Figure 2.4-115. Information Transfer between the Model Components and Submodels of the TSPA Igneous Intrusion Modeling Case

Source: SNL 2008a, Figure 6.1.4-4.
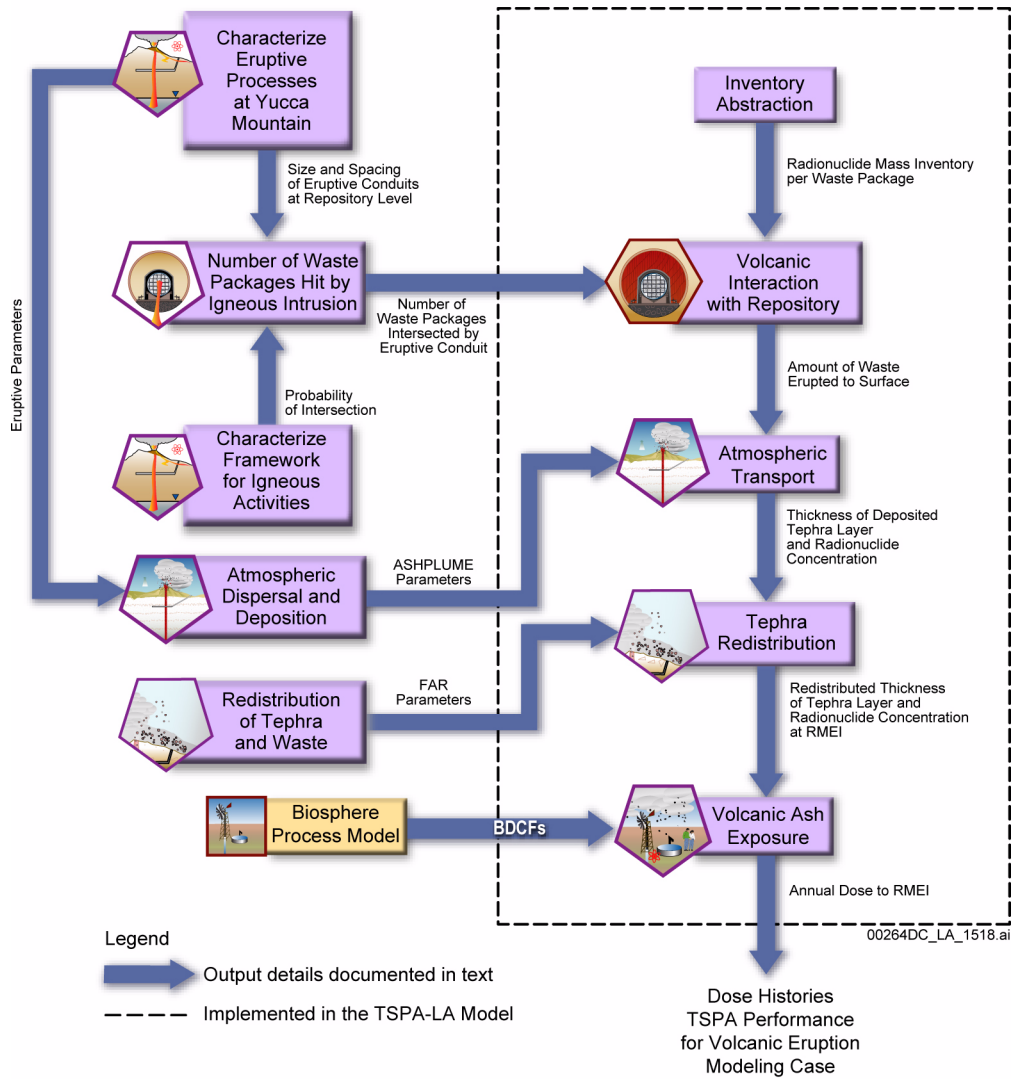
Figure 2.4-116. Information Transfer between the Model Components and Submodels of the TSPA
                 Volcanic Eruption Modeling Case
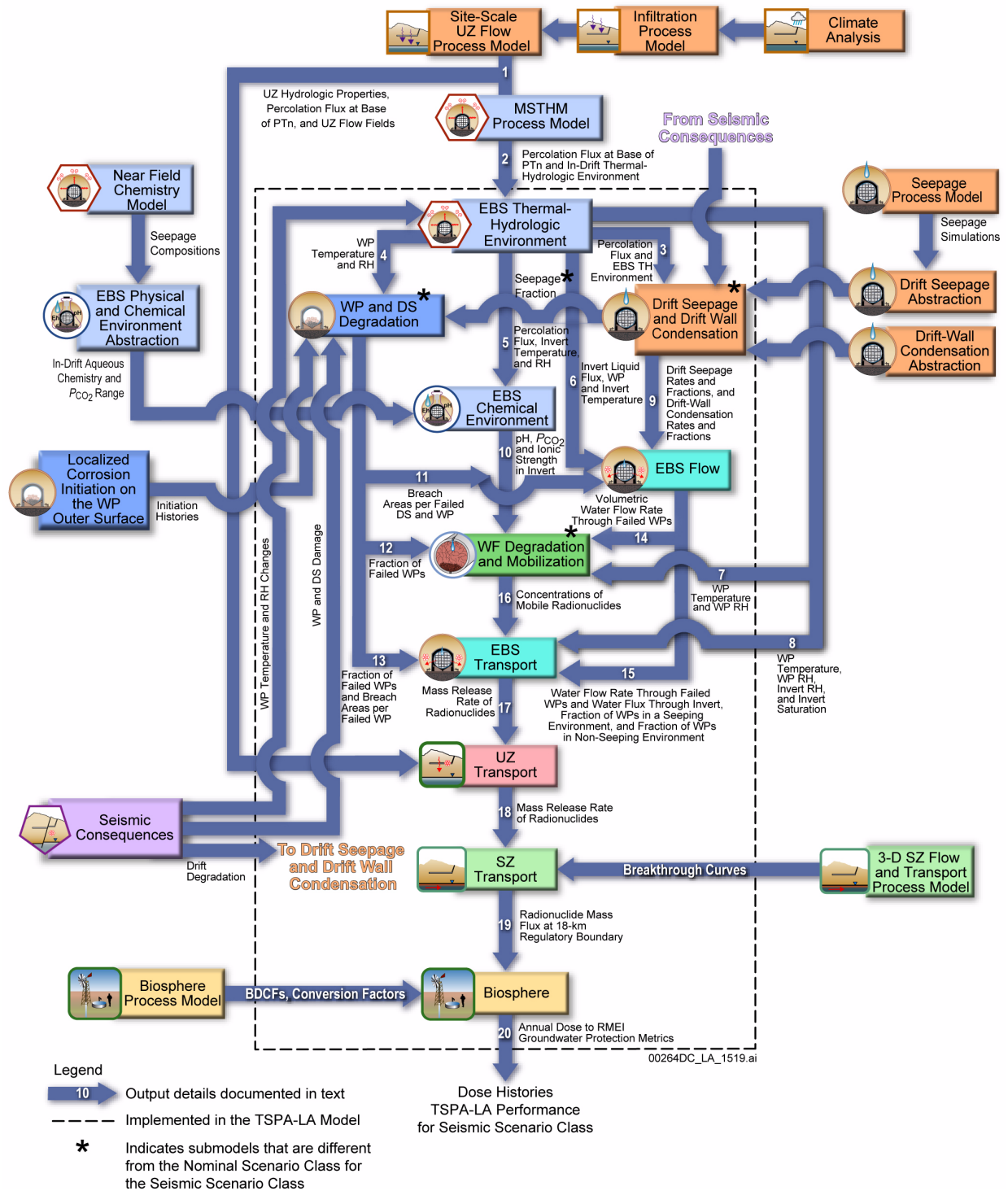
Source: SNL 2008a, Figure 6.1.4-5.

Figure 2.4-117. Information Transfer between the Model Components and Submodels of the TSPA
Seismic Scenario Class

Source: SNL 2008a, Figure 6.1.4-6.
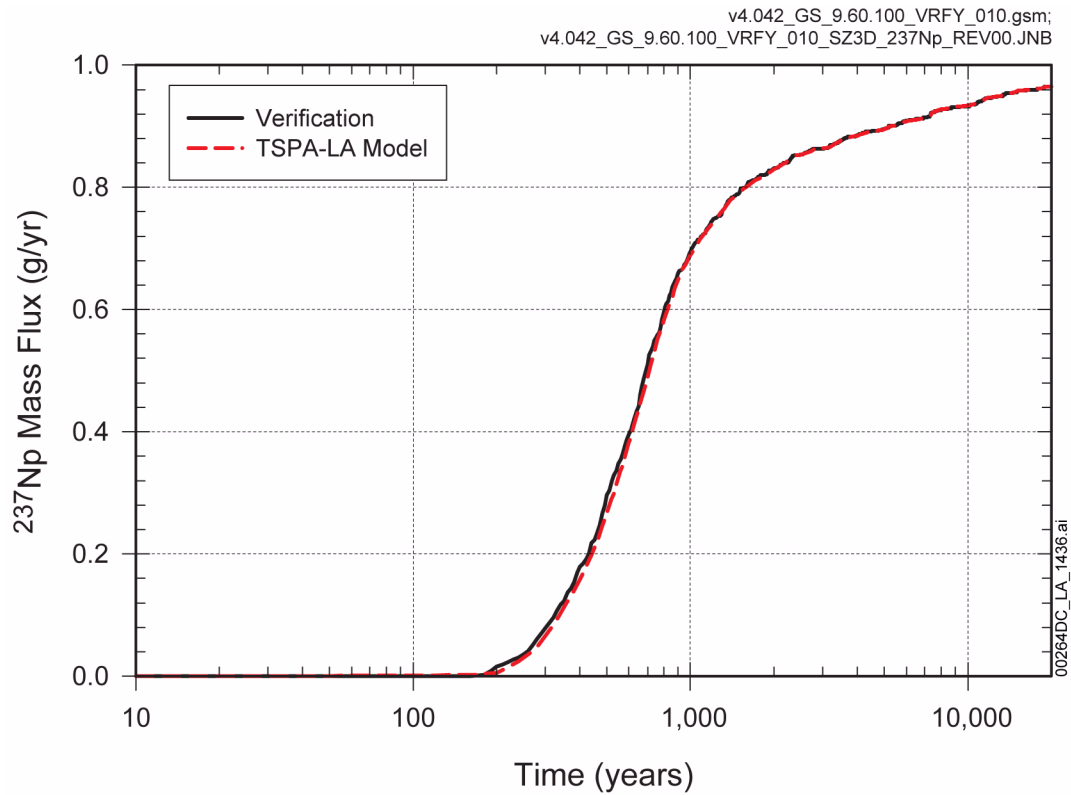
Figure 2.4-118. Comparison of the ^{237}Np Breakthrough Curve Using the SZ_Convolute Dynamic Link Library in the Verification of the Three-Dimensional Saturated Zone Flow and Transport Abstraction

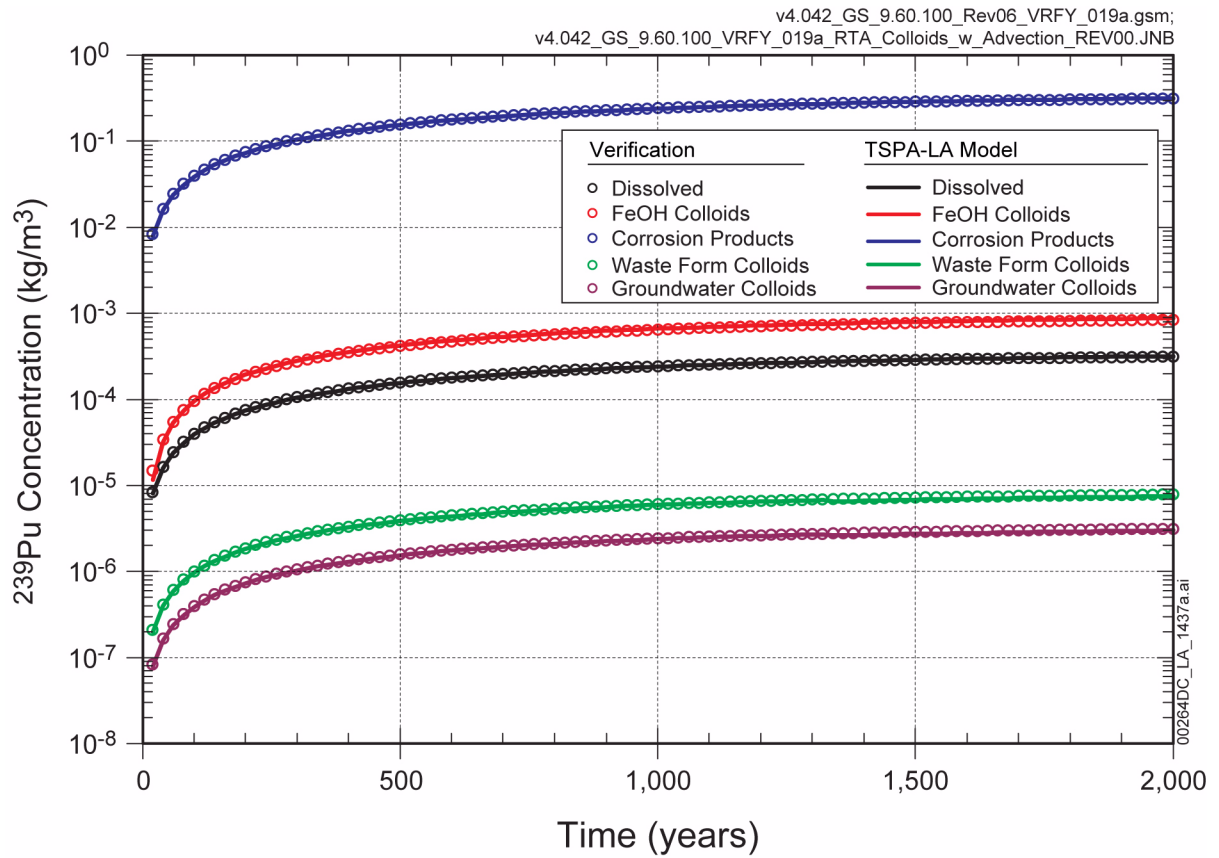Source: SNL 2008a, Figure 7.2-12.

