.28E+01  7.86E+01  1.06E+02  1.22E-05   24
 L-EDEWBODY  TOT LIF            0-80.5 km  1.0000  2.02E+02  1.41E+02  4.21E+02
5.51E+02  8.22E+02  9.76E+02  1.46E+03  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                   0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                  0-16.1 km  1.0000  5.18E-05  4.78E-05  9.56E-05
1.08E-04  1.34E-04  1.47E-04  2.31E-04  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                      0-1.6 km  1.0000  7.41E-02  7.10E-02  1.11E-01
1.38E-01  2.11E-01  2.30E-01  2.51E-01  2.54E-03   81
 L-EDEWBODY                     1.6-3.2 km  1.0000  5.56E-02  5.63E-02  8.22E-02
8.97E-02  1.17E-01 NOT-FOUND  1.18E-01  9.62E-03   64
 L-EDEWBODY                     3.2-4.8 km  1.0000  3.96E-02  3.61E-02  7.14E-02
7.61E-02  8.82E-02  9.40E-02  1.20E-01  2.54E-03  103
 L-EDEWBODY                     4.8-6.4 km  1.0000  3.21E-02  2.64E-02  6.11E-02
7.15E-02  8.90E-02 NOT-FOUND  9.19E-02  7.91E-03   50
 L-EDEWBODY                     6.4-8.1 km  1.0000  2.37E-02  1.65E-02  4.76E-02
5.62E-02  7.99E-02 NOT-FOUND  8.47E-02  7.91E-03   50
 L-EDEWBODY                     8.1-9.7 km  1.0000  1.72E-02  1.41E-02  3.37E-02
3.99E-02  6.42E-02 NOT-FOUND  9.20E-02  7.91E-03   50
 L-EDEWBODY                    9.7-16.1 km  1.0000  8.88E-03  7.62E-03  1.61E-02
2.10E-02  3.36E-02 NOT-FOUND  3.58E-02  7.91E-03   50
 L-EDEWBODY                   16.1-32.2 km  1.0000  3.08E-03  2.76E-03  5.65E-03
6.54E-03  9.15E-03 NOT-FOUND  9.74E-03  7.42E-03   83
 L-EDEWBODY                   32.2-48.3 km  1.0000  1.18E-03  1.10E-03  2.14E-03
2.54E-03 NOT-FOUND NOT-FOUND  3.72E-03  1.27E-02   23
 L-EDEWBODY                   48.3-64.4 km  1.0000  5.84E-04  5.42E-04  1.11E-03
1.47E-03 NOT-FOUND NOT-FOUND  1.74E-03  3.32E-02    7
 L-EDEWBODY                   64.4-80.5 km  1.0000  3.35E-04  2.83E-04  5.78E-04
7.15E-04  9.49E-04 NOT-FOUND  1.21E-03  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 11 OF 11:
    Case 11TSL

