

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Table of Contents

Part IV: Concentration of Radionuclides

Concentration of radionuclides in different media

Time= 0.000E+00	2
Time= 1.000E+00	3
Time= 3.000E+00	4
Time= 1.000E+01	5
Time= 4.049E+01	6
Time= 1.000E+02	7
Time= 3.000E+02	8
Time= 1.000E+03	9

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 0.000E+00 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	1.000E+00	0.000E+00	0.000E+00	4.480E+00	2.890E-01
Cs-134	1.000E+00	0.000E+00	0.000E+00	2.212E+01	1.427E+00
Cs-137	1.000E+00	0.000E+00	0.000E+00	2.212E+01	1.427E+00
Eu-152	1.000E+00	0.000E+00	0.000E+00	1.050E+01	6.775E-01
Eu-154	1.000E+00	0.000E+00	0.000E+00	1.050E+01	6.775E-01
Gd-152	0.000E+00	0.000E+00	0.000E+00	3.060E-15	1.974E-16
H-3	1.000E+00	0.000E+00	0.000E+00	4.891E+03	3.155E+02
Nd-144	0.000E+00	0.000E+00	0.000E+00	5.616E-37	3.623E-38
Ni-63	1.000E+00	0.000E+00	0.000E+00	1.608E+01	1.037E+00
Sm-148	0.000E+00	0.000E+00	0.000E+00	8.152E-29	5.258E-30
Sr-90	1.000E+00	0.000E+00	0.000E+00	3.993E+02	2.575E+01

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 0.000E+00 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	4.480E+00	1.144E+00	8.874E+00	6.027E+00	6.027E+00	2.304E+01	2.118E+00	8.669E+01	5.779E+01
Cs-134	2.212E+01	5.527E+00	4.379E+01	2.972E+01	2.972E+01	1.274E+02	4.571E+01	2.854E+03	1.427E+02
Cs-137	2.212E+01	5.527E+00	4.379E+01	2.972E+01	2.972E+01	1.274E+02	4.571E+01	2.854E+03	1.427E+02
Eu-152	1.050E+01	2.569E+00	2.078E+01	1.409E+01	1.409E+01	3.721E+00	9.294E-02	3.387E+01	6.775E+02
Eu-154	1.050E+01	2.569E+00	2.078E+01	1.409E+01	1.409E+01	3.721E+00	9.294E-02	3.387E+01	6.775E+02
Gd-152	3.060E-15	7.485E-16	6.054E-15	4.106E-15	4.106E-15	5.421E-16	2.708E-17	4.934E-15	1.974E-13
H-3	4.891E+03	3.962E+03	1.915E+03	1.311E+03	1.311E+03	2.328E+03	2.970E+03	3.155E+02	3.155E+02
Nd-144	5.616E-37	1.374E-37	1.111E-36	7.536E-37	7.536E-37	9.949E-38	4.970E-39	3.623E-36	3.623E-35
Ni-63	1.608E+01	4.038E+00	3.183E+01	2.160E+01	2.160E+01	1.311E+01	7.594E+01	1.037E+02	1.037E+02
Sm-148	8.152E-29	1.994E-29	1.613E-28	1.094E-28	1.094E-28	1.444E-29	7.213E-31	1.314E-28	5.258E-27
Sr-90	3.993E+02	1.299E+02	7.971E+02	5.463E+02	5.463E+02	4.636E+02	1.609E+02	1.545E+03	2.575E+03

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 1.000E+00 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	8.767E-01	0.000E+00	0.000E+00	3.928E+00	2.533E-01
Cs-134	7.145E-01	0.000E+00	0.000E+00	1.581E+01	1.019E+00
Cs-137	9.768E-01	0.000E+00	0.000E+00	2.161E+01	1.394E+00
Eu-152	9.499E-01	0.000E+00	0.000E+00	9.977E+00	6.435E-01
Eu-154	9.223E-01	0.000E+00	0.000E+00	9.687E+00	6.248E-01
Gd-152	1.745E-15	0.000E+00	0.000E+00	5.133E-15	3.311E-16
H-3	8.502E-01	0.000E+00	0.000E+00	4.158E+03	2.682E+02
Nd-144	0.000E+00	0.000E+00	0.000E+00	5.616E-37	3.622E-38
Ni-63	9.928E-01	0.000E+00	0.000E+00	1.596E+01	1.029E+00
Sm-148	8.715E-32	0.000E+00	0.000E+00	7.743E-29	4.994E-30
Sr-90	9.678E-01	0.000E+00	0.000E+00	3.864E+02	2.492E+01