Figure 2.4-119. Verification of the Dissolved and Colloidal Radionuclide Transport within the Engineered
Barrier System Transport Submodel for the Case with Advection and Diffusion

Source: SNL 2008a, Figure 7.2-9.

Figure 2.4-120. Verification of the Dissolve and Colloidal Radionuclide Transport within the Engineered
Barrier System Transport Submodel for the Case with Diffusion Only

Source: SNL 2008a, Figure 7.2-10.

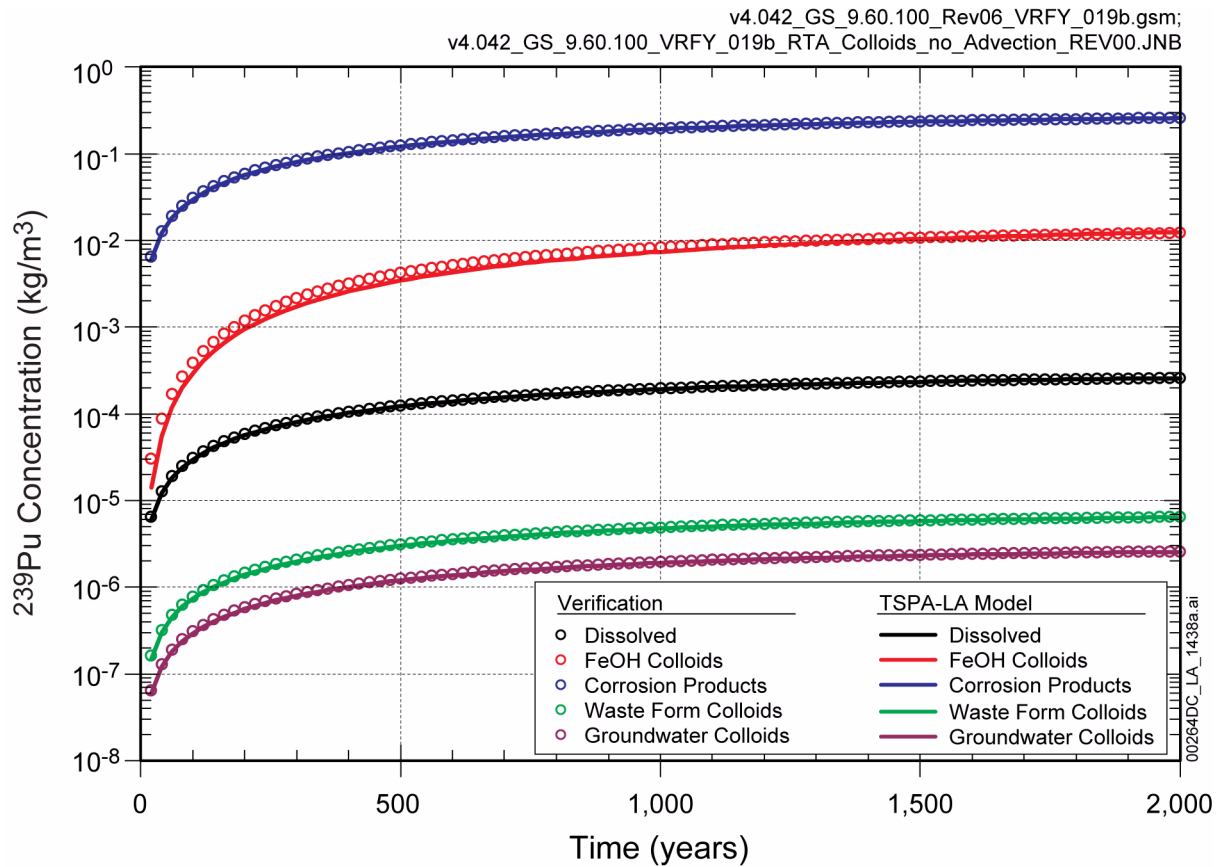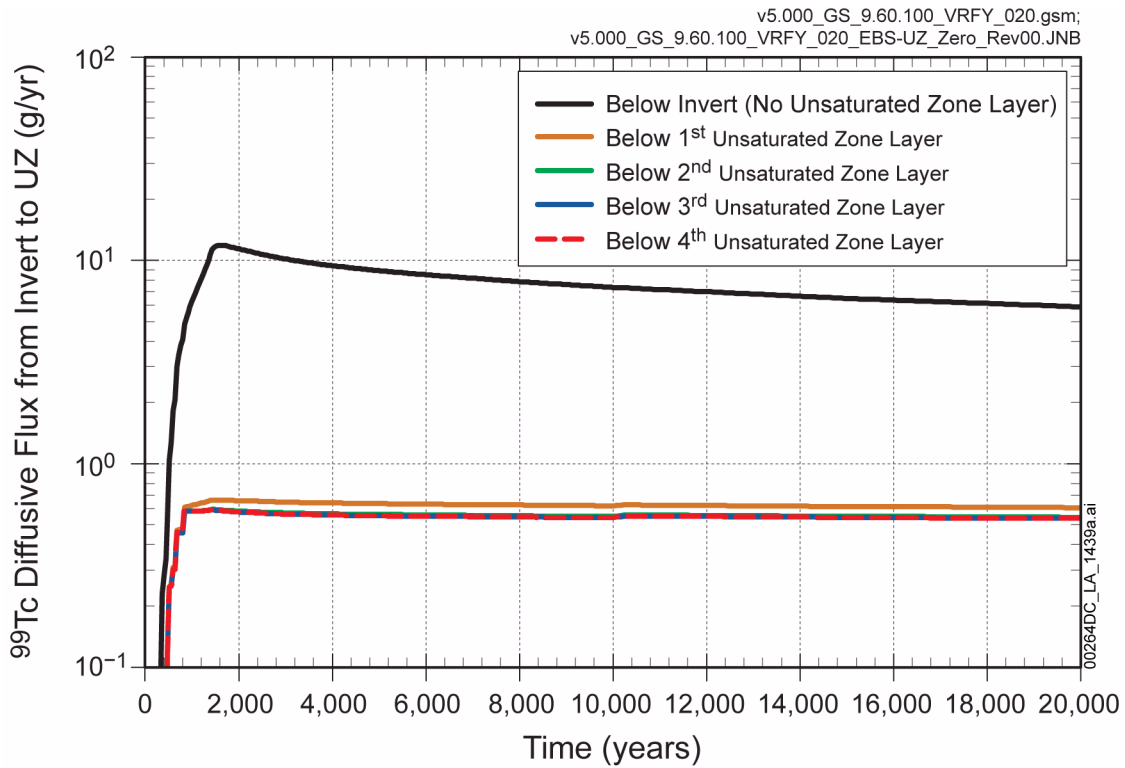Figure 2.4-121. Comparison of the Diffusive Flux of ^{99}Tc across the Engineered Barrier System– Unsaturated Zone Interface for Different Placement Locations of an Effective Zero-Concentration Boundary below the Invert

Source: SNL 2008a, Figure 7.2-16.
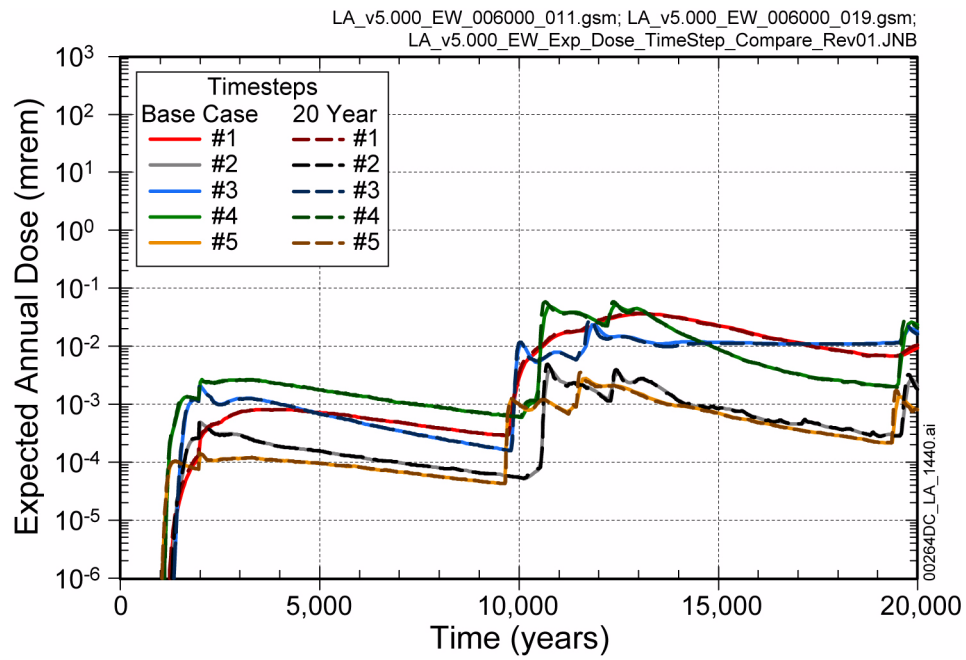
Figure 2.4-122. Expected Annual Dose from Early Failed Waste Packages for Base-Case and 20-Year Timestep Schemes

Source: SNL 2008a, Figure 7.3.3-2.
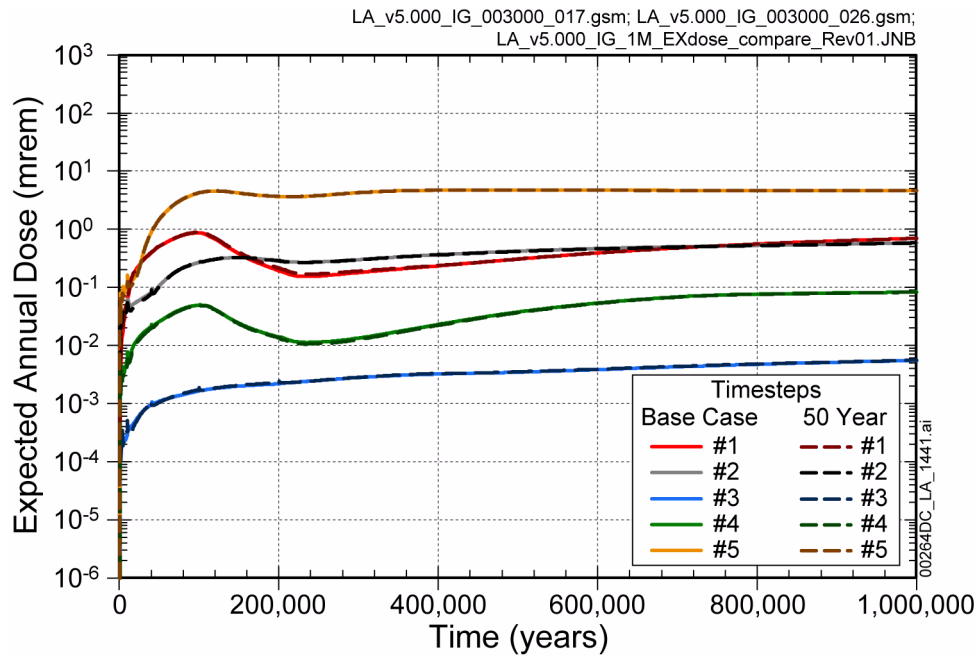
Figure 2.4-123. Expected Annual Dose from Igneous Intrusion for Base-Case and Alternate Timestep Schemes, for Five Epistemic Realizations

Source: SNL 2008a, Figure 7.3.3-5.
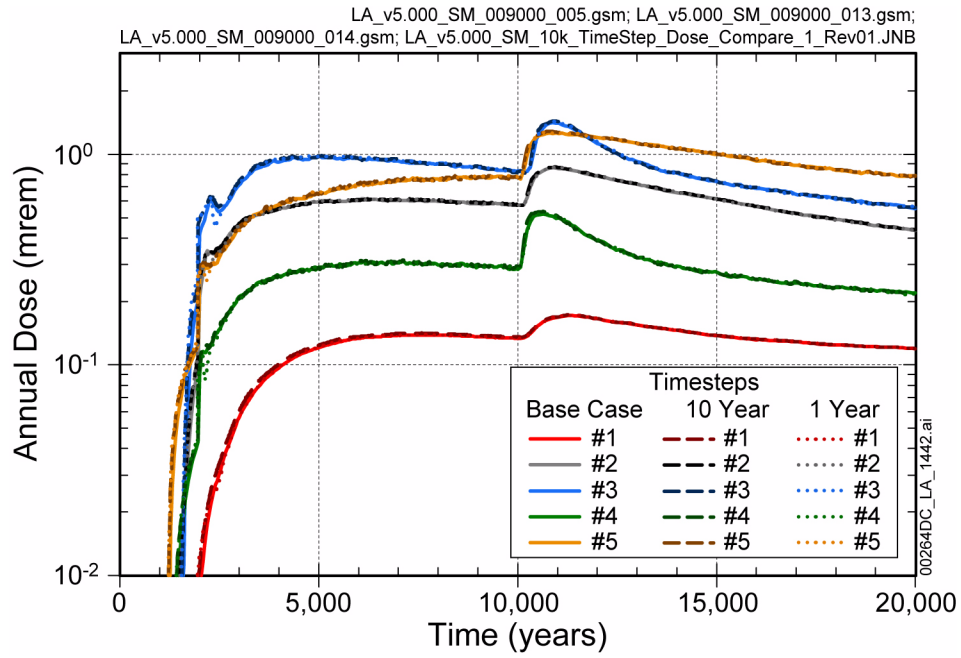
Figure 2.4-124. Annual Dose from a Seismic Ground Motion Event at 1,000 Years with Damage Fraction Equal to 10^{-6}, for Three Timestep Schemes

