

'Eu-152 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 6.50E+02
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 6.50E+01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 6.17E-08
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 6.50E+01
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 1.72E+28

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 3.4060E-05
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.2360E+03
RETARDATION FACTOR (UNSATURATED) 3.0222E+02
SOLUBILITY LIMITED MASS (mg) 4.7354E+16
SOLUBILITY LIMITED ACTIVITY (Ci) 1.6943E-19
TRANSIT TIME IN UNSAT ZONE (years) 7.1868E+03
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 1.85E-20 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 1.85E-20 Ci/L

PEAK TIME (y): 7.827690E+03

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.114E+05
LIMITING SOIL CONCENTRATION (Ci/kg):	2.742E+02
LIMITING INVENTORY IN SOIL (Ci):	1.997E+10
LIMITING INVENTORY IN SOIL (mg):	5.582E+45
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Eu-154 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0) CONC VS TIME; (1) PEAK CONC AND LIMITING SOIL CONC

IMODEL: 1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 6.50E+02
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 6.50E+01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 8.77E-09
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 6.50E+01
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 2.45E+27

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 3.4060E-05
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.2360E+03
RETARDATION FACTOR (UNSATURATED) 3.0222E+02
SOLUBILITY LIMITED MASS (mg) 4.7354E+16
SOLUBILITY LIMITED ACTIVITY (Ci) 1.6943E-19
TRANSIT TIME IN UNSAT ZONE (years) 7.1868E+03
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 2.63E-21 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 2.63E-21 Ci/L

PEAK TIME (y): 7.827690E+03

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.114E+05
LIMITING SOIL CONCENTRATION (Ci/kg):	2.742E+02
LIMITING INVENTORY IN SOIL (Ci):	1.997E+10
LIMITING INVENTORY IN SOIL (mg):	5.582E+45
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Np-237 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0) CONC VS TIME; (1) PEAK CONC AND LIMITING SOIL CONC

IMODEL: 1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY	0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m)	1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m)	1.27E+02
THICKNESS OF SOURCE (m)	3.01E+00
PERCOLATION RATE (darcy vel m/y)	1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE	4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE	4.10E-01
BULK DENSITY AT SOURCE (g/cm**3)	1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g)	8.00E+00
BULK DENSITY IN UNSAT ZONE (g/cm**3)	1.90E+00
UNSATURATED ZONE THICKNESS (m)	5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g)	8.00E-01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1)	0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci)	2.53E-09
MOLECULAR WEIGHT (g/mole)	1.00E+00
SOLUBILITY LIMIT (mg/L)	1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y)	1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3)	1.90E+00
POROSITY OF AQUIFER	1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g)	8.00E-01
DISPERSIVITY X DIRECTION (m)	9.00E+00
DISPERSIVITY Y DIRECTION (m)	4.00E+00
PORE VELOCITY (m/y)	5.70E+02
WELL SCREEN THICKNESS (m)	1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m)	6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m)	0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L)	6.00E-03
UNITS OF CONTAMINANT	Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 7.07E+26

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y)	2.6771E-03
UNSATURATED PORE VELOCITY (m/y)	2.4390E-01
DECAY CONSTANT(S) (1/y)	6.9315E-39
RETARDATION FACTOR(S) (SATURATED)	1.6200E+01
RETARDATION FACTOR (UNSATURATED)	4.7073E+00
SOLUBILITY LIMITED MASS (mg)	6.0248E+14
SOLUBILITY LIMITED ACTIVITY (Ci)	2.1556E-21
TRANSIT TIME IN UNSAT ZONE (years)	1.1194E+02
FRACTION DECAYED DURING UNSAT TRANSPORT	0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years)	30
BODY WEIGHT (kg)	7.000E+01
AVERAGING TIME (days)	2.550E+04
WATER INTAKE RATE (L/d)	2.000E+00
EXPOSURE FREQUENCY (days/year)	3.500E+02
EXPOSURE DURATION (years)	3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y)	4.000E-03
CARCINOGENIC RISK CRITERIA	1.000E-04
HAZARD QUOTIENT	1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 5.97E-20 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 5.42E-20 Ci/L