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

    COHORT 1 = EVACUATION WITHIN 10 MILES, RELOCATION MODELS APPLY ELSEWHERE


10-APR-06  19:11:31    PAGE  83          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 ERL FAT/TOTAL                  0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
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 ERL INJ/DIARRHEA              0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-16.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                 0-16.1 km  1.0000  9.19E-02  7.69E-02  1.80E-01
2.25E-01  3.17E-01  3.44E-01  5.16E-01  2.28E-04   81
 CAN FAT/LUNG                  0-80.5 km  1.0000  3.73E-01  2.29E-01  9.07E-01
1.15E+00  1.69E+00  2.00E+00  3.54E+00  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  5.61E-02  3.49E-02  1.24E-01
1.80E-01  2.56E-01  2.89E-01  5.21E-01  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  7.32E-02  4.11E-02  1.79E-01
2.46E-01  3.66E-01  4.15E-01  7.01E-01  9.70E-04    7
 CAN FAT/GI                    0-80.5 km  1.0000  2.22E-01  1.25E-01  5.71E-01
7.71E-01  1.16E+00  1.37E+00  2.12E+00  9.70E-04    7
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  5.64E-02  3.23E-02  1.35E-01
2.07E-01  3.13E-01  3.60E-01  5.39E-01  9.70E-04    7
 CAN FAT/BONE                  0-80.5 km  1.0000  6.98E-03  4.01E-03  1.73E-02
2.32E-02  3.48E-02  4.04E-02  6.66E-02  9.70E-04    7
 CAN FAT/OTHER                 0-80.5 km  1.0000  2.90E-01  1.71E-01  7.22E-01
1.03E+00  1.42E+00  1.63E+00  2.77E+00  9.70E-04    7
 CAN INJ/THYROID               0-80.5 km  1.0000  5.61E-01  3.49E-01  1.24E+00
1.80E+00  2.56E+00  2.89E+00  5.21E+00  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  2.31E-01  1.24E-01  5.94E-01
7.81E-01  1.20E+00  1.44E+00  2.21E+00  9.70E-04    7
 CAN FAT/TOTAL                 0-80.5 km  1.0000  1.08E+00  6.59E-01  2.68E+00
3.46E+00  5.20E+00  5.95E+00  1.02E+01  9.70E-04    7
 ERL FAT/TOTAL                 0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PRODROMAL VOMIT       0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/DIARRHEA              0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/PNEUMONITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/THYROIDITIS           0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/HYPOTHYROIDISM        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/SKIN ERYTHEMA         0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0000  0.00E+00  0.00E+00  0.00E+00
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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL              4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
10-APR-06  19:11:31    PAGE  84          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                   NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL              6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF         0-16.1 km  1.0000  1.59E+00  1.24E+00  3.04E+00
3.68E+00  5.38E+00  5.94E+00  8.50E+00  2.28E-04   81
 L-EDEWBODY  TOT LIF         0-80.5 km  1.0000  2.10E+01  1.22E+01  5.18E+01
7.28E+01  1.05E+02  1.27E+02  2.00E+02  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL               0-16.1 km  1.0000  4.46E-06  3.61E-06  8.89E-06
1.08E-05  1.44E-05  1.63E-05  2.50E-05  2.28E-04   81

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                   0-1.6 km  1.0000  2.58E-02  1.61E-02  5.26E-02
6.92E-02  1.23E-01  1.43E-01  1.66E-01  2.54E-03   81
 L-EDEWBODY                 1.6-3.2 km  1.0000  9.05E-03  6.09E-03  2.00E-02
2.40E-02  3.61E-02  4.26E-02  6.53E-02  2.54E-03   81
 L-EDEWBODY                 3.2-4.8 km  1.0000  4.80E-03  3.69E-03  1.04E-02
1.21E-02  1.72E-02  2.02E-02  2.97E-02  2.54E-03  103
 L-EDEWBODY                 4.8-6.4 km  1.0000  3.06E-03  2.36E-03  7.20E-03
9.39E-03  1.23E-02  1.36E-02  1.50E-02  2.54E-03   81
 L-EDEWBODY                 6.4-8.1 km  1.0000  2.08E-03  1.41E-03  4.80E-03
5.72E-03  7.86E-03  8.88E-03  1.04E-02  2.54E-03   81
 L-EDEWBODY                 8.1-9.7 km  1.0000  1.47E-03  1.20E-03  3.09E-03
4.00E-03  6.57E-03 NOT-FOUND  9.30E-03  7.91E-03   50
 L-EDEWBODY                9.7-16.1 km  1.0000  7.64E-04  6.24E-04  1.44E-03
1.97E-03  3.45E-03 NOT-FOUND  3.59E-03  7.91E-03   50
 L-EDEWBODY               16.1-32.2 km  1.0000  6.52E-04  5.52E-04  1.22E-03
1.50E-03  2.47E-03 NOT-FOUND  2.72E-03  7.42E-03   83
 L-EDEWBODY               32.2-48.3 km  1.0000  2.45E-04  2.09E-04  5.02E-04
5.80E-04 NOT-FOUND NOT-FOUND  7.91E-04  1.27E-02   69
 L-EDEWBODY               48.3-64.4 km  1.0000  1.19E-04  1.06E-04  2.39E-04
3.22E-04  4.17E-04 NOT-FOUND  4.38E-04  7.42E-03  106
 L-EDEWBODY               64.4-80.5 km  1.0000  6.74E-05  5.33E-05  1.13E-04
1.39E-04  2.52E-04 NOT-FOUND  3.52E-04  7.42E-03  106
  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input