Source: SNL 2008a, Figure 7.3.3-8.
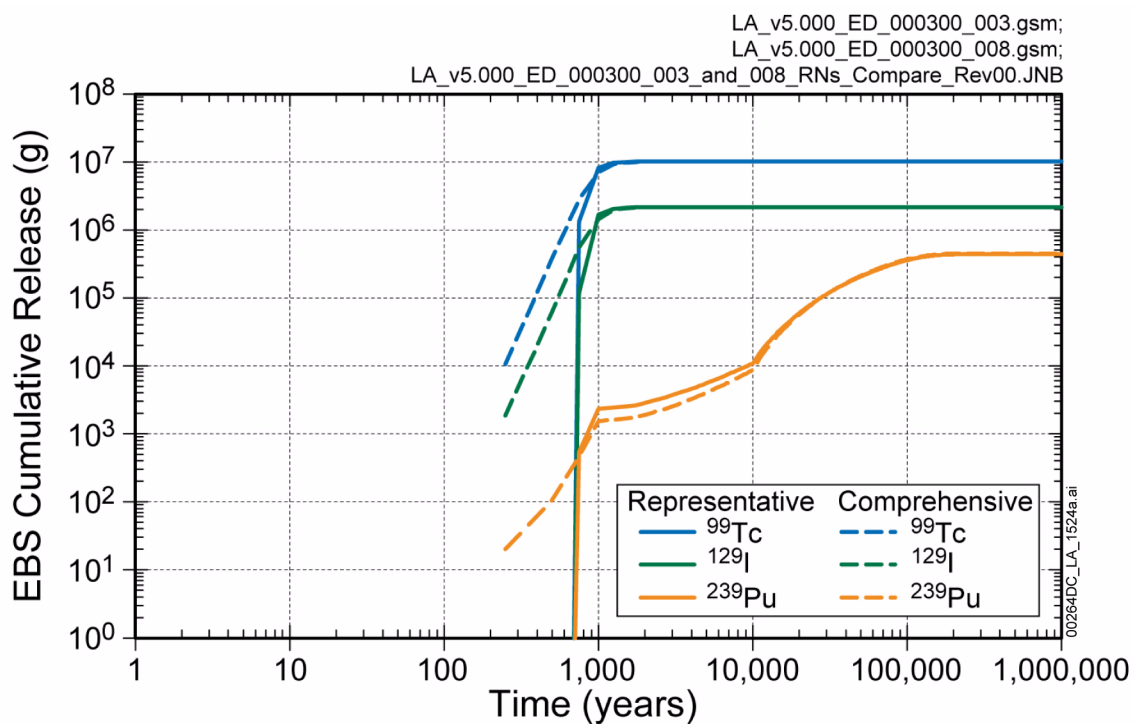
Figure 2.4-125. Comparison of the Representative and Comprehensive Thermal Hydrologic Data Sets for Engineered Barrier System Releases of ^{99}Tc, ^{129}I, and ^{239}Pu for the Drip Shield Early Failure Modeling Case, 10th Percentile Infiltration Scenario, Low Host-Rock Thermal Conductivity, Percolation Subregion 3

Source: SNL 2008a, Figure 7.3.4-2(a).
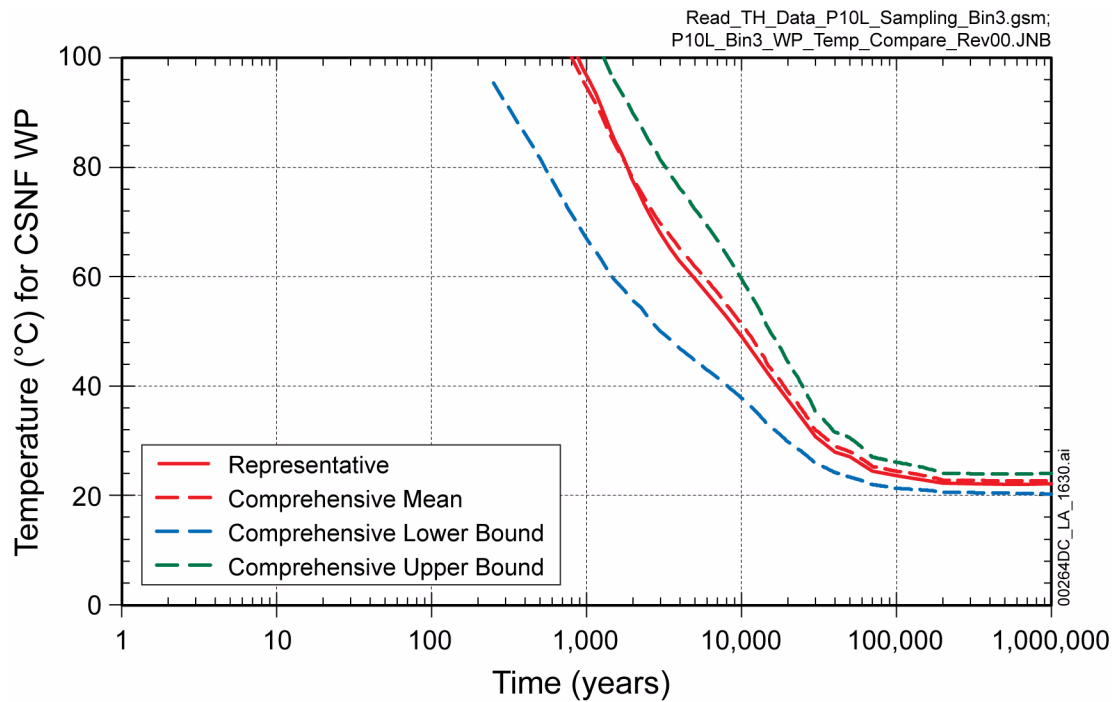
Figure 2.4-126. Comparison of the Representative and Comprehensive Thermal Hydrologic Data Sets for Time when the Commercial SNF Waste Package Temperature Drops Below Boiling for the Drip Shield Early Failure Modeling Case, 10th Percentile Percolation Flux, Low Host-Rock Thermal Conductivity, Percolation Subregion 3

Source: SNL 2008a, Figure 7.3.4-2(b).
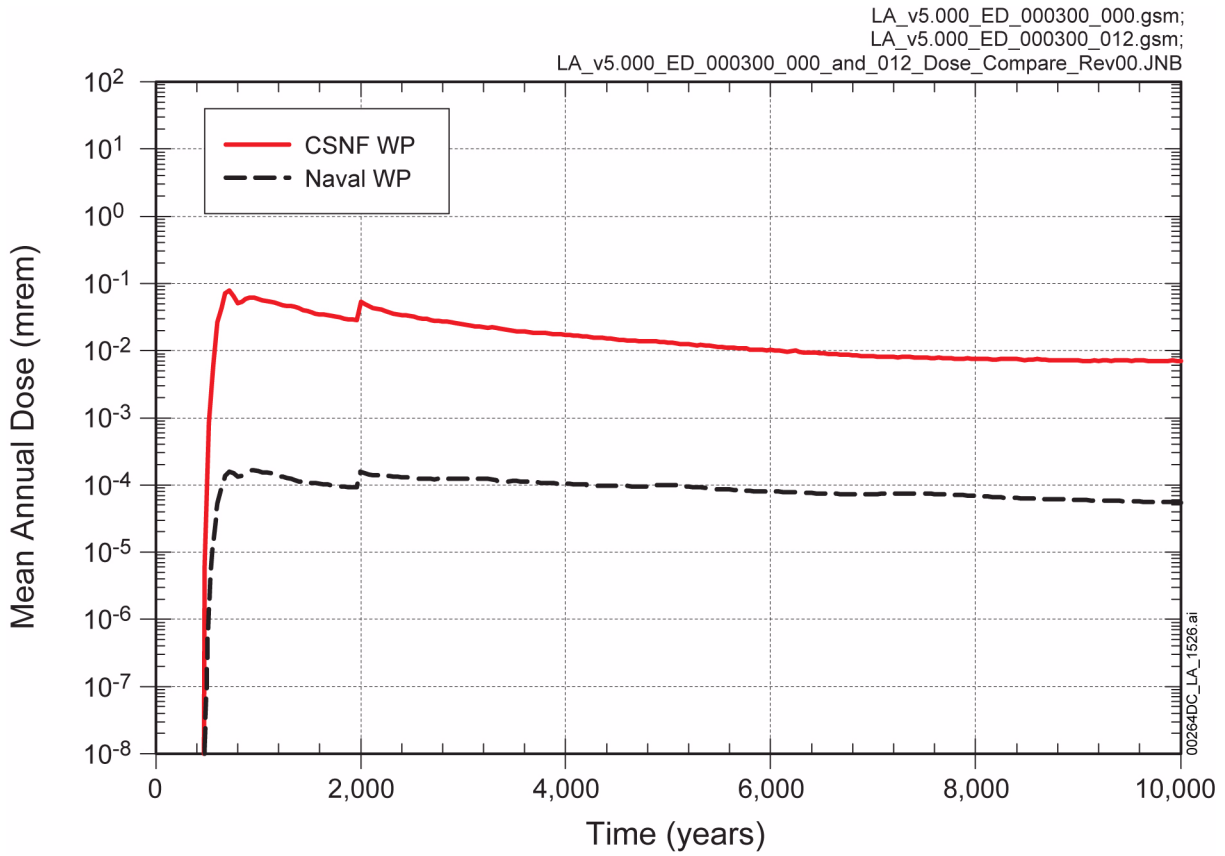
Figure 2.4-127. Comparison of Mean Annual Dose for a Single Commercial SNF Waste Package and a
Single Waste Package with a Naval Source Term for the Drip Shield Early Failure
Modeling Case

Source: SNL 2008a, Figure 7.5-4.
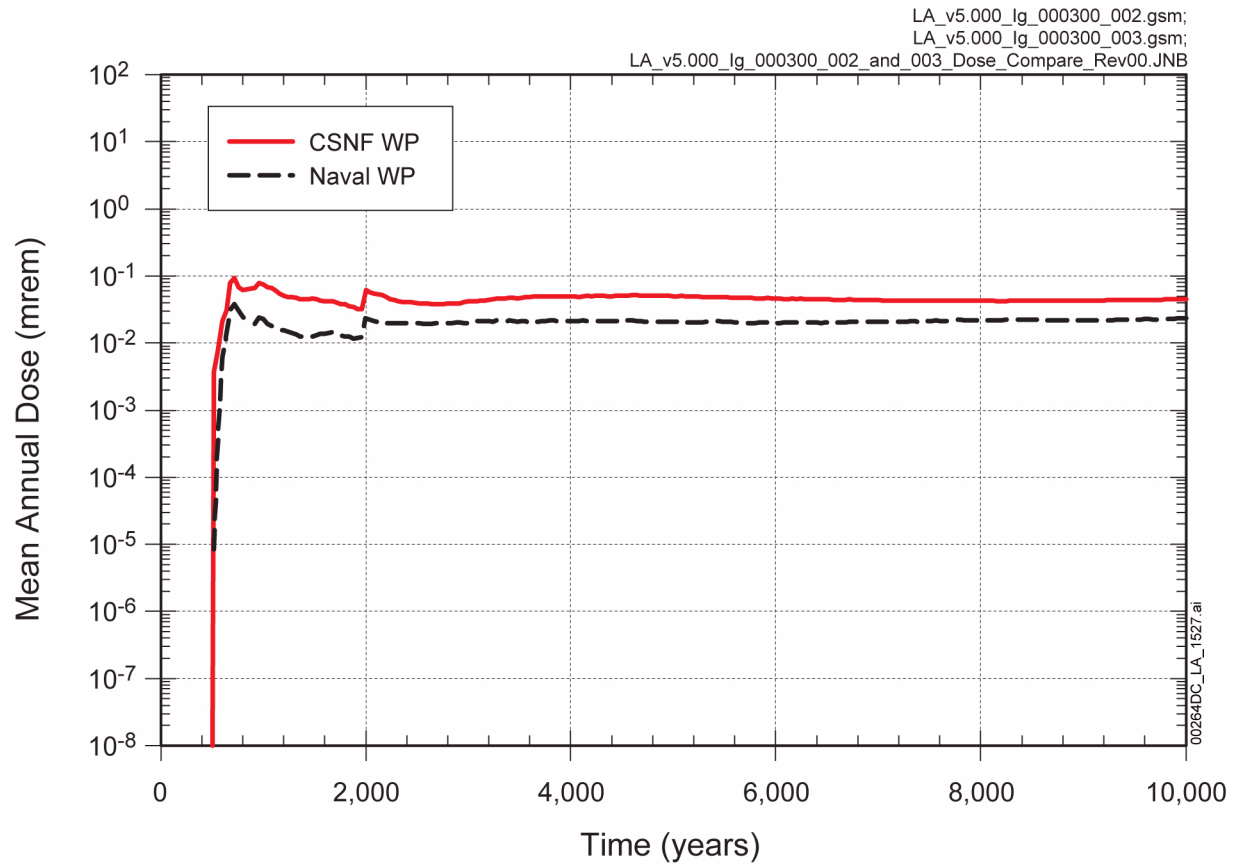
Figure 2.4-128. Comparison of Mean Annual Dose for a Single Commercial SNF Waste Package and Single Waste Package with a Naval Source Term for the Igneous Intrusion Modeling Case