PEAK TIME (y): 1.203042E+02

LIMITING SOIL CONCENTRATION (Ci/m**3):	5.766E+03
LIMITING SOIL CONCENTRATION (Ci/kg):	3.844E+00
LIMITING INVENTORY IN SOIL (Ci):	2.799E+08
LIMITING INVENTORY IN SOIL (mg):	7.824E+43
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Pu-238 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY	0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m)	1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m)	1.27E+02
THICKNESS OF SOURCE (m)	3.01E+00
PERCOLATION RATE (darcy vel m/y)	1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE	4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE	4.10E-01
BULK DENSITY AT SOURCE (g/cm**3)	1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g)	1.50E+03
BULK DENSITY IN UNSAT ZONE (g/cm**3)	1.90E+00
UNSATURATED ZONE THICKNESS (m)	5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g)	1.50E+02
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1)	0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci)	3.03E-09
MOLECULAR WEIGHT (g/mole)	1.00E+00
SOLUBILITY LIMIT (mg/L)	1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y)	1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3)	1.90E+00
POROSITY OF AQUIFER	1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g)	1.50E+02
DISPERSIVITY X DIRECTION (m)	9.00E+00
DISPERSIVITY Y DIRECTION (m)	4.00E+00
PORE VELOCITY (m/y)	5.70E+02
WELL SCREEN THICKNESS (m)	1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m)	6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m)	0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L)	6.00E-03
UNITS OF CONTAMINANT	Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 8.47E+26

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y)	1.4763E-05
UNSATURATED PORE VELOCITY (m/y)	2.4390E-01
DECAY CONSTANT(S) (1/y)	6.9315E-39
RETARDATION FACTOR(S) (SATURATED)	2.8510E+03
RETARDATION FACTOR (UNSATURATED)	6.9612E+02
SOLUBILITY LIMITED MASS (mg)	1.0925E+17
SOLUBILITY LIMITED ACTIVITY (Ci)	3.9090E-19
TRANSIT TIME IN UNSAT ZONE (years)	1.6554E+04
FRACTION DECAYED DURING UNSAT TRANSPORT	0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years)	30
BODY WEIGHT (kg)	7.000E+01
AVERAGING TIME (days)	2.550E+04
WATER INTAKE RATE (L/d)	2.000E+00
EXPOSURE FREQUENCY (days/year)	3.500E+02
EXPOSURE DURATION (years)	3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y)	4.000E-03
CARCINOGENIC RISK CRITERIA	1.000E-04
HAZARD QUOTIENT	1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 3.95E-22 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 3.95E-22 Ci/L

PEAK TIME (y): 1.803212E+04

LIMITING SOIL CONCENTRATION (Ci/m**3):	9.490E+05
LIMITING SOIL CONCENTRATION (Ci/kg):	6.327E+02
LIMITING INVENTORY IN SOIL (Ci):	4.607E+10
LIMITING INVENTORY IN SOIL (mg):	1.288E+46
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Pu-239/240 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 1.50E+03
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 1.50E+02
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 4.60E-08
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 1.50E+02
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 1.29E+28

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 1.4763E-05
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 2.8510E+03
RETARDATION FACTOR (UNSATURATED) 6.9612E+02
SOLUBILITY LIMITED MASS (mg) 1.0925E+17
SOLUBILITY LIMITED ACTIVITY (Ci) 3.9090E-19
TRANSIT TIME IN UNSAT ZONE (years) 1.6554E+04
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 5.99E-21 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 5.99E-21 Ci/L