SOURCE TERM 11 OF 11:
    Case 11TSL
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RESULTS FOR A SINGLE EMERGENCY RESPONSE COHORT WITHOUT ANY WEIGHTING FRACTIONS BEING APPLIED

COHORT 2 = NO EVACUATION, RELOCATION MODELS APPLY EVERYWHERE

10-APR-06 19:11:31 PAGE 85

	PEAK CONS	PROB PEAK	PEAK NON-ZERO PROB	MEAN TRIAL	QUANTILES 50TH	90TH	95TH	99TH	99.5TH
HEALTH EFFECTS CASES									
ERL FAT/TOTAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/TRANSEPIDERMAL	0-16.1 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CAN FAT/TOTAL	0-16.1 km	1.0000	2.29E-01	2.01E-01	4.30E-01	5.35E-01	7.53E-01	8.38E-01	1.27E+00
CAN FAT/LUNG	0-80.5 km	1.0000	4.05E-01	2.62E-01	9.53E-01	1.18E+00	1.81E+00	2.17E+00	3.56E+00
CAN FAT/THYROID	0-80.5 km	1.0000	5.99E-02	3.80E-02	1.26E-01	1.82E-01	2.63E-01	3.00E-01	5.24E-01
CAN FAT/BREAST	0-80.5 km	1.0000	8.75E-02	5.67E-02	2.00E-01	2.62E-01	3.83E-01	4.39E-01	7.11E-01
CAN FAT/GI	0-80.5 km	1.0000	2.57E-01	1.61E-01	6.08E-01	7.90E-01	1.20E+00	1.43E+00	2.14E+00
CAN FAT/LEUKEMIA	0-80.5 km	1.0000	6.70E-02	4.29E-02	1.46E-01	2.12E-01	3.16E-01	3.71E-01	5.47E-01
CAN FAT/BONE	0-80.5 km	1.0000	8.15E-03	5.38E-03	1.88E-02	2.45E-02	3.62E-02	4.13E-02	6.75E-02
CAN FAT/OTHER	0-80.5 km	1.0000	3.31E-01	2.16E-01	7.57E-01	1.05E+00	1.43E+00	1.64E+00	2.80E+00
CAN INJ/THYROID	0-80.5 km	1.0000	5.99E-01	3.80E-01	1.26E+00	1.82E+00	2.63E+00	3.00E+00	5.24E+00
CAN INJ/BREAST	0-80.5 km	1.0000	2.76E-01	1.78E-01	6.35E-01	8.40E-01	1.28E+00	1.50E+00	2.24E+00
CAN FAT/TOTAL	0-80.5 km	1.0000	1.22E+00	7.87E-01	2.89E+00	3.62E+00	5.44E+00	6.10E+00	1.04E+01
ERL FAT/TOTAL	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PRODROMAL VOMIT	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/DIARRHEA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/PNEUMONITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/THYROIDITIS	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/HYPOTHYROIDISM	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ERL INJ/SKIN ERYTHEMA	0-80.5 km	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL INJ/TRANSEPIDERMAL        0-80.5 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

EARLY FATALITY DISTANCE (km)
 ERL FAT/TOTAL RISK > 0.000                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION EXCEEDING DOSE
 EARLY dose A-RED MARR > 1.50 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose A-LUNGS > 5.00 Sv              0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 2.00 Sv           0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EARLY dose L-EDEWBODY > 0.250 Sv          0.0007  2.00E-04  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  4.29E-01  5.71E-05   81

AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL                  0-1.6 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               1.6-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               3.2-4.8 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 ERL FAT/TOTAL               4.8-6.4 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
□10-APR-06  19:11:31    PAGE  86          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH     99.5TH     CONS      PROB  TRIAL
AVERAGE INDIVIDUAL RISK
 ERL FAT/TOTAL               6.4-8.1 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF          0-16.1 km  1.0000  4.51E+00  3.75E+00  8.58E+00
1.04E+01  1.37E+01  1.54E+01  2.28E+01  2.28E-04   81
 L-EDEWBODY  TOT LIF          0-80.5 km  1.0000  2.40E+01  1.49E+01  5.80E+01
7.69E+01  1.13E+02  1.34E+02  2.03E+02  9.70E-04    7