Source: SNL 2008a, Figure 7.5-5.
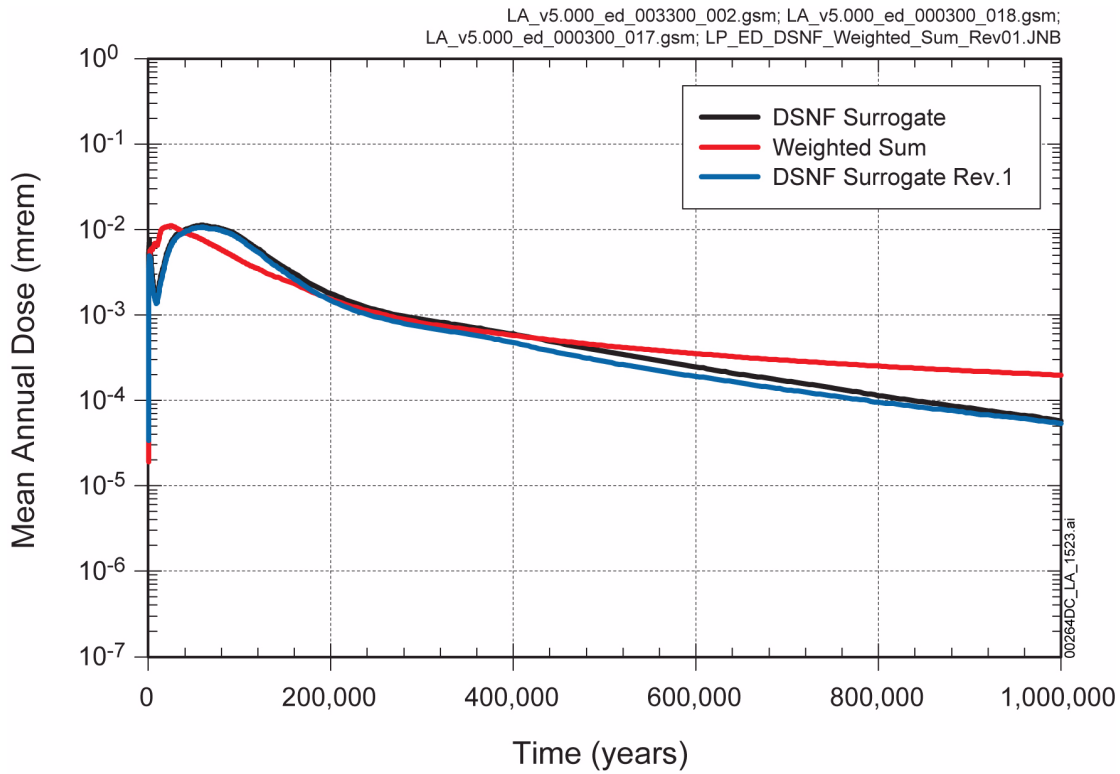
Figure 2.4-129. Comparison of the Weighted Sum (Weighted by the Number of Packages per Category) of the Dose from One Waste Package Failure of Categories 2 to 11 DOE SNF with One Waste Package Failure of DOE SNF Surrogate and Revision 1 DOE SNF Surrogate

Source: SNL 2008a, Figure 7.5-20.
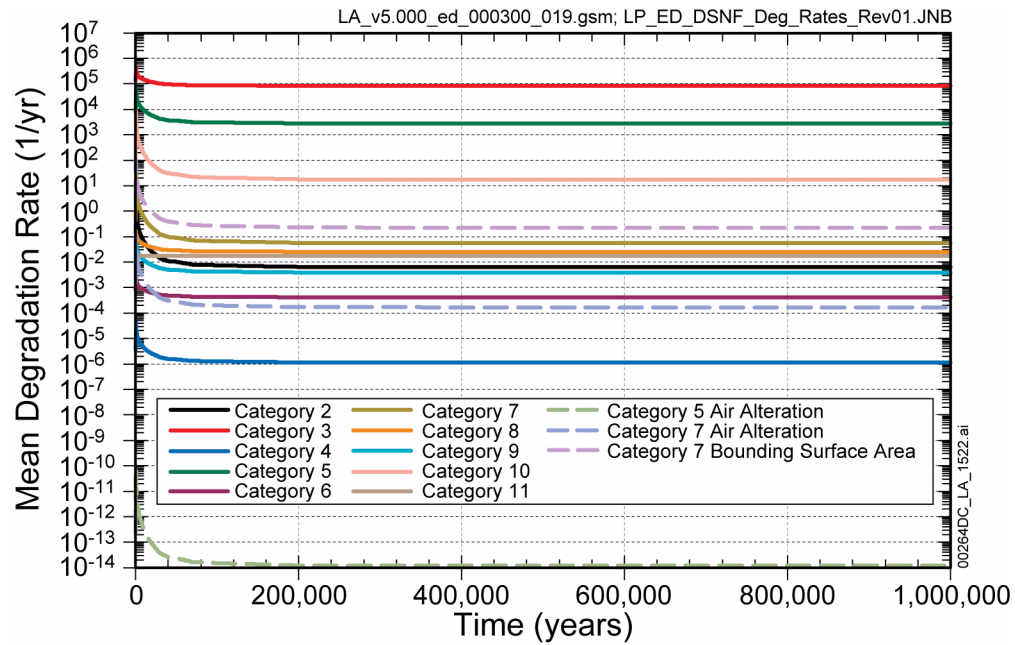
Figure 2.4-130. Comparison of Spent Fuel Degradation Rates for Categories 2 to 11, Air Alteration Rates for Categories 5 and 7, and Category 7 Bounding Surface Area of DOE SNF

Source: SNL 2008a, Figure 7.5-9.
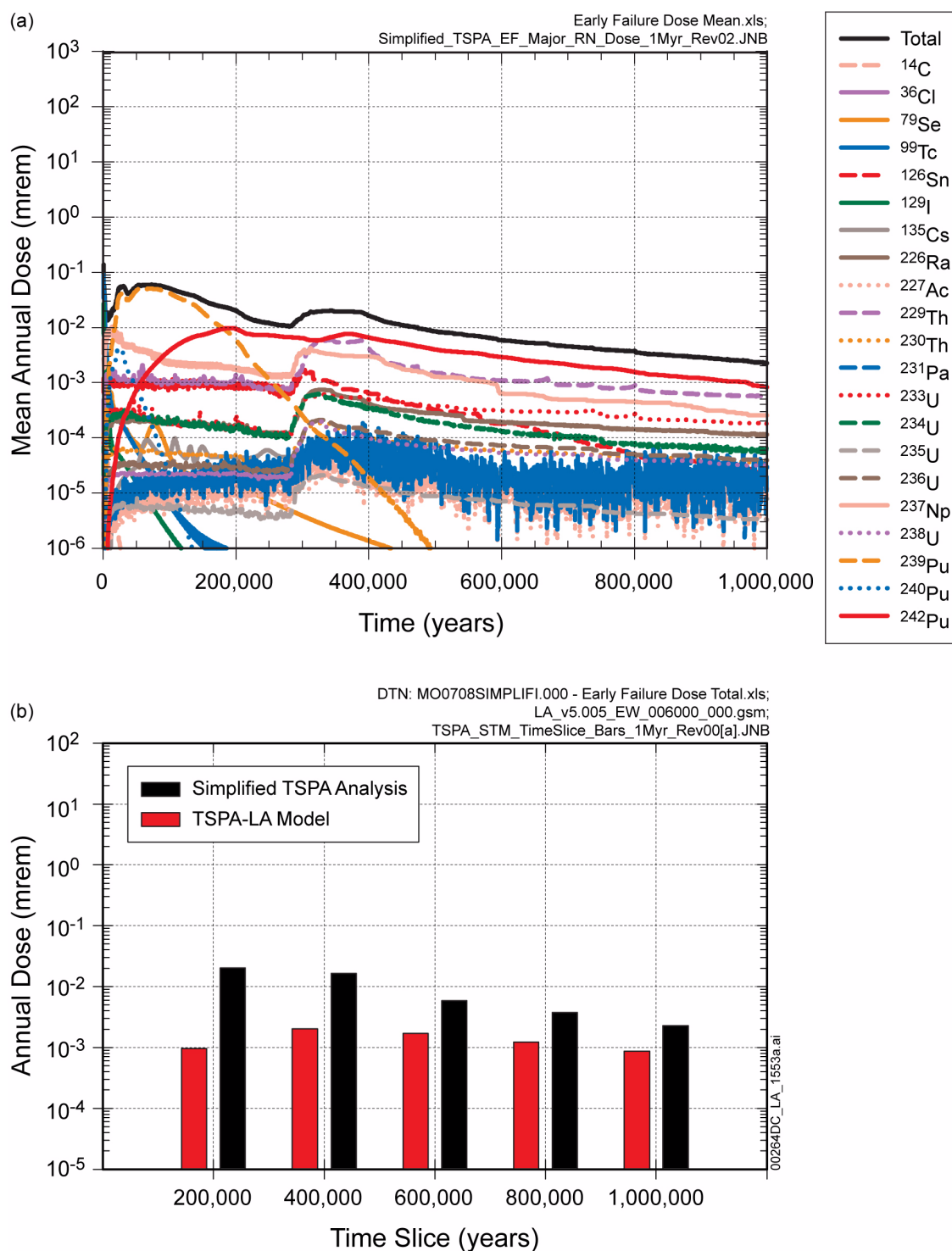
Figure 2.4-131. (a) Total Mean Annual Dose and Mean Annual Dose for Individual Radionuclides for the Simplified TSPA Analysis Waste Package Early Failure Modeling Case and (b) Time-Slice Comparison of the Simplified TSPA Analysis Results against the TSPA Model Results for the Waste Package Early Failure Modeling Case

Source: SNL 2008a, Figures 7.7.2-1 and 7.7.2-3[a].
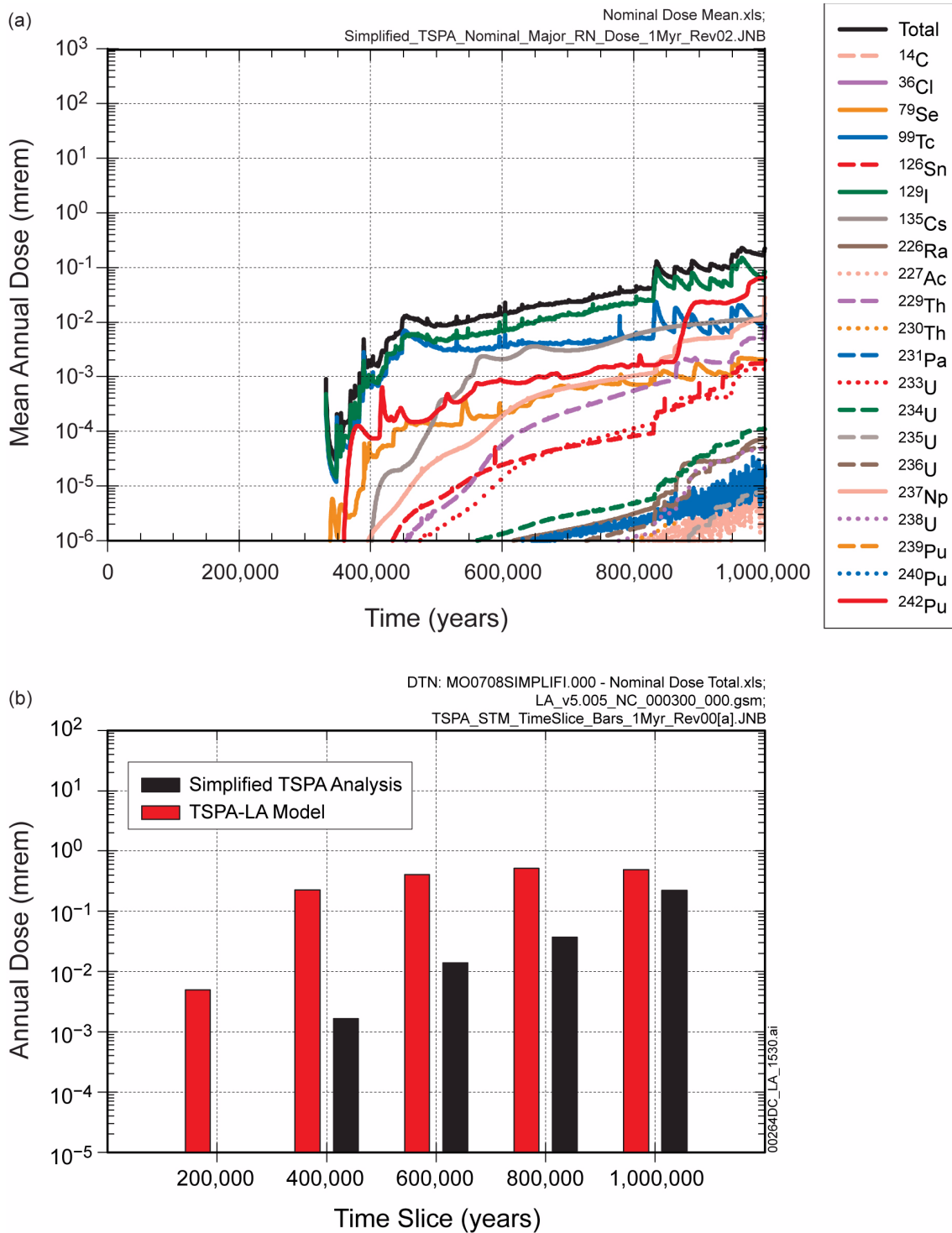
Figure 2.4-132. (a) Total Mean Annual Dose and Mean Annual Dose for Individual Radionuclides for the Simplified TSPA Analysis Nominal Modeling Case and (b) Time-Slice Comparison of the Simplified TSPA Analysis Results against the TSPA Model Results for the Nominal Modeling Case