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 1.000E+00 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	3.928E+00	1.003E+00	7.780E+00	5.286E+00	5.286E+00	2.020E+01	1.857E+00	7.600E+01	5.067E+01
Cs-134	1.581E+01	3.949E+00	3.129E+01	2.125E+01	2.125E+01	9.105E+01	3.266E+01	2.039E+03	1.019E+02
Cs-137	2.161E+01	5.399E+00	4.278E+01	2.903E+01	2.903E+01	1.245E+02	4.465E+01	2.788E+03	1.394E+02
Eu-152	9.977E+00	2.441E+00	1.974E+01	1.339E+01	1.339E+01	3.535E+00	8.829E-02	3.218E+01	6.435E+02
Eu-154	9.688E+00	2.370E+00	1.917E+01	1.300E+01	1.300E+01	3.432E+00	8.572E-02	3.124E+01	6.248E+02
Gd-152	5.177E-15	1.415E-15	1.033E-14	9.566E-15	9.566E-15	1.082E-15	5.647E-17	9.320E-15	3.507E-13
H-3	4.159E+03	3.383E+03	1.629E+03	1.130E+03	1.130E+03	1.984E+03	2.534E+03	2.687E+02	2.687E+02
Nd-144	5.616E-37	1.374E-37	1.111E-36	7.535E-37	7.535E-37	9.948E-38	4.969E-39	3.622E-36	3.622E-35
Ni-63	1.596E+01	4.009E+00	3.160E+01	2.145E+01	2.145E+01	1.301E+01	7.539E+01	1.029E+02	1.029E+02
Sm-148	7.744E-29	1.899E-29	1.532E-28	1.047E-28	1.047E-28	1.376E-29	6.884E-31	1.250E-28	5.000E-27
Sr-90	3.864E+02	1.257E+02	7.714E+02	5.293E+02	5.293E+02	4.489E+02	1.558E+02	1.496E+03	2.493E+03

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 3.000E+00 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	6.738E-01	0.000E+00	0.000E+00	3.019E+00	1.947E-01
Cs-134	3.648E-01	0.000E+00	0.000E+00	8.069E+00	5.204E-01
Cs-137	9.320E-01	0.000E+00	0.000E+00	2.062E+01	1.330E+00
Eu-152	8.570E-01	0.000E+00	0.000E+00	9.002E+00	5.806E-01
Eu-154	7.845E-01	0.000E+00	0.000E+00	8.240E+00	5.315E-01
Gd-152	4.978E-15	0.000E+00	0.000E+00	8.973E-15	5.787E-16
H-3	6.146E-01	0.000E+00	0.000E+00	3.006E+03	1.939E+02
Nd-144	0.000E+00	0.000E+00	0.000E+00	5.614E-37	3.621E-38
Ni-63	9.784E-01	0.000E+00	0.000E+00	1.573E+01	1.015E+00
Sm-148	7.584E-31	0.000E+00	0.000E+00	6.986E-29	4.506E-30
Sr-90	9.064E-01	0.000E+00	0.000E+00	3.619E+02	2.334E+01

