SNEC Results of Groundwater Duplicates Shared With ORISE					
WELLS	SAMPLE DATE	TRITIUM (pCi/L)	Cs-137(pCi/L)	Cs-134(pCi/L)	Co-60(pCi/L)
		<2000(MDA)	18(MDA)	15(MDA)	15(MDA)
GEO-5	4/2/02	<308	<14.0	<13.5	<13.2
GEO-8	4/1/02	<308	<13.3	<12.3	<12.3
MW-4	4/2/02	<308	<8.0	<9.3	<8.3
OW-3	4/2/02	<342	<8.3	<9.6	<9.3
OW-3R	4/2/02	<308	<10.9	<10.9	<9.4
OW-4R	4/2/02	<308	<12.2	<12.2	<11.2
OW-5R	4/1/02	<310	<8.7	<9.5	<9.6
OW-6	4/2/02	<308	<12.4	<10.9	<12.0
OW-7R	4/2/02	<308	<13.4	<13.0	<12.4
NRC ANGLE WELL	4/2/02	<308	<7.9	<8.6	<8.6

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RAE-42613-003-5

SUB-SURFACE DCGLs FOR THE SAXTON NUCLEAR EXPERIMENTAL CORPORATION SITE

CALCULATION PACKAGE

July 30, 2002

URS Corporation
756 East Winchester Street, Suite 400
Salt Lake City, UT 84107

URS

Memorandum

Date:	June 18, 2002
To:	**P. Donnachie, B. Brosey, GPU**
From:	K. K. Nielson, V. C. Rogers, URS
Subject:	Subsurface DCGL Technical Approach For SNEC Site

DRAFT TECHNICAL APPROACH

This memorandum documents the technical approach proposed by URS Corp to estimate Derived Concentration Guideline Limits (DCGLs) for the Subsurface materials at the Saxton Nuclear Energy Corporation (SNEC) Site. Three areas of concern have been identified at SNEC: the Spray Ponds, the Steam Generating Station (SSGS), and the Reactor area around the Containment Vessel (CV) excavations. Subsurface materials for the Spray Pond and Reactor areas (excluding the CV excavations) are very similar, consisting of approximately two meters of overburden and a greater thickness of underlying bedrock. The subsurface material in the SSGS consists of crushed, homogenized site debris that is covered with one meter of clean fill. Because of these differences, DCGLs will be estimated for only one material (homogenized debris) in the SSGS and for two materials (overburden and bedrock) in the Spray Pond and Reactor areas.

A Resident Farmer Scenario has been selected to most reasonably represent exposures to members of the critical population group. In the scenario, it is assumed that the resident moves onto the Spray Pond, Steam Plant, or Reactor areas, grades the surface, digs a basement, builds a house, develops a bedrock-depth well for drinking water and irrigation, and plants a garden. During these activities, the resident is exposed to residual radioactivity in several ways that include (a) consuming drinking water from the bedrock well, (b) consuming fruits and vegetables grown onsite with irrigation water from the bedrock well, (c) consuming beef and milk from cattle raised onsite using the same irrigation water, (d) consuming fish caught from the adjacent stream into which contaminated runoff and groundwater flows, (e) inhalation of contaminated dust suspended as a result of wind or other activities near the residence, and (f) directly from the material that has been brought to the surface during home construction and yard leveling. The effects of exposure to all pathways will be analyzed and the peak doses compared to the 25 mrem/year criterion to develop DCGLs for each nuclide, soil layer and SNEC area of concern. In addition to these DCGLs, the drinking water pathway will also be analyzed in comparison to the 4 mrem/year drinking water standard to estimate separate drinking water DCGLs for each nuclide, soil layer and SNEC area of concern. To promote consistency with the surface DCGLs, documentation and files for the first five DCGLs for each subsoil region and SNEC area of concern will be transmitted to GPU for review and approval.

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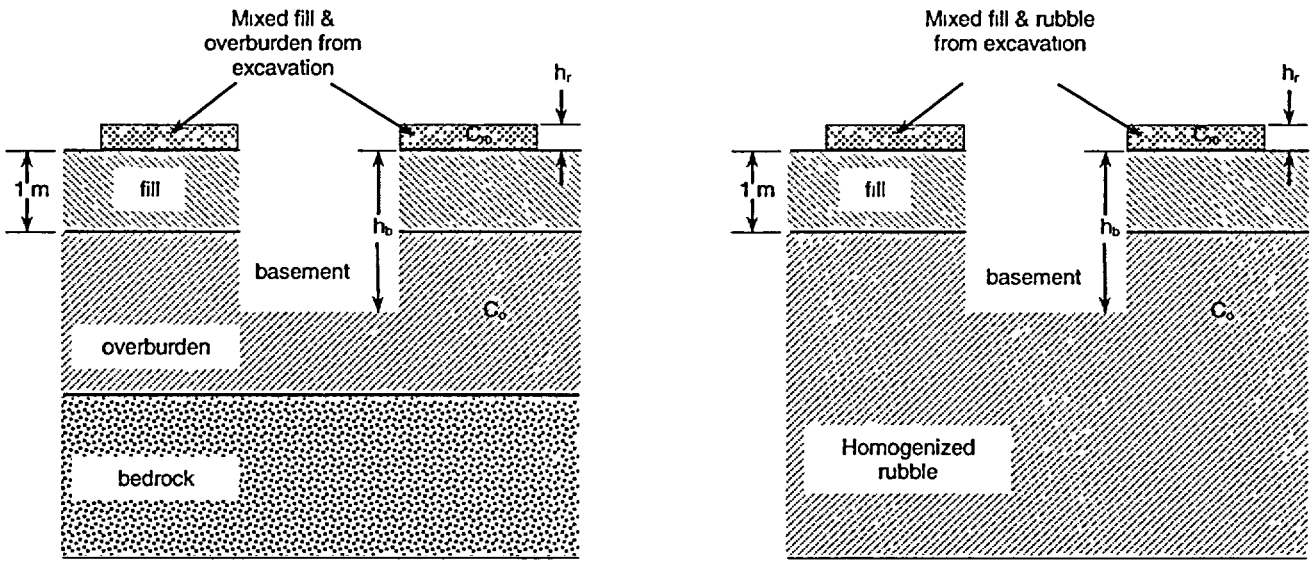
The basement of the hypothetical house built by the resident in the Spray Pond, Steam Plant, or Reactor areas penetrates the 1-m surface fill layer and the top part of the underlying material. The materials excavated for the basement are represented here in the same way as they have been in previous NRC guidance documents. The excavation is considered to penetrate sufficiently deep for construction of the basement, and the excavated material is considered to be mixed with overlying fill material and placed in the vicinity of the house.[1,2] Figure 1 illustrates the basement excavations and surface placement of the excavated materials for the different Site areas.



Spray Ponds, Reactor Area, & Most of the SNEC Site

Steam Plant Basement

FIGURE 1. HYPOTHETICAL BASEMENT EXCAVATIONS AND SURFACE MATERIAL SPREADING IN DIFFERENT AREAS OF THE SNEC SITE.

The footprint area of the hypothetical house and its basement excavation is chosen to be 200 m^2, which corresponds to the house areas used in the previous NRC analyses.[1,2]

The height of the basement, h_b, is chosen to be 2 meters based on both the previous NRC guidance and conservative assessment of the site parameters. The previous NRC guidance documents used basement depths of 3 meters for disposal cells that were covered by 2 m of clean soil or cap material.[1] This resulted in 1-meter intrusion depths into the contaminated material. For the present Site, where fill soil layers are 1 m thick, a 2-m basement excavation provides the same 1-m intrusion depth into potentially-contaminated material.

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[1] NRC 1986. "Update of Part 61 Impacts Analysis Methodology," O.I. Oztunali and G.W. Roles, Washington DC: U.S. Nuclear Regulatory Commission report NUREG/CR-4370, January 1986.

[2] NRC 1999. "Preliminary Guidelines for Evaluating Dose Assessments in Support of Decommissioning," J.W.N. Hickey, Washington D.C.: U.S. Nuclear Regulatory Commission Memorandum dated March 16, 1999.

The Spray Pond area, Reactor area (except the back-filled CV excavation), and undisturbed areas of the Site feature a 2-m layer of boulder-laden overburden between the 1-m fill soil layer and bedrock, as shown in Figure 1. The overburden discourages excavation because of its large boulders and interstitial cobbles. The hypothetical 2-m basement excavation (1-m into the boulder layer) is therefore conservatively deeper than would normally be expected. Furthermore, the water table at the Site varies between 0.7 and 2.3 m, making the hypothetical 2-m basement excavation conservatively deeper than the average estimated water table depth.

The Steam Plant basement contains homogenized rubble instead of overburden in the bottom half of the hypothetical 2-m excavation (see Figure 1). The hypothetical Steam Plant excavation therefore intrudes to the same extent (1 m) into potentially-contaminated material as in the Spray Pond area and is subject to similar water-table limitations as in other parts of the Site.

The native materials in the CV area are replaced with clean backfill to depths well beyond any realistic basement excavation depths. Therefore, any excavations in the CV area would only bring clean backfill to the surface. The surrounding materials in the Reactor area are represented by the same profile as the Spray Ponds, as illustrated in Figure 1. Because of the identical material profiles in the Spray Pond and Reactor areas, the same DCGL analyses will probably apply to both unless hydraulic gradient or water table depth differences are significant. The potential significance of any differences will be explored before any separate DCGLs are calculated for the Reactor area.

The concentrations of any contaminants in the overburden layer beneath the Spray Ponds or in the homogenized rubble in the Steam Plant are reduced to one-half of their in-situ concentrations by mixing with the top meter of fill soil during their excavation. The two-fold dilution factor results from mixing equal volumes of clean and potentially-contaminated excavation materials using the same calculation approach advocated in the NRC guidance documents.[1,2]

The mixed material from the basement excavation is considered to be spread around the hypothetical house as in the NRC models.[1] The area of this material is conservatively taken to be 2,000 m^2 based on the nominal one-half acre (2,023 m^2) and 1,000 m^2 to 2,000 m^2 area ranges estimated by NRC.[1] The average thickness of this layer of mixed material is h_r = 0.20 m [estimated as (200 m^2 basement footprint area) x (2 m depth) / (2,000 m^2 spread area)]. This thickness is conservative in giving an approximate maximum gamma radiation activity and approximating the default crop root depth of 0.15 m in the Resrad dose assessment code.[3] Additionally, the geophysical characteristics of this layer of mixed material are depth-weighted averages of those of the Fill and Overburden layers.

The technical approach and detailed steps for determining the DCGLs for the sub-surface materials at the SNEC Site are identified in Figure 2 based on discussions between URS and GPU personnel. The large gray numbers in Figure 2 correspond to the step numbers listed below.

[3] Resrad v. 6.2, Charles Yu, Argonne National Laboratory, Environmental Assessment Div., 9700 South Cass Ave., Argonne, IL, 60439, May 31, 2002.

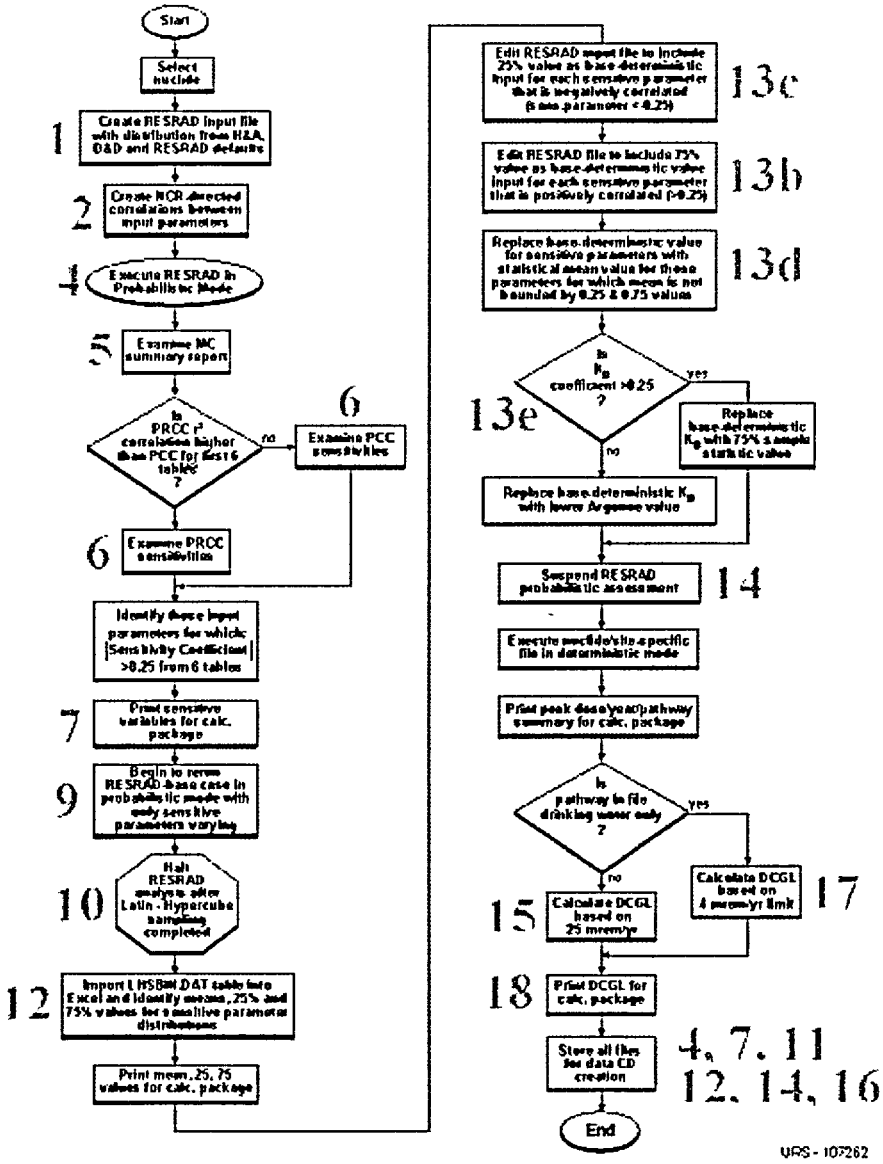

FIGURE 2. TECHNICAL APPROACH FOR SUBSURFACE DCGL CALCULATIONS.

1) Generate an appropriate RESRAD 6.1 input file containing all Haley and Aldrich (H & A) values and parameter distributions. Where available, DandD default values will be used for metabolic and behavior inputs. For parameters for which input guidance is unavailable from either DandD or H & A, default RESRAD values and distributions will be used. Uncertainty analysis will be performed by RESRAD for each parameter for which a distribution has been input. A list of these values and distributions is presented in Table 1.

2) Uncertainty correlations will be established between density and total porosity, density and effective porosity, and total porosity and effective porosity with a correlation value specified as 0.99.

3) A random seed of 1,000 will be used for the uncertainty sampling. Additionally, the Latin HyperCube Sample (LHS) method will be used to generate samples of input values for the probabilistic analysis. The analysis will be repeated three times, with between 300 and 500 points selected for each analysis.

4) The RESRAD input file will then be processed using the probabilistic analysis feature of RESRAD 6.1. All output reports will be copied and stored for inclusion in the data CD to be delivered to the NRC.

5) The first 6 correlation tables of the MCSUMMARY.REP file will then be extracted. Within these tables, the higher correlation coefficient (r^2 value) between the PRCC and PCC sensitivity methods will be highlighted.

6) Sensitive input parameters will then be identified and highlighted for those parameters whose sensitivity correlation value is greater than 0.25 or less than -0.25, using the correlation method identified in 5) with the highest r^2 value.

7) The tables with appropriate highlighted points will be printed for inclusion in the Calculation Package and the data CD.

8) A copy of the RESRAD input file generated in numbers 1 through 3 will then be made. From within this copy, the uncertainties and input distributions will be deleted for all insensitive parameters (those not highlighted in step 6).

9) The RESRAD input file will then begin started using the probabilistic analysis feature of RESRAD 6.1.

10) Once the RESRAD processing has completed the LHS step, the RESRAD analysis will be halted.

11) The LHSBIN.DAT file will then be copied from the RESRAD output and stored for permanent inclusion in the data CD.

12) The LHSBIN.DAT file will then be imported into MS Excel and the MS Excel Data Analysis package will be used to analyze the input parameter distributions to determine mean, 25th percentile, and 75th percentile for each sensitive input parameter. These values will be summarized in a printout

for inclusion in the Calculation Package and the resulting MS Excel file saved for addition to the data CD.

13) The duplicate RESRAD input file, created in step 8, will then be edited within RESRAD. Modifications will include:

a. Suppression of the uncertainty analysis.

b. The 75th percentile value will replace the base-deterministic input value for those sensitive parameters whose coefficients of sensitivity was greater than 0.25.

c. The 25th percentile value will replace the base-deterministic input value for those sensitive parameters whose coefficients of sensitivity was less than -0.25.

d. The mean value calculated in step 12 will replace the base-deterministic input value for those sensitive parameters whose mean is not bounded by the 25th and 75th percentile values.

e. Except when the coefficients of sensitivity for the distribution coefficients (K_d) are greater than 0.25, the minimum Argonne distribution coefficient (K_d) will be used.

14) The input file created in step 13 will then be analyzed using RESRAD 6.1 in a deterministic mode. The input and resulting output reports will be saved for addition to the data CD. The peak dose, year of occurrence, and pathway breakdown for the peak dose will be printed for inclusion in the Calculation Package.

15) The 25 mrem/year dose limit will then be divided by the peak dose to determine a DCGL representing exposure from all pathways. This process will be performed for each nuclide, soil region, and SNEC area of concern.

16) Steps 1 through 14 will then be repeated with all pathways turned off, except the drinking water pathway. Those files and reports designated for inclusion in the Calculation Package or data CD will be appended with "DW" to signify Drinking Water only.

17) The 4 mrem/year drinking water dose limit will then be divided by the peak dose from drinking water only to determine a DW DCGL. This process will be repeated for each nuclide, soil region, and SNEC area of concern.

18) A summary table of all cumulative and drinking water DCGLs for each nuclide, subsoil region, and SNEC area of concern and will be prepared.

	SPRAY POND AND GENERAL AREA						BEDROCK		SSGS					
	Overburden on Surface				Undisturbed Overburden		Undisturbed Bedrock		Backfill on Surface				Undistubed Backfill	
Applicable Limit (mrem/yr)	25		4		4		4		25		4		4	
	Peak Dose (mrem/yr) [year]	DCGL	Peak Dose (mrem/yr) [year]	DCGL	Peak Dose (mrem/yr) [year]	DCGL	Peak Dose (mrem/yr) [year]	DCGL	Peak Dose (mrem/yr) [year]	DCGL	Peak Dose (mrem/yr) [year]	DCGL	Peak Dose (mrem/yr) [year]	DCGL
H-3	1.14E-02 0	2.19E+03	2.78E-03 2	1.44E+03	5.03E-02 0	7.96E+01	1.28E-01 0	3.12E+01	1.08E-02 0	2.31E+03	1.91E-04 1	2.09E+04	1.15E-01 1	3.47E+01
C-14	5.94E-01 0	4.21E+01	1.09E-03 8	3.68E+03	5.04E-01 0	7.93E+00	7.31E-01 0	5.47E+00	5.94E-01 0	4.21E+01	1.40E-04 9	2.85E+04	7.11E-01 8	5.63E+00
Co-60	3.09E+00 0	8.09E+00			5.94E-02 1	6.73E+01	5.99E-02 1	6.67E+01	3.09E+00 0	8.09E+00				
Ni-63	7.76E-03 0	3.22E+03	5.31E-22 4,879	7.53E+21	2.08E-04 4	1.92E+04	1.99E-04 9	2.01E+04	7.76E-03 0	3.22E+03	4.64E-23 4,881	8.63E+22	7.11E-19 4,616	5.63E+18
Sr-90	4.40E+00 0	5.69E+00	9.45E-02 54	4.23E+01	6.55E+00 0	6.11E-01	6.55E+00 0	6.11E-01	4.40E+00 0	5.69E+00	8.19E-03 41	4.89E+02	3.39E+00 28	1.18E+00
Cs-137	1.18E+00 0	2.11E+01			1.01E-02 5	3.98E+02	1.01E-02 5	3.98E+02	1.18E+00 0	2.11E+01				
Eu-152	1.21E+00 0	2.07E+01	1.89E-16 3,587	2.37E+16	2.77E-03 2	1.44E+03	2.77E-03 2	1.44E+03	1.21E+00 0	2.07E+01	1.04E-17 3,131	9.83E+17	4.21E-15 2,358	9.51E+14
Pu-238	2.00E-01 0	1.25E+02	6.96E-03 471	5.76E+02	9.49E+00 1	4.22E-01	9.54E+00 1	4.19E-01	9.49E+00 1	2.64E+00	9.54E+00 0	4.19E-01	4.35E-01 391	9.20E+00
Pu-239	5.46E-01 970	4.58E+01	6.39E-01 894	7.42E+00	1.07E+01 1	3.76E-01	1.07E+01 1	3.76E-01	2.23E-01 0	1.12E+02	3.13E-02 756	1.28E+02	1.05E+01 391	3.83E-01
Pu-241	5.86E-03 34	4.26E+03	2.64E-06 3,949	1.52E+06	2.02E-01 0	1.98E+01	2.02E-01 38	1.98E+01	6.14E-03 0	4.07E+03	4.97E-08 1,664	8.05E+07	4.31E-05 1,456	9.28E+04
Am-241	2.32E-01 0	1.08E+02	4.10E-05 1,040	9.76E+04	1.73E+00 7	2.31E+00	1.73E+00 7	2.31E+00	2.32E-01 0	1.08E+02	2.74E-06 4 455	1.46E+06	1.29E-03 1,459	2.09E+03

SSGS DW SCENARIO FOR UNDISTURBED BACKFILL

Menu	Class	PARAMETERS	Basic RESRAD Input	SNEC Range of Values Min	SNEC Range of Values Max	Assigned Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0.3	0.2	0 6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
RO11	P	Area of Contaminated Zone (m^2)	2000	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO11	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	4	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Length Parallel to Aquifer Flow (m)	50 5	N/A	N/A	N/A		RESRAD Data Collection Handbook
RO11	P	Thickness of Contaminated Zone 1 (m)	2 000E+00	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO11	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
RO13	P	Average Annual Wind Speed (m/sec)	N/A	N/A	N/A	N/A	Bounded Lognormal-N (1 4 - 13)	SNEC 5/13/02
RO13	P	Contaminated Zone Field Capacity	0 1360	0 0790	0.1920	Uniform	None Assigned	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Contaminated Zone b Parameter	5 60	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P, B	Contaminated Zone Erosion Rate (m/yr)	0 000345	0 00009	0.0006	Loguniform	Continuous Loganthmic (5E-08 - 0 2)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Contaminated Zone Hydraulic Conductivity (m/yr)	32.30	0.36	25400.00	Loguniform	Bounded Lognormal-N (0 004 - 9250)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Contaminated Zone Total Porosity	0 460	0 350	0 560	Uniform	Truncated Normal, (0 157 - 0 693)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Density of Contaminated Zone (g/cc)	1 6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02 (Same as unsat zone)
RO13	P	Evapotranspiration Coefficient (m/yr)	0 59	0 5	0.67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
RO13	P	Humidity in Air (g/m^3)	8 (H-3) not used for others	2.58E+00	2 03E+01	Truncated Lognormal-N		SNEC 5/13/02
RO13	B	Irrigation (m/yr)	0.2	—	—	None Assigned		SNEC 5/13/02
RO13	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
RO13	P	Precipitation (m/y)	0.936	0.688	1.327	Uniform	None Assigned	SNEC 5/13/02
RO13	P	Runoff Coefficient	0 35	0 3	0 4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
RO13	P	Watershed Area for Nearby Stream or Pond (m^2)	5 00E+06	—	—	None Assigned	None Assigned	SNEC 5/13/02
RO14	P	Density of Saturated Zone (g/cc)	1 6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO14	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Mass Balance	N/A	N/A	N/A		SNEC 5/13/02
RO14	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
RO14	P	Saturated Zone Effective Porosity	0 41	0.28	0.54	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
RO14	P	Saturated Zone Hydraulic Conductivity (m/yr)	32 3	0.362	25400	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO14	P	Saturated Zone Hydraulic Gradient	0 02	0 013	0 03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
RO14	P	Saturated Zone Total Porosity	0 46	0.35	0.56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
RO14	P	Water Table Drop Rate (m/yr)	0	—	—	None Assigned	None Assigned	SNEC 5/13/02
RO14	P	Well Pump Intake Depth (m)	30.2	10.2	50.2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/18/02
RO14	B, P	Well Pumping Rate (m^3/yr)	286.2 (reported as not used by RESRAD)	207.3	365	Uniform	None Assigned	SNEC 5/13/02
RO14	P	Saturated Zone Field Capacity	0.136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
RO15	P	Density of Unsaturated Zone 1 (g/cc)	1 6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO15	P	Effective Porosity of Unsaturated Zone 1	0.41	0.28	0.54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
RO15	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	32 3	0 362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO15	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
RO15	P	Thickness of Unsaturated Zone 1 (m)	0.0010	N/A	N/A	N/A	Bounded Lognormal-N (0 18 - 320)	URS Technical Approach 6/18/02 (effectively zero)
RO15	P	Total porosity of Unsaturated Zone 1	0.46	0 35	0.56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
RO15	P	Unsaturated Zone 1 b Parameter	5 6	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02
RO15	P	Unsaturated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02

RO17	P	External Gamma Shielding Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	P, B	Indoor Dust Filtration Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	B	Indoor Time Fraction	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	M, P	Inhalation Rate (m^3/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	P, B	Mass Loading for Inhalation (g/m^3)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	B	Fraction of Time Spent Outdoors	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Aquatic Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Drinking Water	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Household Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Irrigation Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Livestock Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Meat	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Plant Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Drinking Water Intake (L/yr)	478.5	90.4	1860	Truncated Lognormal-N		SNEC 5/13/02
RO18	M, B	Fish Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Fruit, Vegetable, and Grain Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Leafy Vegetable Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Meat and Poultry Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Milk Consumption	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Other Seafood Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Soil Ingestion Rate (g/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19	M, B	Livestock Water Intake for Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19	M, B	Depth of Roots (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19	M, B	Depth of Soil Mixing Layer (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Weathering Removal Constant of all Vegetation	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Crop Yield for Fodder (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Crop Yield for Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Crop Yield for Non-Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Foliar Inception Fraction of Leafy Vegetables	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
STOR	B	Storage Times for Livestock Fodder	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
		Distribution Coefficient for Americium & Curium	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Carbon	***ANL Value***	***GPU Min***	***GPU Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Cesium	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
		Distribution Coefficient for Cobalt	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
		Distribution Coefficient for Europium	***Value Used***	***ANL Min.***	***ANL Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Hydrogen	***ANL Value (GPU)***	***GPU Min.***	***GPU Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Iron	***Value Used***	***GPU Min.***	***GPU Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
		Distribution Coefficient for Lead	***Value Used***	***ANL Min***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
		Distribution Coefficient for Nickel	***Value Used***	***ANL Min***	***ANL Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02

R16	P	3. Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	*Value Used*	*ANL Min*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

NOTE ANL Kd values may be "greater than" values The ANL Min value is the lowest reported value for this element and the ANL Max value is the highest reported value
NOTE Items in RED type face are SNEC input values
NOTE Items in GREEN type face are URS input values
NOTE Items with BLUE background are D & D default values, while items with a YELLOW background are RESRAD default values Unlisted parameters are RESRAD defaults