Source: SNL 2008a, Figures 7.7.2-4 and 7.7.2-6[a].
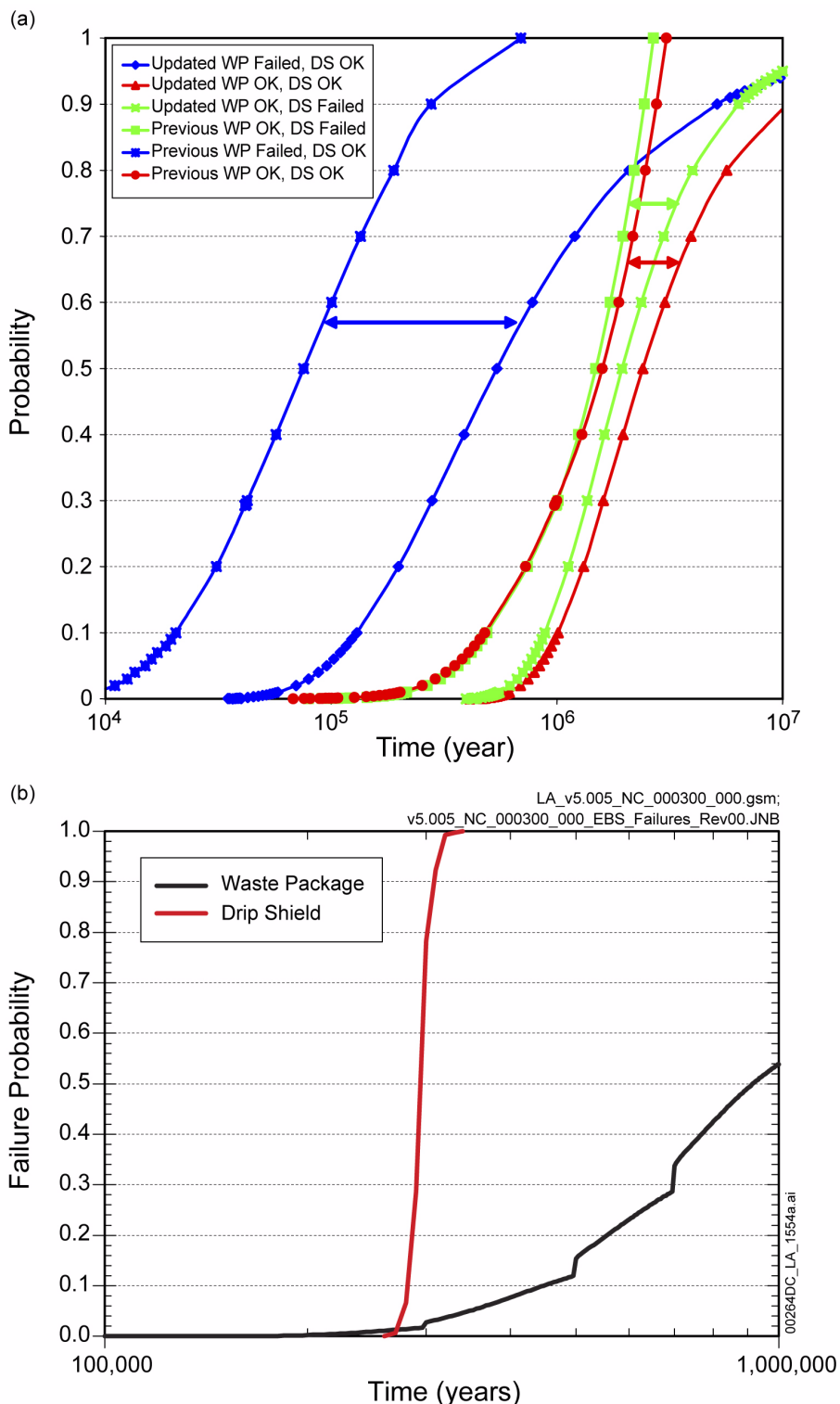
Figure 2.4-133. Comparison of (a) the EPRI Performance Assessment Waste Package and Drip Shield
Probability of Failure with (b) the TSPA Nominal Scenario Class Waste Package and Drip
Shield Probability of Failure

Source: Apted and Ross 2005, Figure 5-7; SNL 2008a, Figure 7.7.3-2[a].
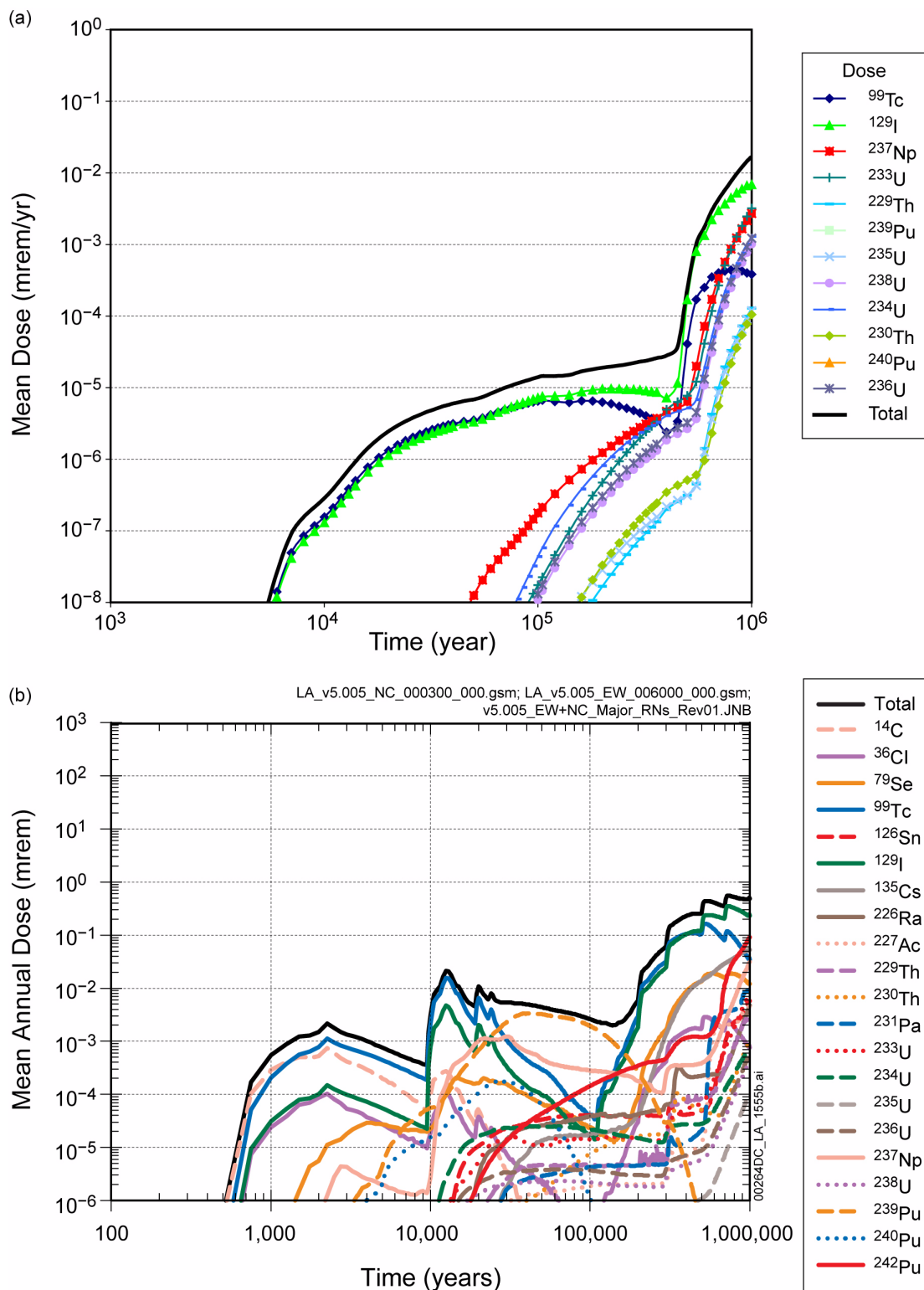
Figure 2.4-134. Comparison of (a) the Mean Annual Doses for the EPRI Performance Assessment Nominal Scenario with (b) the Mean Annual Doses for the Combined TSPA Nominal Modeling Case and TSPA Waste Package Early Failure Modeling Case

Source: Apted and Ross 2005, Figure 5-10; SNL 2008a, Figure 7.7.3-3[a].

(a)

LA_v5.005_10Kyr_Total_Dose_Rev00.JNB;LA_v5.000_10kyr_Total_Dose_Rev00.JNB;
LA_v10.016_10kyr_Total_Dose_Rev00.JNB; LA_TSPA_PMA_Compare_10k_Total_Dose_Rev02.JNB

(b)

LA_v5.005_1Myr_Total_Dose_Rev00.JNB;LA_v5.000_1Myr_Total_Dose_Rev00.JNB;
LA_v10.016_1Myr_Total_Dose_Rev00.JNB; TSPA_PMA_Compare_1M_Total_Dose_Rev02.JNB

Figure 2.4-135. Comparison of Total Mean Annual Dose for TSPA Model Version 5.000, Version 5.005, and the Performance Margin Analysis for: (a) 10,000 Years and (b) 1 Million Years after Repository Closure

Source: SNL 2008a, Figure 7.7.4-7[a].
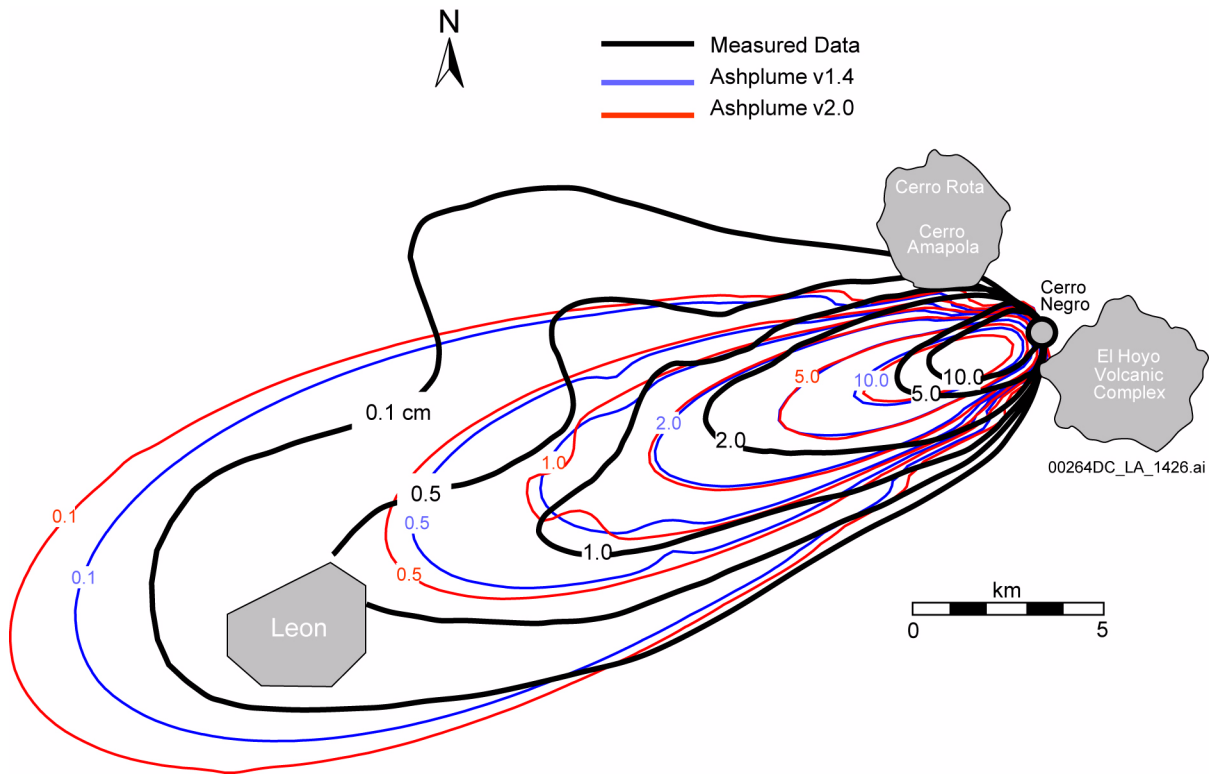
Figure 2.4-136. Comparison of Ash Fall at Cerro Negro with ASHPLUME Simulated Results

Source: SNL 2008a, Figure 7.8-1.