PEAK TIME (y): 1.803212E+04

LIMITING SOIL CONCENTRATION (Ci/m**3):	9.490E+05
LIMITING SOIL CONCENTRATION (Ci/kg):	6.327E+02
LIMITING INVENTORY IN SOIL (Ci):	4.607E+10
LIMITING INVENTORY IN SOIL (mg):	1.288E+46
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Ra-226 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY	0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m)	1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m)	1.27E+02
THICKNESS OF SOURCE (m)	3.01E+00
PERCOLATION RATE (darcy vel m/y)	1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE	4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE	4.10E-01
BULK DENSITY AT SOURCE (g/cm**3)	1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g)	0.00E+00
BULK DENSITY IN UNSAT ZONE (g/cm**3)	1.90E+00
UNSATURATED ZONE THICKNESS (m)	5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g)	0.00E+00
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1)	0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci)	4.46E-05
MOLECULAR WEIGHT (g/mole)	1.00E+00
SOLUBILITY LIMIT (mg/L)	1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y)	1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3)	1.90E+00
POROSITY OF AQUIFER	1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g)	0.00E+00
DISPERSIVITY X DIRECTION (m)	9.00E+00
DISPERSIVITY Y DIRECTION (m)	4.00E+00
PORE VELOCITY (m/y)	5.70E+02
WELL SCREEN THICKNESS (m)	1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m)	6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m)	0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L)	6.00E-03
UNITS OF CONTAMINANT	Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 1.25E+31

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y)	8.1031E-02
UNSATURATED PORE VELOCITY (m/y)	2.4390E-01
DECAY CONSTANT(S) (1/y)	6.9315E-39
RETARDATION FACTOR(S) (SATURATED)	1.0000E+00
RETARDATION FACTOR (UNSATURATED)	1.0000E+00
SOLUBILITY LIMITED MASS (mg)	1.9905E+13
SOLUBILITY LIMITED ACTIVITY (Ci)	7.1218E-23
TRANSIT TIME IN UNSAT ZONE (years)	2.3780E+01
FRACTION DECAYED DURING UNSAT TRANSPORT	0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years)	30
BODY WEIGHT (kg)	7.000E+01
AVERAGING TIME (days)	2.550E+04
WATER INTAKE RATE (L/d)	2.000E+00
EXPOSURE FREQUENCY (days/year)	3.500E+02
EXPOSURE DURATION (years)	3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y)	4.000E-03
CARCINOGENIC RISK CRITERIA	1.000E-04
HAZARD QUOTIENT	1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 3.14E-14 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 1.22E-14 Ci/L

PEAK TIME (y): 2.425002E+01

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.532E+02
LIMITING SOIL CONCENTRATION (Ci/kg):	3.021E-01
LIMITING INVENTORY IN SOIL (Ci):	2.200E+07
LIMITING INVENTORY IN SOIL (mg):	6.149E+42
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Sr-90 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0) CONC VS TIME; (1) PEAK CONC AND LIMITING SOIL CONC

IMODEL: 1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 2.40E+01
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 2.40E+00
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 2.15E-04
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 2.40E+00
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 6.01E+31

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 9.1246E-04
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 4.6600E+01
RETARDATION FACTOR (UNSATURATED) 1.2122E+01
SOLUBILITY LIMITED MASS (mg) 1.7676E+15
SOLUBILITY LIMITED ACTIVITY (Ci) 6.3245E-21
TRANSIT TIME IN UNSAT ZONE (years) 2.8826E+02
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 1.73E-15 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 1.68E-15 Ci/L

PEAK TIME (y): 3.123868E+02

LIMITING SOIL CONCENTRATION (Ci/m**3):	1.579E+04
LIMITING SOIL CONCENTRATION (Ci/kg):	1.053E+01
LIMITING INVENTORY IN SOIL (Ci):	7.665E+08
LIMITING INVENTORY IN SOIL (mg):	2.142E+44
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Tc-99 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0) CONC VS TIME; (1) PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 0.00E+00
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 0.00E+00
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 2.16E-07
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 0.00E+00
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 6.04E+28

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 8.1031E-02
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.0000E+00
RETARDATION FACTOR (UNSATURATED) 1.0000E+00
SOLUBILITY LIMITED MASS (mg) 1.9905E+13
SOLUBILITY LIMITED ACTIVITY (Ci) 7.1218E-23
TRANSIT TIME IN UNSAT ZONE (years) 2.3780E+01
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 1.52E-16 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 5.89E-17 Ci/L