SPRAY POND SURFACE SCENARIO FOR EXCAVATED OB MATERIAL (ALL PATHS)								
Menu	Class	PARAMETERS	Basic RESRAD Input	SNEC Range of Values Min	SNEC Range of Values Max	Assigned Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0.3	0.2	0 6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
R011	P	Area of Contaminated Zone (m^2)	2000	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	25	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Length Parallel to Aquifer Flow (m)	50 5	N/A	N/A	N/A		RESRAD Data Collection Handbook
R011	P	Thickness of Contaminated Zone 1 (m)	2 000E-01	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Average Annual Wind Speed (m/sec)	4 07	3.13	4.83	Uniform	Bounded Lognormal-N (1 4 - 13)	SNEC 5/13/02
R013	P	Contaminated Zone Field Capacity	0 1360	0 0790	0 1920	Uniform	None Assigned	overburden as per URS Technical Approach 6/18/02
R013	P	Contaminated Zone b Parameter	5 60	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	Weighted average of fill and overburden as per URS Technical Approach 6/5/03
R013	P, B	Contaminated Zone Erosion Rate (m/yr)	0 000345	0 00009	0 0006	Loguniform	Continuous Logarithmic (5E-08 - 0 2)	SNEC 5/13/02
R013	P	Contaminated Zone Hydraulic Conductivity (m/yr)	50.11	7 98	13154 77	Loguniform	Bounded Lognormal-N (0 004 - 9250)	Weighted average of fill and overburden as per URS Technical Approach 6/5/03
R013	P	Contaminated Zone Total Porosity	0.410	0 330	0 485	Uniform	Truncated Normal, (0 157 - 0 693)	Weighted average of fill and overburden as per URS Technical Approach 6/5/03
R013	P	Cover Depth (m)	0	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Density of Contaminated Zone (g/cc)	1.60	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	Weighted average of fill and overburden as per URS Technical Approach 6/5/06
R013	P	Density of Cover Material (g/cc)	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Evapotranspiration Coefficient (m/yr)	0.59	0 5	0.67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
R013	P	Humidity in Air (g/m^3)	8 (H-3) not used for others	2 58E+00	2 03E+01	Truncated Lognormal-N		SNEC 5/13/02
R013	B	Irrigation (m/yr)	0.2	—	—	None Assigned		SNEC 5/13/02
R013	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Precipitation (m/y)	0.936	0 688	1.327	Uniform	None Assigned	SNEC 5/13/02
R013	P	Runoff Coefficient	0.35	0.3	0 4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
R013	P	Watershed Area for Nearby Stream or Pond (m^2)	5 00E+06	—	—	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Density of Saturated Zone (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2.23)	SNEC 5/13/02
R014	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Non-Dispersion	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone Effective Porosity	0 028	0.005	0 05	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Conductivity (m/yr)	67.91	15.59	909 53	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Gradient	0 02	0.013	0 03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
R014	P	Saturated Zone Total Porosity	0.36	0 31	0 41	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R014	P	Water Table Drop Rate (m/yr)	0	—	—	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Well Pump Intake Depth (m)	30.2	10.2	50.2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/18/02
R014	B, P	Well Pumping Rate (m^3/yr)	286 2	207.3	365	Uniform	None Assigned	SNEC 5/13/02
R014	P	Saturated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
R015	P	Density of Unsaturated Zone 1 (g/cc)	1 6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R015	P	Effective Porosity of Unsaturated Zone 1	0 41	0.28	0.54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R015	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	32.3	0 362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R015	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
R015	P	Thickness of Unsaturated Zone 1 (m)	1.25	1 00	1 50	Uniform	Bounded Lognormal-N (0 18 - 320)	SNEC 5/13/02 + 1 0m original fill soil layer as per URS Technical Approach 6/18/02
R015	P	Total porosity of Unsaturated Zone 1	0 46	0.35	0 56	Uniform	Truncated Normal, (0.157 - 0 693)	SNEC 5/13/02
R015	P	Unsaturated Zone 1 b Parameter	5 6	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02

RO15	P	Unsaturated Zone Field Capacity	0.136	0.079	0 192	Uniform	None Assigned	SNEC 5/13/02
RO17	P	External Gamma Shielding Factor	0 7	4 400E-02	1	Bounded Lognormal-N		SNEC 5/13/02
RO17	P, B	Indoor Dust Filtration Factor	0 4	0 15	0 95	Uniform		SNEC 5/13/02
RO17	B	Indoor Time Fraction	0.66	0	1	Continuos Linear		SNEC 5/13/02
RO17	M, P	Inhalation Rate (m^3/yr)	8400	4380	13100	Triangular		SNEC 5/13/02
RO17	P, B	Mass Loading for Inhalation (g/m^3)	0 0001	0	0 0001	Continuos Linear		SNEC 5/13/02
RO17	B	Fraction of Time Spent Outdoors	0.12	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Aquatic Food	1	0	1	Triangular		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Drinking Water	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Household Water	Not Used	N/A	N/A	N/A		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Irrigation Water	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Livestock Water	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Meat	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Milk	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Plant Food	1	—	—	None Assigned		SNEC 5/13/02
RO18	M, B	Drinking Water Intake (L/yr)	478.5	90 4	1860	Truncated Lognormal-N		SNEC 5/13/02
RO18	M, B	Fish Consumption (kg/yr)	20.6	—	—	None Assigned		SNEC 5/13/02
RO18	M, B	Fruit, Vegetable, and Grain Consumption (kg/yr)	111.8	135	318	Triangular		SNEC 5/13/02
RO18	M, B	Leafy Vegetable Consumption (kg/yr)	21.4	—	—	None Assigned		SNEC 5/13/02
RO18	M, B	Meat and Poultry Consumption (kg/yr)	67	—	—	None Assigned		SNEC 5/13/02
RO18	M, B	Milk Consumption	233	60	200	Triangular		SNEC 5/13/02
RO18	M, B	Other Seafood Consumption (kg/yr)	0 9	—	—	None Assigned		SNEC 5/13/02
RO18	M, B	Soil Ingestion Rate (g/yr)	18.3	0	36 5	Triangular		SNEC 5/13/02
RO19	M, B	Livestock Water Intake for Milk	60	—	—	None Assigned		SNEC 5/13/02
RO19	M, B	Depth of Roots (m)	0 9	0.3	1	Uniform		SNEC 5/13/02
RO19	M, B	Depth of Soil Mixing Layer (m)	0.15	0	0 6	Triangular		SNEC 5/13/02
RO19B	M, B	Weathering Removal Constant of all Vegetation	20	5.1	84	Triangular		SNEC 5/13/02
RO19B	M, B	Wet Crop Yield for Fodder (kg/m^2)	1.1	—	—	None Assigned		SNEC 5/13/02
RO19B	M, B	Wet Crop Yield for Leafy (kg/m^2)	1.5	—	—	None Assigned		SNEC 5/13/02
RO19B	M, B	Wet Crop Yield for Non-Leafy (kg/m^2)	0 7	0 397	7.72	Truncated Lognormal-N		SNEC 5/13/02
RO19B	M, B	Wet Foliar Inception Fraction of Leafy Vegetables	0.25	0 06	0 95	Triangular		SNEC 5/13/02
STOR	B	Storage Times for Livestock Fodder	0	—	—	None Assigned		SNEC 5/13/02
		Distribution Coefficient for Americium & Curium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Carbon	*ANL Value*	*GPU Min.*	*GPU Max.*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Cesium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	12131	2131	28341			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
		Distribution Coefficient for Cobalt	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
		Distribution Coefficient for Europium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Hydrogen	*ANL Value (GPU)*	*GPU Min.*	*GPU Max.*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Iron	*Value Used*	*GPU Min.*	*GPU Max.*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
		Distribution Coefficient for Lead	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
		Distribution Coefficient for Nickel	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02

R16	P	2 Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	*Value Used*	*ANL Min*	*ANL Max.*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1 Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2 Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

NOTE ANL Kd values may be "greater than" values The ANL Min. value is the lowest reported value for this element and the ANL Max. value is the highest reported value
NOTE. Items in RED type face are SNEC input values.
NOTE: Items in GREEN type face are URS input values
NOTE: Items with BLUE background are D & D default values, while items with a YELLOW background are RESRAD default values. Unlisted parameters are RESRAD defaults

SPRAY POND DW SCENARIO FOR UNDISTURBED OVERBURDEN MATERIAL

Menu	Class	PARAMETERS	Basic RESRAD Input	SNEC Range of Values Min	SNEC Range of Values Max	Assigned Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0 3	0 2	0 6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
R011	P	Area of Contaminated Zone (m^2)	2000	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	4	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Length Parallel to Aquifer Flow (m)	50.5	N/A	N/A	N/A		RESRAD Data Collection Handbook
R011	P	Thickness of Contaminated Zone 1 (m)	1 000E+00	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Average Annual Wind Speed (m/sec)	N/A	N/A	N/A	N/A	Bounded Lognormal-N (1 4 - 13)	URS Technical Approach 6/18/02
R013	P	Contaminated Zone Field Capacity	0 136	0.079	0.192	Uniform	None Assigned	SNEC 5/13/02 (Same as unsat zone)
R013	P	Contaminated Zone b Parameter	5 6	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02 (Same as unsat zone)
R013	P	Contaminated Zone Hydraulic Conductivity (m/yr)	32 3	0.362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02 (Same as unsat zone)
R013	P	Contaminated Zone Total Porosity	0 46	0.35	0 56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02 (Same as unsat zone)
R013	P	Cover Depth (m)	0	N/A	N/A	N/A		SNEC 5/13/02 & URS Technical Approach 6/18/02
R013	P, B	Cover Depth Erosion Rate (m/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R013	P	Density of Contaminated Zone (g/cc)	1 6	1 28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02 (Same as unsat zone)
R013	P	Density of Cover Material (g/cc)	1 6	1 28	1 92	Uniform		SNEC 5/13/02 (Same as fill zone)
R013	P	Evapotranspiration Coefficient (m/yr)	0 59	0 5	0 67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
R013	P	Humidity in Air (g/m^3)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R013	B	Irrigation (m/yr)	0.2	—	—	None Assigned		SNEC 5/13/02
R013	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Precipitation (m/y)	0.936	0 688	1.327	Uniform	None Assigned	SNEC 5/13/02
R013	P	Runoff Coefficient	0 35	0.3	0 4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
R013	P	Watershed Area for Nearby Stream or Pond (m^2)	5.00E+06	—	—	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Density of Saturated Zone (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R014	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Mass Balance	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone Effective Porosity	0 028	0 005	0.05	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Conductivity (m/yr)	67.91	15 59	909.53	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Gradient	0.02	0 013	0.03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
R014	P	Saturated Zone Total Porosity	0 36	0.31	0.41	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R014	P	Water Table Drop Rate (m/yr)	0	—	—	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Well Pump Intake Depth (m)	30 2	10.2	50.2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/18/02
R014	B, P	Well Pumping Rate (m^3/yr)	286.2 (listed as not used by RESRAD)	207 3	365	Uniform	None Assigned	SNEC 5/13/02
R014	P	Saturated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
R015	P	Density of Unsaturated Zone 1 (g/cc)	1 6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R015	P	Effective Porosity of Unsaturated Zone 1	0 41	0.28	0.54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R015	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	32 3	0 362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R015	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
R015	P	Thickness of Unsaturated Zone 1 (m)	0 0010	N/A	N/A	N/A	Bounded Lognormal-N (0 18 - 320)	URS Technical Approach 6/18/02 (effectively zero)
R015	P	Total porosity of Unsaturated Zone 1	0 46	0.35	0.56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R015	P	Unsaturated Zone 1 b Parameter	5 6	4.05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02
R015	P	Unsaturated Zone Field Capacity	0.136	0.079	0.192	Uniform	None Assigned	SNEC 5/13/02
R017	P	External Gamma Shielding Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	P, B	Indoor Dust Filtration Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	B	Indoor Time Fraction	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	M, P	Inhalation Rate (m^3/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02

R017	P, B	Mass Loading for Inhalation (g/m^3)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	B	Fraction of Time Spent Outdoors	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Aquatic Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Drinking Water	1	---	---	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Household Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Irrigation Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Livestock Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Meat	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Plant Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Drinking Water Intake (L/yr)	478 5	90 4	1860	Truncated Lognormal-N		SNEC 5/13/02
R018	M, B	Fish Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Fruit, Vegetable, and Grain Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Leafy Vegetable Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Meat and Poultry Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Milk Consumption	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Other Seafood Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Soil Ingestion Rate (g/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019	M, B	Livestock Water Intake for Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019	M, B	Depth of Roots (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019	M, B	Depth of Soil Mixing Layer (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Weathering Removal Constant of all Vegetation	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Crop Yield for Fodder (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Crop Yield for Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Crop Yield for Non-Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Foliar Inception Fraction of Leafy Vegetables	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
STOR	B	Storage Times for Livestock Fodder	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
		Distribution Coefficient for Americium & Curium	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Carbon	***ANL Value***	***GPU Min.***	***GPU Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Cesium	***Value Used***	***ANL Min***	***ANL Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
		Distribution Coefficient for Cobalt	***Value Used***	***ANL Min***	***ANL Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
		Distribution Coefficient for Europium	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Hydrogen	***ANL Value (GPU)***	***GPU Min.***	***GPU Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Iron	***Value Used***	***GPU Min.***	***GPU Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
		Distribution Coefficient for Lead	***Value Used***	***ANL Min***	***ANL Max***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
		Distribution Coefficient for Nickel	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	***Value Used***	***ANL Min.***	***ANL Max.***	***Distribution Type***		
R16	P	1. Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02

R16	P	3. Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

NOTE ANL Kd values may be "greater than" values. The ANL Min value is the lowest reported value for this element and the ANL Max value is the highest reported value

NOTE Items in RED type face are SNEC input values.

NOTE Items in GREEN type face are URS input values.

NOTE Items with BLUE background are D & D default values, while items with a YELLOW background are RESRAD default values. Unlisted parameters are RESRAD defaults

SPRAY POND DW SCENARIO FOR EXCAVATED OVERBURDEN MATERIAL

Menu	Class	PARAMETERS	Basic RESRAD Input	SNEC Range of Values Min	SNEC Range of Values Max.	Assigned Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0 3	0.2	0 6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
R011	P	Area of Contaminated Zone (m^2)	2000	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	4	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Length Parallel to Aquifer Flow (m)	50.5	N/A	N/A	N/A		RESRAD Data Collection Handbook
R011	P	Thickness of Contaminated Zone 1 (m)	2 000E-01	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Average Annual Wind Speed (m/sec)	N/A	N/A	N/A	N/A	Bounded Lognormal-N (1 4 - 13)	URS Technical Approach 6/18/02
R013	P	Contaminated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02 (Same as unsat zone)
R013	P	Contaminated Zone b Parameter	5 6	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02 (Same as unsat zone)
R013	P, B	Contaminated Zone Erosion Rate (m/yr)	0 000345	0 00009	0 0006	Loguniform	Continuous Logarithmic (5E-08 - 0 2)	SNEC 5/13/02
R013	P	Contaminated Zone Hydraulic Conductivity (m/yr)	50 11	7.98	13154.77	Loguniform	Bounded Lognormal-N (0 004 - 9250)	Weighted average of fill and overburden as per URS Technical Approach 6/18/02
R013	P	Contaminated Zone Total Porosity	0 41	0 33	0 485	Uniform	Truncated Normal, (0 157 - 0 693)	Weighted average of fill and overburden as per URS Technical Approach 6/18/02
R013	P	Cover Depth (m)	0	N/A	N/A	N/A		SNEC 5/13/02 & URS Technical Approach 6/18/02
R013	P	Density of Contaminated Zone (g/cc)	1 6	1.28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02 (Same as unsat zone)
R013	P	Evapotranspiration Coefficient (m/yr)	0 59	0 5	0 67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
R013	P	Humidity in Air (g/m^3)	8 (H-3) not used for others	2.58E+00	2 03E+01	Truncated Lognormal-N		SNEC 5/13/02
R013	B	Irrigation (m/yr)	0 2	---	---	None Assigned		SNEC 5/13/02
R013	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Precipitation (m/y)	0.936	0 688	1.327	Uniform	None Assigned	SNEC 5/13/02
R013	P	Runoff Coefficient	0 35	0 3	0 4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
R013	P	Watershed Area for Nearby Stream or Pond (m^2)	5 00E+06	---	---	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Density of Saturated Zone (g/cc)	1 6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R014	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Non-Dispersion	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone Effective Porosity	0.028	0 005	0 05	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Conductivity (m/yr)	67.91	15.59	909 53	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Gradient	0.02	0.013	0 03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
R014	P	Saturated Zone Total Porosity	0 36	0.31	0 41	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R014	P	Water Table Drop Rate (m/yr)	0	---	---	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Well Pump Intake Depth (m)	30 2	10 2	50 2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/18/02
R014	B, P	Well Pumping Rate (m^3/yr)	286.2 (listed as not used by RESRAD)	207.3	365	Uniform	None Assigned	SNEC 5/13/02
R014	P	Saturated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
R015	P	Density of Unsaturated Zone 1 (g/cc)	1.6	1.28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R015	P	Effective Porosity of Unsaturated Zone 1	0 41	0 28	0 54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R015	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	32 3	0 362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R015	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
R015	P	Thickness of Unsaturated Zone 1 (m)	1.2500	1 0000	1.5000	Uniform	Bounded Lognormal-N (0 18 - 320)	SNEC 5/13/02 + 1 0m original fill soil as per URS Technical Approach 6/18/02 (effectively zero)
R015	P	Total porosity of Unsaturated Zone 1	0 46	0 35	0 56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R015	P	Unsaturated Zone 1 b Parameter	5 6	4.05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02
R015	P	Unsaturated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
R017	P	External Gamma Shielding Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	P, B	Indoor Dust Filtration Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02

R017	B	Indoor Time Fraction	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	M, P	Inhalation Rate (m^3/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	P, B	Mass Loading for Inhalation (g/m^3)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R017	B	Fraction of Time Spent Outdoors	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Aquatic Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Drinking Water	1	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Household Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Irrigation Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Livestock Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Meat	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	B, P	Contaminated Fraction of Plant Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Drinking Water Intake (L/yr)	478 5	90 4	1860	Truncated Lognormal-N		SNEC 5/13/02
R018	M, B	Fish Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Fruit, Vegetable, and Grain Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Leafy Vegetable Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Meat and Poultry Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Milk Consumption	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Other Seafood Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R018	M, B	Soil Ingestion Rate (g/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019	M, B	Livestock Water Intake for Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019	M, B	Depth of Roots (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019	M, B	Depth of Soil Mixing Layer (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Weathering Removal Constant of all Vegetation	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Crop Yield for Fodder (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Crop Yield for Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Crop Yield for Non-Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
R019B	M, B	Wet Foliar Inception Fraction of Leafy Vegetables	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
STOR	B	Storage Times for Livestock Fodder	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
		Distribution Coefficient for Americium & Curium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Carbon	*ANL Value*	*GPU Min.*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	-1	0	5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	-1	0	5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	-1	0	5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Cesium	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
		Distribution Coefficient for Cobalt	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
		Distribution Coefficient for Europium	*Value Used*	*ANL Min*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Hydrogen	*ANL Value (GPU)*	*GPU Min*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	-1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	-1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	-1 (0.25)	0	0 5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Iron	*Value Used*	*GPU Min*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
		Distribution Coefficient for Lead	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
		Distribution Coefficient for Nickel	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	*Value Used*	*ANL Min*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02

R16	P	3. Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	*Value Used*	*ANL Min*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

NOTE ANL Kd values may be "greater than" values. The ANL Min value is the lowest reported value for this element and the ANL Max value is the highest reported value

NOTE Items in RED type face are SNEC input values.

NOTE Items in GREEN type face are URS input values.

NOTE Items with BLUE background are D & D default values, while items with a YELLOW background are RESRAD default values. Unlisted parameters are RESRAD defaults.

SSGS DW SCENARIO FOR EXCAVATED BACKFILL ON SURFACE

Menu	Class	PARAMETERS	Basic RESRAD Input	SNEC Range of Values Min	SNEC Range of Values Max	Assigned Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0 3	0.2	0.6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
RO11	P	Area of Contaminated Zone (m^2)	2000	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO11	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	4	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Length Parallel to Aquifer Flow (m)	50 5	N/A	N/A	N/A		RESRAD Data Collection Handbook
RO11	P	Thickness of Contaminated Zone 1 (m)	2 000E-01	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO11	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
RO13	P	Average Annual Wind Speed (m/sec)	N/A	N/A	N/A	N/A	Bounded Lognormal-N (1 4 - 13)	SNEC 5/13/02
RO13	P	Contaminated Zone Field Capacity	0.1360	0 0790	0.1920	Uniform	None Assigned	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Contaminated Zone b Parameter	5 60	4 05	7 12	Uniform	Bounded Lognormal-N (0 5 - 30)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P, B	Contaminated Zone Erosion Rate (m/yr)	0 000345	0 00009	0 0006	Loguniform	Continuous Logarithmic (5E-08 - 0 2)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Contaminated Zone Hydraulic Conductivity (m/yr)	32.30	0 36	25400 00	Loguniform	Bounded Lognormal-N (0 004 - 9250)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Contaminated Zone Total Porosity	0.460	0.350	0.560	Uniform	Truncated Normal, (0 157 - 0 693)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
RO13	P	Density of Contaminated Zone (g/cc)	1.6	1 28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02 (Same as unsat zone)
RO13	P	Evapotranspiration Coefficient (m/yr)	0.59	0.5	0 67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
RO13	P	Humidity in Air (g/m^3)	8 (H-3) not used for others	2 58E+00	2 03E+01	Truncated Lognormal-N		SNEC 5/13/02
RO13	B	Irrigation (m/yr)	0.2	—	—	None Assigned		SNEC 5/13/02
RO13	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
RO13	P	Precipitation (m/y)	0 936	0 688	1.327	Uniform	None Assigned	SNEC 5/13/02
RO13	P	Runoff Coefficient	0 35	0 3	0 4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
RO13	P	Watershed Area for Nearby Stream or Pond (m^2)	5 00E+06	—	—	None Assigned	None Assigned	SNEC 5/13/02
RO14	P	Density of Saturated Zone (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO14	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Non-Dispersion	N/A	N/A	N/A		SNEC 5/13/02
RO14	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
RO14	P	Saturated Zone Effective Porosity	0.41	0.28	0 54	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
RO14	P	Saturated Zone Hydraulic Conductivity (m/yr)	32.3	0 362	25400	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO14	P	Saturated Zone Hydraulic Gradient	0 02	0 013	0 03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
RO14	P	Saturated Zone Total Porosity	0 46	0 35	0 56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
RO14	P	Water Table Drop Rate (m/yr)	0	—	—	None Assigned	None Assigned	SNEC 5/13/02
RO14	P	Well Pump Intake Depth (m)	30 2	10 2	50 2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/18/02
RO14	B, P	Well Pumping Rate (m^3/yr)	286.2 (reported as not used by RESRAD)	207.3	365	Uniform	None Assigned	SNEC 5/13/02
RO14	P	Saturated Zone Field Capacity	0.136	0 079	0.192	Uniform	None Assigned	SNEC 5/13/02
RO15	P	Density of Unsaturated Zone 1 (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO15	P	Effective Porosity of Unsaturated Zone 1	0 41	0 28	0 54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
RO15	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	32 3	0.362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO15	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
RO15	P	Thickness of Unsaturated Zone 1 (m)	1.2500	1 0000	1 5000	Uniform	Bounded Lognormal-N (0 18 - 320)	SNEC 5/13/02 + 1 0m original fill soil as per URS Technical Approach 6/18/02 (effectively zero)
RO15	P	Total porosity of Unsaturated Zone 1	0 46	0 35	0.56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
RO15	P	Unsaturated Zone 1 b Parameter	5 6	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02

RO15	P	Unsaturated Zone Field Capacity	0 136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
RO17	P	External Gamma Shielding Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	P, B	Indoor Dust Filtration Factor	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	B	Indoor Time Fraction	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	M, P	Inhalation Rate (m^3/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	P, B	Mass Loading for Inhalation (g/m^3)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO17	B	Fraction of Time Spent Outdoors	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Aquatic Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Drinking Water	1	—	—	None Assigned		SNEC 5/13/02
RO18	B, P	Contaminated Fraction of Household Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Irrigation Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Livestock Water	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Meat	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	B, P	Contaminated Fraction of Plant Food	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Drinking Water Intake (L/yr)	478 5	90.4	1860	Truncated Lognormal-N		SNEC 5/13/02
RO18	M, B	Fish Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Fruit, Vegetable, and Grain Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Leafy Vegetable Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Meat and Poultry Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Milk Consumption	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Other Seafood Consumption (kg/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO18	M, B	Soil Ingestion Rate (g/yr)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19	M, B	Livestock Water Intake for Milk	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19	M, B	Depth of Roots (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19	M, B	Depth of Soil Mixing Layer (m)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Weathering Removal Constant of all Vegetation	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Crop Yield for Fodder (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Crop Yield for Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Crop Yield for Non-Leafy (kg/m^2)	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
RO19B	M, B	Wet Foliar Inception Fraction of Leafy Vegetables	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
STOR	B	Storage Times for Livestock Fodder	N/A	N/A	N/A	N/A		URS Technical Approach 6/18/02
		Distribution Coefficient for Americium & Curium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Carbon	*ANL Value*	*GPU Min.*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Cesium	*Value Used*	*ANL Min*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
		Distribution Coefficient for Cobalt	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
		Distribution Coefficient for Europium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Hydrogen	*ANL Value (GPU)*	*GPU Min*	*GPU Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1 (0.25)	0	0 5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Iron	*Value Used*	*GPU Min.*	*GPU Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
		Distribution Coefficient for Lead	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
		Distribution Coefficient for Nickel	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02

R16	P	2. Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

NOTE ANL Kd values may be "greater than" values The ANL Min value is the lowest reported value for this element and the ANL Max value is the highest reported value
NOTE Items in RED type face are SNEC input values
NOTE Items in GREEN type face are URS input values
NOTE Items with BLUE background are D & D default values, while items with a YELLOW background are RESRAD default values Unlisted parameters are RESRAD defaults