(a)

LA_v5.000_NC_000300_000.gsm;
NO_1M_00_300_PRCC_HT_NCSFL_NCDFL.JNB

(b)

LA_v5.000_NC_000300_000.gsm; NO_1M_00_300_NCSFL.mview;
NO_1M_00_300_PRCC_HT_NCSFL_NCDFL.JNB

(c)

Step[a]	NCFL: 600K Years			NCFL: 800K Years			NCFL: 1M Years		
	Variable[b]	R^{2c}	$SRRC^2$	Variable	R^2	SRRC	Variable	R^2	SRRC
1	WDGCA22	0.86	−0.96	WDGCA22	0.90	−0.98	WDGCA22	0.91	−0.98
2	WDZOLID	0.88	0.13	WDZOLID	0.92	0.14	WDZOLID	0.92	0.10
3	INFIL	0.90	−0.15	INFIL	0.94	−0.13	INFIL	0.93	−0.12
4	THERMCON	0.91	−0.13	THERMCON	0.95	−0.11	THERMCON	0.94	−0.10
5	WDNSCC	0.92	−0.09	SCCTHR	0.95	−0.08	WDNSCC	0.95	−0.09
6	SCCTHR	0.93	−0.08	WDGCUA22	0.96	0.08	WDGCUA22	0.96	0.09
7	WDGCUA22	0.93	0.06	WDNSCC	0.96	−0.05	SCCTHR	0.96	−0.05
8	SEEPPRMN	0.93	0.06	PH2DHLNS	0.96	−0.03			

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model

(d)

LA_v5.000_NC_000300_000.gsm; NO_1M_00_300_NCSFL.mview;
NO_1M_00_300_Scatter_NCSFL_NCDFL.JNB

(e)

LA_v5.000_NC_000300_000.gsm; NO_1M_00_300_NCSFL.mview;
NO_1M_00_300_Scatter_NCSFL_NCDFL.JNB
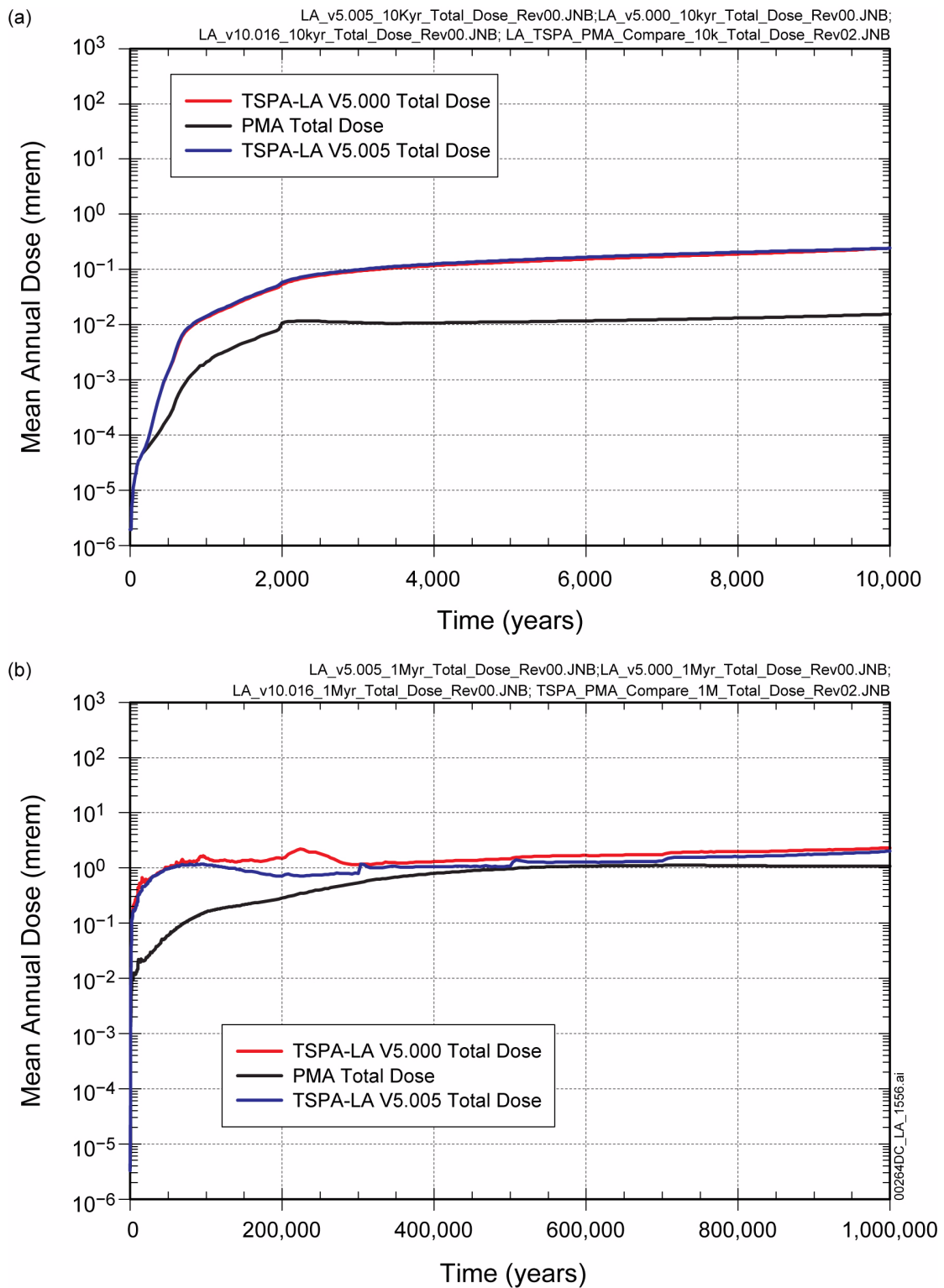
00264DC_LA_1633.ai

Figure 2.4-137. Illustration of Uncertainty and Sensitivity Analysis Results for Time-Dependent Number of Failed Commercial SNF Waste Packages in Percolation Subregion 3 for the Nominal Modeling Case: (a) NCSFL for All (i.e., 300) Sample Elements, (b) Partial Rank Correlation Coefficients for NCSFL, (c) Stepwise Rank Regressions for NCSFL at 600,000, 800,000, and 1 Million Years, and (d, e) Scatterplots for (WDGA22, NCSFL) at 600,000 and 1 Million Years

Source: SNL 2008a, Appendix K, Figure K2-1.

Figure 2.4-138. Dose to RMEI (*DOSTOT,* mrem/yr) for All Radioactive Species for the Nominal Modeling Case: (a) *DOSTOT* for All (i.e., 300) Sample Elements, (b) *DOSTOT* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *DOSTOT*

Source: Modified from SNL 2008a, Appendix K, Figure K4.5-1[a].

(a)

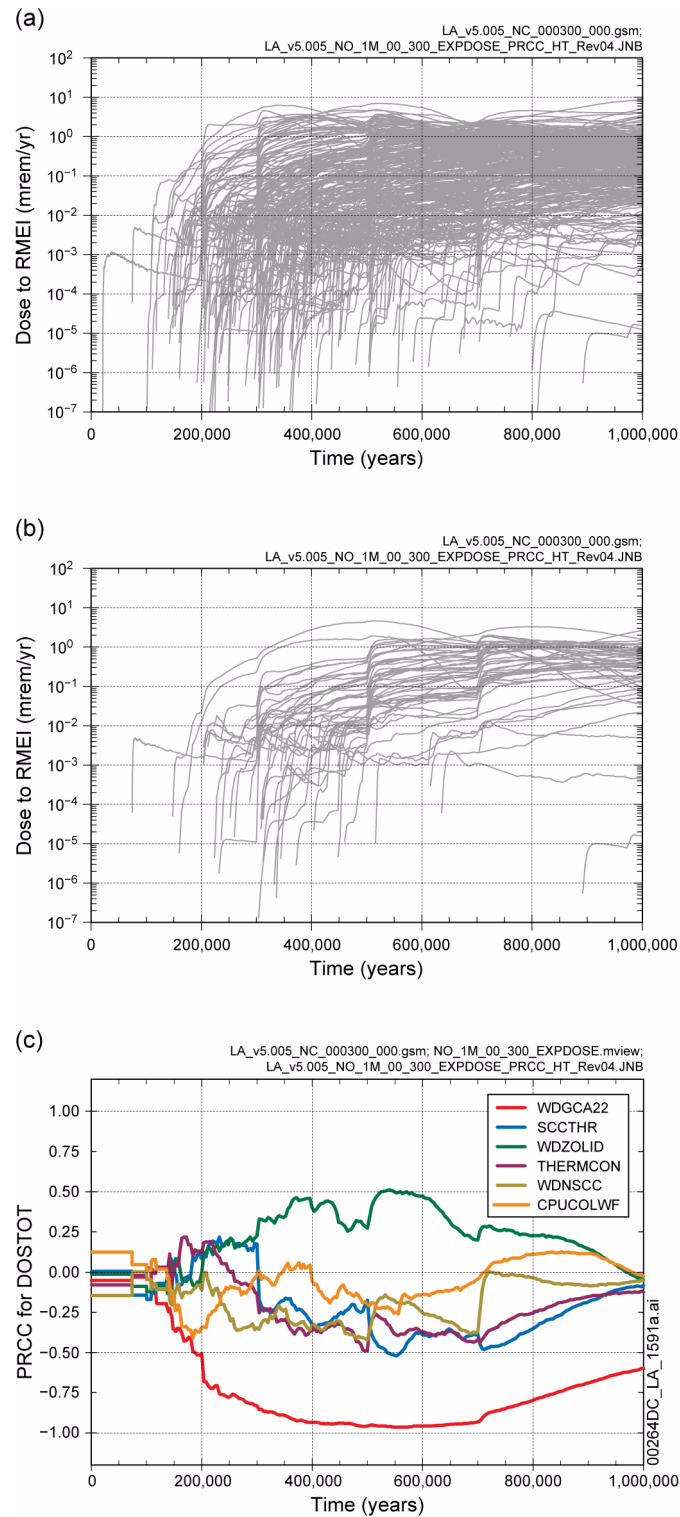| Step[a]	DOSTOT: 400,000 Years			DOSTOT: 600,000 Years			DOSTOT: 800,000 Years		
	Variable[b]	R^{2c}	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	WDGCA22	0.78	−0.90	WDGCA22	0.85	−0.94	WDGCA22	0.63	−0.80
2	WDZOLID	0.81	0.16	WDZOLID	0.87	0.14	WDZOLID	0.65	0.16
3	WDNSCC	0.82	−0.12	THERMCON	0.88	−0.10	MICI129	0.67	0.13
4	THERMCON	0.83	−0.13	INFIL	0.89	−0.10	SCCTHR	0.68	−0.10
5	INFIL	0.84	−0.10	SCCTHR	0.90	−0.09			
6	SCCTHR	0.85	−0.09	WDNSCC	0.91	−0.08			
7	WDGCUA22	0.85	0.07	CORRATSS	0.91	−0.07			
8	WDLCRATE	0.86	0.06	WDGCUA22	0.92	0.08			
9				MICTC99	0.92	0.07			
10				DTDRHUNC	0.92	0.04			
11				CSNFMASS	0.92	0.04			

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model

Figure 2.4-139. Stepwise Rank Regression Analyses and Selected Scatterplots for Dose to RMEI (*DOSTOT*, mrem/yr) for All Radioactive Species for the Nominal Modeling Case: (a) Regressions for *DOSTOT* at 400,000, 600,000, and 800,000 Years, and (b, c, d, e) Scatterplots for *DOSTOT* at 600,000 Years

Source: SNL 2008a, Appendix K, Figure K4.5-2[a].

Figure 2.4-140. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species for the Early Drip Shield Failure Modeling Case: (a) *EXPDOSE* for All (i.e., 300) Sample Elements, (b) EXPDOSE for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K5.7.1-1[a]

(a)

Step[a]	EXPDOSE: 3,000 Years			EXPDOSE: 5,000 Years			EXPDOSE: 10,000 Years		
	Variable[b]	R^2[c]	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	PROBDSEF	0.70	0.80	PROBDSEF	0.71	0.81	PROBDSEF	0.63	0.79
2	SEEPUNC	0.77	0.24	SEEPUNC	0.78	0.24	INFIL	0.69	0.23
3	SEEPPRM	0.81	−0.22	SEEPPRM	0.81	−0.19	SEEPUNC	0.73	0.23
4	MICTC99	0.83	0.15	INFIL	0.83	0.13	SEEPPRM	0.77	−0.21
5	INFIL	0.85	0.12	MICTC99	0.84	0.09	ALPHAL	0.79	−0.13
6	ALPHAL	0.86	−0.08	ALPHAL	0.85	−0.11	SZCOLRAL	0.80	−0.12
7	MICNP237	0.87	0.07	MICNP237	0.86	0.09	MICPU239	0.81	0.09
8	CSNFMASS	0.87	0.07				CPUCOLWF	0.82	0.08
9	GP4NO3	0.87	0.07				SEEPPRMN	0.82	−0.08
10							RHMU0	0.83	0.08
11							SMECSA	0.83	0.08
12							SZGWSPDM	0.84	0.07
13							UZFAG4	0.84	−0.07
14							EP1LOWPU	0.85	0.06

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
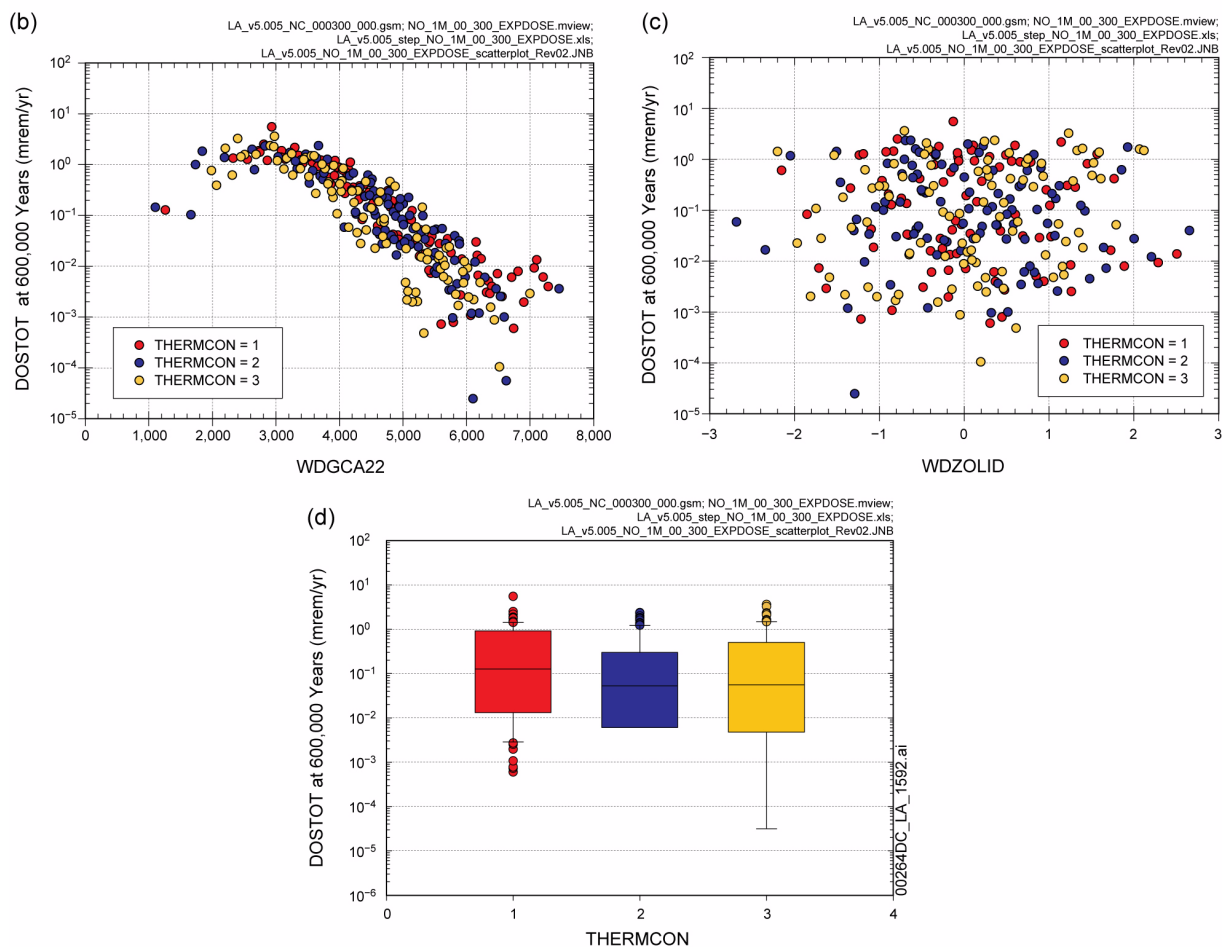d: Standardized rank regression coefficients (SRRCs) in final regression model