PEAK TIME (y): 2.425002E+01

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.532E+02
LIMITING SOIL CONCENTRATION (Ci/kg):	3.021E-01
LIMITING INVENTORY IN SOIL (Ci):	2.200E+07
LIMITING INVENTORY IN SOIL (mg):	6.149E+42
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Th-230 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY	0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m)	1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m)	1.27E+02
THICKNESS OF SOURCE (m)	3.01E+00
PERCOLATION RATE (darcy vel m/y)	1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE	4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE	4.10E-01
BULK DENSITY AT SOURCE (g/cm**3)	1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g)	1.00E+02
BULK DENSITY IN UNSAT ZONE (g/cm**3)	1.90E+00
UNSATURATED ZONE THICKNESS (m)	5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g)	1.00E+01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1)	0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci)	2.01E-05
MOLECULAR WEIGHT (g/mole)	1.00E+00
SOLUBILITY LIMIT (mg/L)	1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y)	1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3)	1.90E+00
POROSITY OF AQUIFER	1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g)	1.00E+01
DISPERSIVITY X DIRECTION (m)	9.00E+00
DISPERSIVITY Y DIRECTION (m)	4.00E+00
PORE VELOCITY (m/y)	5.70E+02
WELL SCREEN THICKNESS (m)	1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m)	6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m)	0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L)	6.00E-03
UNITS OF CONTAMINANT	Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 5.62E+30

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y)	2.2088E-04
UNSATURATED PORE VELOCITY (m/y)	2.4390E-01
DECAY CONSTANT(S) (1/y)	6.9315E-39
RETARDATION FACTOR(S) (SATURATED)	1.9100E+02
RETARDATION FACTOR (UNSATURATED)	4.7341E+01
SOLUBILITY LIMITED MASS (mg)	7.3021E+15
SOLUBILITY LIMITED ACTIVITY (Ci)	2.6126E-20
TRANSIT TIME IN UNSAT ZONE (years)	1.1258E+03
FRACTION DECAYED DURING UNSAT TRANSPORT	0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years)	30
BODY WEIGHT (kg)	7.000E+01
AVERAGING TIME (days)	2.550E+04
WATER INTAKE RATE (L/d)	2.000E+00
EXPOSURE FREQUENCY (days/year)	3.500E+02
EXPOSURE DURATION (years)	3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y)	4.000E-03
CARCINOGENIC RISK CRITERIA	1.000E-04
HAZARD QUOTIENT	1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 3.92E-17 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 3.91E-17 Ci/L

PEAK TIME (y): 1.224791E+03

LIMITING SOIL CONCENTRATION (Ci/m**3):	6.348E+04
LIMITING SOIL CONCENTRATION (Ci/kg):	4.232E+01
LIMITING INVENTORY IN SOIL (Ci):	3.082E+09
LIMITING INVENTORY IN SOIL (mg):	8.613E+44
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'U-234 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 6.00E+00
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 6.00E-01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 4.51E-06
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 6.00E-01
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 1.26E+30

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 3.5306E-03
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.2400E+01
RETARDATION FACTOR (UNSATURATED) 3.7805E+00
SOLUBILITY LIMITED MASS (mg) 4.5684E+14
SOLUBILITY LIMITED ACTIVITY (Ci) 1.6345E-21
TRANSIT TIME IN UNSAT ZONE (years) 8.9900E+01
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 1.40E-16 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 1.28E-16 Ci/L

PEAK TIME (y): 9.629427E+01

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.344E+03
LIMITING SOIL CONCENTRATION (Ci/kg):	2.896E+00
LIMITING INVENTORY IN SOIL (Ci):	2.109E+08
LIMITING INVENTORY IN SOIL (mg):	5.895E+43
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'U-235 Group 1'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0) CONC VS TIME; (1) PEAK CONC AND LIMITING SOIL CONC

IMODEL: 1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 1.27E+02
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 1.27E+02
THICKNESS OF SOURCE (m) 3.01E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 6.00E+00
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 6.00E-01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 1.51E-06
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 6.00E-01
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 6.35E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 4.22E+29