DW SCENARIO IN BEDROCK

Menu	Class	PARAMETERS	Basic RESRAD Input	SNEC Range of Values Min	SNEC Range of Values Max	Assigned Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0.3	0.2	0.6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
RO11	P	Area of Contaminated Zone (m^2)	10000	N/A	N/A	N/A		URS Technical Approach 6/5/02
RO11	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	4	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Length Parallel to Aquifer Flow (m)	112.8	N/A	N/A	N/A		RESRAD Data Collection Handbook
RO11	P	Thickness of Contaminated Zone 1 (m)	2.000E+00	N/A	N/A	N/A		URS Technical Approach 6/5/02
RO11	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
RO11	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
RO13	P	Average Annual Wind Speed (m/sec)	4.07	3.13	4.83	Uniform	Bounded Lognormal-N (1 4 - 13)	SNEC 5/13/02
RO13	P	Contaminated Zone Field Capacity	0.136	0 079	0.192	Uniform	None Assigned	SNEC 5/13/02
RO13	P	Contaminated Zone b Parameter	5 6	4.05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02
RO13	P, B	Contaminated Zone Erosion Rate (m/yr)	0.000345	0.00009	0.0006	Loguniform	Continuous Logarithmic (5E-08 - 0 2)	SNEC 5/13/02
RO13	P	Contaminated Zone Hydraulic Conductivity (m/yr)	67.91	15.59	909 53	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO13	P	Contaminated Zone Total Porosity	0.36	0.31	0.41	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
RO13	P	Cover Depth (m)	3.2	N/A	N/A	N/A		SNEC 5/13/02 & URS Technical Approach 6/5/02
RO13	P, B	Cover Depth Erosion Rate (m/yr)	0.000345	0 00009	0.0006	Loguniform		SNEC 5/13/02
RO13	P	Density of Contaminated Zone (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO13	P	Density of Cover Material (g/cc)	1 6 (reported as not used by RESRAD)	1.28	1.92	Uniform		SNEC 5/13/02
RO13	P	Evapotranspiration Coefficient (m/yr)	0 59	0.5	0.67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
RO13	P	Humidity in Air (g/m^3)	N/A	N/A	N/A	N/A		URS Technical Approach 6/5/02
RO13	B	Irrigation (m/yr)	0 2	—	—	None Assigned		SNEC 5/13/02
RO13	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
RO13	P	Precipitation (m/y)	0 936	0.688	1.327	Uniform	None Assigned	SNEC 5/13/02
RO13	P	Runoff Coefficient	0 35	0.3	0.4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
RO13	P	Watershed Area for Nearby Stream or Pond (m^2)	5.00E+06	—	—	None Assigned	None Assigned	SNEC 5/13/02
RO14	P	Density of Saturated Zone (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO14	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Mass Balance	N/A	N/A	N/A		SNEC 5/13/02
RO14	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
RO14	P	Saturated Zone Effective Porosity	0 028	0 005	0 05	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
RO14	P	Saturated Zone Hydraulic Conductivity (m/yr)	67.91	15.59	909.53	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO14	P	Saturated Zone Hydraulic Gradient	0 02	0 013	0 03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
RO14	P	Saturated Zone Total Porosity	0.36	0 31	0 41	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
RO14	P	Water Table Drop Rate (m/yr)	0	—	—	None Assigned	None Assigned	SNEC 5/13/02
RO14	P	Well Pump Intake Depth (m)	30 2	10.2	50 2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/5/02
RO14	B, P	Well Pumping Rate (m^3/yr)	286.2 (reported as not used by RESRAD)	207.3	365	Uniform	None Assigned	SNEC 5/13/02
RO14	P	Saturated Zone Field Capacity	0.136	0.079	0.192	Uniform	None Assigned	SNEC 5/13/02
RO15	P	Density of Unsaturated Zone 1 (g/cc)	1.6	1.28	1.92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
RO15	P	Effective Porosity of Unsaturated Zone 1	0.41	0.28	0.54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
RO15	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	67.91	15.59	909.53	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
RO15	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
RO15	P	Thickness of Unsaturated Zone 1 (m)	0 0010	N/A	N/A	N/A	Bounded Lognormal-N (0 18 - 320)	URS Technical Approach 6/5/02 (effectively zero)
RO15	P	Total porosity of Unsaturated Zone 1	0.46	0 35	0.56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02

R16	P	2. Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
		Distribution Coefficient for Nickel	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

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SSGS SURFACE All PATHS SCENARIO FOR EXCAVATED BACKFILL								
			Basic	SNEC Range of Values		Assigned		
Menu	Class	PARAMETERS	RESRAD Input	Min	Max	Distribution	Default Distribution	Basis
C14	P	Thickness of Soil Evasion Layer of C-14 in Soil (m)	0 3	0.2	0 6	Triangular		SNEC 5/13/02
D-5	P	Bioaccumulation Factors, Fresh Water	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
D-34	P	Food Transfer Factors	Default Values	Varies	Varies	Lognormal		SNEC 5/13/02
R011	P	Area of Contaminated Zone (m^2)	2000	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	NRC	Basic Radiation Dose Limit (mrem/y) (NRC)	25	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Length Parallel to Aquifer Flow (m)	50.5	N/A	N/A	N/A		RESRAD Data Collection Handbook
R011	P	Thickness of Contaminated Zone 1 (m)	2.000E-01	N/A	N/A	N/A		URS Technical Approach 6/18/02
R011	P	Time Since Placement of Materials (yr)	0	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	3	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	35	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	150	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	300	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	1000	N/A	N/A	N/A		SNEC 5/13/02
R011	P	Times for Calculations (yr)	10000	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Average Annual Wind Speed (m/sec)	4 07	3 13	4 83	Uniform	Bounded Lognormal-N (1 4 - 13)	SNEC 5/13/02
R013	P	Contaminated Zone Field Capacity	0 1360	0 0790	0 1920	Uniform	None Assigned	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
R013	P	Contaminated Zone b Parameter	5 60	4 05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
R013	P, B	Contaminated Zone Erosion Rate (m/yr)	0 000345	0 00009	0 0006	Loguniform	Continuous Loganthmic (5E-08 - 0 2)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
R013	P	Contaminated Zone Hydraulic Conductivity (m/yr)	32.30	0.36	25400.00	Loguniform	Bounded Lognormal-N (0 004 - 9250)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
R013	P	Contaminated Zone Total Porosity	0 460	0 350	0 560	Uniform	Truncated Normal, (0 157 - 0 693)	Backfill properties assumed same as fill soil as per GPU direction 5/13/02
R013	P	Cover Depth (m)	0	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Density of Contaminated Zone (g/cc)	1.60	1.28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	Weighted average of fill and overburden as per URS Technical Approach 6/5/06
R013	P	Density of Cover Material (g/cc)	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Evapotranspiration Coefficient (m/yr)	0.59	0.5	0 67	Uniform	Uniform (0 5 - 0 75)	SNEC 5/13/02
R013	P	Humidity in Air (g/m^3)	8 (H-3) not used for others	2.58E+00	2 03E+01	Truncated Lognormal-N		SNEC 5/13/02
R013	B	Irrigation (m/yr)	0 2	—	—	None Assigned		SNEC 5/13/02
R013	B	Irrigation Mode (Overhead)	Overhead	N/A	N/A	N/A		SNEC 5/13/02
R013	P	Precipitation (m/y)	0 936	0 688	1.327	Uniform	None Assigned	SNEC 5/13/02
R013	P	Runoff Coefficient	0.35	0.3	0 4	Uniform	Uniform (0 1 - 0 8)	SNEC 5/13/02
R013	P	Watershed Area for Nearby Stream or Pond (m^2)	5 00E+06	—	—	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Density of Saturated Zone (g/cc)	1 6	1 28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R014	P	Model Non-dispersion (ND) or Mass-Balance (MB)	Non-Dispersion	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone b Parameter	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R014	P	Saturated Zone Effective Porosity	0 41	0 28	0 54	Loguniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Conductivity (m/yr)	32.3	0 362	25400	Uniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R014	P	Saturated Zone Hydraulic Gradient	0 02	0 013	0 03	Uniform	Bounded Lognormal-N (0 00007 - 0 5)	SNEC 5/13/02
R014	P	Saturated Zone Total Porosity	0 46	0 35	0 56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R014	P	Water Table Drop Rate (m/yr)	0	—	—	None Assigned	None Assigned	SNEC 5/13/02
R014	P	Well Pump Intake Depth (m)	30 2	10.2	50.2	Uniform	Triangular (6 -30)	SNEC 5/13/02 + 0 2m excavation as per URS Technical Approach 6/18/02
R014	B, P	Well Pumping Rate (m^3/yr)	286.2	207.3	365	Uniform	None Assigned	SNEC 5/13/02
R014	P	Saturated Zone Field Capacity	0.136	0 079	0.192	Uniform	None Assigned	SNEC 5/13/02
R015	P	Density of Unsaturated Zone 1 (g/cc)	1 6	1.28	1 92	Uniform	Truncated Normal (0 809 - 2 23)	SNEC 5/13/02
R015	P	Effective Porosity of Unsaturated Zone 1	0 41	0.28	0 54	Uniform	Truncated Normal (0 075 - 0 635)	SNEC 5/13/02
R015	P	Hydraulic Conductivity of Unsaturated Zone 1 (m/yr)	32 3	0 362	25400	Loguniform	Bounded Lognormal-N (0 004 - 9250)	SNEC 5/13/02
R015	P	Number of Unsaturated Zone Strata	1	N/A	N/A	N/A	N/A	SNEC 5/13/02
R015	P	Thickness of Unsaturated Zone 1 (m)	1 25	1.00	1.50	Uniform	Bounded Lognormal-N (0 18 - 320)	SNEC 5/13/02 + 1 0m original fill soil layer as per URS Technical Approach 6/18/02

R015	P	Total porosity of Unsaturated Zone 1	0 46	0.35	0 56	Uniform	Truncated Normal, (0 157 - 0 693)	SNEC 5/13/02
R015	P	Unsaturated Zone 1 b Parameter	5.6	4.05	7.12	Uniform	Bounded Lognormal-N (0 5 - 30)	SNEC 5/13/02
R015	P	Unsaturated Zone Field Capacity	0.136	0 079	0 192	Uniform	None Assigned	SNEC 5/13/02
R017	P	External Gamma Shielding Factor	0.7	4 400E-02	1	Bounded Lognormal-N		SNEC 5/13/02
R017	P, B	Indoor Dust Filtration Factor	0.4	0.15	0.95	Uniform		SNEC 5/13/02
R017	B	Indoor Time Fraction	0 66	0	1	Continuos Linear		SNEC 5/13/02
R017	M, P	Inhalation Rate (m^3/yr)	8400	4380	13100	Triangular		SNEC 5/13/02
R017	P, B	Mass Loading for Inhalation (g/m^3)	0 0001	0	0 0001	Continuos Linear		SNEC 5/13/02
R017	B	Fraction of Time Spent Outdoors	0.12	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Aquatic Food	1	0	1	Triangular		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Drinking Water	1	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Household Water	Not Used	N/A	N/A	N/A		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Irrigation Water	1	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Livestock Water	1	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Meat	1	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Milk	1	—	—	None Assigned		SNEC 5/13/02
R018	B, P	Contaminated Fraction of Plant Food	1	—	—	None Assigned		SNEC 5/13/02
R018	M, B	Drinking Water Intake (L/yr)	478.5	90.4	1860	Truncated Lognormal-N		SNEC 5/13/02
R018	M, B	Fish Consumption (kg/yr)	20 6	—	—	None Assigned		SNEC 5/13/02
R018	M, B	Fruit, Vegetable, and Grain Consumption (kg/yr)	111.8	135	318	Triangular		SNEC 5/13/02
R018	M, B	Leafy Vegetable Consumption (kg/yr)	21 4	—	—	None Assigned		SNEC 5/13/02
R018	M, B	Meat and Poultry Consumption (kg/yr)	67	—	—	None Assigned		SNEC 5/13/02
R018	M, B	Milk Consumption	233	60	200	Triangular		SNEC 5/13/02
R018	M, B	Other Seafood Consumption (kg/yr)	0.9	—	—	None Assigned		SNEC 5/13/02
R018	M, B	Soil Ingestion Rate (g/yr)	18.3	0	36.5	Triangular		SNEC 5/13/02
R019	M, B	Livestock Water Intake for Milk	60	—	—	None Assigned		SNEC 5/13/02
R019	M, B	Depth of Roots (m)	0.9	0 3	1	Uniform		SNEC 5/13/02
R019	M, B	Depth of Soil Mixing Layer (m)	0 15	0	0 6	Triangular		SNEC 5/13/02
R019B	M, B	Weathering Removal Constant of all Vegetation	20	5 1	84	Triangular		SNEC 5/13/02
R019B	M, B	Wet Crop Yield for Fodder (kg/m^2)	1.1	—	—	None Assigned		SNEC 5/13/02
R019B	M, B	Wet Crop Yield for Leafy (kg/m^2)	1.5	—	—	None Assigned		SNEC 5/13/02
R019B	M, B	Wet Crop Yield for Non-Leafy (kg/m^2)	0.7	0.397	7.72	Truncated Lognormal-N		SNEC 5/13/02
R019B	M, B	Wet Foliar Inception Fraction of Leafy Vegetables	0 25	0 06	0 95	Triangular		SNEC 5/13/02
STOR	B	Storage Times for Livestock Fodder	0	—	—	None Assigned		SNEC 5/13/02
		Distribution Coefficient for Americium & Curium	*Value Used*	*ANL Min.*	*ANL Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Carbon	*ANL Value*	*GPU Min*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1	0	5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Cesium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	2131	2131	28341			SNEC 5/13/02
		Distribution Coefficient for Cobalt	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	200	200	1000			SNEC 5/13/02
		Distribution Coefficient for Europium	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	1000	1000	5000			SNEC 5/13/02
		Distribution Coefficient for Hydrogen	*ANL Value (GPU)*	*GPU Min*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	-1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	-1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
R16	P	3 Saturated Zone (cm^3/g)	-1 (0.25)	0	0.5	Uniform		SNEC 5/13/02
		Distribution Coefficient for Iron	*Value Used*	*GPU Min*	*GPU Max*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	10000	10000	50000			SNEC 5/13/02
		Distribution Coefficient for Lead	*Value Used*	*ANL Min.*	*ANL Max.*	*Distribution Type*		
R16	P	1. Contaminated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	9700	9700	160000			SNEC 5/13/02

		Distribution Coefficient for Nickel	Value Used	ANL Min.	ANL Max.	Distribution Type		
R16	P	1. Contaminated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	1300	1300	10000			SNEC 5/13/02
		Distribution Coefficient for Plutonium	Value Used	ANL Min.	ANL Max.	Distribution Type		
R16	P	1. Contaminated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	160	160	600			SNEC 5/13/02
		Distribution Coefficient for Strontium	Value Used	ANL Min.	ANL Max.	Distribution Type		
R16	P	1. Contaminated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	11	11	475			SNEC 5/13/02
		Distribution Coefficient for Uranium	Value Used	ANL Min.	ANL Max.	Distribution Type		
R16	P	1. Contaminated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	2. Unsaturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02
R16	P	3. Saturated Zone (cm^3/g)	16	16	5200			SNEC 5/13/02

NOTE: ANL Kd values may be "greater than" values. The ANL Min value is the lowest reported value for this element and the ANL Max value is the highest reported value

NOTE: Items in RED type face are SNEC input values

NOTE: Items in GREEN type face are URS input values.

NOTE: Items with BLUE background are D & D default values, while items with a YELLOW background are RESRAD default values. Unlisted parameters are RESRAD defaults.

	Depth of Roots	Thickness of Soil Evasion Layer	Wind Speed
Mean	0.649982691	0.366662733	3.980098622
Standard Error	0.006740618	0.002835742	0.016368527
Median	0.650117	0.354897	3.982175
Mode	#N/A	#N/A	4.14391
Standard Deviation	0.202218541	0.085072252	0.491055821
Sample Variance	0.040892338	0.007237288	0.241135819
Kurtosis	-1.200049739	-0.594675096	-1.199988957
Skewness	-0.000299975	0.422969497	-0.00021101
Range	0.698836	0.385032	1.6976
Minimum	0.300041	0.204388	3.13166
Maximum	0.998877	0.58942	4.82926
Sum	584.984422	329.99646	3582.08876
Count	900	900	900
75%	0.825627	0.427072	4.40533
25%	0.475012	0.300219	3.55714

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	C-14	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	5.936E-01	1.319E-12	1.682E-11	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	2.374E-02	5.275E-14	6.730E-13	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 5.936E-01 mrem/yr at t = 0.000E+00 years

	Depth of Roots	Depth of Soil Mixing Layer	Plant Transfer Factor for Ni	Meat Transfer Factor for Ni	Milk Transfer Factor for Ni
Mean	0.649993827	0.249986177	0.075424134	0.007565828	0.025398861
Standard Error	0.006740584	0.004249897	0.002741354	0.000276251	0.000645479
Median	0.650577	0.2327835	0.0498441	0.00499491	0.02004635
Mode	#N/A	#N/A	0.0270835	0.0160252	0.0212972
Standard Deviation	0.202217512	0.127496899	0.082240619	0.008287517	0.019364374
Sample Variance	0.040891922	0.016255459	0.006763519	6.86829E-05	0.000374979
Kurtosis	-1.2001246	-0.602278227	15.57308108	16.40397836	7.586634947
Skewness	0.00038154	0.421420863	3.271820383	3.33939064	2.242910824
Range	0.698224	0.57292766	0.70178229	0.071301364	0.15766312
Minimum	0.300527	0.00658234	0.00219871	0.000291436	0.00245888
Maximum	0.998751	0.57951	0.703981	0.0715928	0.160122
Sum	584.994444	224.9875592	67.88172097	6.809244837	22.8589746
Count	900	900	900	900	900
75%	0.825021	0.341009	0.0924693	0.00928698	0.0320911
25%	0.475012	0.150229	0.02707	0.00269398	0.0125698

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Ni-63	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	7.763E-03	7.690E-03	7.546E-03	7.061E-03	5.564E-03	1.815E-03	3.550E-04	0.000E+00	0.000E+00
M(t):	3.105E-04	3.076E-04	3.018E-04	2.824E-04	2.225E-04	7.262E-05	1.420E-05	0.000E+00	0.000E+00

0Maximum TDOSE(t): 7.763E-03 mrem/yr at t = 0.000E+00 years

	Depht of Roots	External Gamma Shielding Factor	Plant Transfer Factor for Cs	Meat Transfer Factor for Cs	Milk Transfer Factor for Cs
Mean	0.649993827	0.311576942	0.065048881	0.054032323	0.011100371
Standard Error	0.006740584	0.005865496	0.002634899	0.000757146	0.000181501
Median	0.650577	0.2701895	0.0400047	0.0498017	0.00995379
Mode	#N/A	0.127979	0.0206515	#N/A	0.0103708
Standard Deviation	0.202217512	0.175964866	0.079046976	0.022714384	0.005445023
Sample Variance	0.040891922	0.030963634	0.006248424	0.000515943	2.96483E-05
Kurtosis	-1.2001246	1.310726062	19.04497359	2.339536098	2.999055409
Skewness	0.00038154	1.184287836	3.63998789	1.238550021	1.416613307
Range	0.698224	0.9285946	0.70438126	0.1476186	0.03832798
Minimum	0.300527	0.0471544	0.00135774	0.0141644	0.00239922
Maximum	0.998751	0.975749	0.705739	0.161783	0.0407272
Sum	584.994444	280.4192479	58.54399301	48.6290907	9.99033421
Count	900	900	900	900	900
75%	0.825021	0.399408	0.0781693	0.0655288	0.0136946
25%	0.475012	0.182397	0.0206404	0.037896	0.00725339

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Cs-137	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	1.184E+00	1.155E+00	1.100E+00	9.273E-01	5.033E-01	2.978E-02	6.634E-04	0.000E+00	0.000E+00
M(t):	4.735E-02	4.621E-02	4.401E-02	3.709E-02	2.013E-02	1.191E-03	2.654E-05	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.184E+00 mrem/yr at t = 0.000E+00 years

	Density of Contamianted Zone	External Gamma Shielding Factor
Mean	1.5999862	0.311548422
Standard Error	0.006163312	0.005862214
Median	1.60063	0.2702035
Mode	1.88748	0.238119
Standard Deviation	0.184899372	0.175866421
Sample Variance	0.034187778	0.030928998
Kurtosis	-1.200435789	1.291223333
Skewness	0.000232204	1.180458827
Range	0.63895	0.9203616
Minimum	1.28077	0.0471544
Maximum	1.91972	0.967516
Sum	1439.98758	280.3935794
Count	900	900
75%	1.76106	0.399162
25%	1.44001	0.182547

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Eu-152	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	1.207E+00	1.144E+00	1.029E+00	7.092E-01	1.876E-01	4.075E-04	1.250E-07	0.000E+00	0.000E+00
M(t):	4.827E-02	4.577E-02	4.115E-02	2.837E-02	7.506E-03	1.630E-05	4.998E-09	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.207E+00 mrem/yr at t = 0.000E+00 years

	Depth of Roots	Depht os Soil Mixing Layer	Plant Transfer Factor for Pu
Mean	0.6499827	0.249994075	0.001524553
Standard Error	0.0067406	0.004253613	5.88168E-05
Median	0.650117	0.2323455	0.001000697
Mode	#N/A	#N/A	#N/A
Standard Deviation	0.2022185	0.12760839	0.001764503
Sample Variance	0.0408923	0.016283901	3.11347E-06
Kurtosis	-1.20005	-0.594674848	31.18195251
Skewness	-0.0003	0.422969496	4.326394078
Range	0.698836	0.57754766	0.021008815
Minimum	0.300041	0.00658234	5.83849E-05
Maximum	0.998877	0.58413	0.0210672
Sum	584.98442	224.9946674	1.372097365
Count	900	900	900
75%	0.825627	0.340609	0.00185214
25%	0.475012	0.150328	0.000539749

Site-Specific Parameter Summary (continued)

0 Menu	Parameter	User Input	Default	Used by RESRAD (If different from user input)	Parameter Name
R021	Volumetric water content of the foundation	not used	3.000E-02	---	PH2OFL
R021	Diffusion coefficient for radon gas (m/sec):				
R021	in cover material	not used	2.000E-06	---	DIFCV
R021	in foundation material	not used	3.000E-07	---	DIFFL
R021	in contaminated zone soil	not used	2.000E-06	---	DIFCZ
R021	Radon vertical dimension of mixing (m)	not used	2.000E+00	---	HMIX
R021	Average building air exchange rate (1/hr)	not used	5.000E-01	---	REXG
R021	Height of the building (room) (m)	not used	2.500E+00	---	HRM
R021	Building interior area factor	not used	0.000E+00	---	FAI
R021	Building depth below ground surface (m)	not used	-1.000E+00	---	DMFL
R021	Emanating power of Rn-222 gas	not used	2.500E-01	---	EMANA(1)
R021	Emanating power of Rn-220 gas	not used	1.500E-01	---	EMANA(2)
TITL	Number of graphical time points	32	---	---	NPTS
TITL	Maximum number of integration points for dose	1	---	---	LYMAX
TITL	Maximum number of integration points for risk	1	---	---	KYMAX

Summary of Pathway Selections

Pathway	User Selection
1 -- external gamma	active
2 -- inhalation (w/o radon)	active
3 -- plant ingestion	active
4 -- meat ingestion	active
5 -- milk ingestion	active
6 -- aquatic foods	active
7 -- drinking water	active
8 -- soil ingestion	active
9 -- radon	suppressed
Find peak pathway doses	active

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Pu-238 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	2.000E-01	1.969E-01	1.908E-01	1.708E-01	1.149E-01	1.818E-02	1.389E-03	9.288E-05	1.883E-08
M(t):	8.001E-03	7.877E-03	7.632E-03	6.832E-03	4.597E-03	7.273E-04	5.557E-05	3.715E-06	7.531E-10

0Maximum TDOSE(t): 2.000E-01 mrem/yr at t = 0.000E+00 years

	Depth of Roots	Saturated Zone Hydraulic Conductivity	Depth of Soil Mixing Layer	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation	Plant of Transfer Factor of Pu	Meat Transfer Factor for Pu
Mean	0.649954	462.5821307	0.250024336	0.021500003	30.20076067	1.007516014	0.001513964	0.000108553
Standard Error	0.006741	8.605859733	0.004251867	0.000163665	0.385142389	0.006152158	5.64332E-05	1.51915E-06
Median	0.650424	463.003	0.23242	0.02150015	30.17325	1.00774	0.000998642	0.000100071
Mode	#N/A	#N/A	0.210457	#N/A	#N/A	1.0592	#N/A	#N/A
Standard Deviation	0.202218	258.175792	0.127556003	0.004909947	11.55427167	0.184564747	0.001692996	4.55746E-05
Sample Variance	0.040892	66654.73957	0.016270534	2.41076E-05	133.5011939	0.034064146	2.86623E-06	2.07704E-09
Kurtosis	-1.20019	-1.19985799	-0.598277249	-1.199960676	-1.200301514	-1.200686893	26.77309311	2.419496533
Skewness	0.000106	-0.000593817	0.423447695	0.000249728	0.000874386	0.000259715	3.938086976	1.245098487
Range	0.69816	891.6096	0.57216883	0.0169729	39.9469	0.637829	0.020564731	0.000311274
Minimum	0.300751	16.0204	0.00936717	0.0130164	10.2494	0.688481	5.86693E-05	3.04625E-05
Maximum	0.998911	907.63	0.581536	0.0299893	50.1963	1.32631	0.0206234	0.000341736
Sum	584.9584	416323.9176	225.0219022	19.3500031	27180.6846	906.764413	1.362567175	0.097697409
Count	900	900	900	900	900	900	900	900
75%	0.826163	686.337	0.340389	0.0257509	40.241	1.16735	0.00185126	0.000131715
25%	0.475012	239.113	0.150326	0.0172576	20.2196	0.848289	0.000538951	7.61345E-05

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Pu-239	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	2.233E-01	2.213E-01	2.173E-01	2.038E-01	1.621E-01	5.515E-02	1.132E-02	4.096E-01	0.000E+00
M(t):	8.930E-03	8.851E-03	8.691E-03	8.153E-03	6.482E-03	2.206E-03	4.527E-04	1.638E-02	0.000E+00

0Maximum TDOSE(t): 5.462E-01 mrem/yr at t = 970 ± 2 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.696E+02 years
Water Independent Pathways (Inhalation excludes radon)

0

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.696E+02 years
Water Dependent Pathways

0

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	4.706E-01	0.8617	1.171E-03	0.0021	0.000E+00	0.0000	7.283E-02	0.1334	1.505E-03	0.0028	3.661E-05	0.0001	5.462E-01	1.0000
Total	4.706E-01	0.8617	1.171E-03	0.0021	0.000E+00	0.0000	7.283E-02	0.1334	1.505E-03	0.0028	3.661E-05	0.0001	5.462E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Depth of Roots	Depth of Soil Mixing Layer	Evapotranspiration Coefficient	Mass Loading for Inhalation	Plant Transfer Factor for Pu	Plant Transfer Factor for Am
Mean	0.649988	0.249979934	0.58500943	2.45659E-05	0.001517364	0.001514999
Standard Error	0.00674	0.00425247	0.001636874	3.40419E-07	5.71591E-05	5.6421E-05
Median	0.650017	0.2326005	0.585209	2.35352E-05	0.000997934	0.000998544
Mode	#N/A	#N/A	#N/A	#N/A	0.000655625	#N/A
Standard Deviation	0.202193	0.127574087	0.049106209	1.02126E-05	0.001714774	0.001692631
Sample Variance	0.040882	0.016275148	0.00241142	1.04297E-10	2.94045E-06	2.865E-06
Kurtosis	-1.199774	-0.597085682	-1.199914998	6.869174325	28.5578476	22.88643449
Skewness	3.82E-05	0.420837328	-0.000518995	1.622119668	4.063024021	3.768802875
Range	0.699176	0.57754766	0.16976	9.92024E-05	0.021260094	0.018563233
Minimum	0.300141	0.00658234	0.500166	5.1228E-07	6.23057E-05	6.52672E-05
Maximum	0.999317	0.58413	0.669926	9.97147E-05	0.0213224	0.0186285
Sum	584.989	224.9819402	526.508487	0.022109338	1.365627739	1.363498742
Count	900	900	900	900	900	900
75%	0.825627	0.340444	0.627564	2.87368E-05	0.00185148	0.00185313
25%	0.475012	0.150241	0.542537	0.000018362	0.000538557	0.000537897

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Pu-241 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	4.210E-03	4.346E-03	4.589E-03	5.218E-03	5.862E-03	3.893E-03	1.793E-03	3.094E-10	9.612E-11
M(t):	1.684E-04	1.738E-04	1.836E-04	2.087E-04	2.345E-04	1.557E-04	7.173E-05	1.237E-11	3.845E-12

0Maximum TDOSE(t): 5.862E-03 mrem/yr at t = 34.10 ± 0.07 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.410E+01 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-241	2.809E-04	0.0479	4.081E-05	0.0070	0.000E+00	0.0000	4.740E-03	0.8085	9.933E-05	0.0169	1.152E-05	0.0020	6.900E-04	0.1177
Total	2.809E-04	0.0479	4.081E-05	0.0070	0.000E+00	0.0000	4.740E-03	0.8085	9.933E-05	0.0169	1.152E-05	0.0020	6.900E-04	0.1177

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.410E+01 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.862E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.862E-03	1.0000

0*Sum of all water independent and dependent pathways.