Figure 2.4-141. Stepwise Rank Regression Analyses and Selected Scatterplots and Boxplots for Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species for the Early Drip Shield Failure Modeling Case: (a) Regressions for *EXPDOSE* at 3,000, 5,000, and 10,000 Years, and (b, c, d) Scatterplots and Boxplots for *EXPDOSE* at 10,000 Years

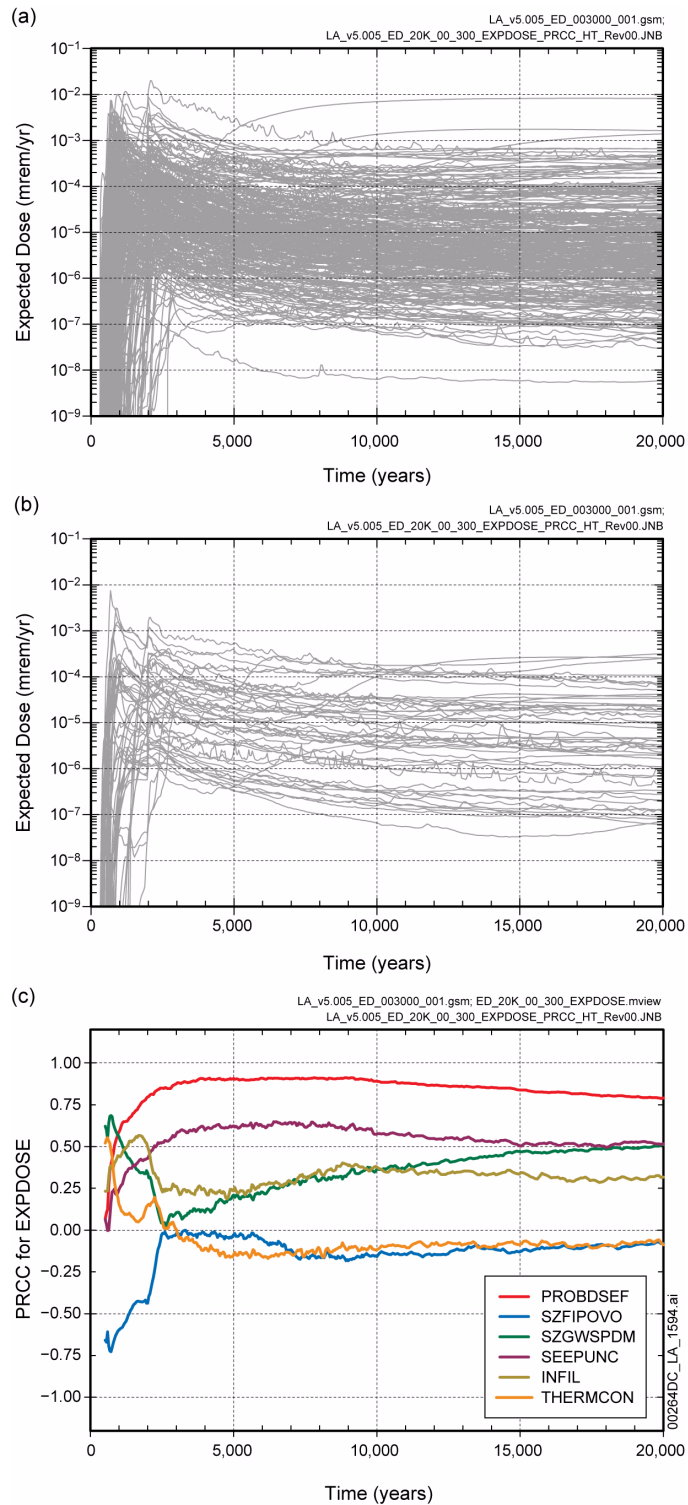Source: SNL 2008a, Appendix K, Figure K5.7.1-2[a].

Figure 2.4-142. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive Species for the Early Drip Shield Failure Modeling Case: (a) *EXPDOSE* for all (i.e., 300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K5.7.1-3[a]

(a)

Step[a]	EXPDOSE: 50,000 Years			EXPDOSE: 200,000 Years			EXPDOSE: 500,000 Years		
	Variable[b]	R^{2c}	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	PROBDSEF	0.47	0.71	PROBDSEF	0.55	0.76	PROBDSEF	0.52	0.73
2	SZGWSPDM	0.55	0.29	INFIL	0.63	0.26	INFIL	0.63	0.31
3	INFIL	0.64	0.28	SEEPPRM	0.68	−0.23	SEEPPRM	0.68	−0.21
4	SEEPPRM	0.69	−0.26	SZGWSPDM	0.72	0.21	EP1LOWPU	0.71	0.18
5	EP1LOWPU	0.73	0.20	SEEPUNC	0.77	0.23	SEEPUNC	0.75	0.20
6	SEEPUNC	0.77	0.20	EP1LOWPU	0.79	0.15	SZGWSPDM	0.78	0.15
7	MICPU239	0.78	0.10	MICPU239	0.80	0.13	GOESITED	0.79	−0.12
8	SEEPPRMN	0.78	−0.08	GOESITED	0.82	−0.11	MICPU239	0.81	0.11
9	SZCOLRAL	0.79	−0.10	SEEPPRMN	0.82	−0.07	PHCSS	0.82	0.11
10	PHCSS	0.80	−0.08	HFOSA	0.83	−0.09	SEEPPRMN	0.82	−0.08
11	SZDIFCVO	0.81	−0.10	SZFISPVO	0.84	0.10	EP1LOWNU	0.83	0.11
12	SZFISPVO	0.81	0.10	SZDIFCVO	0.84	−0.09	ALPHAL	0.84	−0.10
13	ALPHAL	0.82	−0.07	ALPHAL	0.85	−0.09	UZFAG4	0.85	−0.07
14				EP1LOWNU	0.85	0.08	SZFISPVO	0.85	0.10
15				SZCONCOL	0.86	0.07	SZDIFCVO	0.86	−0.09
16				SZCOLRVO	0.86	0.06	HFOSA	0.87	−0.08

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model
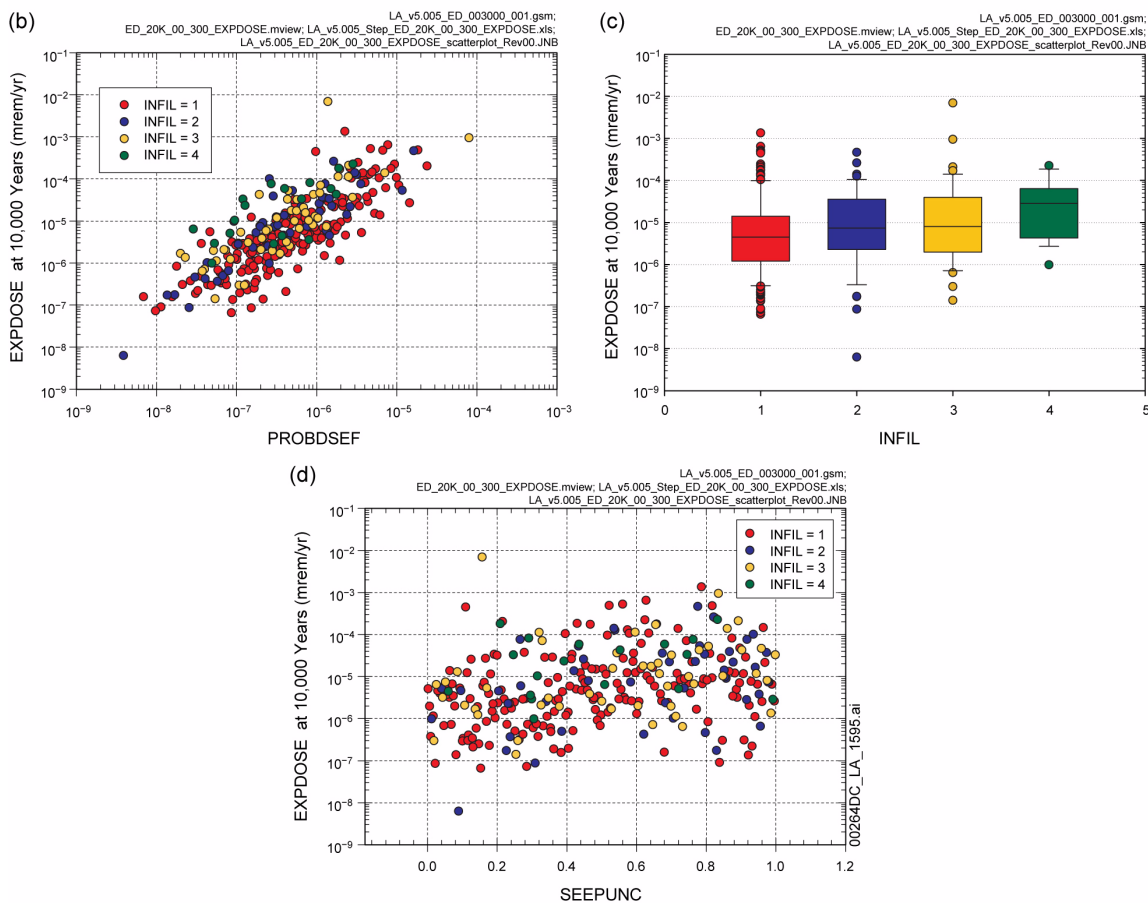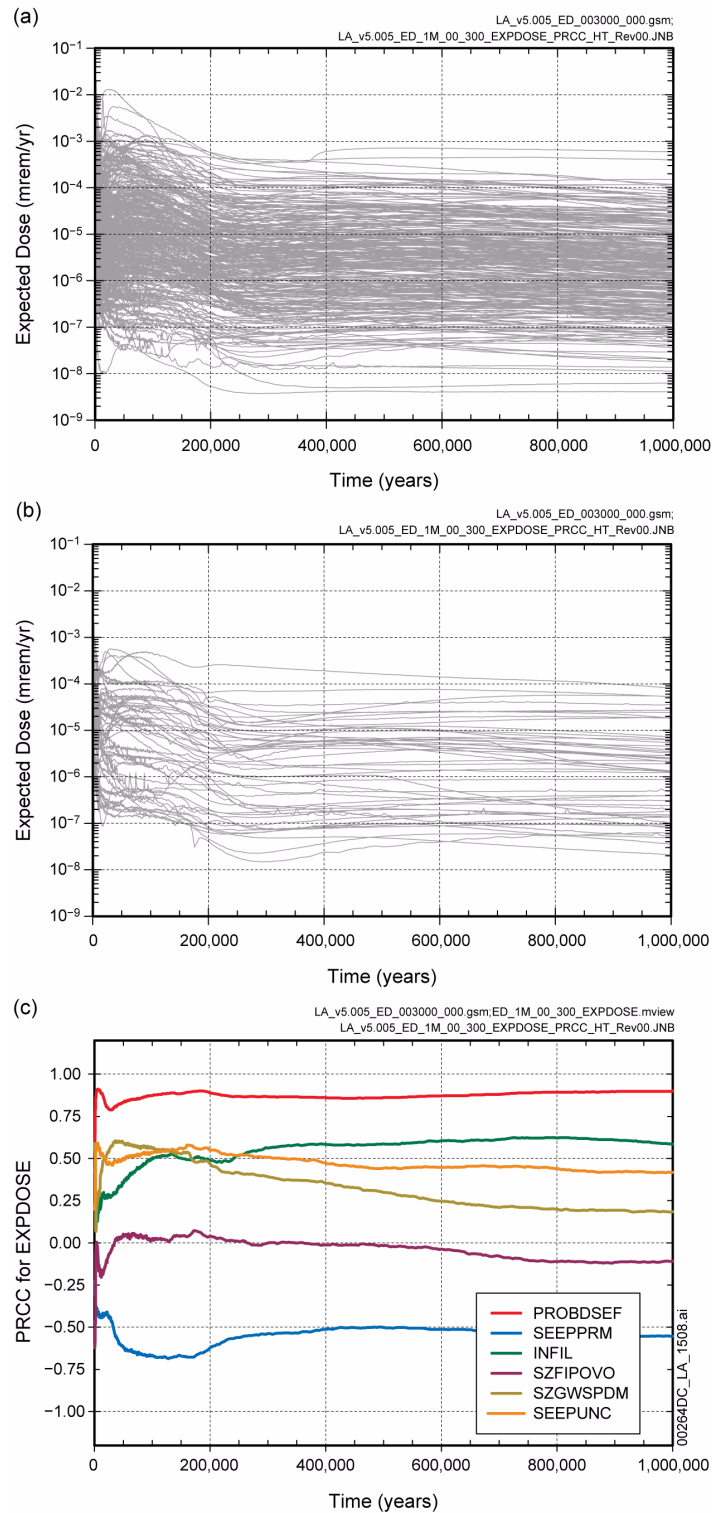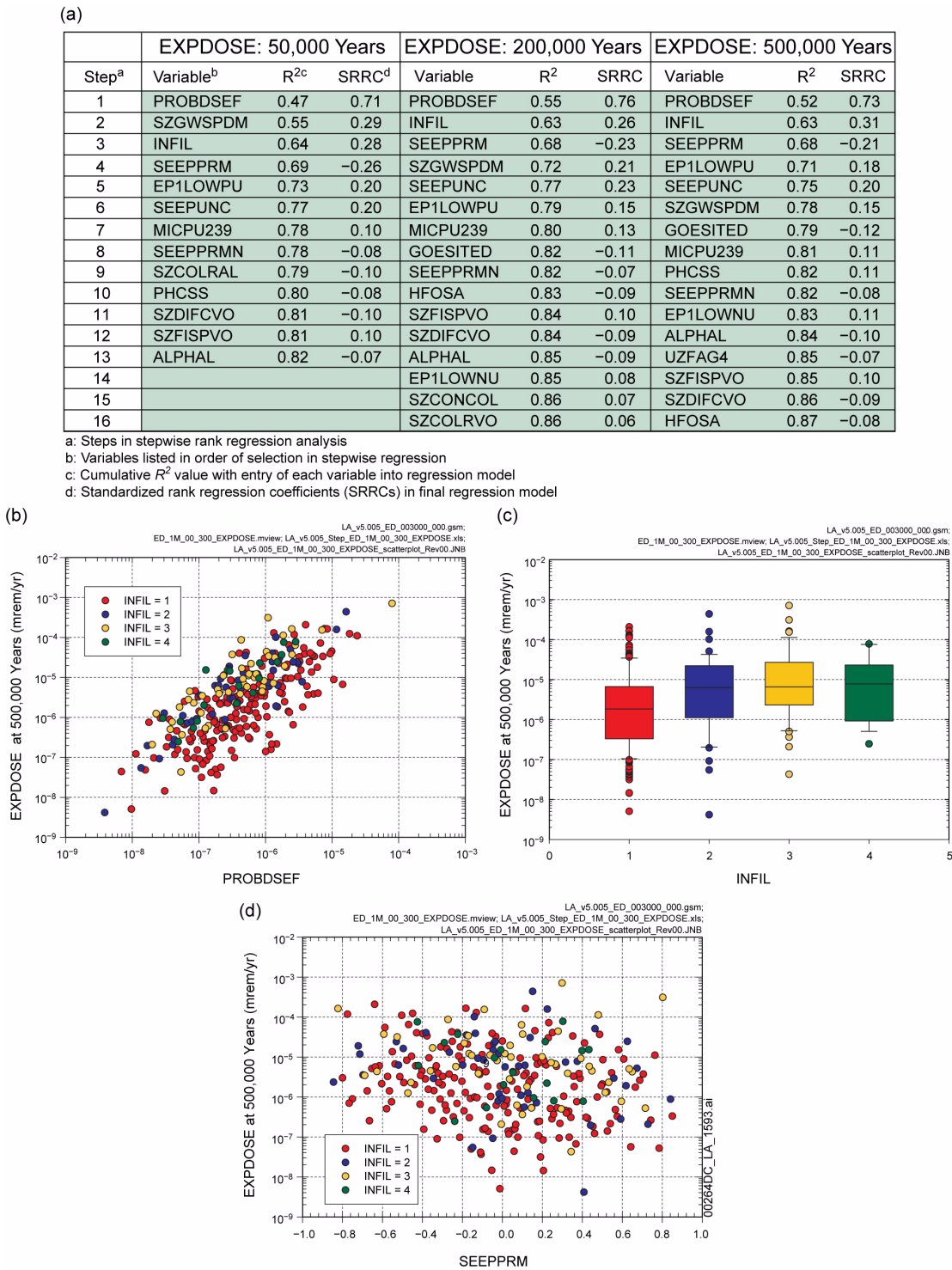