POPULATION WEIGHTED RISK
 ERL FAT/TOTAL                  0-3.2 km  0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 CAN FAT/TOTAL                0-16.1 km  1.0000  1.11E-05  9.59E-06  2.13E-05
2.58E-05  3.53E-05  3.94E-05  6.18E-05  2.28E-04   81

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
 L-EDEWBODY                     0-1.6 km  1.0000  7.12E-02  5.37E-02  1.29E-01
1.57E-01  2.21E-01  2.42E-01  2.64E-01  2.54E-03   81
 L-EDEWBODY                  1.6-3.2 km  1.0000  2.69E-02  1.70E-02  5.90E-02
7.45E-02  1.11E-01  1.50E-01  2.01E-01  2.54E-03   81
 L-EDEWBODY                  3.2-4.8 km  1.0000  1.39E-02  9.11E-03  2.93E-02
3.75E-02  5.99E-02  7.06E-02  1.02E-01  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  8.79E-03  6.25E-03  2.00E-02
2.88E-02  3.72E-02  4.11E-02  4.52E-02  2.54E-03   81
 L-EDEWBODY                  6.4-8.1 km  1.0000  5.98E-03  4.05E-03  1.22E-02
1.64E-02  3.04E-02  3.22E-02  3.41E-02  2.54E-03   81
 L-EDEWBODY                  8.1-9.7 km  1.0000  4.24E-03  2.91E-03  8.55E-03
1.18E-02  2.57E-02 NOT-FOUND  2.87E-02  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  2.19E-03  1.47E-03  4.58E-03
6.88E-03  9.55E-03 NOT-FOUND  1.16E-02  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  6.52E-04  5.52E-04  1.22E-03
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1.50E-03  2.47E-03 NOT-FOUND  2.72E-03  7.42E-03   83
 L-EDEWBODY                32.2-48.3 km  1.0000  2.45E-04  2.09E-04  5.02E-04
5.80E-04 NOT-FOUND NOT-FOUND  7.91E-04  1.27E-02   69
 L-EDEWBODY                48.3-64.4 km  1.0000  1.19E-04  1.06E-04  2.39E-04
3.22E-04  4.17E-04 NOT-FOUND  4.38E-04  7.42E-03  106
 L-EDEWBODY                64.4-80.5 km  1.0000  6.74E-05  5.33E-05  1.13E-04
1.39E-04  2.52E-04 NOT-FOUND  3.52E-04  7.42E-03  106
▯  DATE AND TIME OF RUN = MACCS2 10-APR-06  19:11:31   VERSION 1.13.1:  last revised
1/8/04, K. McFadden
  "ATMOS"  DESCRIPTION = IN1A.INP, ESBWR Model--Using stacked ST data, ATMOS input