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 3.000E+00 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	3.019E+00	7.707E-01	5.980E+00	4.063E+00	4.063E+00	1.553E+01	1.427E+00	5.842E+01	3.894E+01
Cs-134	8.069E+00	2.016E+00	1.597E+01	1.085E+01	1.085E+01	4.648E+01	1.667E+01	1.041E+03	5.205E+01
Cs-137	2.062E+01	5.151E+00	4.081E+01	2.770E+01	2.770E+01	1.188E+02	4.260E+01	2.660E+03	1.330E+02
Eu-152	9.002E+00	2.202E+00	1.781E+01	1.208E+01	1.208E+01	3.189E+00	7.966E-02	2.903E+01	5.806E+02
Eu-154	8.240E+00	2.016E+00	1.630E+01	1.106E+01	1.106E+01	2.919E+00	7.292E-02	2.658E+01	5.315E+02
Gd-152	9.012E-15	2.339E-15	1.791E-14	1.446E-14	1.446E-14	1.745E-15	8.937E-17	1.541E-14	5.964E-13
H-3	3.007E+03	2.445E+03	1.177E+03	8.169E+02	8.169E+02	1.434E+03	1.832E+03	1.943E+02	1.943E+02
Nd-144	5.614E-37	1.373E-37	1.111E-36	7.533E-37	7.533E-37	9.945E-38	4.968E-39	3.621E-36	3.621E-35
Ni-63	1.573E+01	3.951E+00	3.114E+01	2.114E+01	2.114E+01	1.283E+01	7.430E+01	1.015E+02	1.015E+02
Sm-148	6.987E-29	1.713E-29	1.383E-28	9.452E-29	9.452E-29	1.242E-29	6.214E-31	1.128E-28	4.512E-27
Sr-90	3.619E+02	1.177E+02	7.225E+02	4.957E+02	4.957E+02	4.204E+02	1.459E+02	1.401E+03	2.335E+03

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 1.000E+01 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	2.682E-01	0.000E+00	0.000E+00	1.202E+00	7.751E-02
Cs-134	3.467E-02	0.000E+00	0.000E+00	7.670E-01	4.947E-02
Cs-137	7.909E-01	0.000E+00	0.000E+00	1.750E+01	1.128E+00
Eu-152	5.979E-01	0.000E+00	0.000E+00	6.280E+00	4.051E-01
Eu-154	4.453E-01	0.000E+00	0.000E+00	4.678E+00	3.017E-01
Gd-152	1.400E-14	0.000E+00	0.000E+00	1.969E-14	1.270E-15
H-3	1.974E-01	0.000E+00	0.000E+00	9.652E+02	6.226E+01
Nd-144	8.408E-45	0.000E+00	0.000E+00	5.609E-37	3.618E-38
Ni-63	9.298E-01	0.000E+00	0.000E+00	1.495E+01	9.642E-01
Sm-148	7.521E-30	0.000E+00	0.000E+00	4.874E-29	3.144E-30
Sr-90	7.206E-01	0.000E+00	0.000E+00	2.877E+02	1.856E+01

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 1.000E+01 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	1.202E+00	3.068E-01	2.380E+00	1.617E+00	1.617E+00	6.180E+00	5.680E-01	2.325E+01	1.550E+01
Cs-134	7.670E-01	1.916E-01	1.518E+00	1.031E+00	1.031E+00	4.418E+00	1.585E+00	9.895E+01	4.947E+00
Cs-137	1.750E+01	4.371E+00	3.463E+01	2.351E+01	2.351E+01	1.008E+02	3.615E+01	2.257E+03	1.129E+02
Eu-152	6.280E+00	1.536E+00	1.242E+01	8.428E+00	8.428E+00	2.225E+00	5.557E-02	2.025E+01	4.051E+02
Eu-154	4.678E+00	1.144E+00	9.254E+00	6.278E+00	6.278E+00	1.657E+00	4.139E-02	1.509E+01	3.017E+02
Gd-152	1.971E-14	4.916E-15	3.905E-14	2.810E-14	2.810E-14	3.596E-15	1.812E-16	3.240E-14	1.282E-12
H-3	9.655E+02	7.853E+02	3.781E+02	2.623E+02	2.623E+02	4.605E+02	5.883E+02	6.238E+01	6.238E+01
Nd-144	5.609E-37	1.372E-37	1.110E-36	7.525E-37	7.525E-37	9.935E-38	4.963E-39	3.618E-36	3.618E-35
Ni-63	1.495E+01	3.755E+00	2.959E+01	2.009E+01	2.009E+01	1.219E+01	7.061E+01	9.642E+01	9.642E+01
Sm-148	4.875E-29	1.197E-29	9.647E-29	6.617E-29	6.617E-29	8.680E-30	4.344E-31	7.873E-29	3.149E-27
Sr-90	2.877E+02	9.360E+01	5.744E+02	3.941E+02	3.941E+02	3.342E+02	1.160E+02	1.114E+03	1.856E+03