	Depth of Roots	Depht of Soil Mixing Layer	External Gamma Shielding Factor	Plant Transfer Factor for Am
Mean	0.6499669	0.249978731	0.311688396	0.001507213
Standard Error	0.0067403	0.004247832	0.005873594	5.42441E-05
Median	0.650424	0.2328915	0.2699155	0.000997779
Mode	#N/A	0.390133	0.246525	0.00052656
Standard Deviation	0.2022089	0.127434961	0.17620783	0.001627322
Sample Variance	0.0408884	0.016239669	0.031049199	2.64818E-06
Kurtosis	-1.20006	-0.605787603	1.340214143	14.76014952
Skewness	-9.99E-05	0.419931123	1.190883367	3.185618162
Range	0.698945	0.56945966	0.9405984	0.014255048
Minimum	0.300751	0.00658234	0.0496876	5.54525E-05
Maximum	0.999696	0.576042	0.990286	0.0143105
Sum	584.97025	224.9808583	280.519556	1.356491438
Count	900	900	900	900
75%	0.826163	0.340362	0.398555	0.0018514
25%	0.475012	0.150013	0.182284	0.000538494

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Am-241	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	2.320E-01	2.311E-01	2.293E-01	2.228E-01	2.012E-01	1.230E-01	5.520E-02	8.799E-09	2.314E-09
M(t):	9.282E-03	9.245E-03	9.170E-03	8.914E-03	8.048E-03	4.920E-03	2.208E-03	3.520E-10	9.258E-11

0Maximum TDOSE(t): 2.320E-01 mrem/yr at t = 0.000E+00 years

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone 1	Contaminated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation	Kd of H-3 in Contaminated Zone	Kd of H-3 in Unsaturated Zone 1	Kd of H-3 in Saturated Zone
Mean	462 5551824	1.250028144	1776 825359	0 58499863	0 021499883	30 199142	1.007483728	0 249988448	0 249995232	0 25000169
Standard Error	8 60764065	0 004814399	97.54111472	0 001636876	0 00016369	0 38505503	0 006152986	0 00481435	0 004814503	0 00481368
Median	- 463.2965	1.249865	325 201	0 5851685	0 02148935	30 18795	1 007885	0 250076	0 2500775	0.249859
Mode	#N/A	1.46172	#N/A	0 652743	0 0220943	33 8905	1 06781	#N/A	#N/A	0 338982
Standard Deviation	258 2292195	0 144431978	2926 233442	0 049106286	0 004910709	11 551651	0 184589571	0 144430487	0.144435085	0.14441044
Sample Variance	66682 32981	0 020860596	8562842.154	0 002411427	2 41151E-05	133 440641	0 03407331	0 020860166	0 020861494	0 02085437
Kurtosis	-1 199962061	-1.199859597	3 544515913	-1.200335918	-1.200401045	-1.200391	-1.200013324	-1.199667227	-1.199391216	-1.1996505
Skewness	0 000168595	-0 000235192	2 067710609	-0 000279067	0 00022789	-0 0003736	-0 00091345	0 000339083	-0 000324204	3 2336E-05
Range	891.7857	0 49938	12961.10041	0 169634	0 0169463	39 8884	0 637786	0 49865118	0 499721952	0 49916413
Minimum	16.1493	1.00024	7.99959	0 500106	0 0130032	10 2081	0 688634	0 00073782	2 20483E-05	4 8875E-05
Maximum	907.935	1 49962	12969 1	0 66974	0 0299495	50 0965	1.32642	0 499389	0 499744	0.499213
Sum	416299 6642	1125 02533	1599142 823	526 498767	19 3498946	27179 2278	906 735355	224 9896033	224.9957087	225 00152
Count	900	900	900	900	900	900	900	900	900	900
Largest(1)	907.935	1.49962	12969.1	0 66974	0 0299495	50 0965	1 32642	0 499389	0 499744	0 499213
Smallest(1)	16.1493	1.00024	7.99959	0 500106	0 0130032	10 2081	0.688634	0 00073782	2 20483E-05	4 8875E-05
75%	686 072	1.37578	2070.3	0 627667	0 0257757	40 2158	1.16727	0 375177	0 376059	0 375077
25%	239.09	1.12538	50 8494	0 542576	0 0172524	20 2459	0 848868	0 125418	0 125915	0 125333

	Saturated Zone Hydraulic Conductivity	Precipitation	Kd of C-14 in contaminated Zone	Kd of C-14 in Unsaturated Zone 1	Kd of C-14 in Saturated Zone
Mean	462.5521126	1.00750291	2.500454134	2.500056321	2.50007587
Standard Error	8.608111111	0.006151777	0.048133255	0.048140062	0.048143279
Median	463.2965	1.00786	2.50249	2.501445	2.50084
Mode	#N/A	#N/A	#N/A	4.49243	2.67481
Standard Deviation	258.2433333	0.184553316	1.443997636	1.444201851	1.444298365
Sample Variance	66689.61922	0.034059927	2.085129172	2.085718987	2.085997768
Kurtosis	-1.200124418	-1.2000071	-1.199835858	-1.200150121	-1.200661883
Skewness	0.000381325	0.000132538	0.000230347	0.000134696	5.61575E-05
Range	891.6719	0.637702	4.98874533	4.98603536	4.98703167
Minimum	16.2631	0.688308	0.00165467	0.00483464	0.00617833
Maximum	907.935	1.32601	4.9904	4.99087	4.99321
Sum	416296.9013	906.752619	2250.408721	2250.050689	2250.068283
Count	900	900	900	900	900
Largest(1)	907.935	1.32601	4.9904	4.99087	4.99321
Smallest(1)	16.2631	0.688308	0.00165467	0.00483464	0.00617833
75%	686.072	1.16825	3.7519	3.7549	3.75755
25%	239.09	0.848237	1.26514	1.25225	1.25245

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	C-14	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	6.528E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	1.632E-18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.087E-03 mrem/yr at t = 7.95 ± 0.02 years

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Contaminated Zone erosion rate	Evapotranspiration Coefficient	Precipitation
Mean	462.5521126	1.250002222	0.000268867	0.585001923	1.007509689
Standard Error	8.608111111	0.00481359	4.77306E-06	0.001636762	0.006152711
Median	463.2965	1.25028	0.000232599	0.5850495	1.007605
Mode	#N/A	1.0528	0.000145498	0.652743	1.02984
Standard Deviation	258.2433333	0.144407692	0.000143192	0.049102864	0.184581334
Sample Variance	66689.61922	0.020853582	2.05039E-08	0.002411091	0.034070269
Kurtosis	-1.200124418	-1.2000078	-0.744076128	-1.200149724	-1.200661455
Skewness	0.000381325	0.00013691	0.643645529	0.000134412	5.64198E-05
Range	891.6719	0.49898	0.000507763	0.169526	0.63734
Minimum	16.2631	1.00024	9.00566E-05	0.500164	0.68879
Maximum	907.935	1.49922	0.00059782	0.66969	1.32613
Sum	416296.9013	1125.002	0.241980407	526.501731	906.75872
Count	900	900	900	900	900
75%	686.072	1.37578	0.000373669	0.627667	1.16822
25%	239.09	1.12538	0.00014545	0.542576	0.848063

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Ni-63 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	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
M(t):	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

0Maximum TDOSE(t): 5.312E-22 mrem/yr at t = 4879 ± * years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.879E+03 years
Water Independent Pathways (Inhalation excludes radon)

0

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.879E+03 years
Water Dependent Pathways

0

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ni-63	5.312E-22	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.312E-22	1.0000
Total	5.312E-22	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.312E-22	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Evapotranspiratio n Coefficient	Runoff Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation
Mean	0.499501111	450.5	1.2499738	450.4922222	0.499493333	450.5	0.585009323
Standard Error	0.009638499	8.665063954	0.004813962	8.665041842	0.009638521	8.665063954	0.001636641
Median	0.4995	450.5	1.25011	450	0.4995	450.5	0.5850255
Mode	#N/A	#N/A	1.34034	287	0.68	#N/A	0.534356
Standard Deviation	0.289154967	259.9519186	0.144418874	259.9512553	0.289155633	259.9519186	0.049099222
Sample Variance	0.083610595	67575	0.020856811	67574.65511	0.08361098	67575	0.002410734
Kurtosis	-1.20008036	-1.2	-1.19941896	-1.199983984	-1.200094766	-1.2	-1.19957509
Skewness	2.30305E-05	5.4459E-18	4.78015E-05	6.68969E-05	8.31864E-05	7.42622E-18	0.000215841
Range	1	899	0.4987	899	1	899	0.169739
Minimum	0	1	1.00024	1	0	1	0.500166
Maximum	1	900	1.49894	900	1	900	0.669905
Sum	449.551	405450	1124.97642	405443	449.544	405450	526.508391
Count	900	900	900	900	900	900	900
75%	686.068	1.37578	0.627528	0.375024	0.0257728	40.2238	1.16727
25%	239.09	1.12548	0.542866	0.325045	0.0172583	20.2459	0.848089

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Sr-90 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.808E-08	7.945E-18	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.702E-08	1.986E-18	0.000E+00	0.000E+00

0Maximum TDOSE(t): 9.450E-02 mrem/yr at t = 54.3 ± 0.1 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 5.433E+01 years
Water Independent Pathways (Inhalation excludes radon)

0

0 Radio-Nuclide Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 5.433E+01 years
Water Dependent Pathways

0

0 Radio-Nuclide Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Sr-90	9.450E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.450E-02	1.0000
Total	9.450E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.450E-02	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Contaminated Zone Erosion Rate	Well Pump Intake Depth	Precipitation	Plant Transfer Factor for Gd
Mean	462.5521126	0.000268826	30.203633	1.007507141	0.003625961
Standard Error	8.608111111	4.77235E-06	0.385066042	0.0061523	0.00016698
Median	463.2965	0.000232628	30.2199	1.007685	0.00201017
Mode	#N/A	0.000134304	#N/A	1.26213	0.00221257
Standard Deviation	258.2433333	0.00014317	11.55198127	0.184568988	0.00500941
Sample Variance	66689.61922	2.04978E-08	133.4482714	0.034065711	2.50942E-05
Kurtosis	-1.200124418	-0.746029457	-1.19983498	-1.200149408	24.98574926
Skewness	0.000381325	0.643147661	0.000230231	0.000136172	4.128974922
Range	891.6719	0.000508152	39.91	0.637212	0.054068145
Minimum	16.2631	9.00823E-05	10.2132	0.688618	7.22548E-05
Maximum	907.935	0.000598234	50.1232	1.32583	0.0541404
Sum	416296.9013	0.241943826	27183.2697	906.756427	3.263364788
Count	900	900	900	900	900
75%	686.072	0.000374514	40.2152	1.16788	0.00423756
25%	239.09	0.000144827	20.3211	0.848037	0.000959297

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Eu-152	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	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
M(t):	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

0Maximum TDOSE(t): 1.691E-16 mrem/yr at t = 3587 ± 7 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.587E+03 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.587E+03 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Eu-152	1.691E-16	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.691E-16	1.0000
Total	1.691E-16	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.691E-16	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Saturated Zone Hydraulic Gradient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Well Pump Intake Depth	Precipitation
Mean	462 5551824	1.250028144	0 585022528	0 349999192	0 021499883	1 599986411	0 409993393	0 454995153	30 1996178	1 007502112
Standard Error	8 60764065	0 004814399	0 001636771	0 000962869	0 00016369	0 006160876	0 002503563	0 002022027	0 38516027	0 006151884
Median	463 2965	1 249865	0 5850845	0 350099	0 02148935	1 59981	0 4101575	0 4550315	30 2062	1.00732
Mode	#N/A	1 46172	#N/A	0 355635	0 0220943	1 65905	#N/A	0 382189	#N/A	1.12122
Standard Deviation	258 2292195	0 144431978	0 049103125	0 028886055	0 004910709	0 184826292	0 075106895	0 060660822	11 5548081	0 184556514
Sample Variance	66682.32981	0 020860596	0 002411117	0 000834404	2 41151E-05	0 034160758	0 005641046	0 003679735	133 51359	0 034061107
Kurtosis	-1.199962061	-1 199859597	-1.199911991	-1.200334777	-1 200401045	-1 200390767	-1 200012871	-1 199668332	-1 199391	-1 199649603
Skewness	0 000168595	-0 000235192	9 756E-05	-0 000278642	0 00022789	-0 000374962	-0 000912979	0 000338694	-0 0003234	3 24491E-05
Range	891.7857	0 49938	0 169618	0 099785	0 0169463	0 63821	0 259508	0 209433	39 9777	0 637928
Minimum	16 1493	1 00024	0 500056	0 300062	0 0130032	1 28013	0 280258	0 35031	10 2018	0 688062
Maximum	907.935	1.49962	0 669674	0 399847	0 0299495	1 91834	0 539766	0 559743	50 1795	1 32599
Sum	416299 6642	1125 02533	526 520275	314 999273	19 3498946	1439 98777	368 994054	409 495638	27179 656	906 751901
Count	900	900	900	900	900	900	900	900	900	900
75%	686 072	1 37578	0 627564	0 375098	0 0257757	1.76025	0 475007	0.507574	40 2847	1.16735
25%	239 09	1.12538	0 542501	0 325045	0 0172524	1.44073	0 345455	0 402676	20 2732	0 848176

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Pu-238	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.716E-05	4.229E-06	1.852E-06	2.920E-09
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.289E-06	1.057E-06	4.631E-07	7.300E-10

0Maximum TDOSE(t): 6.959E-03 mrem/yr at t = 471.1 ± 0.9 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.711E+02 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.711E+02 years
0 Water Dependent Pathways
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-238	6.959E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.959E-03	1.0000
Total	6.959E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.959E-03	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 1.67 seconds

	Saturated Zone Hydraulic Conductivity	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation
Mean	462.5443884	0.000268835	0.58500943	0.021499345	30.19947467	1.007493339
Standard Error	8.607082884	4.77265E-06	0.001636874	0.000163689	0.385146729	0.006151524
Median	462.5815	0.000232408	0.585209	0.02150035	30.2031	1.007715
Mode	#N/A	0.000104856	#N/A	0.019049	23.135	1.20429
Standard Deviation	258.2124865	0.00014318	0.049106209	0.004910669	11.55440187	0.184545716
Sample Variance	66673.68819	2.05004E-08	0.00241142	2.41147E-05	133.5042027	0.034057121
Kurtosis	-1.199773828	-0.744707998	-1.199914998	-1.199465755	-1.200587029	-1.199877082
Skewness	3.8233E-05	0.643362901	-0.000518995	-0.000162327	0.000183068	-1.03853E-05
Range	892.8885	0.000508858	0.16976	0.0169833	39.934	0.637617
Minimum	15.7695	9.00823E-05	0.500166	0.0130164	10.2494	0.688933
Maximum	908.658	0.00059894	0.669926	0.0299997	50.1834	1.32655
Sum	416289.9496	0.241951061	526.508487	19.3494105	27179.5272	906.744005
Count	900	900	900	900	900	900
75%	686.846	0.000373743	0.627564	0.0257663	40.2028	1.16749
25%	239.09	0.000144837	0.542537	0.0172576	20.2196	0.847791

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Pu-239	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.455E-08	1.547E-08	2.016E-01	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.639E-09	3.867E-09	5.039E-02	0.000E+00

0Maximum TDOSE(t): 5.391E-01 mrem/yr at t = 894 ± 2 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 8.940E+02 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 8.940E+02 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	5.391E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.391E-01	1.0000
Total	5.391E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.391E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Contamianted Zone Erosion Rate	Evapotranspiration Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation	Plant Transfer Factor for Np
Mean	462.5009132	1.2500124	0.000268852	0.585000048	0.021500324	30.20099867	1.007525454	0.030353059
Standard Error	8.608129991	0.004813444	4.77352E-06	0.001636649	0 000163686	0 385111719	0.006151901	0.001110218
Median	463.1015	1.250245	0.000232192	0.5850015	0.02148865	30.2148	1.007745	0.0200573
Mode	#N/A	1.0432	0.000206587	#N/A	#N/A	12.9547	1.06267	#N/A
Standard Deviation	258.2438997	0.144403315	0.000143206	0.049099474	0.004910567	11.55335156	0.184557024	0.033306554
Sample Variance	66689.91174	0.020852317	2.05079E-08	0.002410758	2.41137E-05	133.4799324	0.034061295	0.001109327
Kurtosis	-1.200185297	-1.19985556	-0.744096153	-1.199960161	-1.200302418	-1.200687375	-1.200505914	18.3783643
Skewness	0.000105668	-0 000594614	0.643576391	0 000249692	0.000875268	0.00025997	-7.34731E-05	3.45567101
Range	891.5912	0.4987	0 000508399	0.169729	0.0169774	39.9265	0.638066	0.32047254
Minimum	16.5488	1.00024	9.01667E-05	0.500164	0.013021	10.2301	0.688634	0.00136446
Maximum	908.14	1.49894	0 000598566	0.669893	0.0299984	50.1566	1.3267	0.321837
Sum	416250.8219	1125.01116	0.241966728	526.500043	19.3502913	27180.8988	906.772909	27.31775275
Count	900	900	900	900	900	900	900	900
75%	687.53	1.37516	0.000373669	0.627509	0.0257674	40.206	1.16727	0.037319
25%	239.09	1.12502	0.000144915	0.542576	0.0172583	20.2337	0.848225	0.0108135

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Pu-241	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.972E-11	1.001E-10	2.340E-10	6.416E-14
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.430E-12	2.503E-11	5.850E-11	1.604E-14

0Maximum TDOSE(t): 2.639E-06 mrem/yr at t = 3949 ± 8 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.949E+03 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.949E+03 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-241	2.639E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.639E-06	1.0000
Total	2.639E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.639E-06	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation	Plant Transfer Factor for Np
Mean	462.5009132	1.2500124	0.000268852	0.585000048	0.021500324	30.2009987	1.007525454	0.030353059
Standard Error	8.608129991	0.004813444	4.77352E-06	0.001636649	0.000163686	0.38511172	0.006151901	0 001110218
Median	463.1015	1.250245	0.000232192	0.5850015	0.02148865	30.2148	1.007745	0.0200573
Mode	#N/A	1.0432	0.000206587	#N/A	#N/A	12.9547	1.06267	#N/A
Standard Deviation	258.2438997	0.144403315	0 000143206	0 049099474	0.004910567	11.5533516	0.184557024	0.033306554
Sample Variance	66689.91174	0.020852317	2.05079E-08	0.002410758	2.41137E-05	133.479932	0.034061295	0.001109327
Kurtosis	-1.200185297	-1.19985556	-0.744096153	-1.199960161	-1.200302418	-1.20068738	-1.200505914	18.3783643
Skewness	0.000105668	-0.000594614	0 643576391	0.000249692	0.000875268	0.00025997	-7.34731E-05	3.45567101
Range	891.5912	0.4987	0 000508399	0 169729	0 0169774	39.9265	0.638066	0.32047254
Minimum	16.5488	1.00024	9.01667E-05	0.500164	0.013021	10.2301	0.688634	0.00136446
Maximum	908.14	1.49894	0.000598566	0.669893	0.0299984	50.1566	1.3267	0.321837
Sum	416250.8219	1125 01116	0.241966728	526.500043	19 3502913	27180.8988	906.772909	27.31775275
Count	900	900	900	900	900	900	900	900
75%	687.53	1.37516	0.000373669	0.627509	0.0257674	40.206	1.16727	0.037319
25%	239.09	1.12502	0 000144915	0.542576	0.0172583	20.2337	0.848225	0.0108135

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Am-241	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.265E-09	3.402E-09	4.016E-05	9.965E-13
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.161E-10	8.504E-10	1.004E-05	2.491E-13

0Maximum TDOSE(t): 4.100E-05 mrem/yr at t = 1040 ± 2 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.040E+03 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.040E+03 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Am-241	4.100E-05	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.100E-05	1.0000
Total	4.100E-05	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.100E-05	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contaminated Zone	Contaminated Zone B Parameter	Contaminated Zone Hydraulic Conductivity	Runoff Coefficient	Precipitation	Kd of H-3 in Contaminated Zone
Mean	1.599988856	5.585036656	2277.140165	0.349996129	1.00749158	0.249994733
Standard Error	0.006162084	0.029557835	162.5834621	0.000962876	0.00615272	0.004813397
Median	1.600015	5.585205	97.22505	0.350002	1.007545	0.250171
Mode	1.62469	#N/A	#N/A	0.381216	0.894636	#N/A
Standard Deviation	0.184862511	0.886735047	4877.503862	0.028886285	0.184581596	0.144401922
Sample Variance	0.034174148	0.786299043	23790043.92	0.000834417	0.034070365	0.020851915
Kurtosis	-1.19977361	-1.199467197	7.184586365	-1.19946353	-1.200587087	-1.199877898
Skewness	3.59934E-05	-0.000216834	2.74102626	-0.00016192	0.000184958	-1.12037E-05
Range	0.63925	3.06566	25276.43404	0.099901	0.63794	0.498920271
Minimum	1.28013	4.05148	0.36596	0.300097	0.68879	0.000729729
Maximum	1.91938	7.11714	25276.8	0.399998	1.32673	0.49965
Sum	1439.98997	5026.53299	2049426.149	314.996516	906.742422	224.9952596
Count	900	900	900	900	900	900
Largest(1)	1.91938	7.11714	25276.8	0.399998	1.32673	0.49965
Smallest(1)	1.28013	4.05148	0.36596	0.300097	0.68879	0.000729729
75%	1.76057	6.35399	1567.26	0.375096	1.16729	0.37519
25%	1.44001	4.81996	5.90608	0.325045	0.848063	0.125032

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 1.00 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

H-3 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	2.536E-02	5.428E-03	2.442E-05	9.004E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	6.339E-03	1.357E-03	6.105E-06	2.251E-14	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 5.027E-02 mrem/yr at t = 0.1213 ± 0.0002 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.213E-01 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.213E-01 years
Water Dependent Pathways

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
H-3	5.027E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.027E-02	1.0000
Total	5.027E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.027E-02	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 1.45 seconds

	Thickness of Evasion Layer of C-14 in Soil	Contaminated Zone Hydraulic Conductivity	Kd of C-14 in contaminated Zone
Mean	0.366642664	2278.823014	2.500289956
Standard Error	0.00283506	162.7674136	0.048142715
Median	0.355092	95.2229	2.506395
Mode	#N/A	#N/A	#N/A
Standard Deviation	0.085051815	4883.022407	1.444281457
Sample Variance	0.007233811	23843907.82	2.085948928
Kurtosis	-0.598701793	7.164907647	-1.199988632
Skewness	0.42028563	2.739583737	-0.000210463
Range	0.384598	25136.83605	4.99294534
Minimum	0.201525	0.36395	0.00487466
Maximum	0.586123	25137.2	4.99782
Sum	329.978398	2050940.713	2250.260961
Count	900	900	900
Largest(1)	0.586123	25137.2	4.99782
Smallest(1)	0.201525	0.36395	0.00487466
75%	0.427106	1574.65	3.75097
25%	0.300003	5.96396	1.25629

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	C-14	1.000E+00
Thickness:	1.00 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	1.176E-03	1.482E-09	2.882E-30	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	2.940E-04	3.705E-10	7.205E-31	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 5.044E-01 mrem/yr at t = 0.1009 ± 0.0002 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.009E-01 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.009E-01 years
Water Dependent Pathways

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
C-14	5.044E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.044E-01	1.0000
Total	5.044E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.044E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Contaminated Zone Erosion Rate	Contaminated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.000268808	2273.909692	0.585005496	0.350000028	1.600012244	0 410006522	0 455008379	1.007501901
Standard Error	4.77306E-06	162.1524557	0.001636863	0 000962736	0.006162287	0.002503226	0.002021753	0.006151779
Median	0.000232647	96.42905	0 5849275	0.350001	1.59957	0.4100965	0.4550805	1.00773
Mode	#N/A	#N/A	0 565466	0.378622	1.60064	0.422049	#N/A	1.31383
Standard Deviation	0.000143192	4864.573672	0.049105883	0 028882065	0.184868623	0.075096787	0.060652604	0.184553372
Sample Variance	2.05039E-08	23664077.01	0.002411388	0 000834174	0 034176408	0.005639527	0.003678738	0 034059947
Kurtosis	-0.744097135	7.084605376	-1.20010564	-1.199960807	-1.200302968	-1.200686978	-1.200503565	-1.200385121
Skewness	0.643558793	2.728505515	0.000137047	0.00025033	0.000873747	0 000259907	-7.15461E-05	4.61703E-05
Range	0.000508049	24804.43605	0.169619	0.09984	0.63915	0.259522	0.209693	0.637146
Minimum	9.01833E-05	0.36395	0.500166	0.300097	1.28079	0 280196	0.350208	0.689074
Maximum	0.000598232	24804.8	0.669785	0.399937	1.91994	0.539718	0.559901	1.32622
Sum	0.241927129	2046518.723	526.504946	315.000025	1440.01102	369 00587	409.507541	906.751711
Count	900	900	900	900	900	900	900	900
75%	3.75E-04	1.57E+03	6.28E-01	3.75E-01	1.76E+00	4.75E-01	5.08E-01	1.17E+00
25%	1.45E-04	5.89E+00	5.43E-01	3.25E-01	1.44E+00	3.45E-01	4.03E-01	8.48E-01

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Co-60	1.000E+00
Thickness:	1.00 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	5.635E-02	4.321E-02	1.706E-02	6.166E-04	1.437E-10	3.208E-19	0.000E+00	0.000E+00
M(t):	0.000E+00	1.409E-02	1.080E-02	4.264E-03	1.542E-04	3.594E-11	8.019E-20	0.000E+00	0.000E+00

0Maximum TDOSE(t): 5.942E-02 mrem/yr at t = 0.652 ± 0.001 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 6.518E-01 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 6.518E-01 years
0 Water Dependent Pathways
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Co-60	5.942E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.942E-02	1.0000
Total	5.942E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.942E-02	1.0000

0*Sum of all water independent and dependent pathways.