  "EARLY"  DESCRIPTION = NAPS ESBWR NEARLY.INP, Sample Problem 1  EARLY input

  "CHRONC" DESCRIPTION = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


SOURCE TERM 11 OF 11:
    Case 11TSL

RESULTS FROM THE "CHRONC" MODULE ALONE

    COHORT 3 = NAPS ESBWR CHRONC.INP,  "New" COMIDA2-Based Food Model


10-APR-06  19:11:31     PAGE  87          PROB                              QUANTILES
                         PEAK       PEAK  PEAK
                                       NON-ZERO   MEAN       50TH       90TH       95TH
     99TH      99.5TH     CONS       PROB  TRIAL
HEALTH EFFECTS CASES
 CAN FAT/TOTAL                 0-16.1 km  1.0000  1.23E+00  1.10E+00  2.07E+00
2.34E+00  3.04E+00  3.17E+00  4.68E+00  6.60E-06   44
 CAN FAT/LUNG                  0-80.5 km  1.0000  1.38E+00  9.44E-01  3.00E+00
3.72E+00  6.13E+00  7.37E+00  1.06E+01  9.70E-04    7
 CAN FAT/THYROID               0-80.5 km  1.0000  9.85E-02  6.36E-02  2.31E-01
3.20E-01  4.87E-01  5.57E-01  8.46E-01  9.70E-04    7
 CAN FAT/BREAST                0-80.5 km  1.0000  8.36E-01  5.77E-01  1.83E+00
2.32E+00  3.46E+00  4.02E+00  6.33E+00  9.70E-04    7
 CAN FAT/GI                    0-80.5 km  1.0000  2.40E+00  1.75E+00  5.20E+00
6.40E+00  9.31E+00  1.08E+01  1.56E+01  9.70E-04    7
 CAN FAT/LEUKEMIA              0-80.5 km  1.0000  6.68E-01  4.64E-01  1.30E+00
1.77E+00  2.73E+00  3.22E+00  4.85E+00  9.70E-04    7
 CAN FAT/BONE                  0-80.5 km  1.0000  7.06E-02  4.99E-02  1.40E-01
2.03E-01  3.07E-01  3.55E-01  5.19E-01  9.70E-04    7
 CAN FAT/OTHER                 0-80.5 km  1.0000  2.49E+00  1.78E+00  5.22E+00
6.63E+00  1.03E+01  1.20E+01  1.74E+01  9.70E-04    7
 CAN INJ/THYROID               0-80.5 km  1.0000  9.85E-01  6.36E-01  2.31E+00
3.20E+00  4.87E+00  5.57E+00  8.46E+00  9.70E-04    7
 CAN INJ/BREAST                0-80.5 km  1.0000  2.63E+00  1.76E+00  5.78E+00
7.61E+00  1.11E+01  1.32E+01  1.99E+01  9.70E-04    7
 CAN FAT/TOTAL                 0-80.5 km  1.0000  7.95E+00  5.72E+00  1.65E+01
2.18E+01  3.23E+01  3.76E+01  5.62E+01  9.70E-04    7

POPULATION DOSE (Sv)
 L-EDEWBODY  TOT LIF           0-16.1 km  1.0000  2.75E+01  2.48E+01  4.51E+01
5.27E+01  6.68E+01  7.18E+01  1.02E+02  1.22E-05   24
 L-EDEWBODY  TOT LIF           0-80.5 km  1.0000  1.81E+02  1.27E+02  3.58E+02
4.72E+02  7.38E+02  8.35E+02  1.26E+03  9.70E-04    7

POPULATION WEIGHTED RISK
 CAN FAT/TOTAL                 0-16.1 km  1.0000  4.70E-05  4.14E-05  8.41E-05
1.01E-04  1.29E-04  1.43E-04  2.08E-04  5.14E-04   50

PEAK DOSE FOUND ON SPATIAL GRID (Sv)
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 L-EDEWBODY                    0-1.6 km  1.0000  4.61E-02  4.94E-02  7.11E-02
7.49E-02  8.48E-02  8.94E-02  9.04E-02  4.31E-03    1
 L-EDEWBODY                  1.6-3.2 km  1.0000  4.57E-02  4.64E-02  7.14E-02
7.30E-02  7.71E-02  7.89E-02  8.96E-02  1.14E-04   26
 L-EDEWBODY                  3.2-4.8 km  1.0000  3.43E-02  3.27E-02  5.99E-02
7.05E-02  7.86E-02  8.24E-02  8.62E-02  2.54E-03  103
 L-EDEWBODY                  4.8-6.4 km  1.0000  2.88E-02  2.49E-02  5.76E-02
7.05E-02 NOT-FOUND NOT-FOUND  8.06E-02  1.58E-02   50
 L-EDEWBODY                  6.4-8.1 km  1.0000  2.15E-02  1.63E-02  4.51E-02
5.34E-02  6.79E-02 NOT-FOUND  7.45E-02  7.91E-03   50
 L-EDEWBODY                  8.1-9.7 km  1.0000  1.56E-02  1.34E-02  3.13E-02
3.82E-02  6.42E-02 NOT-FOUND  8.18E-02  7.91E-03   50
 L-EDEWBODY                 9.7-16.1 km  1.0000  8.04E-03  7.00E-03  1.59E-02
2.06E-02  2.86E-02 NOT-FOUND  3.18E-02  7.91E-03   50
 L-EDEWBODY                16.1-32.2 km  1.0000  2.43E-03  2.34E-03  4.06E-03
4.78E-03 NOT-FOUND NOT-FOUND  7.32E-03  1.27E-02   23
 L-EDEWBODY                32.2-48.3 km  1.0000  9.31E-04  8.97E-04  1.43E-03
1.70E-03 NOT-FOUND NOT-FOUND  3.17E-03  1.27E-02   23
 L-EDEWBODY                48.3-64.4 km  1.0000  4.65E-04  4.04E-04  8.07E-04
1.05E-03 NOT-FOUND NOT-FOUND  1.39E-03  3.32E-02    7
 L-EDEWBODY                64.4-80.5 km  1.0000  2.68E-04  2.19E-04  5.27E-04
6.93E-04  8.34E-04 NOT-FOUND  8.61E-04  7.42E-03  106