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 4.049E+01 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	4.853E-03	0.000E+00	0.000E+00	2.174E-02	1.402E-03
Cs-134	1.226E-06	0.000E+00	0.000E+00	2.712E-05	1.749E-06
Cs-137	3.868E-01	0.000E+00	0.000E+00	8.556E+00	5.519E-01
Eu-152	1.246E-01	0.000E+00	0.000E+00	1.309E+00	8.443E-02
Eu-154	3.780E-02	0.000E+00	0.000E+00	3.971E-01	2.561E-02
Gd-152	3.045E-14	0.000E+00	0.000E+00	3.923E-14	2.531E-15
H-3	1.401E-03	0.000E+00	0.000E+00	6.853E+00	4.420E-01
Nd-144	3.784E-43	0.000E+00	0.000E+00	5.585E-37	3.602E-38
Ni-63	7.449E-01	0.000E+00	0.000E+00	1.197E+01	7.723E-01
Sm-148	8.084E-29	0.000E+00	0.000E+00	1.016E-29	6.552E-31
Sr-90	2.653E-01	0.000E+00	0.000E+00	1.059E+02	6.832E+00

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 4.049E+01 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	2.174E-02	5.551E-03	4.307E-02	2.926E-02	2.926E-02	1.118E-01	1.028E-02	4.207E-01	2.805E-01
Cs-134	2.712E-05	6.775E-06	5.368E-05	3.647E-05	3.647E-05	1.562E-04	5.603E-05	3.498E-03	1.749E-04
Cs-137	8.557E+00	2.138E+00	1.694E+01	1.150E+01	1.150E+01	4.929E+01	1.768E+01	1.104E+03	5.519E+01
Eu-152	1.309E+00	3.202E-01	2.590E+00	1.756E+00	1.756E+00	4.637E-01	1.158E-02	4.221E+00	8.443E+01
Eu-154	3.971E-01	9.713E-02	7.855E-01	5.329E-01	5.329E-01	1.407E-01	3.514E-03	1.281E+00	2.561E+01
Gd-152	3.924E-14	9.618E-15	7.764E-14	5.299E-14	5.299E-14	6.972E-15	3.486E-16	6.340E-14	2.533E-12
H-3	6.855E+00	5.575E+00	2.684E+00	1.862E+00	1.862E+00	3.269E+00	4.176E+00	4.429E-01	4.429E-01
Nd-144	5.585E-37	1.366E-37	1.105E-36	7.494E-37	7.494E-37	9.893E-38	4.942E-39	3.602E-36	3.602E-35
Ni-63	1.197E+01	3.008E+00	2.371E+01	1.609E+01	1.609E+01	9.764E+00	5.657E+01	7.723E+01	7.723E+01
Sm-148	1.017E-29	2.529E-30	2.014E-29	1.438E-29	1.438E-29	1.845E-30	9.296E-32	1.652E-29	6.607E-28
Sr-90	1.059E+02	3.446E+01	2.114E+02	1.451E+02	1.451E+02	1.231E+02	4.270E+01	4.100E+02	6.833E+02

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 1.000E+02 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	1.928E-06	0.000E+00	0.000E+00	8.636E-06	5.570E-07
Cs-134	2.511E-15	0.000E+00	0.000E+00	5.556E-14	3.583E-15
Cs-137	9.576E-02	0.000E+00	0.000E+00	2.118E+00	1.366E-01
Eu-152	5.839E-03	0.000E+00	0.000E+00	6.133E-02	3.955E-03
Eu-154	3.068E-04	0.000E+00	0.000E+00	3.223E-03	2.079E-04
Gd-152	3.454E-14	0.000E+00	0.000E+00	4.408E-14	2.843E-15
H-3	8.965E-08	0.000E+00	0.000E+00	4.384E-04	2.828E-05
Nd-144	3.561E-42	0.000E+00	0.000E+00	5.539E-37	3.573E-38
Ni-63	4.831E-01	0.000E+00	0.000E+00	7.767E+00	5.009E-01
Sm-148	2.775E-28	0.000E+00	0.000E+00	4.759E-31	3.070E-32
Sr-90	3.773E-02	0.000E+00	0.000E+00	1.506E+01	9.717E-01