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 3.5306E-03
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.2400E+01
RETARDATION FACTOR (UNSATURATED) 3.7805E+00
SOLUBILITY LIMITED MASS (mg) 4.5684E+14
SOLUBILITY LIMITED ACTIVITY (Ci) 1.6345E-21
TRANSIT TIME IN UNSAT ZONE (years) 8.9900E+01
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 4.70E-17 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 4.30E-17 Ci/L

PEAK TIME (y): 9.629427E+01

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.344E+03
LIMITING SOIL CONCENTRATION (Ci/kg):	2.896E+00
LIMITING INVENTORY IN SOIL (Ci):	2.109E+08
LIMITING INVENTORY IN SOIL (mg):	5.895E+43
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Chromium Group 2'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 4

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2) POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 6.39E+01
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 6.39E+01
THICKNESS OF SOURCE (m) 2.93E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 1.00E+00
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 1.00E-01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 2.95E+08
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 1.00E-01
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 3.19E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING CONTAMINANT GW CONCENTRATION (mg/L) 6.00E-03
UNITS OF CONTAMINANT mg

LIMITING SOIL CONCENTRATION CALCULATION

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 1.7869E-02
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 2.9000E+00
RETARDATION FACTOR (UNSATURATED) 1.4634E+00
SOLUBILITY LIMITED MASS (mg) 2.2851E+13
SOLUBILITY LIMITED ACTIVITY (Ci) 0.0000E+00
TRANSIT TIME IN UNSAT ZONE (years) 3.4800E+01
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM NON RADIOLOGICAL CONTAMINANT CALCULATION
MAXIMUM CONCENTRATION 8.46E-02 mg/L
AVERAGE CONCENTRATION 6.63E-02 mg/L
PEAK TIME (y): 3.577041E+01
LIMITING SOIL CONCENTRATION (mg/m**3): 2.231E+03
LIMITING SOIL CONCENTRATION (mg/kg): 1.488E+00

LIMITING INVENTORY IN SOIL (mg): 2.670E+07

'Lead Group 2'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 4

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 6.39E+01
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 6.39E+01
THICKNESS OF SOURCE (m) 2.93E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 1.00E+02
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 1.00E+01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 9.27E+07
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 1.00E+01
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 3.19E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING CONTAMINANT GW CONCENTRATION (mg/L) 6.00E-03
UNITS OF CONTAMINANT mg

LIMITING SOIL CONCENTRATION CALCULATION

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 2.2691E-04
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.9100E+02
RETARDATION FACTOR (UNSATURATED) 4.7341E+01
SOLUBILITY LIMITED MASS (mg) 1.7995E+15
SOLUBILITY LIMITED ACTIVITY (Ci) 0.0000E+00
TRANSIT TIME IN UNSAT ZONE (years) 1.1258E+03
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM NON RADIOLOGICAL CONTAMINANT CALCULATION
MAXIMUM CONCENTRATION 3.38E-04 mg/L
AVERAGE CONCENTRATION 3.38E-04 mg/L
PEAK TIME (y): 1.189978E+03
LIMITING SOIL CONCENTRATION (mg/m**3): 1.376E+05
LIMITING SOIL CONCENTRATION (mg/kg): 9.172E+01

LIMITING INVENTORY IN SOIL (mg): 1.646E+09

'Manganese Group 2'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 4

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 6.39E+01
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 6.39E+01
THICKNESS OF SOURCE (m) 2.93E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 5.00E+01
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 5.00E+00
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 6.22E+08
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 5.00E+00
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 3.19E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING CONTAMINANT GW CONCENTRATION (mg/L) 6.00E-03
UNITS OF CONTAMINANT mg

LIMITING SOIL CONCENTRATION CALCULATION

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 4.5259E-04
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 9.6000E+01
RETARDATION FACTOR (UNSATURATED) 2.4171E+01
SOLUBILITY LIMITED MASS (mg) 9.0219E+14
SOLUBILITY LIMITED ACTIVITY (Ci) 0.0000E+00
TRANSIT TIME IN UNSAT ZONE (years) 5.7478E+02
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM NON RADIOLOGICAL CONTAMINANT CALCULATION
MAXIMUM CONCENTRATION 4.53E-03 mg/L
AVERAGE CONCENTRATION 4.49E-03 mg/L
PEAK TIME (y): 6.070472E+02
LIMITING SOIL CONCENTRATION (mg/m**3): 6.947E+04
LIMITING SOIL CONCENTRATION (mg/kg): 4.632E+01