L-EDEWBODY  POP. DOSE (SV)     0-80.5 km
 TOTAL LONG-TERM PATHWAYS DOSE          1.0000  1.81E+02  1.27E+02  3.58E+02
4.72E+02  7.38E+02  8.35E+02  1.26E+03  9.70E-04    7
 LONG-TERM DIRECT EXPOSURE PATHWAYS     1.0000  1.36E+02  8.70E+01  3.10E+02
4.12E+02  6.56E+02  7.65E+02  1.17E+03  9.70E-04    7
 TOTAL INGESTION PATHWAYS DOSE          1.0000  4.47E+01  2.75E+01  1.02E+02
1.21E+02  1.80E+02  2.10E+02  3.25E+02  3.83E-04   48
 LONG-TERM GROUNDSHINE DOSE             1.0000  1.29E+02  8.01E+01  3.00E+02
3.81E+02  6.43E+02  7.65E+02  1.11E+03  9.70E-04    7
 LONG-TERM RESUSPENSION DOSE            1.0000  6.72E+00  4.17E+00  1.48E+01
2.15E+01  3.22E+01  3.77E+01  5.79E+01  9.70E-04    7
 WATER INGESTION DOSE                   1.0000  3.30E-01  2.53E-01  6.74E-01
8.75E-01  1.25E+00  1.42E+00  2.45E+00  1.43E-04   81
 POP.-DEPENDENT DECONTAMINATION DOSE    0.6432  5.85E-02  5.43E-03  1.73E-01
2.54E-01  4.57E-01  5.83E-01  1.27E+00  2.28E-04   81
10-APR-06  19:11:31    PAGE  88          PROB                          QUANTILES
                          PEAK      PEAK  PEAK
                                       NON-ZERO   MEAN      50TH      90TH      95TH
     99TH      99.5TH      CONS      PROB  TRIAL
L-EDEWBODY  POP. DOSE (SV)     0-80.5 km
 FARM-DEPENDENT DECONTAMINATION DOSE    0.7401  5.20E-03  8.63E-04  1.47E-02
2.09E-02  4.42E-02  5.48E-02  8.28E-02  6.56E-04   81
 INGESTION OF GRAINS                    1.0000  1.28E+00  8.08E-01  3.28E+00
4.18E+00  5.73E+00  6.25E+00  9.93E+00  3.83E-04   48
 INGESTION OF LEAF VEG                  1.0000  2.23E+00  1.03E+00  4.83E+00
6.63E+00  2.25E+01  2.84E+01  4.84E+01  3.83E-04   48
 INGESTION OF ROOT CROPS                1.0000  1.69E+00  1.05E+00  4.24E+00
5.48E+00  7.94E+00  8.77E+00  1.29E+01  3.83E-04   48
 INGESTION OF FRUITS                    1.0000  2.51E+00  1.42E+00  6.36E+00
8.03E+00  1.16E+01  1.29E+01  1.91E+01  3.83E-04   48
 INGESTION OF LEGUMES                   1.0000  1.48E+00  9.00E-01  3.80E+00
4.81E+00  6.66E+00  7.67E+00  1.11E+01  3.83E-04   48
 INGESTION OF BEEF                      1.0000  1.57E+01  9.43E+00  3.82E+01
4.92E+01  6.07E+01  6.62E+01  9.31E+01  3.83E-04   48
 INGESTION OF MILK                      1.0000  1.53E+01  1.02E+01  3.42E+01
4.15E+01  7.03E+01  7.23E+01  9.38E+01  7.72E-06   35
 INGESTION OF POULTRY                   1.0000  3.09E+00  1.75E+00  6.63E+00
9.02E+00  2.25E+01  2.84E+01  4.82E+01  3.83E-04   48
 INGESTION OF OTHER MEAT CROPS          1.0000  1.10E+00  9.13E-01  1.69E+00
2.18E+00  5.50E+00  6.68E+00  1.12E+01  3.83E-04   48
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ECONOMIC COST MEASURES ($)      0-80.5 km
 TOTAL ECONOMIC COSTS                        0.9245  1.47E+06  9.16E+05  3.46E+06
4.50E+06  8.10E+06  1.05E+07  1.54E+07  7.13E-04   23
 POP.-DEPENDENT COSTS                        0.6432  6.25E+05  4.80E+04  2.03E+06
2.59E+06  4.99E+06  5.68E+06  1.05E+07  2.28E-04   81
 FARM-DEPENDENT COSTS                        0.9067  8.43E+05  2.01E+05  2.17E+06
2.47E+06  5.74E+06  9.20E+06  1.37E+07  7.13E-04   23
 POP.-DEPENDENT DECONTAMINATION COST         0.6432  1.26E+05  9.72E+03  3.98E+05
5.56E+05  1.00E+06  1.16E+06  2.22E+06  2.28E-04   81
 FARM-DEPENDENT DECONTAMINATION COST         0.7401  3.01E+04  9.53E+03  7.73E+04
9.96E+04  1.47E+05  1.74E+05  2.40E+05  6.56E-04   81
 POP.-DEPENDENT INTERDICTION COST            0.6432  4.99E+05  2.90E+04  1.53E+06
2.19E+06  3.33E+06  3.89E+06  8.26E+06  2.28E-04   81
 FARM-DEPENDENT INTERDICTION COST            0.8577  6.52E+05  1.12E+05  1.52E+06
1.92E+06  3.77E+06  5.68E+06  9.18E+06  7.13E-04   23
 POP.-DEPENDENT CONDEMNATION COST            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 FARM-DEPENDENT CONDEMNATION COST            0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 EMERGENCY PHASE COST                        0.0136  7.01E+00  0.00E+00  0.00E+00
0.00E+00  3.30E+02  5.46E+02  7.80E+02  9.57E-04  110
 INTERMEDIATE PHASE COST                     0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL COST                          0.9051  2.33E+04  2.30E+03  8.03E+04
1.07E+05  1.42E+05  1.61E+05  2.23E+05  7.66E-04   48
 CROP DISPOSAL COST                          0.8577  1.37E+05  2.41E+04  3.55E+05
4.46E+05  8.85E+05  2.27E+06  4.23E+06  7.13E-04   23