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 1.000E+02 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	8.636E-06	2.205E-06	1.711E-05	1.162E-05	1.162E-05	4.441E-05	4.082E-06	1.671E-04	1.114E-04
Cs-134	5.556E-14	1.388E-14	1.100E-13	7.471E-14	7.471E-14	3.200E-13	1.148E-13	7.167E-12	3.584E-13
Cs-137	2.118E+00	5.292E-01	4.193E+00	2.846E+00	2.846E+00	1.220E+01	4.377E+00	2.733E+02	1.366E+01
Eu-152	6.133E-02	1.500E-02	1.213E-01	8.229E-02	8.229E-02	2.173E-02	5.427E-04	1.978E-01	3.955E+00
Eu-154	3.223E-03	7.883E-04	6.375E-03	4.325E-03	4.325E-03	1.142E-03	2.852E-05	1.039E-02	2.079E-01
Gd-152	4.408E-14	1.078E-14	8.720E-14	5.916E-14	5.916E-14	7.809E-15	3.901E-16	7.108E-14	2.843E-12
H-3	4.386E-04	3.567E-04	1.717E-04	1.192E-04	1.192E-04	2.092E-04	2.672E-04	2.834E-05	2.834E-05
Nd-144	5.539E-37	1.355E-37	1.096E-36	7.432E-37	7.432E-37	9.813E-38	4.902E-39	3.573E-36	3.573E-35
Ni-63	7.767E+00	1.951E+00	1.538E+01	1.044E+01	1.044E+01	6.333E+00	3.669E+01	5.009E+01	5.009E+01
Sm-148	4.880E-31	1.605E-31	9.891E-31	1.380E-30	1.380E-30	1.296E-31	7.263E-33	9.031E-31	3.612E-29
Sr-90	1.506E+01	4.901E+00	3.007E+01	2.064E+01	2.064E+01	1.750E+01	6.073E+00	5.831E+01	9.718E+01

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 3.000E+02 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	7.163E-18	0.000E+00	0.000E+00	3.209E-17	2.070E-18
Cs-134	1.541E-44	0.000E+00	0.000E+00	3.405E-43	2.242E-44
Cs-137	8.782E-04	0.000E+00	0.000E+00	1.943E-02	1.253E-03
Eu-152	1.990E-07	0.000E+00	0.000E+00	2.091E-06	1.348E-07
Eu-154	2.888E-11	0.000E+00	0.000E+00	3.034E-10	1.957E-11
Gd-152	3.456E-14	0.000E+00	0.000E+00	4.409E-14	2.844E-15
H-3	7.205E-22	0.000E+00	0.000E+00	3.524E-18	2.273E-19
Nd-144	4.053E-41	0.000E+00	0.000E+00	5.389E-37	3.476E-38
Ni-63	1.128E-01	0.000E+00	0.000E+00	1.813E+00	1.169E-01
Sm-148	9.600E-28	0.000E+00	0.000E+00	1.623E-35	1.047E-36
Sr-90	5.371E-05	0.000E+00	0.000E+00	2.145E-02	1.383E-03

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 3.000E+02 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	3.209E-17	8.193E-18	6.357E-17	4.319E-17	4.319E-17	1.650E-16	1.517E-17	6.210E-16	4.140E-16
Cs-134	3.405E-43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.455E-41	2.228E-42
Cs-137	1.943E-02	4.854E-03	3.846E-02	2.610E-02	2.610E-02	1.119E-01	4.014E-02	2.506E+00	1.253E-01
Eu-152	2.091E-06	5.114E-07	4.136E-06	2.805E-06	2.805E-06	7.407E-07	1.850E-08	6.742E-06	1.348E-04
Eu-154	3.034E-10	7.421E-11	6.001E-10	4.071E-10	4.071E-10	1.075E-10	2.684E-12	9.783E-10	1.957E-08
Gd-152	4.409E-14	1.079E-14	8.723E-14	5.916E-14	5.916E-14	7.810E-15	3.901E-16	7.109E-14	2.844E-12
H-3	3.525E-18	2.867E-18	1.380E-18	9.577E-19	9.577E-19	1.681E-18	2.148E-18	2.277E-19	2.277E-19
Nd-144	5.389E-37	1.318E-37	1.066E-36	7.231E-37	7.231E-37	9.547E-38	4.770E-39	3.476E-36	3.476E-35
Ni-63	1.813E+00	4.554E-01	3.589E+00	2.436E+00	2.436E+00	1.478E+00	8.564E+00	1.169E+01	1.169E+01
Sm-148	1.197E-32	4.386E-32	4.733E-32	7.377E-31	7.377E-31	4.508E-32	3.035E-33	1.349E-31	5.398E-30
Sr-90	2.145E-02	6.977E-03	4.281E-02	2.938E-02	2.938E-02	2.491E-02	8.646E-03	8.301E-02	1.384E-01