LIMITING INVENTORY IN SOIL (mg) : 8.312E+08

'Ag-108m Group 2'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY 0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m) 6.39E+01
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m) 6.39E+01
THICKNESS OF SOURCE (m) 2.93E+00
PERCOLATION RATE (darcy vel m/y) 1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE 4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE 4.10E-01
BULK DENSITY AT SOURCE (g/cm**3) 1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g) 9.00E+01
BULK DENSITY IN UNSAT ZONE (g/cm**3) 1.90E+00
UNSATURATED ZONE THICKNESS (m) 5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g) 9.00E+00
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1) 0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci) 3.56E-05
MOLECULAR WEIGHT (g/mole) 1.00E+00
SOLUBILITY LIMIT (mg/L) 1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y) 1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3) 1.90E+00
POROSITY OF AQUIFER 1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g) 9.00E+00
DISPERSIVITY X DIRECTION (m) 9.00E+00
DISPERSIVITY Y DIRECTION (m) 4.00E+00
PORE VELOCITY (m/y) 5.70E+02
WELL SCREEN THICKNESS (m) 1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m) 3.19E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m) 0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L) 6.00E-03
UNITS OF CONTAMINANT Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 9.95E+30

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y) 2.5205E-04
UNSATURATED PORE VELOCITY (m/y) 2.4390E-01
DECAY CONSTANT(S) (1/y) 6.9315E-39
RETARDATION FACTOR(S) (SATURATED) 1.7200E+02
RETARDATION FACTOR (UNSATURATED) 4.2707E+01
SOLUBILITY LIMITED MASS (mg) 1.6200E+15
SOLUBILITY LIMITED ACTIVITY (Ci) 5.7963E-21
TRANSIT TIME IN UNSAT ZONE (years) 1.0156E+03
FRACTION DECAYED DURING UNSAT TRANSPORT 0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years) 30
BODY WEIGHT (kg) 7.000E+01
AVERAGING TIME (days) 2.550E+04
WATER INTAKE RATE (L/d) 2.000E+00
EXPOSURE FREQUENCY (days/year) 3.500E+02
EXPOSURE DURATION (years) 3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y) 4.000E-03
CARCINOGENIC RISK CRITERIA 1.000E-04
HAZARD QUOTIENT 1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 1.44E-16 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 1.44E-16 Ci/L

PEAK TIME (y): 1.073392E+03

LIMITING SOIL CONCENTRATION (Ci/m**3):	1.239E+05
LIMITING SOIL CONCENTRATION (Ci/kg):	8.261E+01
LIMITING INVENTORY IN SOIL (Ci):	1.482E+09
LIMITING INVENTORY IN SOIL (mg):	4.143E+44
SPECIFIC ACTIVITY (Ci/g):	3.578E-33

'Am-241 Group 2'