	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.000268837	0.584991104	0.350005479	1.599991267	0.409989919	0.455002578	1.007488272
Standard Error	4.77281E-06	0.001636747	0 00096273	0.006161712	0.002503686	0.002021635	0.006153245
Median	0.000232533	0.585038	0.350015	1.60075	0.409732	0.4548075	1.007535
Mode	0.00029171	0.573988	0.349318	1.86433	#N/A	0.544867	1.30224
Standard Deviation	0.000143184	0.049102425	0 028881898	0.184851368	0.075110588	0.060649047	0.184597359
Sample Variance	2.05018E-08	0.002411048	0.000834164	0.034170028	0.0056416	0.003678307	0.034076185
Kurtosis	-0.746746422	-1.199417592	-1.199576162	-1.199980454	-1.200826746	-1.200016993	-1.199911705
Skewness	0 642587388	4.72965E-05	0 000215723	-0.000536939	0.000534848	-6.72923E-05	8.59276E-06
Range	0.000507779	0.169557	0.099847	0.63936	0.259519	0.209435	0 637726
Minimum	0.000090411	0.500082	0.300097	1.28022	0.280228	0.350306	0.688634
Maximum	0.00059819	0.669639	0.399944	1.91958	0.539747	0.559741	1.32636
Sum	0.241952968	526.491994	315.004931	1439.99214	368.990927	409.50232	906.739445
Count	900	900	900	900	900	900	900
75%	3.73E-04	6.28E-01	3.75E-01	1.76E+00	4.75E-01	5.08E-01	1.17E+00
25%	1.45E-04	5.43E-01	3.25E-01	1.44E+00	3.45E-01	4.03E-01	8.48E-01

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 1.00 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Ni-63 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	1.972E-04	1.633E-04	6.867E-05	2.217E-05	1.126E-07	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	4.929E-05	4.083E-05	1.717E-05	5.544E-06	2.816E-08	0.000E+00

0Maximum TDOSE(t): 2.078E-04 mrem/yr at t = 3.792 ± 0.008 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.792E+00 years
Water Independent Pathways (Inhalation excludes radon)

0

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.792E+00 years
Water Dependent Pathways

0

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Ni-63	2.078E-04	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.078E-04	1.0000
Total	2.078E-04	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.078E-04	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contaminated Zone	Contaminated Zone b Parameter	Contaminated Zone Hydraulic Conductivity	Contaminated Zone Total Porosity	Evapotranspiration Coefficient	Runoff Coefficient	Precipitation
Mean	1.599998989	5.584839233	2279.165753	0.454997122	0.584993402	0.350001247	1.007488272
Standard Error	0.006162766	0.029557717	162.8127778	0.002021813	0.001637026	0 000962683	0.006153245
Median	1.60022	5.585685	96.05685	0.455246	0.5848245	0 3499085	1.007535
Mode	1.60771	5.38614	#N/A	0.420488	#N/A	0.392794	1.30224
Standard Deviation	0.184882993	0.886731513	4884.383334	0.060654387	0.04911078	0.028880485	0.184597359
Sample Variance	0.034181721	0.786292776	23857200.55	0.003678955	0.002411869	0 000834082	0.034076185
Kurtosis	-1.200468675	-1.199418707	7.163082773	-1.199982036	-1.200825834	-1.200018055	-1.199911705
Skewness	-0.000346662	4.63389E-05	2.739416477	-0.000538719	0.00053554	-6.73476E-05	8.59276E-06
Range	0.63744	3.062	25242.13404	0.209789	0.169686	0.09973	0.637726
Minimum	1.28154	4.05148	0.36596	0.350074	0.500149	0.300146	0.688634
Maximum	1.91898	7.11348	25242.5	0.559863	0.669835	0.399876	1.32636
Sum	1439.99909	5026.35531	2051249.178	409.49741	526.494062	315.001122	906.739445
Count	900	900	900	900	900	900	900
75%	1.76002	6.35732	1563.53	0.50755	0.627728	0.37506	1.16727
25%	1.44001	4.82043	6.03474	0.402594	0.542583	0.325115	0.848089

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Sr-90	1.000E+00
Thickness:	1.00 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	6.353E+00	5.887E+00	4.511E+00	1.743E+00	2.190E-02	7.250E-05	1.834E-16	0.000E+00
M(t):	0.000E+00	1.588E+00	1.472E+00	1.128E+00	4.356E-01	5.476E-03	1.813E-05	4.586E-17	0.000E+00

0Maximum TDOSE(t): 6.545E+00 mrem/yr at t = 0.2164 ± 0.0004 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.164E-01 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.164E-01 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Sr-90	6.545E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.545E+00	1.0000
Total	6.545E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.545E+00	1.0000

0*Sum of all water independent and dependent pathways.

	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.000268837	0.584991104	0.350005479	1.599991267	0.409989919	0.455002578	1.007488272
Standard Error	4.77281E-06	0.001636747	0.00096273	0.006161712	0.002503686	0.002021635	0.006153245
Median	0.000232533	0.585038	0.350015	1.60075	0.409732	0.4548075	1.007535
Mode	0.00029171	0.573988	0.349318	1.86433	#N/A	0.544867	1.30224
Standard Deviation	0.000143184	0.049102425	0.028881898	0.184851368	0.075110588	0.060649047	0.184597359
Sample Variance	2.05018E-08	0.002411048	0.000834164	0.034170028	0.0056416	0.003678307	0.034076185
Kurtosis	-0.746746422	-1.199417592	-1.199576162	-1.199980454	-1.200826746	-1.200016993	-1.199911705
Skewness	0.642587388	4.72965E-05	0.000215723	-0.000536939	0.000534848	-6.72923E-05	8.59276E-06
Range	0.000507779	0.169557	0.099847	0.63936	0.259519	0.209435	0.637726
Minimum	0.000090411	0.500082	0.300097	1.28022	0.280228	0.350306	0.688634
Maximum	0.00059819	0.669639	0.399944	1.91958	0.539747	0.559741	1.32636
Sum	0.241952968	526.491994	315.004931	1439.99214	368.990927	409.50232	906.739445
Count	900	900	900	900	900	900	900
75%	3.73E-04	6.28E-01	3.75E-01	1.76E+00	4.75E-01	5.08E-01	1.17E+00
25%	1.45E-04	5.43E-01	3.25E-01	1.44E+00	3.45E-01	4.03E-01	8.48E-01

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 1.00 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Cs-137 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	8.897E-03	4.959E-03	3.369E-04	1.009E-05	7.776E-13	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	2.224E-03	1.240E-03	8.422E-05	2.523E-06	1.944E-13	0.000E+00

0Maximum TDOSE(t): 1.006E-02 mrem/yr at t = 4.766 ± 0.010 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.766E+00 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.766E+00 years
Water Dependent Pathways

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Cs-137	1.006E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.006E-02	1.0000
Total	1.006E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.006E-02	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 1.22 seconds

	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.000268837	0.584991104	0.350005479	1.599991267	0.409989919	0.455002578	1.007488272
Standard Error	4.77281E-06	0.001636747	0.00096273	0.006161712	0.002503686	0.002021635	0.006153245
Median	0.000232533	0.585038	0.350015	1.60075	0.409732	0.4548075	1.007535
Mode	0.00029171	0.573988	0.349318	1.86433	#N/A	0.544867	1.30224
Standard Deviation	0.000143184	0.049102425	0.028881898	0.184851368	0.075110588	0.060649047	0.184597359
Sample Variance	2.05018E-08	0.002411048	0.000834164	0.034170028	0.0056416	0.003678307	0.034076185
Kurtosis	-0.746746422	-1.199417592	-1.199576162	-1.199980454	-1.200826746	-1.200016993	-1.199911705
Skewness	0.642587388	4.72965E-05	0.000215723	-0.000536939	0.000534848	-6.72923E-05	8.59276E-06
Range	0.000507779	0.169557	0.099847	0.63936	0.259519	0.209435	0.637726
Minimum	0.000090411	0.500082	0.300097	1.28022	0.280228	0.350306	0.688634
Maximum	0.00059819	0.669639	0.399944	1.91958	0.539747	0.559741	1.32636
Sum	0.241952968	526.491994	315.004931	1439.99214	368.990927	409.50232	906.739445
Count	900	900	900	900	900	900	900
75%	3.73E-04	6.28E-01	3.75E-01	1.76E+00	4.75E-01	5.08E-01	1.17E+00
25%	1.45E-04	5.43E-01	3.25E-01	1.44E+00	3.45E-01	4.03E-01	8.48E-01

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Eu-152	1.000E+00
Thickness:	1.00 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	2.651E-03	1.837E-03	4.953E-04	1.192E-06	4.579E-10	1.957E-15	0.000E+00
M(t):	0.000E+00	0.000E+00	6.628E-04	4.592E-04	1.238E-04	2.980E-07	1.145E-10	4.892E-16	0.000E+00

0Maximum TDOSE(t): 2.772E-03 mrem/yr at t = 2.282 ± 0.005 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.282E+00 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.282E+00 years
0 Water Dependent Pathways
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Eu-152	2.772E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.772E-03	1.0000
Total	2.772E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.772E-03	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contaminated Zone	Contaminated Zone B Parameter	Contaminated Zone Erosion Rate	Contaminated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Runoff Coefficient	Precipitation
Mean	1.599998989	5.584839233	0 000268854	2274.417426	0.584993402	0.350001247	1.007488272
Standard Error	0.006162766	0.029557717	4.77325E-06	162.3194427	0.001637026	0.000962683	0.006153245
Median	1.60022	5.585685	0.000232446	97.16735	0.5848245	0.3499085	1.007535
Mode	1.60771	5.38614	0.000132053	#N/A	#N/A	0.392794	1.30224
Standard Deviation	0.184882993	0.886731513	0.000143198	4869.583281	0.04911078	0.028880485	0.184597359
Sample Variance	0.034181721	0.786292776	2.05055E-08	23712841.33	0.002411869	0.000834082	0.034076185
Kurtosis	-1.200468675	-1.199418707	-0.742935775	7.154808843	-1.200825834	-1.200018055	-1.199911705
Skewness	-0.000346662	4.63389E-05	0.644011983	2.736251306	0.00053554	-6.73476E-05	8.59276E-06
Range	0.63744	3.062	0.000509199	25215.63658	0.169686	0.09973	0.637726
Minimum	1.28154	4.05148	9.01667E-05	0.36342	0.500149	0.300146	0.688634
Maximum	1.91898	7.11348	0.000599366	25216	0.669835	0.399876	1.32636
Sum	1439.99909	5026.35531	0.241968634	2046975.684	526.494062	315.001122	906.739445
Count	900	900	900	900	900	900	900
75%	1.76002	6.35732	0.000373517	1564.77	0.627728	0.37506	1.16727
25%	1.44001	4.82043	0.000145208	5.92129	0.542583	0.325115	0.848089

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 1.00 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Pu-238 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	9.486E+00	9.317E+00	8.747E+00	6.984E+00	2.478E+00	6.413E-01	1.159E-03	0.000E+00
M(t):	0.000E+00	2.372E+00	2.329E+00	2.187E+00	1.746E+00	6.195E-01	1.603E-01	2.897E-04	0.000E+00

0Maximum TDOSE(t): 9.486E+00 mrem/yr at t = 0.999 ± 0.002 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.988E-01 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.988E-01 years
Water Dependent Pathways

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-238	9.486E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.486E+00	1.0000
Total	9.486E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.486E+00	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 3.49 seconds

	Density of Contaminated Zone	Contaminated Zone b Parameter	Contaminated Zone Erosion Rate	Contaminated Zone Hydraulic Conductivity	Contaminated Zone Total Porosity	Evapotranspiration Coefficient	Runoff Coefficient	Effective Porosity of Unsaturated Zone	Precipitation
Mean	1.599994367	5.585002411	0 000268857	2276 496896	0 455012184	0 58500639	0 350003462	0 40999103	1 007480358
Standard Error	0 006162667	0 029559245	4.77346E-06	162.4249002	0 002021821	0 001636722	0 000962891	0 002503333	0 006152832
Median	1.599935	5 58379	0 000232267	97.147	0 4549935	0 585066	0 350074	0 409868	1.00774
Mode	1.58491	4 71008	#N/A	6988 62	#N/A	0 548114	0 375003	#N/A	1.03602
Standard Deviation	0 184880004	0 886777355	0 000143204	4872 747006	0 060654632	0 049101652	0 028886716	0 075099979	0 184584959
Sample Variance	0 034180616	0 786374078	2.05073E-08	23743663 38	0 003678984	0 002410972	0 000834442	0 005640007	0 034071607
Kurtosis	-1.200119059	-1.199864756	-0.743648267	7.137040803	-1 200703951	-1 20038223	-1.200129046	-1.199894282	-1.199766018
Skewness	0 000354623	1.0021E-05	0 643870607	2 734708529	0 000365453	-0 00020634	-0 000413371	-0 000421301	-0 000365207
Range	0.6384	3 06576	0 000508388	24887.23407	0 20983	0 16959	0 099808	0 259775	0 638573
Minimum	1.28046	4 05148	9.01349E-05	0 365927	0 350001	0 500158	0.300099	0.280013	0 688027
Maximum	1.91886	7.11724	0 000598523	24887 6	0 559831	0 669748	0 399907	0 539788	1 3266
Sum	1439 99493	5026 50217	0 241971669	2048847 206	409 510966	526 505751	315 003116	368 991927	906 732322
Count	900	900	900	900	900	900	900	900	900
75%	1.76106	6 35567	0.000373669	1577.81	0.507553	0 627601	0 375003	0 475319	1.16879
25%	1 44001	4 82136	0 00014482	5 92129	0 402603	0 542695	0 325061	0 345218	0 848921

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 1.00 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Pu-239 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	2.470E+00	1.056E+01	1.047E+01	1.018E+01	8.926E+00	7.520E+00	3.355E+00	0.000E+00
M(t):	0.000E+00	6.176E-01	2.639E+00	2.618E+00	2.544E+00	2.231E+00	1.880E+00	8.387E-01	0.000E+00

0Maximum TDOSE(t): 1.065E+01 mrem/yr at t = 1.093 ± 0.002 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
Water Dependent Pathways

0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	1.065E+01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.065E+01	1.0000
Total	1.065E+01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.065E+01	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 2.03 seconds

	Contaminated Zone Erosion Rate	Contaminated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.000268808	2273.909692	0.585005496	0.350000028	1.600012244	0.410006522	0.455008379	1.007501901
Standard Error	4.77306E-06	162.1524557	0.001636863	0.000962736	0.006162287	0 002503226	0.002021753	0.006151779
Median	0 000232647	96.42905	0.5849275	0.350001	1.59957	0.4100965	0.4550805	1.00773
Mode	#N/A	#N/A	0.565466	0 378622	1.60064	0.422049	#N/A	1.31383
Standard Deviation	0.000143192	4864.573672	0.049105883	0.028882065	0.184868623	0.075096787	0.060652604	0.184553372
Sample Variance	2.05039E-08	23664077.01	0.002411388	0.000834174	0.034176408	0 005639527	0.003678738	0.034059947
Kurtosis	-0 744097135	7.084605376	-1.20010564	-1.19996081	-1.200302968	-1.200686978	-1.200503565	-1.200385121
Skewness	0.643558793	2.728505515	0.000137047	0.00025033	0.000873747	0.000259907	-7.15461E-05	4.61703E-05
Range	0.000508049	24804.43605	0.169619	0.09984	0.63915	0.259522	0.209693	0.637146
Minimum	9.01833E-05	0.36395	0.500166	0.300097	1.28079	0.280196	0.350208	0.689074
Maximum	0.000598232	24804.8	0.669785	0.399937	1.91994	0.539718	0 559901	1.32622
Sum	0.241927129	2046518.723	526.504946	315.000025	1440.01102	369.00587	409.507541	906.751711
Count	900	900	900	900	900	900	900	900
75%	3.75E-04	1.57E+03	6.28E-01	3.75E-01	1.76E+00	4.75E-01	5.08E-01	1.17E+00
25%	1.45E-04	5.89E+00	5.43E-01	3.25E-01	1.44E+00	3.45E-01	4.03E-01	8.48E-01

Contaminated Zone Dimensions	
Area:	2000.00 square meters
Thickness:	1.00 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g	
Pu-241	1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	1.974E-01	1.847E-01	1.464E-01	7.981E-02	4.301E-02	3.164E-02	7.568E-03	0.000E+00
M(t):	0.000E+00	4.934E-02	4.619E-02	3.661E-02	1.995E-02	1.075E-02	7.910E-03	1.892E-03	0.000E+00

0Maximum TDOSE(t): 2.018E-01 mrem/yr at t = 0.4656 ± 0.0009 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.656E-01 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.656E-01 years
0 Water Dependent Pathways
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-241	2.018E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.018E-01	1.0000
Total	2.018E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.018E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Runoff Coefficient	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.000268823	0.585002026	0.350005549	0.409989978	0.454997262	1.007493339
Standard Error	4.77282E-06	0.001636754	0.000962867	0.002503478	0.00202202	0.006151524
Median	0.00023239	0.585011	0.350123	0.4100055	0.455016	1.007715
Mode	#N/A	0.624546	0.387499	#N/A	0.402603	1.20429
Standard Deviation	0.000143185	0.049102612	0.028886	0.075104344	0.060660615	0.184545716
Sample Variance	2.05018E-08	0.002411067	0.000834401	0.005640662	0.00367971	0.034057121
Kurtosis	-0.744580078	-1.199466682	-1.19991697	-1.199464141	-1.200587674	-1.199877082
Skewness	0.643528202	-0.000216204	-0.000521509	-0.000162075	0.000183047	-1.03853E-05
Range	0.000508856	0.16976	0.099859	0.259744	0.209654	0.637617
Minimum	9.00343E-05	0.500082	0.300097	0.280251	0.350259	0.688933
Maximum	0.00059889	0.669842	0.399956	0.539995	0.559913	1.32655
Sum	0.241940998	526.501823	315.004994	368.99098	409.497536	906.744005
Count	900	900	900	900	900	900
75%	3.74E-04	6.28E-01	3.75E-01	4.75E-01	5.08E-01	1.17E+00
25%	1.45E-04	5.43E-01	3.25E-01	3.45E-01	4.03E-01	8.48E-01

Contaminated Zone Dimensions

Area: 2000.00 square meters
Thickness: 1.00 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g

Am-241 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	9.554E-12	4.175E-06	1.712E+00	1.632E+00	1.309E+00	9.812E-01	2.540E-01	0.000E+00
M(t):	0.000E+00	2.389E-12	1.044E-06	4.280E-01	4.080E-01	3.272E-01	2.453E-01	6.350E-02	0.000E+00

0Maximum TDOSE(t): 1.730E+00 mrem/yr at t = 7.07 ± 0.01 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.070E+00 years
Water Independent Pathways (Inhalation excludes radon)

0
0

Radio-Nuclide Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.070E+00 years
Water Dependent Pathways

0
0

Radio-Nuclide Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Am-241	1.730E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.730E+00	1.0000
Total	1.730E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.730E+00	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contamianted Zone	Contaminated Zone b Parameter	Contamianted Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Runoff Coefficient	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation	Plant Transfer Factor for Np
Mean	1.599994367	5 585002411	219 9011614	0 585010094	0 350005806	0 410009789	0 455007262	1 007477948	0 030388272
Standard Error	0 006162667	0 029559245	7 707980835	0 00163666	0 000962772	0 002503221	0 00202207	0 006152422	0 001124475
Median	1 599935	5 58379	118 955	0 585196	0 3499965	0 4101005	0 455156	1 007175	0 0200578
Mode	1 58491	4 71008	#N/A	0 647449	#N/A	0 353586	0 391116	1 1521	#N/A
Standard Deviation	0 184880004	0 886777355	231 2394251	0 049099809	0 028883145	0 075096645	0 060662103	0 184572654	0 033734236
Sample Variance	0 034180616	0 786374078	53471 6717	0 002410791	0 000834236	0 005639506	0 003679891	0 034067064	0 001137999
Kurtosis	-1 200119059	-1 199864756	0 63825005	-1 200395077	-1 200704725	-1 200383095	-1 200129568	-1 199892558	23 06462523
Skewness	0 000354623	1 0021E-05	1 290141998	-2 29934E-05	0 000367082	-0 000206286	-0 000413796	-0 00042048	3 732161591
Range	0 6384	3 06576	889 0969	0 169526	0 099919	0 259373	0 209596	0 638449	0 383685247
Minimum	1 28046	4 05148	15 6401	0 500164	0 300001	0 280242	0 350208	0 688031	0 000545753
Maximum	1 91886	7 11724	904 737	0 66969	0 39992	0 539615	0 559804	1 32648	0 384231
Sum	1439 99493	5026 50217	197911 0453	526 509085	315 005225	369 00881	409 506536	906 730153	27 34944514
Count	900	900	900	900	900	900	900	900	900
75%	1 76106	6 35567	329 605	0 627667	0 375025	0 475155	0 507506	1 16803	0 0374402
25%	1 44001	4 82136	43 2158	0 542576	0 325049	0 345298	0 402628	0 848285	0 010859

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	10000.00 square meters	Am-241	1.000E+00
Thickness:	2.00 meters		
Cover Depth:	3.20 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	5.540E-12	7.842E-06	1.713E+00	1.643E+00	1.355E+00	1.053E+00	3.260E-01	3.735E-05
M(t):	0.000E+00	1.385E-12	1.960E-06	4.284E-01	4.108E-01	3.387E-01	2.633E-01	8.149E-02	9.338E-06

0Maximum TDOSE(t): 1.731E+00 mrem/yr at t = 7.07 n 0.01 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.070E+00 years

0 Water Independent Pathways (Inhalation excludes radon)

0	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Radio-Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Nuclide														
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.070E+00 years

0 Water Dependent Pathways

0	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Radio-Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Nuclide														
Am-241	1.731E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.731E+00	1.0000
Total	1.731E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.731E+00	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contaminated Zone	Contaminated Zone B Parameter	Contaminated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Precipitation	Kd of C-14 in Contaminated Zone	Kd of C-14 in Unsaturated Zone 1
Mean	1.599998989	5 584839233	219.8917289	0 584997673	1.00747517	2 500061969	2 499909269
Standard Error	0 006162766	0 029557717	7.707887415	0 001636706	0 006153291	0.048134153	0 048147501
Median	1.60022	5.585685	119.152	0 5851995	1.00684	2 495425	2 500285
Mode	1.60771	5.38614	#N/A	#N/A	#N/A	4.63969	#N/A
Standard Deviation	0.184882993	0 886731513	231.2366225	0 049101186	0 184598739	1.444024596	1 444425026
Sample Variance	0 034181721	0.786292776	53470.37556	0 002410927	0 034076695	2.085207034	2 086363655
Kurtosis	-1.200468675	-1.199418707	0 640033425	-1.199981276	-1.200825629	-1 200018526	-1.199911876
Skewness	-0.000346662	4 63389E-05	1 29063247	-0 000539701	0.000535489	-6 76913E-05	9 60404E-06
Range	0.63744	3 062	891.8191	0 169829	0.637819	4.98652271	4.99000738
Minimum	1.28154	4.05148	15 6519	0 50006	0 688561	0.00729729	0 00496262
Maximum	1.91898	7.11348	907 471	0 669889	1.32638	4 99382	4 99497
Sum	1439.99909	5026 35531	197902.556	526 497906	906.727653	2250 055772	2249 918342
Count	900	900	900	900	900	900	900
Largest(1)	1.91898	7 11348	907.471	0 669889	1.32638	4.99382	4.99497
Smallest(1)	1.28154	4.05148	15.6519	0.50006	0.688561	0 00729729	0.00496262
75%	1.76002	6 35732	329.319	0 62754	1.16811	3 75298	3.75014
25%	1.44001	4.82043	43 4646	0.542576	0.848063	1.25574	1.25265

Contaminated Zone Dimensions	
Area:	10000.00 square meters
Thickness:	2.00 meters
Cover Depth:	3.20 meters

Initial Soil Concentrations, pCi/g	
C-14	1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	6.904E-01	6.147E-01	4.095E-01	9.599E-02	1.213E-04	2.012E-08	4.593E-26	0.000E+00
M(t):	0.000E+00	1.726E-01	1.537E-01	1.024E-01	2.400E-02	3.033E-05	5.030E-09	1.148E-26	0.000E+00

0Maximum TDOSE(t): 7.309E-01 mrem/yr at t = 0.1393 ñ 0.0003 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.393E-01 years
0
Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.393E-01 years
0
Water Dependent Pathways
0

Radio-Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
C-14	7.309E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.309E-01	1.0000
Total	7.309E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.309E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Contaminated Zone B Parameter	Contaminated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	total Porosity of Unsaturated Zone	Precipitation
Mean	5 584797211	219 8155057	0 585005496	0 350000028	1 600012244	0 410006522	0 455008379	1.007501901
Standard Error	0 029562333	7 700788063	0 001636863	0 000962736	0 006162287	0 002503226	0 002021753	0 006151779
Median	5 58686	119 3195	0 5849275	0 350001	1 59957	0 4100965	0 4550805	1.00773
Mode	#N/A	22 1526	0 565466	0 378622	1 60064	0 422049	#N/A	1.31383
Standard Deviation	0 886869987	231 0236419	0 049105883	0 028882065	0 184868623	0 075096787	0 060652604	0 184553372
Sample Variance	0 786538375	53371 92311	0 002411388	0 000834174	0 034176408	0 005639527	0 003678738	0 034059947
Kurtosis	-1 200185027	0 628501485	-1 20010564	-1 199960807	-1 200302968	-1 200686978	-1 200503565	-1 200385121
Skewness	0 000105678	1 287798565	0 000137047	0 00025033	0 000873747	0 000259907	-7.15461E-05	4 61703E-05
Range	3 06193	886 0844	0 169619	0 09984	0 63915	0 259522	0 209693	0 637146
Minimum	4 05329	15.6206	0 500166	0.300097	1 28079	0.280196	0.350208	0 689074
Maximum	7.11522	901 705	0 669785	0 399937	1 91994	0 539718	0 559901	1 32622
Sum	5026 31749	197833 9551	526 504946	315 000025	1440 01102	369 00587	409 507541	906.751711
Count	900	900	900	900	900	900	900	900
75%	6 3576	329.535	0 627564	0 375005	1 76066	0 475039	0.507506	1.16807
25%	4.81755	43 0936	0 542685	0 325045	1.44031	0 345219	0 402656	0 847987

Contaminated Zone Dimensions
Area: 10000.00 square meters
Thickness: 2.00 meters
Cover Depth: 3.20 meters

Initial Soil Concentrations, pCi/g
Co-60 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	5.638E-02	4.329E-02	1.717E-02	6.322E-04	1.601E-10	3.985E-19	0.000E+00	0.000E+00
M(t):	0.000E+00	1.409E-02	1.082E-02	4.293E-03	1.580E-04	4.003E-11	9.962E-20	0.000E+00	0.000E+00

0Maximum TDOSE(t): 5.944E-02 mrem/yr at t = 0.652 n 0.001 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 6.525E-01 years
0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Co-60	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 6.525E-01 years
0 Water Dependent Pathways

0 Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Co-60	5.944E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.944E-02	1.0000
Total	5.944E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	5.944E-02	1.0000

0*Sum of all water independent and dependent pathways.