AFFECTED AREA/POPULATION        0-80.5 km
 FARM DECONTAMINATION (HECTARES)             0.7401  4.11E+01  1.80E+01  1.07E+02
1.33E+02  2.17E+02  2.57E+02  3.06E+02  2.68E-03   66
 POP. DECONTAMINATION (INDIVIDUALS)          0.6432  3.44E+01  2.90E+00  1.10E+02
1.47E+02  2.97E+02  3.47E+02  5.56E+02  9.42E-04   66
 FARM INTERDICTION (HECTARES)                0.8577  5.29E+02  1.05E+02  1.26E+03
1.51E+03  3.71E+03  5.42E+03  8.38E+03  7.13E-04   23
 POP. INTERDICTION (INDIVIDUALS)             0.6432  3.44E+01  2.90E+00  1.10E+02
1.47E+02  2.97E+02  3.47E+02  5.56E+02  9.42E-04   66
 FARM CONDEMNATION (HECTARES)                0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 POP. CONDEMNATION (INDIVIDUALS)             0.0000  0.00E+00  0.00E+00  0.00E+00
0.00E+00  0.00E+00  0.00E+00  0.00E+00  0.00E+00    0
 MILK DISPOSAL AREA (HECTARES)               0.9051  1.30E+03  1.23E+02  5.14E+03
6.15E+03  7.66E+03  8.11E+03  1.02E+04  3.83E-04   48
 CROP DISPOSAL AREA (HECTARES)               0.8577  5.28E+02  9.98E+01  1.26E+03
1.51E+03  3.71E+03  5.42E+03  8.38E+03  7.13E-04   23

Successful completion of MACCS2 was achieved!
This job required a total of      51.133 CPU seconds

   Input processing required       0.609 CPU seconds
         Simulation required      47.773 CPU seconds
  Output processing required       2.750 CPU seconds
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