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concent : RESRAD Default

File : C:\USERS\DAVID FAUVER\DOCUMENTS\ZION\RESRAD\TSD\BFM DOSE FACTOR\BFM RESRAD INPUT FILE\FINAL\ZION BFM.RAD

Concentration of radionuclides in environmental media
at t = 1.000E+03 years

Radio- Nuclide	Contaminat- ted Zone	Surface Soil*	Air Par- ticulate	Well Water	Surface Water
	pCi/g	pCi/g	pCi/m**3	pCi/L	pCi/L
Co-60	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cs-134	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cs-137	6.485E-11	0.000E+00	0.000E+00	1.434E-09	9.251E-11
Eu-152	4.603E-23	0.000E+00	0.000E+00	4.833E-22	3.118E-23
Eu-154	7.389E-36	0.000E+00	0.000E+00	7.759E-35	5.005E-36
Gd-152	3.393E-14	0.000E+00	0.000E+00	4.327E-14	2.791E-15
H-3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Nd-144	4.717E-40	0.000E+00	0.000E+00	4.892E-37	3.156E-38
Ni-63	6.927E-04	0.000E+00	0.000E+00	1.113E-02	7.181E-04
Sm-148	3.294E-27	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sr-90	5.845E-15	0.000E+00	0.000E+00	2.333E-12	1.505E-13

*The Surface Soil is the top layer of soil within the user specified mixing zone/depth.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.

Concentration of H-3 in soil moisture = 0.000E+00 pCi/ml

Concentration of gaseous H-3 in air = 0.000E+00 pCi/m**3

Concentration of radionuclides in foodstuff media
at t = 1.000E+03 years*

Radio- Nuclide	Drinking Water	Nonleafy Vegetable	Leafy Vegetable	Fodder Meat	Fodder Milk	Meat	Milk	Fish	Crustacea
	pCi/L	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/kg	pCi/L	pCi/kg	pCi/kg
Co-60	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cs-134	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cs-137	1.434E-09	1.195E-09	3.676E-09	2.764E-09	2.764E-09	9.801E-09	3.727E-09	1.850E-07	9.251E-09
Eu-152	4.833E-22	1.479E-22	9.859E-22	6.783E-22	6.783E-22	1.746E-22	4.393E-24	1.559E-21	3.118E-20
Eu-154	7.759E-35	2.375E-35	1.583E-34	1.089E-34	1.089E-34	2.803E-35	7.053E-37	2.502E-34	5.005E-33
Gd-152	4.327E-14	3.247E-14	1.075E-13	7.994E-14	7.994E-14	8.903E-15	4.685E-16	6.977E-14	2.791E-12
H-3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Nd-144	4.892E-37	1.200E-37	9.682E-37	6.567E-37	6.567E-37	8.668E-38	4.330E-39	3.156E-36	3.156E-35
Ni-63	1.113E-02	1.397E-02	3.322E-02	2.613E-02	2.613E-02	1.199E-02	7.590E-02	7.181E-02	7.181E-02
Sm-148	0.000E+00	2.125E-27	2.125E-27	2.125E-27	2.125E-27	1.203E-28	8.312E-30	0.000E+00	0.000E+00
Sr-90	2.333E-12	1.872E-12	5.770E-12	4.310E-12	4.310E-12	3.120E-12	1.137E-12	9.031E-12	1.505E-11

*Concentrations are at consumption time and include radioactive decay and ingrowth during storage time.

For livestock fodder, consumption time is t minus meat or milk storage time.

Concentrations in the media occurring in pathways that are suppressed are calculated using the current input parameters, i.e. using parameters appearing in the input screen when the pathways are active.