	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0.584997016	0.350001207	1.600035411	0.409989978	0.454997262	1.007493339
Standard Error	0 001636804	0 000962796	0.006162343	0.002503478	0.00202202	0 006151524
Median	0.585004	0.3500065	1.600785	0.4100055	0.455016	1.007715
Mode	0 590284	0.308053	1.83999	#N/A	0.402603	1.20429
Standard Deviation	0 049104121	0 028883867	0.184870288	0 075104344	0.060660615	0.184545716
Sample Variance	0.002411215	0 000834278	0 034177023	0.005640662	0 00367971	0 034057121
Kurtosis	-1.199773784	-1.199466961	-1.19991514	-1 199464141	-1 200587674	-1 199877082
Skewness	3.78472E-05	-0 00021806	-0.00051953	-0.000162075	0 000183047	-1.03853E-05
Range	0.1698	0.099859	0.6391	0.259744	0 209654	0.637617
Minimum	0.500034	0 300048	1.28062	0.280251	0.350259	0.688933
Maximum	0 669834	0 399907	1.91972	0.539995	0.559913	1.32655
Sum	526.497314	315 001086	1440.03187	368.99098	409 497536	906.744005
Count	900	900	900	900	900	900
75%	0.627652	0.375048	1 76024	0 47525	0.507515	1.16749
25%	0.542503	0.32508	1.44014	0.345117	0 402603	0.847791

Contaminated Zone Dimensions
Area: 10000.00 square meters
Thickness: 2.00 meters
Cover Depth: 3.20 meters

Initial Soil Concentrations, pCi/g
Cs-137 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	8.907E-03	4.991E-03	3.474E-04	1.075E-05	9.708E-13	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	2.227E-03	1.248E-03	8.686E-05	2.688E-06	2.427E-13	0.000E+00

0Maximum TDOSE(t): 1.005E-02 mrem/yr at t = 4.777 n 0.010 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.777E+00 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Nuclide														
Cs-137	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.777E+00 years
Water Dependent Pathways

0

Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Nuclide														
Cs-137	1.005E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-02	1.0000
Total	1.005E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.005E-02	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 1.04 seconds

	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	0 584997016	0 350001207	1.600035411	0 409989978	0 454997262	1.007493339
Standard Error	0 001636804	0.000962796	0 006162343	0 002503478	0.00202202	0 006151524
Median	0 585004	0.3500065	1.600785	0.4100055	0 455016	1.007715
Mode	0 590284	0 308053	1.83999	#N/A	0 402603	1 20429
Standard Deviation	0.049104121	0.028883867	0 184870288	0 075104344	0.060660615	0 184545716
Sample Variance	0.002411215	0 000834278	0.034177023	0.005640662	0.00367971	0.034057121
Kurtosis	-1.199773784	-1.199466961	-1.19991514	-1.199464141	-1 200587674	-1.199877082
Skewness	3 78472E-05	-0 00021806	-0.00051953	-0.000162075	0.000183047	-1.03853E-05
Range	0.1698	0 099859	0.6391	0.259744	0.209654	0 637617
Minimum	0 500034	0.300048	1.28062	0 280251	0 350259	0 688933
Maximum	0 669834	0.399907	1.91972	0 539995	0 559913	1 32655
Sum	526 497314	315 001086	1440.03187	368 99098	409.497536	906.744005
Count	900	900	900	900	900	900
75%	0 627652	0.375048	1.76024	0 47525	0.507515	1.16749
25%	0.542503	0.32508	1.44014	0.345117	0.402603	0 847791

```
     Contaminated Zone Dimensions            Initial Soil Concentrations, pCi/g
     AAAAAAAAAAAAAAAAAAAAAAAAAAAA            AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
       Area:  10000.00 square meters                Eu-152     1.000E+00
  Thickness:      2.00 meters
 Cover Depth:     3.20 meters
0
                                    Total Dose TDOSE(t), mrem/yr
                                Basic Radiation Dose Limit = 4.000E+00 mrem/yr
                   Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
                   AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
   t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.500E+01  1.500E+02  3.000E+02  1.000E+03  1.000E+04
    TDOSE(t):  0.000E+00  0.000E+00  2.652E-03  1.841E-03  5.000E-04  1.244E-06  4.992E-10  2.715E-15  5.069E-16
       M(t):   0.000E+00  0.000E+00  6.630E-04  4.603E-04  1.250E-04  3.111E-07  1.248E-10  6.787E-16  1.267E-16
0Maximum TDOSE(t):  2.771E-03 mrem/yr  at t =  2.288 ñ 0.005 years
0
                     Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                                As mrem/yr and Fraction of Total Dose At t = 2.288E+00 years
0                                 Water Independent Pathways (Inhalation excludes radon)
0            Ground            Inhalation          Radon              Plant              Meat               Milk               Soil
 Radio-  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA
 Nuclide  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.
 Nuclide
 AAAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA
 Eu-152  0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000
 ffffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff
 Total   0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000
0
                     Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                                As mrem/yr and Fraction of Total Dose At t = 2.288E+00 years
0                                 Water Dependent Pathways
0             Water              Fish               Radon              Plant              Meat               Milk               All Pathways*
 Radio-  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA
 Nuclide  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.
 Nuclide
 AAAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA AAAAAAAAA AAAAAA
 Eu-152  2.771E-03 1.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 2.771E-03 1.0000
 ffffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff fffffffff ffffff
 Total   2.771E-03 1.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 0.000E+00 0.0000 2.771E-03 1.0000
0*Sum of all water independent and dependent pathways.
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	Density of Contaminated Zone	Contaminated Zone B Parameter	Contaminated Zone Hydraulic Conductivity	Contaminated Zone Total Porosity	Evapotranspiration Coefficient	Runoff Coefficient	Precipitation	Kd of H-3 In Contaminated Zone
Mean	1.599957756	5 585075967	219 8949487	0 360000017	0 58500324	0 350002516	1 007525454	0 25000153
Standard Error	0.006162839	0 029554536	7 70738437	0 000962736	0 001636856	0 000962779	0 006151901	0 004813601
Median	1 600385	5 58652	118 8725	0 360001	0 5848865	0 350037	1.007745	0 250182
Mode	1.61797	4 31525	#N/A	0 388622	#N/A	0 306887	1 06267	#N/A
Standard Deviation	0 184885174	0 886636073	231.2215311	0 028882066	0 049105667	0 028883361	0 184557024	0 144408028
Sample Variance	0 034182527	0 786123527	53463 39644	0 000834174	0 002411367	0 000834249	0 034061295	0 020853678
Kurtosis	-1.200184632	-1 199858307	0 637331405	-1.199960523	-1.20030226	-1 200684878	-1 200505914	-1 200386209
Skewness	0 000104472	-0 000593929	1 289859511	0 000250836	0 000875047	0 0002601	-7.34731E-05	4 6435E-05
Range	0 63831	3 062	889 2231	0 09984	0 169774	0 099816	0 638066	0 498548309
Minimum	1 28069	4 05148	15 6519	0 310097	0 50021	0 300075	0 688634	0 000840691
Maximum	1 919	7 11348	904 875	0 409937	0 669984	0 399891	1 3267	0 499389
Sum	1439 96198	5026 56837	197905 4538	324 000015	526 502916	315 002264	906.772909	225 0013771
Count	900	900	900	900	900	900	900	900
Largest(1)	1 919	7 11348	904 875	0 409937	0 669984	0 399891	1 3267	0 499389
Smallest(1)	1 28069	4 05148	15 6519	0 310097	0 50021	0 300075	0 688634	0 000840691
75%	1.76106	6 3535	329 605	0 385005	0.627674	0.375015	1.16727	0 375644
25%	1 44001	4 81763	43 277	0 335045	0 542583	0 325084	0.848225	0.125185

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

Area: 10000.00 square meters
Thickness: 2.00 meters
Cover Depth: 3.20 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

H-3 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr

Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	9.070E-02	4.187E-02	2.799E-03	1.783E-07	8.905E-27	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	2.267E-02	1.047E-02	6.998E-04	4.457E-08	2.226E-27	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.283E-01 mrem/yr at t = 0.1215 ñ 0.0002 years

	Density of Contaminated Zone	Contaminated Zone B Parameter	Evapotranspiration Coefficient	Runoff Coefficient	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	1.599998989	5 584839233	0 585009323	0 349998632	0 409989919	0 455002578	1.007488272
Standard Error	0 006162766	0 029557717	0 001636641	0 000962768	0 002503686	0 002021635	0 006153245
Median	1 60022	5 585685	0 5850255	0 350117	0 409732	0 4548075	1 007535
Mode	1 60771	5 38614	0 534356	0 333566	#N/A	0 544867	1 30224
Standard Deviation	0.184882993	0 886731513	0 049099222	0 028883046	0 075110588	0 060649047	0 184597359
Sample Variance	0.034181721	0 786292776	0 002410734	0 00083423	0 0056416	0 003678307	0 034076185
Kurtosis	-1 200468675	-1 199418707	-1.19957509	-1.199982822	-1 200826746	-1 200016993	-1 199911705
Skewness	-0 000346662	4 63389E-05	0 000215841	-0 000539038	0 000534848	-6.72923E-05	8 59276E-06
Range	0 63744	3 062	0 169739	0 0999	0 259519	0 209435	0 637726
Minimum	1 28154	4 05148	0 500166	0 300035	0 280228	0 350306	0 688634
Maximum	1 91898	7 11348	0 669905	0.399935	0 539747	0 559741	1 32636
Sum	1439 99909	5026 35531	526 508391	314 998769	368 990927	409 50232	906 739445
Count	900	900	900	900	900	900	900
75%	1.76002	6 35732	0.627528	0 375024	0.475349	0.507625	1 16727
25%	1.44001	4.82043	0 542866	0 325045	0 345127	0.402741	0.848089

Contaminated Zone Dimensions	
Area:	10000.00 square meters
Thickness:	2.00 meters
Cover Depth:	3.20 meters

Initial Soil Concentrations, pCi/g	
Ni-63	1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	1.976E-04	1.647E-04	7.130E-05	2.393E-05	1.465E-07	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	4.939E-05	4.117E-05	1.783E-05	5.982E-06	3.663E-08	0.000E+00

0Maximum TDOSE(t): 1.987E-04 mrem/yr at t = 9.19 ñ 0.02 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.188E+00 years
0 Water Independent Pathways (Inhalation excludes radon)

Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.188E+00 years
0 Water Dependent Pathways

Radio-Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Ni-63	1.987E-04	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.987E-04	1.0000
Total	1.987E-04	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.987E-04	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 1.22 seconds

	Density of Contaminated Zone	Contaminated b Parameter	Contaminated Zone Hydraulic Conductivity	Contaminated Zon Total Porosity	Evapotranspir ation Coefficient	Runoff Coefficient	Effective Porosity of Unsaturated Zone	Precipitation
Mean	1 599957756	5 585075967	219 8949487	0 360000017	0.58500324	0 350002516	0 410010379	1 007501901
Standard Error	0 006162839	0 029554536	7 70738437	0 000962736	0 001636856	0 000962779	0 002503123	0 006151779
Median	1 600385	5 58652	118 8725	0 360001	0 5848865	0 350037	0 4101	1 00773
Mode	1.61797	4 31525	#N/A	0 388622	#N/A	0 306887	#N/A	1 31383
Standard Deviation	0 184885174	0 886636073	231.2215311	0 028882066	0 049105667	0 028883361	0.075093678	0 184553372
Sample Variance	0 034182527	0 786123527	53463.39644	0 000834174	0 002411367	0 000834249	0.00563906	0 034059947
Kurtosis	-1 200184632	-1 199858307	0 637331405	-1 199960523	-1 20030226	-1 20068488	-1 200504146	-1 200385121
Skewness	0 000104472	-0 000593929	1 289859511	0 000250836	0 000875047	0 0002601	-7.19236E-05	4 61703E-05
Range	0.63831	3 062	889 2231	0 09984	0 169774	0 099816	0 259619	0 637146
Minimum	1.28069	4 05148	15 6519	0 310097	0 50021	0.300075	0 280258	0 689074
Maximum	1.919	7.11348	904 875	0 409937	0 669984	0 399891	0 539877	1 32622
Sum	1439 96198	5026 56837	197905 4538	324 000015	526 502916	315 002264	369 009341	906 751711
Count	900	900	900	900	900	900	900	900
75%	1.76106	6 3535	329.605	0 385005	0.627674	0 375015	0 475007	1.16807
25%	1.44001	4 81763	43 277	0.335045	0 542583	0 325084	0 345193	0 847987

Contaminated Zone Dimensions
Area: 10000.00 square meters
Thickness: 2.00 meters
Cover Depth: 3.20 meters

Initial Soil Concentrations, pCi/g
Pu-238 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	2.188E+00	9.331E+00	8.799E+00	7.136E+00	2.723E+00	7.751E-01	2.245E-03	1.355E-06
M(t):	0.000E+00	5.470E-01	2.333E+00	2.200E+00	1.784E+00	6.807E-01	1.938E-01	5.612E-04	3.387E-07

0Maximum TDOSE(t): 9.544E+00 mrem/yr at t = 1.093 n 0.002 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
Water Dependent Pathways

0

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-238	9.544E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.544E+00	1.0000
Total	9.544E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.544E+00	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contamianted Zone	Contaminated Zone b parameter	Contamianted Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Runoff Coefficient	Effective Porosity of Unsaturated Zone	Precipitation
Mean	1.599998989	5.584839233	219.8917289	0 584997673	0.349996113	0 410003238	1.007488272
Standard Error	0 006162766	0.029557717	7.707887415	0 001636706	0.000962956	0 002502976	0 006153245
Median	1 60022	5.585685	119.152	0 5851995	0 3498965	0 409762	1 007535
Mode	1.60771	5 38614	#N/A	#N/A	#N/A	0 521264	1.30224
Standard Deviation	0 184882993	0 886731513	231.2366225	0.049101186	0.028888682	0 075089281	0 184597359
Sample Variance	0 034181721	0 786292776	53470.37556	0.002410927	0 000834556	0 0056384	0 034076185
Kurtosis	-1.200468675	-1 199418707	0 640033425	-1.199981276	-1 20082638	-1 200018168	-1.199911705
Skewness	-0 000346662	4.63389E-05	1.29063247	-0 000539701	0 0005359	-6.77515E-05	8 59276E-06
Range	0.63744	3 062	891.8191	0 169829	0 099815	0.2593	0 637726
Minimum	1.28154	4 05148	15.6519	0 50006	0 300088	0.280379	0 688634
Maximum	1.91898	7.11348	907.471	0.669889	0 399903	0.539679	1.32636
Sum	1439 99909	5026 35531	197902 556	526 497906	314.996502	369.002914	906 739445
Count	900	900	900	900	900	900	900
75%	1.76002	6 35732	329 319	0.62754	0.375134	0.475155	1.16727
25%	1.44001	4.82043	43.4646	0.542576	0.325049	0 345298	0.848089

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	10000.00 square meters	Pu-239	1.000E+00
Thickness:	2.00 meters		
Cover Depth:	3.20 meters		

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	2.439E+01	1.057E+01	1.053E+01	1.040E+01	9.804E+00	9.080E+00	6.347E+00	5.614E-02
M(t):	0.000E+00	6.097E-01	2.642E+00	2.633E+00	2.599E+00	2.451E+00	2.270E+00	1.587E+00	1.404E-02

Maximum TDOSE(t): 1.065E+01 mrem/yr at t = 1.093 to 0.002 years

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
Water Independent Pathways (Inhalation excludes radon)

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
Water Dependent Pathways

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	1.065E+01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.065E+01	1.0000
Total	1.065E+01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.065E+01	1.0000

*Sum of all water independent and dependent pathways.

	Contaminated Zone Hydraulic Conductivity	Evapotranspiration coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	total Porosity of Unsaturated Zone	Precipitation
Mean	219.8564278	0 584991104	0.350005479	1.599991267	0.409989919	0 455002578	1.007488272
Standard Error	7.703317495	0 001636747	0 00096273	0 006161712	0 002503686	0.002021635	0 006153245
Median	119 247	0 585038	0 350015	1.60075	0 409732	0 4548075	1.007535
Mode	#N/A	0.573988	0 349318	1.86433	#N/A	0 544867	1 30224
Standard Deviation	231.0995248	0.049102425	0 028881898	0.184851368	0 075110588	0 060649047	0.184597359
Sample Variance	53406.99038	0.002411048	0.000834164	0 034170028	0 0056416	0 003678307	0.034076185
Kurtosis	0 629114005	-1.199417592	-1.199576162	-1.199980454	-1.200826746	-1.200016993	-1.199911705
Skewness	1.287696308	4.72965E-05	0.000215723	-0.000536939	0.000534848	-6 72923E-05	8 59276E-06
Range	887.916	0.169557	0.099847	0 63936	0 259519	0.209435	0 637726
Minimum	15 743	0 500082	0.300097	1.28022	0 280228	0 350306	0 688634
Maximum	903.659	0.669639	0.399944	1 91958	0 539747	0 559741	1.32636
Sum	197870.785	526 491994	315 004931	1439 99214	368 990927	409 50232	906 739445
Count	900	900	900	900	900	900	900
75%	329.132	0.627767	0.375017	1.76015	0.475349	0.507625	1.16727
25%	43.0892	0.542662	0.325215	1.44029	0.345127	0 402741	0 848089

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAA
Area: 10000.00 square meters
Thickness: 2.00 meters
Cover Depth: 3.20 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Pu-241 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	1.975E-01	1.852E-01	1.478E-01	8.195E-02	4.559E-02	3.503E-02	1.035E-02	2.692E-07
M(t):	0.000E+00	4.937E-02	4.631E-02	3.695E-02	2.049E-02	1.140E-02	8.759E-03	2.587E-03	6.730E-08

0Maximum TDOSE(t): 2.019E-01 mrem/yr at t = 0.4666 ñ 0.0009 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.666E-01 years

0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Nuclide AAAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
ffffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.666E-01 years

0 Water Dependent Pathways

0 Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Nuclide AAAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA
Pu-241	2.019E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.019E-01	1.0000
ffffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff
Total	2.019E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.019E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Density of Contaminated Zone	Contaminated Zone b Parameter	Contaminated Zone Hydraulic Conductivity	Contamianted Zone Total Porosity	Evapotranspiration Coefficient	Runoff Coefficient	Precipitation
Mean	1 599998989	5 584839233	219 8917289	0 359998622	0 584993402	0 350001247	1.007488272
Standard Error	0 006162766	0 029557717	7.707887415	0 000962768	0 001637026	0.000962683	0 006153245
Median	1.60022	5 585685	119 152	0 360117	0 5848245	0 3499085	1 007535
Mode	1 60771	5 38614	#N/A	0.343566	#N/A	0 392794	1 30224
Standard Deviation	0 184882993	0 886731513	231 2366225	0 028883049	0.04911078	0 028880485	0 184597359
Sample Variance	0 034181721	0 786292776	53470 37556	0 000834231	0 002411869	0 000834082	0 034076185
Kurtosis	-1 200468675	-1 199418707	0.640033425	-1 199982856	-1 200825834	-1 200018055	-1 199911705
Skewness	-0 000346662	4 63389E-05	1.29063247	-0 00053861	0 00053554	-6 73476E-05	8 59276E-06
Range	0 63744	3 062	891 8191	0 0999	0.169686	0 09973	0 637726
Minimum	1.28154	4 05148	15 6519	0 310035	0 500149	0 300146	0 688634
Maximum	1 91898	7.11348	907 471	0 409935	0 669835	0 399876	1 32636
Sum	1439 99909	5026 35531	197902 556	323 99876	526 494062	315 001122	906 739445
Count	900	900	900	900	900	900	900
75%	1.76002	6 35732	329.319	0.385024	0 627728	0 37506	1 16727
25%	1.44001	4 82043	43 4646	0.335045	0 542583	0 325115	0 848089

```
RESRAD, Version 6.1      T« Limit = 0.5 year        07/05/2002  15:10  Page   8
Summary : SNEC-SprayPond-Bedrock-DWSubSurface-Sr-90-Determine    File: sr90.RAD

     Contaminated Zone Dimensions              Initial Soil Concentrations, pCi/g
     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ              ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
       Area:  10000.00 square meters                 Sr-90      1.000E+00
  Thickness:       2.00 meters
Cover Depth:       3.20 meters
0
                                         Total Dose TDOSE(t), mrem/yr
                                   Basic Radiation Dose Limit = 4.000E+00 mrem/yr
                    Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
                    ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
   t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.500E+01  1.500E+02  3.000E+02  1.000E+03  1.000E+04
    TDOSE(t):  0.000E+00  6.396E+00  6.014E+00  4.849E+00  2.248E+00  6.545E-02  6.494E-04  2.908E-13  0.000E+00
        M(t):  0.000E+00  1.599E+00  1.504E+00  1.212E+00  5.620E-01  1.636E-02  1.624E-04  7.269E-14  0.000E+00
0Maximum TDOSE(t):   6.552E+00 mrem/yr   at t =  0.2163 ñ 0.0004 years
0
                         Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                                    As mrem/yr and Fraction of Total Dose At t = 2.163E-01 years
0                                     Water Independent Pathways (Inhalation excludes radon)
0            Ground           Inhalation           Radon             Plant              Meat              Milk              Soil
 Radio-  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
 Nuclide  mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.
 Nuclide
 ÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ
 Sr-90   0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000
 fffffff fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff
 Total   0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000
0
                         Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                                    As mrem/yr and Fraction of Total Dose At t = 2.163E-01 years
0                                                Water Dependent Pathways
0            Water             Fish              Radon             Plant              Meat              Milk          All Pathways*
 Radio-  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
 Nuclide  mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.
 Nuclide
 ÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ
 Sr-90   6.552E+00 1.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  6.552E+00 1.0000
 fffffff fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff  fffffffff ffffff
 Total   6.552E+00 1.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  6.552E+00 1.0000
0*Sum of all water independent and dependent pathways.
```

	Depth of Roots	Depth of Soil Mixing Layers	External Gamma Shielding Factor	Plant Transfer Factor for Am
Mean	0.649966946	0.249978731	0.311688396	0.001507213
Standard Error	0.006740296	0 004247832	0 005873594	5 42441E-05
Median	0.650424	0 2328915	0 2699155	0 000997779
Mode	#N/A	0.390133	0.246525	0 00052656
Standard Deviation	0.202208887	0 127434961	0 17620783	0.001627322
Sample Variance	0.040888434	0 016239669	0.031049199	2.64818E-06
Kurtosis	-1.200059872	-0 605787603	1.340214143	14.76014952
Skewness	-9.99408E-05	0.419931123	1.190883367	3 185618162
Range	0 698945	0 56945966	0 9405984	0 014255048
Minimum	0 300751	0.00658234	0 0496876	5.54525E-05
Maximum	0.999696	0.576042	0.990286	0.0143105
Sum	584.970251	224 9808583	280 519556	1 356491438
Count	900	900	900	900
75%	0.826163	0.340362	0.398555	0.0018514
25%	0.475012	0.150013	0.182284	0 000538494

```
     Contaminated Zone Dimensions              Initial Soil Concentrations, pCi/g
     AAAAAAAAAAAAAAAAAAAAAAAAAAAAA             AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
       Area:   2000.00 square meters                   Am-241      5.000E-01
  Thickness:      0.20 meters
Cover Depth:      0.00 meters
0
                                    Total Dose TDOSE(t), mrem/yr
                               Basic Radiation Dose Limit = 2.500E+01 mrem/yr
                 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
                 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
   t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.500E+01  1.500E+02  3.000E+02  1.000E+03  1.000E+04
    TDOSE(t):  2.320E-01  2.311E-01  2.293E-01  2.228E-01  2.012E-01  1.230E-01  5.520E-02  7.153E-09  2.515E-06
        M(t):  9.282E-03  9.245E-03  9.170E-03  8.914E-03  8.048E-03  4.920E-03  2.208E-03  2.861E-10  1.006E-07
0Maximum TDOSE(t):  2.320E-01 mrem/yr  at t = 0.000E+00 years
```

	Depth of Roots	External Gamma Shielding Factor	Plant Transfer Factor for Co	Meat Transfer Factor for Co
Mean	0.649966946	0 31152919	0.12115272	0.050265726
Standard Error	0 006740296	0 005859029	0.00454535	0.002114444
Median	0 650424	0 270305	0.0796347	0.02989765
Mode	#N/A	0.1218	#N/A	0 0145787
Standard Deviatior	0.202208887	0.175770875	0 136360505	0 063433327
Sample Variance	0 040888434	0 0308954	0.018594187	0 004023787
Kurtosis	-1.200059872	1.285485788	25 07457565	19 78702585
Skewness	-9 99408E-05	1.179186037	3.904341752	3 71564928
Range	0.698945	0.9203616	1 54445867	0 59492478
Minimum	0.300751	0.0471544	0.00466133	0.00116222
Maximum	0.999696	0.967516	1.54912	0.596087
Sum	584.970251	280.3762708	109 0374476	45 23915297
Count	900	900	900	900
75%	0.826163	0.398518	0.14795	0.0598833
25%	0.475012	0.182156	0.0429894	0 0149505