GAUSSIAN QUADRATURE SOLUTION

MODEL OPTIONS

IMODE: 3

KFLAG: 1 (0)CONC VS TIME; (1)PEAK CONC AND LIMITING SOIL CONC

IMODEL:1 (1) SURF OR BURIED SOURCE; (2)POND SOURCE; (3) TABULATED SOURCE FUNCTION

>>> INPUT DATA

NUMBER OF RADIOACTIVE PROGENY	0
LENGTH OF SOURCE PARALLEL TO GW FLOW (m)	6.39E+01
WIDTH OF SOURCE PERPENDICULAR TO GW FLOW (m)	6.39E+01
THICKNESS OF SOURCE (m)	2.93E+00
PERCOLATION RATE (darcy vel m/y)	1.00E-01
VOLUMETRIC WATER CONTENT IN SOURCE	4.10E-01
VOLUMETRIC WATER CONTENT IN UNSATURATED ZONE	4.10E-01
BULK DENSITY AT SOURCE (g/cm**3)	1.50E+00
SORPTION COEFFICIENT AT SOURCE (ml/g)	3.40E+02
BULK DENSITY IN UNSAT ZONE (g/cm**3)	1.90E+00
UNSATURATED ZONE THICKNESS (m)	5.80E+00
SORPTION COEFFICIENT IN UNSAT ZONE (ml/g)	3.40E+01
OPTIONAL LOSS RATE CONSTANT FOR SOURCE (y**-1)	0.00E+00
INITIAL MASS OR ACTIVITY (mg or Ci)	5.86E-07
MOLECULAR WEIGHT (g/mole)	1.00E+00
SOLUBILITY LIMIT (mg/L)	1.00E+06
HALF-LIFE(S) OF CONTAMINANT AND PROGENY (y)	1.00E+38
BULK DENSITY OF AQUIFER (g/cm**3)	1.90E+00
POROSITY OF AQUIFER	1.00E-01
SORPTION COEFFICIENT(S) IN AQUIFER (ml/g)	3.40E+01
DISPERSIVITY X DIRECTION (m)	9.00E+00
DISPERSIVITY Y DIRECTION (m)	4.00E+00
PORE VELOCITY (m/y)	5.70E+02
WELL SCREEN THICKNESS (m)	1.50E+01
DISTANCE TO RECEPTOR ALONG X AXIS (m)	3.19E+01
DISTANCE TO RECEPTOR ALONG Y AXIS (m)	0.00E+00
LIMITING RADIONUCLIDE GW CONCENTRATION (Ci/L)	6.00E-03
UNITS OF CONTAMINANT	Ci

LIMITING SOIL CONCENTRATION CALCULATION

>>> INITIAL ACTIVITY CONVERTED TO MASS (mg) 1.64E+29

>>> VALUES CALCULATED IN SOURCE SUBROUTINE

LEACH RATE CONSTANT (1/y)	6.6867E-05
UNSATURATED PORE VELOCITY (m/y)	2.4390E-01
DECAY CONSTANT(S) (1/y)	6.9315E-39
RETARDATION FACTOR(S) (SATURATED)	6.4700E+02
RETARDATION FACTOR (UNSATURATED)	1.5856E+02
SOLUBILITY LIMITED MASS (mg)	6.1064E+15
SOLUBILITY LIMITED ACTIVITY (Ci)	2.1848E-20
TRANSIT TIME IN UNSAT ZONE (years)	3.7706E+03
FRACTION DECAYED DURING UNSAT TRANSPORT	0.0000E+00

>>> EXPOSURE DATA FOR LIMITING SOIL CONCENTRATION

INTEGRATION TIME (years)	30
BODY WEIGHT (kg)	7.000E+01
AVERAGING TIME (days)	2.550E+04
WATER INTAKE RATE (L/d)	2.000E+00
EXPOSURE FREQUENCY (days/year)	3.500E+02
EXPOSURE DURATION (years)	3.000E+01
RADIOLOGICAL DOSE LIMIT (rem/y)	4.000E-03
CARCINOGENIC RISK CRITERIA	1.000E-04
HAZARD QUOTIENT	1.000E+00

>>> RESULTS OF CALCULATIONS

MAXIMUM RADIONUCLIDE CONCENTRATION LIMIT CALCULATION

LIMITING PARENT GW CONCENTRATION ADJUSTED FOR PROGENY = 6.00E-03 Ci/L

MAXIMUM GW CONCENTRATION FOR MBR #1: 6.31E-19 Ci/L

AVERAGE GW CONCENTRATION FOR MBR #1: 6.30E-19 Ci/L

PEAK TIME (y): 3.988047E+03

LIMITING SOIL CONCENTRATION (Ci/m**3):	4.661E+05
LIMITING SOIL CONCENTRATION (Ci/kg):	3.108E+02
LIMITING INVENTORY IN SOIL (Ci):	5.577E+09
LIMITING INVENTORY IN SOIL (mg):	1.559E+45
SPECIFIC ACTIVITY (Ci/g):	3.578E-33