```
     Contaminated Zone Dimensions                 Initial Soil Concentrations, pCi/g
     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ                 ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
       Area:    2000.00 square meters                  C-14         5.000E-01
  Thickness:       0.20 meters
Cover Depth:       0.00 meters
0
                                     Total Dose TDOSE(t), mrem/yr
                                Basic Radiation Dose Limit = 2.500E+01 mrem/yr
                     Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
                     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
   t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.500E+01  1.500E+02  3.000E+02  1.000E+03  1.000E+04
    TDOSE(t):  5.936E-01  2.792E-12  6.145E-03  6.212E-03  2.975E-24  0.000E+00  0.000E+00  0.000E+00  0.000E+00
        M(t):  2.374E-02  1.117E-13  2.458E-04  2.485E-04  1.190E-25  0.000E+00  0.000E+00  0.000E+00  0.000E+00
0Maximum TDOSE(t):   5.936E-01 mrem/yr    at t =  0.000E+00 years
```

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

Area:	2000.00 square meters
Thickness:	0.20 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Co-60	5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	3.092E+00	2.696E+00	2.049E+00	7.846E-01	2.542E-02	3.511E-09	3.583E-18	0.000E+00	0.000E+00
M(t):	1.237E-01	1.079E-01	8.198E-02	3.139E-02	1.017E-03	1.405E-10	1.433E-19	0.000E+00	0.000E+00

0Maximum TDOSE(t): 3.092E+00 mrem/yr at t = 0.000E+00 years

	Depth of Roots	External Gamma shielding Factor	Plant Transfer Factor	Meat Transfer Factor	Milk Transfer Factor
Mean	0.649993827	0 311576942	0 065048881	0.054032323	0 011100371
Standard Error	0.006740584	0 005865496	0 002634899	0 000757146	0 000181501
Median	0.650577	0.2701895	0.0400047	0.0498017	0 00995379
Mode	#N/A	0 127979	0 0206515	#N/A	0 0103708
Standard Deviation	0 202217512	0.175964866	0 079046976	0 022714384	0.005445023
Sample Variance	0 040891922	0.030963634	0.006248424	0 000515943	2 96483E-05
Kurtosis	-1.2001246	1.310726062	19 04497359	2.339536098	2.999055409
Skewness	0 00038154	1.184287836	3.63998789	1.238550021	1.416613307
Range	0.698224	0 9285946	0.70438126	0 1476186	0 03832798
Minimum	0.300527	0.0471544	0 00135774	0 0141644	0.00239922
Maximum	0 998751	0 975749	0 705739	0 161783	0.0407272
Sum	584.994444	280.4192479	58.54399301	48 6290907	9 99033421
Count	900	900	900	900	900
75%	0 825021	0.399408	0.0781693	0.0655288	0.0136946
25%	0.475012	0.182397	0.0206404	0.037896	0.00725339

Contaminated Zone Dimensions

Area:	2000.00 square meters
Thickness:	0.20 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g

Cs-137	5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	1.184E+00	1.155E+00	1.100E+00	9.273E-01	5.033E-01	2.978E-02	6.634E-04	0.000E+00	0.000E+00
M(t):	4.735E-02	4.621E-02	4.401E-02	3.709E-02	2.013E-02	1.191E-03	2.654E-05	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.184E+00 mrem/yr at t = 0.000E+00 years

	Density of Contaminated Zone	External Gamma Shielding Factor
Mean	1.5999862	0 311548422
Standard Error	0 006163312	0 005862214
Median	1.60063	0.2702035
Mode	1.88748	0.238119
Standard Deviation	0 184899372	0 175866421
Sample Variance	0.034187778	0.030928998
Kurtosis	-1.200435789	1 291223333
Skewness	0.000232204	1.180458827
Range	0 63895	0 9203616
Minimum	1.28077	0 0471544
Maximum	1.91972	0 967516
Sum	1439.98758	280.3935794
Count	900	900
75%	1.76106	0.399162
25%	1 44001	0 182547

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAA
Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Eu-152 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	1.207E+00	1.144E+00	1.029E+00	7.092E-01	1.876E-01	4.075E-04	1.250E-07	0.000E+00	4.207E-18
M(t):	4.827E-02	4.577E-02	4.115E-02	2.837E-02	7.506E-03	1.630E-05	4.998E-09	0.000E+00	1.683E-19

0Maximum TDOSE(t): 1.207E+00 mrem/yr at t = 0.000E+00 years

	Depth of Roots	Contaminated Zone B Parameter	Contaminated Zone Hydraulic Conductivity	Kd of H-3 in Contaminated Zone
Mean	0.649966946	5.585091067	2278.595811	0.24999238
Standard Error	0 006740296	0 029551739	162.6345917	0 004813285
Median	0 650424	5.58763	95 74765	0.250004
Mode	#N/A	4.31525	#N/A	0.121367
Standard Deviation	0.202208887	0 886552159	4879 03775	0 144398552
Sample Variance	0.040888434	0 785974731	23805009.37	0.020850942
Kurtosis	-1.200059872	-1.200087672	7.14010619	-1.200049984
Skewness	-9.99408E-05	-0.000498973	2 735551509	-4 23666E-05
Range	0.698945	3.062	25230 33404	0 49868438
Minimum	0.300751	4.05148	0 36596	0 00040262
Maximum	0 999696	7.11348	25230 7	0.499087
Sum	584.970251	5026 58196	2050736 23	224 9931417
Count	900	900	900	900
Largest(1)	0.999696	7.11348	25230 7	0 499087
Smallest(1)	0.300751	4.05148	0.36596	0.00040262
75%	0.826163	6.3535	1567.26	0 375027
25%	0.475012	4.81763	5.91974	0.125225

Contaminated Zone Dimensions

Area:	2000.00 square meters
Thickness:	0.20 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g

H-3	5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	1.082E-02	6.284E-06	1.284E-04	8.979E-05	2.172E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	4.328E-04	2.514E-07	5.136E-06	3.591E-06	8.689E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.082E-02 mrem/yr at t = 0.000E+00 years

	Depht of Roots	Depth of Soil Mixing Layer	Plant Transfer Factor of Ni	Meat Transfer Factor for Ni	Milk Transfer Factor of Ni
Mean	0 64999383	0.249986177	0 075424134	0 007565828	0 025398861
Standard Error	0 00674058	0.004249897	0 002741354	0.000276251	0.000645479
Median	0.650577	0 2327835	0.0498441	0 00499491	0 02004635
Mode	#N/A	#N/A	0.0270835	0.0160252	0.0212972
Standard Deviation	0 20221751	0.127496899	0.082240619	0.008287517	0.019364374
Sample Variance	0 04089192	0.016255459	0.006763519	6.86829E-05	0.000374979
Kurtosis	-1.2001246	-0 602278227	15 57308108	16.40397836	7 586634947
Skewness	0.00038154	0.421420863	3.271820383	3.33939064	2.242910824
Range	0 698224	0.57292766	0.70178229	0.071301364	0.15766312
Minimum	0 300527	0.00658234	0.00219871	0.000291436	0 00245888
Maximum	0 998751	0 57951	0 703981	0.0715928	0.160122
Sum	584.994444	224 9875592	67 88172097	6 809244837	22.8589746
Count	900	900	900	900	900
75%	0.825021	0 341009	0.0924693	0.00928698	0.0320911
25%	0.475012	0.150229	0.02707	0.00269398	0.0125698

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Ni-63	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	7.763E-03	7.690E-03	7.546E-03	7.061E-03	5.564E-03	1.815E-03	3.550E-04	0.000E+00	0.000E+00
M(t):	3.105E-04	3.076E-04	3.018E-04	2.824E-04	2.225E-04	7.262E-05	1.420E-05	0.000E+00	0.000E+00

0Maximum TDOSE(t): 7.763E-03 mrem/yr at t = 0.000E+00 years

	Depth of Roots	Depth of Soil Mixing Layer	Plant Transfer Factor for Pu	Meat Transfer Factor for Pu
Mean	0.64997	0.249978731	0.001517481	0.000108504
Standard Error	0 00674	0.004247832	5 69321E-05	1 51334E-06
Median	0.65042	0 2328915	0.000997453	0 000100035
Mode	#N/A	0 390133	#N/A	0 000101962
Standard Deviation	0.20221	0 127434961	0.001707964	4.54003E-05
Sample Variance	0 04089	0 016239669	2 91714E-06	2.06118E-09
Kurtosis	-1.20006	-0.605787603	25.07453717	2 123332729
Skewness	-1E-04	0 419931123	3 904338254	1.202207735
Range	0.69895	0 56945966	0 019344915	0.000297215
Minimum	0.30075	0 00658234	5 83849E-05	2.78456E-05
Maximum	0.9997	0.576042	0 0194033	0 000325061
Sum	584.97	224.9808583	1.365733136	0 097653961
Count	900	900	900	900
75%	0 82616	0 340362	0.00185313	0.000131507
25%	0.47501	0.150013	0.000538457	7.61421E-05

Summary : SNEC-SprayPond-Overburden-DWSubSurface-Pu-238-Determine
File   : pu238.RAD

Contaminated Zone Dimensions	
Area:	2000.00 square meters
Thickness:	1.00 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g	
Pu-238	1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	9.486E+00	9.317E+00	8.747E+00	6.984E+00	2.478E+00	6.413E-01	1.159E-03	0.000E+00
M(t):	0.000E+00	2.372E+00	2.329E+00	2.187E+00	1.746E+00	6.195E-01	1.603E-01	2.897E-04	0.000E+00

0Maximum TDOSE(t): 9.486E+00 mrem/yr at t = 0.999 ñ 0.002 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.988E-01 years
0
Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 9.988E-01 years
0
Water Dependent Pathways
0

Radio-Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Pu-238	9.486E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.486E+00	1.0000
Total	9.486E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.486E+00	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time =   3.49 seconds

	Depth of Roots	Depth of Soil Mixing Layer	Plant Transfer Factor for Pu	Meat Transfer Factor for Pu
Mean	0 64997	0 249978731	0.001517481	0.000108504
Standard Error	0 00674	0.004247832	5.69321E-05	1.51334E-06
Median	0.65042	0 2328915	0.000997453	0.000100035
Mode	#N/A	0.390133	#N/A	0.000101962
Standard Deviation	0 20221	0.127434961	0.001707964	4.54003E-05
Sample Variance	0 04089	0.016239669	2.91714E-06	2.06118E-09
Kurtosis	-1 2001	-0 605787603	25.07453717	2 123332729
Skewness	-1E-04	0 419931123	3 904338254	1.202207735
Range	0.69895	0.56945966	0.019344915	0.000297215
Minimum	0.30075	0.00658234	5 83849E-05	2.78456E-05
Maximum	0 9997	0 576042	0 0194033	0 000325061
Sum	584.97	224.9808583	1.365733136	0.097653961
Count	900	900	900	900
75%	0.82616	0 340362	0.00185313	0.000131507
25%	0.47501	0.150013	0.000538457	7.61421E-05

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAA
Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Pu-239 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	2.234E-01	2.217E-01	2.182E-01	2.064E-01	1.692E-01	6.614E-02	1.626E-02	2.347E-02	2.522E-02
M(t):	8.937E-03	8.869E-03	8.729E-03	8.258E-03	6.766E-03	2.646E-03	6.503E-04	9.388E-04	1.009E-03

0Maximum TDOSE(t): 2.234E-01 mrem/yr at t = 0.000E+00 years

	Depth of Roots	Contamianted Zone Erosion Rate	Depth of Soil Mixing Layer	Precipitation	Plant Transfer Factor for Pu	Plant Transfer Factor for Am	Meat Transfer Factor for Np
Mean	0 649998902	0 000268803	0 250045715	1 007491108	0 001512707	0 001509963	0 001267046
Standard Error	0 006740526	4.77242E-06	0 0042521	0 006152084	5 58058E-05	5 49616E-05	3 26215E-05
Median	0 650244	0 000232479	0 2326315	1 00825	0 000995407	0 000995665	0 000997863
Mode	#N/A	0 000233076	0 134864	0 902484	#N/A	#N/A	#N/A
Standard Deviation	0 202215791	0 000143173	0 127563015	0 184562521	0 001674174	0 001648847	0 000978644
Sample Variance	0 040891226	2 04984E-08	0 016272323	0 034063324	2 80286E-06	2 7187E-06	9 57743E-07
Kurtosis	-1.200469152	-0 744498763	-0 594216187	-1.199982135	21.10746885	17 34192825	8 941597005
Skewness	-0 000345667	0 643655759	0 425255368	-0 000539688	3 634915908	3 377937119	2 387142382
Range	0 697204	0 000507504	0 57835483	0 638356	0 017007138	0 015909733	0 008367823
Minimum	0 301681	9 00823E-05	0 00936717	0 688224	5 67619E-05	6 52672E-05	0 000116977
Maximum	0 998885	0.000597586	0 587722	1.32658	0 0170639	0 015975	0 0084848
Sum	584 999012	0 241922941	225 0411437	906 741997	1 361436678	1 35896654	1 140341712
Count	900	900	900	900	900	900	900
75%	0 825018	0 000374514	0 340278	1 1674	0 00185829	0 00185429	0.00159255
25%	0 475012	0 000144879	0.150645	0 848037	0 000538557	0 000539577	0 000625872

Contaminated Zone Dimensions
Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g
Pu-241 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	4.296E-03	4.437E-03	4.690E-03	5.356E-03	6.133E-03	4.568E-03	2.813E-03	1.835E-04	1.576E-07
M(t):	1.719E-04	1.775E-04	1.876E-04	2.142E-04	2.453E-04	1.827E-04	1.125E-04	7.340E-06	6.303E-09

0Maximum TDOSE(t): 6.139E-03 mrem/yr at t = 38.28 n 0.08 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.828E+01 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Pu-241	2.884E-04	0.0470	1.424E-04	0.0232	0.000E+00	0.0000	4.908E-03	0.7995	9.768E-05	0.0159	1.170E-05	0.0019	6.907E-04	0.1125
Total	2.884E-04	0.0470	1.424E-04	0.0232	0.000E+00	0.0000	4.908E-03	0.7995	9.768E-05	0.0159	1.170E-05	0.0019	6.907E-04	0.1125

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.828E+01 years
Water Dependent Pathways

0

Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.139E-03	1.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.139E-03	1.0000

0*Sum of all water independent and dependent pathways.

	Depth of Roots	Plant Transfer Factor for Sr	Meat Transfer Factor for Sr	Milk Transfer Factor for Sr
Mean	0.64996695	0.488001662	0.010805866	0.002241031
Standard Error	0.0067403	0.019434056	0 000152114	3 66584E-05
Median	0 650424	0.301838	0.00995047	0.00200926
Mode	#N/A	#N/A	#N/A	0.00175358
Standard Deviation	0 20220889	0.583021673	0 004563408	0 001099753
Sample Variance	0.04088843	0 339914272	2.08247E-05	1.20946E-06
Kurtosis	-1 20005987	17.43171346	2.898742513	2.976637038
Skewness	-9.9941E-05	3.483614975	1.308121488	1.41700937
Range	0 698945	5.141624	0 03416811	0.00741979
Minimum	0.300751	0.011346	0.00283409	0.00045629
Maximum	0 999696	5 15297	0 0370022	0 00787608
Sum	584 970251	439.201496	9.72527896	2 01692818
Count	900	900	900	900
75%	0.826163	0.58917	0.0130883	0.00275894
25%	0.475012	0 154153	0.00757472	0 00146435

Contaminated Zone Dimensions	
Area:	2000.00 square meters
Thickness:	0.20 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g	
Sr-90	5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	4.397E+00	3.920E+00	3.096E+00	1.356E+00	7.102E-02	1.141E-03	3.227E-05	1.888E-12	0.000E+00
M(t):	1.759E-01	1.568E-01	1.239E-01	5.425E-02	2.841E-03	4.563E-05	1.291E-06	7.554E-14	0.000E+00

0Maximum TDOSE(t): 4.397E+00 mrem/yr at t = 0.000E+00 years

	Saturated Zone Hydraulic Conductivity	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation	Plant Transfer Factor for Np
Mean	12700.14008	0 000268803	0.585009323	0 021499767	30.1984438	1.007507879	0 030396869
Standard Error	244 5813287	4.77242E-06	0.001636641	0 000163671	0.38518245	0.006151544	0 001117341
Median	12709	0 000232479	0 5850255	0 02151995	30 1588	1.006915	0 0200434
Mode	15744.6	0 000233076	0 534356	0 0187062	#N/A	1.28095	#N/A
Standard Deviation	7337.439862	0.000143173	0.049099222	0 004910118	11.5554736	0 184546315	0 033520232
Sample Variance	53838023.72	2.04984E-08	0 002410734	2.41093E-05	133.528971	0.034057342	0 001123606
Kurtosis	-1 200468791	-0.744498763	-1.19957509	-1 199981412	-1 2008265	-1.200017641	18 64951692
Skewness	-0.000345398	0 643655759	0 000215841	-0 000539513	0 0005343	-6 66298E-05	3 486585916
Range	25298 2437	0 000507504	0.169739	0 0169829	39 926	0.637277	0 3382866
Minimum	61 3563	9 00823E-05	0.500166	0 013006	10 2351	0.688933	0 0011784
Maximum	25359.6	0 000597586	0.669905	0 0299889	50.1611	1.32621	0 339465
Sum	11430126 07	0.241922941	526.508391	19 3497906	27178 5994	906.757091	27.35718203
Count	900	900	900	900	900	900	900
75%	19050 7	0.000374514	0.627528	0.025754	40 2537	1.16763	0 0371835
25%	6350.7	0.000144879	0.542866	0.0172576	20.2196	0.848483	0.0108185

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Am-241	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.555E-11	1.210E-10	2.555E-10	7.165E-14
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.139E-11	3.024E-11	6.388E-11	1.791E-14

0Maximum TDOSE(t): 2.740E-06 mrem/yr at t = 4455 n 9 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.455E+03 years

0 Water Independent Pathways (Inhalation excludes radon)

0

Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Nuclide														
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.455E+03 years

0 Water Dependent Pathways

0

Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Nuclide														
Am-241	2.740E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.740E-06	1.0000
Total	2.740E-06	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	2.740E-06	1.0000

0*Sum of all water independent and dependent pathways.

	Well pump intake depth	Precipitation	Kd of C-14 in contaminated Zone	Kd of C-14 in Unsaturated Zone	Kd of C-14 in Saturated Zone
Mean	30.19964911	1.00750291	2.500454134	2.500056321	2.50007587
Standard Error	0.385176243	0.006151777	0 048133255	0 048140062	0.048143279
Median	30 23295	1.00786	2 50249	2 501445	2.50084
Mode	27.2774	#N/A	#N/A	4 49243	2.67481
Standard Deviation	11.55528729	0 184553316	1.443997636	1 444201851	1.444298365
Sample Variance	133.5246644	0.034059927	2.085129172	2.085718987	2 085997768
Kurtosis	-1.200124139	-1.2000071	-1 199835858	-1 200150121	-1.200661883
Skewness	0.000381332	0.000132538	0 000230347	0.000134696	5.61575E-05
Range	39 8985	0.637702	4.98874533	4.98603536	4 98703167
Minimum	10 2301	0.688308	0 00165467	0.00483464	0.00617833
Maximum	50 1286	1.32601	4 9904	4 99087	4 99321
Sum	27179 6842	906 752619	2250 408721	2250.050689	2250 068283
Count	900	900	900	900	900
Largest(1)	50 1286	1.32601	4.9904	4.99087	4 99321
Smallest(1)	10 2301	0.688308	0.00165467	0.00483464	0.00617833
75%	40.2012	1.16825	3.7519	3 7549	3.75755
25%	20.2007	0.848237	1.26514	1.25225	1.25245

Contaminated Zone Dimensions
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ

Area:	2000.00 square meters
Thickness:	0.20 meters
Cover Depth:	0.00 meters

Initial Soil Concentrations, pCi/g
ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ

C-14	5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
ÄÄ

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	1.372E-04	1.307E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	3.430E-05	3.267E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.403E-04 mrem/yr at t = 9.39 ñ 0.02 years

	Saturated Zone Hydraulic Conductivity	Contaminated Zone Erosion Rate	Well Pump Intake Depth	Precipitation	Plant Transfer Factor for Gd
Mean	12699.95651	0.000268826	30 203633	1.007507141	0.003625961
Standard Error	244.5834382	4 77235E-06	0 385066042	0.0061523	0.00016698
Median	12721.1	0.000232628	30 2199	1.007685	0.00201017
Mode	#N/A	0 000134304	#N/A	1.26213	0 00221257
Standard Deviation	7337.503146	0.00014317	11.55198127	0.184568988	0 00500941
Sample Variance	53838952 42	2.04978E-08	133 4482714	0 034065711	2.50942E-05
Kurtosis	-1.200124414	-0 746029457	-1.19983498	-1.200149408	24 98574926
Skewness	0 000381861	0 643147661	0.000230231	0 000136172	4.128974922
Range	25335 2145	0.000508152	39 91	0.637212	0.054068145
Minimum	19.4855	9.00823E-05	10.2132	0.688618	7 22548E-05
Maximum	25354.7	0.000598234	50.1232	1.32583	0.0541404
Sum	11429960 86	0 241943826	27183.2697	906 756427	3 263364788
Count	900	900	900	900	900
75%	19050 9	0 000374514	40.2152	1.16788	0.00423756
25%	6350.7	0.000144827	20.3211	0.848037	0.000959297

```
RESRAD, Version 6.1      T« Limit = 0.5 year          07/15/2002  10:19  Page   8
 Summary : SNEC-SSGS-Backfill-DWSurface-Eu-152-Determine              File: eu152.RAD

      Contaminated Zone Dimensions                Initial Soil Concentrations, pCi/g
      AAAAAAAAAAAAAAAAAAAAAAAAAAAA                AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
        Area:     2000.00 square meters                  Eu-152      5.000E-01
   Thickness:        0.20 meters
 Cover Depth:        0.00 meters
0
                                                Total Dose TDOSE(t), mrem/yr
                                          Basic Radiation Dose Limit = 4.000E+00 mrem/yr
                                 Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
                                 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
    t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.500E+01  1.500E+02  3.000E+02  1.000E+03  1.000E+04
      TDOSE(t):  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
          M(t):  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
0Maximum TDOSE(t):  1.044E-17 mrem/yr  at t =  3131 ñ 6 years
0
                              Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                                          As mrem/yr and Fraction of Total Dose At t = 3.131E+03 years
0                                           Water Independent Pathways (Inhalation excludes radon)
0             Ground            Inhalation            Radon             Plant              Meat              Milk              Soil
 Radio-   AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA
 Nuclide  mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.
 Nuclide
 AAAAAAA AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA
 Eu-152  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000
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 Total   0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000
0
                              Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                                          As mrem/yr and Fraction of Total Dose At t = 3.131E+03 years
0                                                   Water Dependent Pathways
0             Water               Fish              Radon             Plant              Meat              Milk          All Pathways*
 Radio-   AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA  AAAAAAAAAAAAAAAA
 Nuclide  mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.   mrem/yr  fract.
 Nuclide
 AAAAAAA AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA  AAAAAAAAA AAAAAA
 Eu-152  1.044E-17 1.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  1.044E-17 1.0000
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 Total   1.044E-17 1.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  1.044E-17 1.0000
0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time =     1.18 seconds
```

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Precipitation
Mean	12699.95651	1 250002222	0 000268867	0.585001923	1.007509689
Standard Error	244.5834382	0 00481359	4 77306E-06	0.001636762	0.006152711
Median	12721 1	1.25028	0.000232599	0 5850495	1.007605
Mode	#N/A	1.0528	0.000145498	0 652743	1.02984
Standard Deviation	7337.503146	0.144407692	0.000143192	0.049102864	0.184581334
Sample Variance	53838952.42	0.020853582	2.05039E-08	0.002411091	0.034070269
Kurtosis	-1.200124414	-1.2000078	-0.744076128	-1.200149724	-1.200661455
Skewness	0 000381861	0 00013691	0.643645529	0 000134412	5 64198E-05
Range	25335 2145	0.49898	0.000507763	0 169526	0 63734
Minimum	19.4855	1.00024	9 00566E-05	0 500164	0.68879
Maximum	25354.7	1.49922	0 00059782	0 66969	1.32613
Sum	11429960.86	1125.002	0 241980407	526.501731	906.75872
Count	900	900	900	900	900
75%	19050.9	1.37578	0.000373669	0.627667	1.16822
25%	6350.7	1.12538	0.00014545	0.542576	0.848063

Contaminated Zone Dimensions
Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g
H-3 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 2.500E+01 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	2.017E-10	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	8.066E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.911E-04 mrem/yr at t = 1.422 ñ 0.003 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.422E+00 years

0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Nuclide														
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.422E+00 years

0 Water Dependent Pathways

0 Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Nuclide														
H-3	1.911E-04	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.911E-04	1.0000
Total	1.911E-04	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.911E-04	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Saturated Zone Hydraulic Gradient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Well Pump Intake Depth	Precipitation
Mean	12700 04309	1 250028144	0 585022528	0 349999192	0 021499883	1 599986411	0 409993393	0 454995153	30 199618	1 007502112
Standard Error	244 5700469	0 004814399	0 001636771	0 000962869	0 00016369	0 006160876	0 002503563	0 002022027	0 3851603	0 006151884
Median	12721.1	1 249865	0 5850845	0 350099	0 02148935	1 59981	0 4101575	0 4550315	30 2062	1 00732
Mode	#N/A	1 46172	#N/A	0 355635	0 0220943	1 65905	#N/A	0 382189	#N/A	1 12122
Standard Deviation	7337 101408	0 144431978	0 049103125	0 028886055	0 004910709	0 184826292	0 075106895	0 060660822	11 554808	0 184556514
Sample Variance	53833057 06	0 020860596	0 002411117	0 000834404	2 41151E-05	0 034160758	0 005641046	0 003679735	133 51359	0 034061107
Kurtosis	-1 199961544	-1 199859597	-1 199911991	-1 200334777	-1 200401045	-1 200390767	-1 200012871	-1 199668332	-1 199391	-1 199649603
Skewness	0 000169254	-0 000235192	9 756E-05	-0 000278642	0 00022789	-0 000374962	-0 000912979	0 000338694	-0 0003234	3 24491E-05
Range	25338 4455	0 49938	0 169618	0 099785	0 0169463	0 63821	0 259508	0 209433	39 9777	0 637928
Minimum	16 2545	1 00024	0 500056	0 300062	0 0130032	1 28013	0 280258	0 35031	10 2018	0 688062
Maximum	25354 7	1 49962	0 669674	0 399847	0 0299495	1 91834	0 539766	0 559743	50 1795	1 32599
Sum	11430038 78	1125 02533	526 520275	314 999273	19 3498946	1439 98777	368 994054	409 495638	27179 656	906 751901
Count	900	900	900	900	900	900	900	900	900	900
75%	19050 9	1 37578	0 627564	0 375098	0 0257757	1.76025	0 475007	0 507574	40 2847	1 16735
25%	6350 7	1.12538	0 542501	0 325045	0 0172524	1 44073	0 345455	0 402676	20 2732	0 848176

Contaminated Zone Dimensions
Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth: 0.00 meters

Initial Soil Concentrations, pCi/g
Ni-63 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	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
M(t):	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

0Maximum TDOSE(t): 4.635E-23 mrem/yr at t = 4.881E+03 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.881E+03 years
Water Independent Pathways (Inhalation excludes radon)

0

0 Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Nuclide														
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.881E+03 years
Water Dependent Pathways

0

0 Radio-Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Nuclide														
Ni-63	4.635E-23	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.635E-23	1.0000
Total	4.635E-23	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.635E-23	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Evapotranspiration Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation
Mean	12699.95651	0 585000757	0.021501543	30.20045	1.007509689
Standard Error	244.5834382	0 001636623	0.000163653	0.3851205	0 006152711
Median	12721.1	0 585096	0 02150845	30.21155	1.007605
Mode	#N/A	0 53587	0 0139442	46 1394	1.02984
Standard Deviation	7337 503146	0 049098687	0.004909591	11.553616	0 184581334
Sample Variance	53838952 42	0.002410681	2.41041E-05	133 48604	0 034070269
Kurtosis	-1.200124414	-1.200005172	-1.199835919	-1.2001501	-1.200661455
Skewness	0 000381861	0.000133828	0 000230335	0 0001349	5.64198E-05
Range	25335 2145	0 169654	0.0169618	39.8882	0 63734
Minimum	19.4855	0 500082	0.0130056	10.2387	0 68879
Maximum	25354.7	0 669736	0 0299674	50.1269	1.32613
Sum	11429960 86	526 500681	19.3513884	27180.405	906.75872
Count	900	900	900	900	900
75%	19050 9	0 627767	0 0257564	40.2392	1.16822
25%	6350.7	0.54263	0.0173015	20.218	0 848063

Contaminated Zone Dimensions
Area: 10000.00 square meters
Thickness: 2.00 meters
Cover Depth: 3.20 meters

Initial Soil Concentrations, pCi/g
Pu-238 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	2.188E+00	9.331E+00	8.799E+00	7.136E+00	2.723E+00	7.751E-01	2.245E-03	1.355E-06
M(t):	0.000E+00	5.470E-01	2.333E+00	2.200E+00	1.784E+00	6.807E-01	1.938E-01	5.612E-04	3.387E-07

0Maximum TDOSE(t): 9.544E+00 mrem/yr at t = 1.093E+00 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.093E+00 years
0 Water Dependent Pathways

0 Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Pu-238	9.544E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.544E+00	1.0000
Total	9.544E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	9.544E+00	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Contaminated Zone Erosion Rate	Evapotranspiration Coefficient	Runoff Coefficient	Saturated Zone Hydraulic Gradient	Well Pump Intake Depth	Precipitation	Plant Transfer Factor for Np
Mean	12699 96279	1 250000322	0 000268857	0 585010094	0 350005806	0 021500638	30 2013841	1 007477948	0 030388272
Standard Error	244 5773892	0 004814214	4 77346E-06	0 00163666	0 000962772	0 000163672	0 38515617	0 006152422	0 001124475
Median	12697 55	1 249805	0 000232267	0 585196	0 3499965	0 0215066	30 2297	1 007175	0 0200578
Mode	12101 2	1 41056	#N/A	0 647449	#N/A	0 0178114	15 5447	1.1521	#N/A
Standard Deviation	7337.321675	0 144426414	0 000143204	0 049099809	0 028883145	0 004910165	11 5546852	0 184572654	0 033734236
Sample Variance	53836289 36	0 020858989	2 05073E-08	0 002410791	0 000834236	2 41097E-05	133 51075	0 034067064	0 001137999
Kurtosis	-1 200119616	-1 199865705	-0 743648267	-1 200395077	-1 200704725	-1 200381941	-1 2001298	-1 199892558	23 06462523
Skewness	0 000355026	9 84808E-06	0 643870607	-2 29934E-05	0 000367082	-0 000206435	-0 0004132	-0 00042048	3 732161591
Range	25335 9465	0 49931	0 000508388	0 169526	0 099919	0 016959	39 9231	0 638449	0 383685247
Minimum	18 7535	1 00024	9 01349E-05	0 500164	0 300001	0 0130158	10 2397	0 688031	0 000545753
Maximum	25354.7	1 49955	0 000598523	0 66969	0 39992	0 0299748	50 1628	1 32648	0 384231
Sum	11429966 51	1125 00029	0 241971669	526.509085	315 005225	19 3505742	27181 2457	906.730153	27 34944514
Count	900	900	900	900	900	900	900	900	900
75%	19092 3	1 37552	0 000373669	0 627667	0 375025	0 0257601	40 2011	1.16803	0 0374402
25%	6350 7	1.12563	0 00014482	0 542576	0 325049	0 0172695	20 2245	0 848285	0 010859

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Pu-239	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.313E-10	5.696E-10	2.101E-03	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.328E-10	1.424E-10	5.252E-04	0.000E+00

0Maximum TDOSE(t): 3.133E-02 mrem/yr at t = 756.2 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.562E+02 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio- Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 7.562E+02 years
Water Dependent Pathways

0

Radio- Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Pu-239	3.133E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.133E-02	1.0000
Total	3.133E-02	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.133E-02	1.0000

0*Sum of all water independent and dependent pathways.

	Saturated Zone Hydraulic Conductivity	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Saturated Zone Hydraulic Gradient	Effective Porosity of Unsaturated Zone	Well Pump Intake Depth	Precipitation
Mean	12698 50153	1 2500124	0 585005496	0 350000028	0 021500324	0 410006522	30 2015979	1.007501901
Standard Error	244 5839508	0 004813444	0 001636863	0 000962736	0 000163686	0 002503226	0 38509579	0 006151779
Median	12715 55	1 250245	0.5849275	0 350001	0 02148865	0 4100965	30 2154	1 00773
Mode	#N/A	1.0432	0 565466	0 378622	#N/A	0 422049	#N/A	1 31383
Standard Deviation	7337.518523	0 144403315	0 049105883	0 028882065	0 004910567	0 075096787	11 5528737	0 184553372
Sample Variance	53839178 08	0 020852317	0 002411388	0 000834174	2 41137E-05	0 005639527	133 468891	0 034059947
Kurtosis	-1.200184658	-1 19985556	-1 20010564	-1.199960807	-1 200302418	-1 200686978	-1 20050378	-1 200385121
Skewness	0 000106211	-0 000594614	0 000137047	0 00025033	0 000875268	0 000259907	-7.1625E-05	4 61703E-05
Range	25332 8955	0 4987	0 169619	0 09984	0 0169774	0 259522	39 9414	0 637146
Minimum	27.6045	1 00024	0 500166	0 300097	0 013021	0 280196	10 2397	0 689074
Maximum	25360 5	1 49894	0 669785	0 399937	0 0299984	0 539718	50 1811	1 32622
Sum	11428651.38	1125 01116	526 504946	315 000025	19 3502913	369 00587	27181 4381	906 751711
Count	900	900	900	900	900	900	900	900
75%	19092 3	1 37516	0 627564	0 375005	0 0257674	0 475039	40 2011	1.16807
25%	6350 7	1.12502	0 542685	0.325045	0 0172583	0 345219	20 2298	0 847987

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Area: 2000.00 square meters
Thickness: 0.20 meters
Cover Depth· 0.00 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Pu-241 5.000E-01

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.308E-12	3.921E-12	8.929E-12	2.083E-15
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.270E-13	9.803E-13	2.232E-12	5.206E-16

0Maximum TDOSE(t): 4.969E-08 mrem/yr at t = 1664 ñ 3 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.664E+03 years
0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
AAAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA
Pu-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
ffffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.664E+03 years
0 Water Dependent Pathways

0 Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
AAAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA
Pu-241	4.969E-08	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.969E-08	1.0000
ffffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff	ffffffffff	ffffff
Total	4.969E-08	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.969E-08	1.0000

0*Sum of all water independent and dependent pathways.

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Precipitation	Plant Transfer Factor for Np
Mean	1.249976433	0.585005068	1.007536886	0 030273173
Standard Error	0.004814497	0 001636417	0 006152487	0.001089522
Median	1.250305	0 5851455	1.007415	0.0200409
Mode	1.26404	0.514688	1.16652	0 0105762
Standard Deviation	0 144434905	0 049092505	0 184574618	0.032685647
Sample Variance	0.020861442	0 002410074	0.034067789	0.001068352
Kurtosis	-1 200060028	-1.200087396	-1.200376148	14.76018554
Skewness	-9 886E-05	-0 000498985	0.000291325	3.185622401
Range	0.49924	0.169557	0 637997	0.28632021
Minimum	1.00054	0.500082	0 688623	0.00111379
Maximum	1.49978	0.669639	1 32662	0.287434
Sum	1124 97879	526.504561	906.783197	27 24585613
Count	900	900	900	900
75%	1.37583	0 627556	1.16749	0.0371863
25%	1.12501	0 542507	0.848022	0 0108159

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Sr-90	5.000E-01
Thickness:	0.20 meters		
Cover Depth:	0.00 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.667E-03	5.345E-10	6.351E-20	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.667E-04	1.336E-10	1.588E-20	0.000E+00	0.000E+00

0Maximum TDOSE(t): 8.185E-03 mrem/yr at t = 40.94 n 0.08 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.094E+01 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.094E+01 years
Water Dependent Pathways

0

Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Sr-90	8.185E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.185E-03	1.0000
Total	8.185E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	8.185E-03	1.0000

0*Sum of all water independent and dependent pathways.

	Contaminated Zone b Parameter	Contaminated Zone Hydraulic Conductivity	Kd of C-14 in Contaminated Zone	Kd of C-14 in Unsaturated Zone
Mean	5.584855022	2273.224353	2.50028841	2 4999239
Standard Error	0 029561012	162 1294134	0 048141507	0.048132853
Median	5.58686	96 8193	2.499335	2.500045
Mode	#N/A	#N/A	2.18993	1.21367
Standard Deviation	0 886830351	4863 882403	1.444245199	1.443985579
Sample Variance	0 786468072	23657352.03	2 085844194	2 085094353
Kurtosis	-1.200059915	7.090667357	-1.200377179	-1 200050044
Skewness	-0.0001002	2 729641196	0 000289718	-4 24237E-05
Range	3.06538	24804.43605	4.99212534	4.9868438
Minimum	4 05329	0.36395	0.00487466	0.0040262
Maximum	7.11867	24804.8	4.997	4.99087
Sum	5026 36952	2045901 918	2250.259569	2249.93151
Count	900	900	900	900
Largest(1)	7.11867	24804.8	4.997	4.99087
Smallest(1)	4 05329	0 36395	0 00487466	0 0040262
75%	6.3576	1566.35	3.7519	3.75027
25%	4.81755	5 89446	1.25213	1.25225

Contaminated Zone Dimensions
Area: 2000.00 square meters
Thickness: 2.00 meters
Cover Depth: 1.20 meters

Initial Soil Concentrations, pCi/g
Am-241 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.040E-08	1.859E-07	9.846E-04	4.039E-08
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.010E-08	4.647E-08	2.461E-04	1.010E-08

0Maximum TDOSE(t): 1.294E-03 mrem/yr at t = 1459 [illegible] 3 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.459E+03 years
Water Independent Pathways (Inhalation excludes radon)

0

Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Am-241	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.459E+03 years
Water Dependent Pathways

0

Radio-Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Am-241	1.294E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.294E-03	1.0000
Total	1.294E-03	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.294E-03	1.0000

0*Sum of all water independent and dependent pathways.

Contaminated Zone Dimensions	
Area:	2000.00 square meters
Thickness:	2.00 meters
Cover Depth:	1.20 meters

Initial Soil Concentrations, pCi/g	
C-14	1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	6.130E-01	9.550E-02	1.844E-05	2.638E-10	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	1.532E-01	2.388E-02	4.611E-06	6.594E-11	0.000E+00	0.000E+00

0Maximum TDOSE(t): 7.106E-01 mrem/yr at t = 8.01 ñ 0.02 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 8.010E+00 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
C-14	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 8.010E+00 years
0 Water Dependent Pathways
0

Radio-Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
C-14	7.106E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.106E-01	1.0000
Total	7.106E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.106E-01	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 2.09 seconds

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	1.249999211	0.584991104	0 350005479	1.599991267	0 409989919	0 455002578	1 007488272
Standard Error	0 00481466	0 001636747	0 00096273	0 006161712	0 002503686	0 002021635	0 006153245
Median	1.250175	0 585038	0 350015	1 60075	0 409732	0 4548075	1 007535
Mode	1 37837	0 573988	0 349318	1 86433	#N/A	0 544867	1 30224
Standard Deviation	0 144439798	0 049102425	0 028881898	0 184851368	0 075110588	0 060649047	0 184597359
Sample Variance	0 020862855	0 002411048	0 000834164	0 034170028	0 0056416	0 003678307	0 034076185
Kurtosis	-1 20047105	-1 199417592	-1 199576162	-1.199980454	-1 200826746	-1 200016993	-1 199911705
Skewness	-0.000347952	4.72965E-05	0 000215723	-0 000536939	0 000534848	-6.72923E-05	8 59276E-06
Range	0 498	0 169557	0 099847	0 63936	0 259519	0 209435	0 637726
Minimum	1 0012	0 500082	0 300097	1 28022	0 280228	0 350306	0 688634
Maximum	1.4992	0 669639	0 399944	1.91958	0 539747	0 559741	1 32636
Sum	1124 99929	526 491994	315 004931	1439 99214	368 990927	409 50232	906 739445
Count	900	900	900	900	900	900	900
75%	1.37501	0 627767	0 375017	1.76015	0 475349	0.507625	1.16727
25%	1.12501	0.542662	0.325215	1.44029	0 345127	0 402741	0 848089

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Precipitation	Plant Transfer Factor for Gd
Mean	1.249976433	0 585005068	1.007536886	0 003626544
Standard Error	0 004814497	0 001636417	0 006152487	0 000166913
Median	1.250305	0.5851455	1.007415	0 002009285
Mode	1.26404	0 514688	1.16652	#N/A
Standard Deviation	0 144434905	0.049092505	0 184574618	0.005007389
Sample Variance	0 020861442	0.002410074	0 034067789	2 50739E-05
Kurtosis	-1.200060028	-1.200087396	-1.200376148	23 29687677
Skewness	-9.886E-05	-0.000498985	0.000291325	4.051623421
Range	0 49924	0 169557	0.637997	0.048892967
Minimum	1.00054	0 500082	0.688623	6 28333E-05
Maximum	1.49978	0 669639	1.32662	0 0489558
Sum	1124 97879	526 504561	906.783197	3 263889993
Count	900	900	900	900
75%	1.37583	0 627556	1.16749	0.00421624
25%	1.12501	0.542507	0.848022	0.000959162

Contaminated Zone Dimensions	
Area:	2000.00 square meters
Thickness:	2.00 meters
Cover Depth:	1.20 meters

Initial Soil Concentrations, pCi/g	
Eu-152	1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.039E-16
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.099E-17

0Maximum TDOSE(t): 4.205E-15 mrem/yr at t = 2358 ñ 5 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.358E+03 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide	Ground		Inhalation		Radon		Plant		Meat		Milk		Soil	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Eu-152	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.358E+03 years
0 Water Dependent Pathways
0

Radio-Nuclide	Water		Fish		Radon		Plant		Meat		Milk		All Pathways*	
Nuclide	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.	mrem/yr	fract.
Eu-152	4.205E-15	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.205E-15	1.0000
Total	4.205E-15	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.205E-15	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 1.18 seconds

	Density of Contaminated Zone	Thickness of Unsaturated Zone	Contaminated Zone B	Contaminated Zone Hydraulic conductivity	contaminated Zone Total Porosity	Evapotranspiration coefficient	Hydraulic Conductivity of Unsaturated Zone	Precipitation	Kd of H-3 in contaminated Zone	Kd of H-3 in Unsaturated Zone
Mean	1 599996578	1 250028144	5 585407	2275 842169	0 454998569	0 584996357	2273 50337	1 007485231	0 249995232	0 250001689
Standard Error	0 006162487	0 004814399	0 02955814	162 4461704	0 002022057	0 001636484	162 1484073	0 006152737	0 004814503	0 004813681
Median	1 600525	1 249865	5 58653	96 96265	0 4548685	0 5849485	96 55985	1 007595	0 2500775	0 249859
Mode	1 3887	1 46172	#N/A	#N/A	0 462342	0 639223	#N/A	1 13282	#N/A	0 338982
Standard Deviation	0 184874595	0 144431978	0 88674424	4873 385112	0 060661709	0 04909453	4864 452218	0 184582097	0 144435085	0 144410439
Sample Variance	0 034178616	0 020860596	0 78631535	23749882 45	0 003679843	0 002410273	23662895 38	0 034070551	0 020861494	0 020854375
Kurtosis	-1 1999578	-1 199859597	-1 1999119	7.164108893	-1 200402455	-1 200390868	7 120653377	-1 199667477	-1.199391216	-1 19965048
Skewness	0 000166573	-0 000235192	9 7321E-05	2 737809968	0 000227049	-0 000374024	2 73256335	0 000338058	-0 000324204	3 23358E-05
Range	0 63846	0 49938	3 06309	24969 93547	0 209337	0 169525	25145 43397	0 637277	0 499721952	0 499164125
Minimum	1 2804	1 00024	4 05102	0 364529	0 350039	0 500035	0 366031	0 688943	2 20483E-05	0 000048875
Maximum	1 91886	1 49962	7 11411	24970 3	0 559376	0 66956	25145 8	1 32622	0 499744	0 499213
Sum	1439 99692	1125 02533	5026 8663	2048257 952	409 498712	526 496721	2046153 033	906 736708	224 9957087	225 0015199
Count	900	900	900	900	900	900	900	900	900	900
Largest(1)	1 91886	1 49962	7 11411	24970 3	0 559376	0 66956	25145 8	1 32622	0 499744	0 499213
Smallest(1)	1 2804	1 00024	4 05102	0 364529	0 350039	0 500035	0 366031	0 688943	2 20483E-05	0 000048875
75%	1 76002	1 37578	6 35366	1577 81	0 507817	0 627567	1561 13	1.16748	0 376059	0 375077
25%	1 44001	1.12538	4 81751	5 92129	0 40253	0 542695	6 00783	0 848285	0 125915	0.125333

Contaminated Zone Dimensions
Area: 2000.00 square meters
Thickness: 2.00 meters
Cover Depth: 1.20 meters

Initial Soil Concentrations, pCi/g
H-3 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	3.996E-02	7.361E-04	4.694E-10	0.000E+00	0.000E+00	0.000E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	9.990E-03	1.840E-04	1.174E-10	0.000E+00	0.000E+00	0.000E+00	0.000E+00

0Maximum TDOSE(t): 1.154E-01 mrem/yr at t = 1.154 n 0.002 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.154E+00 years

0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
H-3	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 1.154E+00 years

0 Water Dependent Pathways

0 Radio- Nuclide Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
H-3	1.154E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.154E-01	1.0000
Total	1.154E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.154E-01	1.0000

0*Sum of all water independent and dependent pathways.
0RESCALC.EXE execution time = 2.29 seconds

	Thickness of Unzaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Precipitation
Mean	1.249976433	0.585005068	0.350005763	1.007490222
Standard Error	0.004814497	0 001636417	0 00096283	0.006151376
Median	1.250305	0 5851455	0.3499865	1 007505
Mode	1 26404	0.514688	0.338509	1.0195
Standard Deviation	0 144434905	0.049092505	0.028884906	0.184541287
Sample Variance	0.020861442	0 002410074	0.000834338	0.034055486
Kurtosis	-1 200060028	-1.200087396	-1.200378505	-1.200051096
Skewness	-9 886E-05	-0.000498985	0.000287687	-4 28343E-05
Range	0.49924	0.169557	0 099843	0.637315
Minimum	1.00054	0.500082	0.300097	0 688515
Maximum	1.49978	0.669639	0.39994	1.32583
Sum	1124 97879	526 504561	315 005187	906.7412
Count	900	900	900	900
75%	1.37583	0 627556	0.375038	1.16728
25%	1.12501	0.542507	0.325043	0.848037

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Ni-63	1.000E+00
Thickness:	2.00 meters		
Cover Depth:	1.20 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	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
M(t):	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

0Maximum TDOSE(t): 7.108E-19 mrem/yr at t = 4616 ñ 9 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.616E+03 years
0 Water Independent Pathways (Inhalation excludes radon)
0

Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Ni-63	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 4.616E+03 years
0 Water Dependent Pathways
0

Radio-Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Ni-63	7.108E-19	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.108E-19	1.0000
Total	7.108E-19	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.108E-19	1.0000

0*Sum of all water independent and dependent pathways.

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	1.249999211	0 584991104	0 350005479	1 599991267	0 409989919	0 455002578	1 007488272
Standard Error	0 00481466	0 001636747	0 00096273	0 006161712	0.002503686	0 002021635	0 006153245
Median	1 250175	0 585038	0 350015	1 60075	0 409732	0 4548075	1 007535
Mode	1 37837	0.573988	0 349318	1.86433	#N/A	0 544867	1.30224
Standard Deviation	0 144439798	0 049102425	0 028881898	0 184851368	0 075110588	0 060649047	0 184597359
Sample Variance	0 020862855	0 002411048	0 000834164	0 034170028	0 0056416	0 003678307	0 034076185
Kurtosis	-1 20047105	-1.199417592	-1 199576162	-1.199980454	-1.200826746	-1 200016993	-1.199911705
Skewness	-0 000347952	4 72965E-05	0.000215723	-0.000536939	0 000534848	-6 72923E-05	8 59276E-06
Range	0 498	0 169557	0 099847	0 63936	0 259519	0 209435	0 637726
Minimum	1 0012	0 500082	0 300097	1.28022	0 280228	0 350306	0 688634
Maximum	1 4992	0 669639	0 399944	1 91958	0 539747	0 559741	1 32636
Sum	1124 99929	526 491994	315 004931	1439 99214	368 990927	409 50232	906 739445
Count	900	900	900	900	900	900	900
75%	1.37501	0 627767	0 375017	1 76015	0 475349	0.507625	1.16727
25%	1.12501	0.542662	0 325215	1.44029	0 345127	0 402741	0 848089

Contaminated Zone Dimensions
AAAAAAAAAAAAAAAAAAAAAAAAAAAA
Area: 2000.00 square meters
Thickness: 2.00 meters
Cover Depth: 1.20 meters

Initial Soil Concentrations, pCi/g
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
Pu-238 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.105E-03	7.018E-04	2.078E-03	1.062E-07
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.762E-04	1.754E-04	5.196E-04	2.655E-08

0Maximum TDOSE(t): 4.349E-01 mrem/yr at t = 391.2 ñ 0.8 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.912E+02 years
Water Independent Pathways (Inhalation excludes radon)

0

0 Radio- Nuclide Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA
Pu-238	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.912E+02 years
Water Dependent Pathways

0

0 Radio- Nuclide Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
AAAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA	AAAAAAAAA	AAAAAA
Pu-238	4.349E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.349E-01	1.0000
ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff	fffffffff	ffffff
Total	4.349E-01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	4.349E-01	1.0000

0*Sum of all water independent and dependent pathways.

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	1 249999211	0 584991104	0 350005479	1 599991267	0 409989919	0 455002578	1.007488272
Standard Error	0 00481466	0.001636747	0 00096273	0 006161712	0 002503686	0 002021635	0 006153245
Median	1 250175	0 585038	0 350015	1 60075	0 409732	0 4548075	1 007535
Mode	1 37837	0 573988	0 349318	1 86433	#N/A	0 544867	1.30224
Standard Deviation	0 144439798	0.049102425	0 028881898	0 184851368	0 075110588	0 060649047	0 184597359
Sample Variance	0 020862855	0 002411048	0 000834164	0 034170028	0 0056416	0 003678307	0 034076185
Kurtosis	-1 20047105	-1.199417592	-1 199576162	-1 199980454	-1 200826746	-1 200016993	-1 199911705
Skewness	-0 000347952	4 72965E-05	0 000215723	-0 000536939	0 000534848	-6 72923E-05	8.59276E-06
Range	0 498	0 169557	0.099847	0 63936	0.259519	0 209435	0 637726
Minimum	1.0012	0 500082	0.300097	1.28022	0 280228	0 350306	0 688634
Maximum	1.4992	0 669639	0.399944	1.91958	0.539747	0 559741	1 32636
Sum	1124 99929	526 491994	315.004931	1439 99214	368 990927	409 50232	906 739445
Count	900	900	900	900	900	900	900
75%	1 37501	0 627767	0 375017	1 76015	0 475349	0.507625	1.16727
25%	1.12501	0 542662	0.325215	1.44029	0.345127	0 402741	0 848089

Contaminated Zone Dimensions		Initial Soil Concentrations, pCi/g	
Area:	2000.00 square meters	Pu-239	1.000E+00
Thickness:	2.00 meters		
Cover Depth:	1.20 meters		

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.645E-06	2.414E-06	6.009E+00	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.114E-07	6.036E-07	1.502E+00	0.000E+00

0Maximum TDOSE(t): 1.045E+01 mrem/yr at t = 391.4 ñ 0.8 years
0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.914E+02 years
0 Water Independent Pathways (Inhalation excludes radon)

0 Radio- Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Nuclide														
Pu-239	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 3.914E+02 years
0 Water Dependent Pathways

0 Radio- Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Nuclide														
Pu-239	1.045E+01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.045E+01	1.0000
Total	1.045E+01	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.045E+01	1.0000

0*Sum of all water independent and dependent pathways.

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Precipitation	Plant Transfer Factor for Np
Mean	1.249976433	0 585005068	1.007536886	0.030273173
Standard Error	0 004814497	0 001636417	0 006152487	0.001089522
Median	1 250305	0.5851455	1.007415	0 0200409
Mode	1.26404	0.514688	1.16652	0 0105762
Standard Deviation	0 144434905	0.049092505	0 184574618	0 032685647
Sample Variance	0 020861442	0.002410074	0.034067789	0.001068352
Kurtosis	-1.200060028	-1.200087396	-1.200376148	14.76018554
Skewness	-9 886E-05	-0.000498985	0 000291325	3 185622401
Range	0.49924	0.169557	0 637997	0 28632021
Minimum	1.00054	0.500082	0 688623	0 00111379
Maximum	1.49978	0.669639	1.32662	0.287434
Sum	1124.97879	526.504561	906 783197	27.24585613
Count	900	900	900	900
75%	1.37583	0.627556	1.16749	0.0371863
25%	1.12501	0.542507	0 848022	0 0108159

```
     Contaminated Zone Dimensions            Initial Soil Concentrations, pCi/g
     ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ            ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
       Area:   2000.00 square meters                Pu-241     1.000E+00
  Thickness:      2.00 meters
 Cover Depth:     1.20 meters
0
                                    Total Dose TDOSE(t), mrem/yr
                              Basic Radiation Dose Limit = 4.000E+00 mrem/yr
                   Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
                   ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
    t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.500E+01  1.500E+02  3.000E+02  1.000E+03  1.000E+04
     TDOSE(t):  0.000E+00  0.000E+00  0.000E+00  0.000E+00  0.000E+00  9.070E-10  5.510E-09  3.296E-05  1.371E-09
        M(t):  0.000E+00  0.000E+00  0.000E+00  0.000E+00  0.000E+00  2.268E-10  1.378E-09  8.241E-06  3.426E-10
0Maximum TDOSE(t):  4.312E-05 mrem/yr  at t =  1.456E+03 years
0
                   Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                              As mrem/yr and Fraction of Total Dose At t = 1.456E+03 years
0                                Water Independent Pathways (Inhalation excludes radon)
0            Ground            Inhalation          Radon              Plant              Meat               Milk               Soil
 Radio-  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
 Nuclide  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.
 Nuclide
 ÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ
 Pu-241  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000
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 Total   0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000
0
                   Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                              As mrem/yr and Fraction of Total Dose At t = 1.456E+03 years
0                                Water Dependent Pathways
0              Water              Fish               Radon              Plant              Meat               Milk               All Pathways*
 Radio-  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ  ÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄ
 Nuclide  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.  mrem/yr  fract.
 Nuclide
 ÄÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ ÄÄÄÄÄÄÄÄÄ ÄÄÄÄÄÄ
 Pu-241  4.312E-05 1.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  4.312E-05 1.0000
 ïïïïïïï ïïïïïïïïï ïïïïïï ïïïïïïïïï ïïïïïï ïïïïïïïïï ïïïïïï ïïïïïïïïï ïïïïïï ïïïïïïïïï ïïïïïï ïïïïïïïïï ïïïïïï
 Total   4.312E-05 1.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  0.000E+00 0.0000  4.312E-05 1.0000
0*Sum of all water independent and dependent pathways.
```

	Thickness of Unsaturated Zone	Evapotranspiration Coefficient	Runoff Coefficient	Density of Unsaturated Zone	Effective Porosity of Unsaturated Zone	Total Porosity of Unsaturated Zone	Precipitation
Mean	1.249999211	0 584991104	0.350005479	1 599991267	0 409989919	0 455002578	1 007488272
Standard Error	0 00481466	0 001636747	0 00096273	0 006161712	0 002503686	0 002021635	0 006153245
Median	1 250175	0 585038	0 350015	1.60075	0 409732	0 4548075	1 007535
Mode	1 37837	0 573988	0 349318	1.86433	#N/A	0 544867	1 30224
Standard Deviation	0 144439798	0 049102425	0 028881898	0 184851368	0 075110588	0 060649047	0 184597359
Sample Variance	0 020862855	0 002411048	0 000834164	0 034170028	0 0056416	0 003678307	0 034076185
Kurtosis	-1 20047105	-1.199417592	-1 199576162	-1 199980454	-1 200826746	-1.200016993	-1 199911705
Skewness	-0.000347952	4 72965E-05	0 000215723	-0 000536939	0 000534848	-6 72923E-05	8 59276E-06
Range	0 498	0 169557	0 099847	0 63936	0 259519	0 209435	0 637726
Minimum	1 0012	0 500082	0 300097	1 28022	0 280228	0.350306	0 688634
Maximum	1.4992	0 669639	0 399944	1.91958	0 539747	0.559741	1 32636
Sum	1124 99929	526 491994	315 004931	1439 99214	368 990927	409 50232	906 739445
Count	900	900	900	900	900	900	900
75%	1 37501	0 627767	0 375017	1.76015	0 475349	0.507625	1.16727
25%	1.12501	0.542662	0 325215	1.44029	0 345127	0 402741	0 848089

Contaminated Zone Dimensions
Area: 2000.00 square meters
Thickness: 2.00 meters
Cover Depth: 1.20 meters

Initial Soil Concentrations, pCi/g
Sr-90 1.000E+00

0

Total Dose TDOSE(t), mrem/yr
Basic Radiation Dose Limit = 4.000E+00 mrem/yr
Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

t (years):	0.000E+00	1.000E+00	3.000E+00	1.000E+01	3.500E+01	1.500E+02	3.000E+02	1.000E+03	1.000E+04
TDOSE(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.583E+00	3.932E-02	1.675E-04	1.447E-15	0.000E+00
M(t):	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.458E-01	9.829E-03	4.186E-05	3.617E-16	0.000E+00

0Maximum TDOSE(t): 3.392E+00 mrem/yr at t = 27.59 n 0.06 years

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.759E+01 years
Water Independent Pathways (Inhalation excludes radon)

0

0 Radio- Nuclide Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Sr-90	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000
Total	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000

0

Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
As mrem/yr and Fraction of Total Dose At t = 2.759E+01 years
Water Dependent Pathways

0

0 Radio- Nuclide Nuclide	Water mrem/yr	Water fract.	Fish mrem/yr	Fish fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	All Pathways* mrem/yr	All Pathways* fract.
Sr-90	3.392E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.392E+00	1.0000
Total	3.392E+00	1.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.392E+00	1.0000

0*Sum of all water independent and dependent pathways.