(b)

(c)

(d)

Figure 2.4-143. Stepwise Rank Regression Analyses and Selected Scatterplots and Boxplots for Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive Species for the Early Drip Shield Failure Modeling Case: (a) Regressions for *EXPDOSE* at 50,000, 200,000, and 500,000 Years, and (b, c, d) Scatterplots and Boxplots for *EXPDOSE* at 500,000 Years

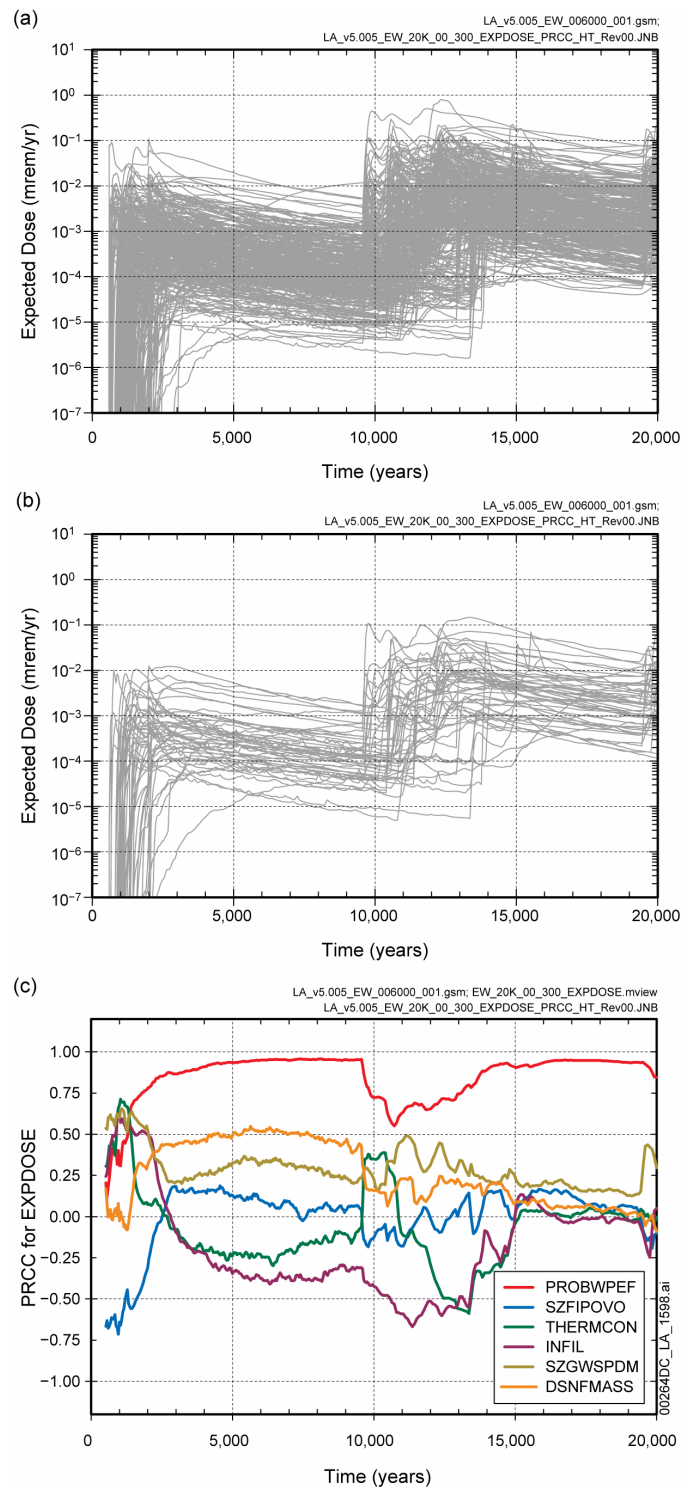Source: SNL 2008a, Appendix K, Figure K5.7.1-4[a]

Figure 2.4-144. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species for the Early Waste Package Failure Modeling Case: (a) *EXPDOSE* for All (i.e., 300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K5.7.2-1[a].

(a)

Step[a]	EXPDOSE: 3,000 Years			EXPDOSE: 5,000 Years			EXPDOSE: 10,000 Years		
	Variable[b]	R^{2c}	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	PROBWPEF	0.62	0.76	PROBWPEF	0.77	0.86	PROBWPEF	0.47	0.69
2	MICTC99	0.67	0.22	MICTC99	0.81	0.16	INFIL	0.57	−0.30
3	MICC14	0.70	0.16	DSNFMASS	0.83	0.18	THERMCON	0.64	0.26
4	DSNFMASS	0.72	0.17	MICC14	0.85	0.14	MICCI36	0.66	0.10
5	UZFAG8	0.74	−0.13	UZFAG8	0.86	−0.10	EP1LOWPU	0.67	0.10
6	SZFISPVO	0.75	0.13	HLWDRACD	0.87	0.08	MICTC99	0.68	0.12
7	HLWDRACD	0.76	0.09	INFIL	0.87	−0.09	SZSREG1Y	0.69	−0.10
8	UZTORRG3	0.77	0.11	HLWDRALK	0.88	0.06	DSNFMASS	0.69	0.09
9	SZGWSPDM	0.78	0.10	MICNP237	0.88	0.07	SEEPPRM	0.70	0.09
10	SZDIFCVO	0.79	−0.08	THERMCON	0.88	−0.06	KDSNCOL	0.71	0.09
11	UZGAM	0.80	−0.08	PH2DHLNS	0.89	−0.06			
12				UZGAM	0.89	−0.06			
13				RHMUN65	0.89	−0.05			

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
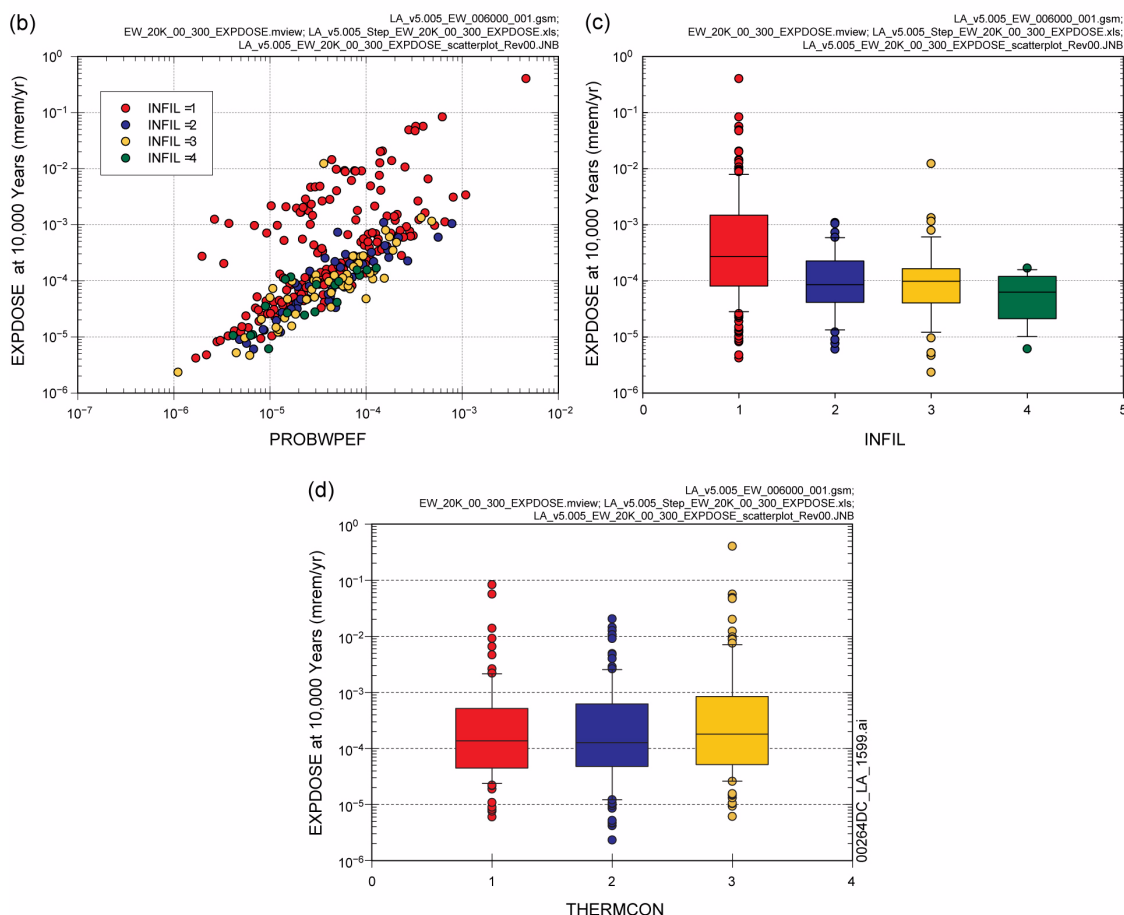d: Standardized rank regression coefficients (SRRCs) in final regression model

Figure 2.4-145. Stepwise Rank Regression Analyses and Selected Scatterplots and Boxplots for Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species for the Early Waste Package Failure Modeling Case: (a) Regressions for *EXPDOSE* at 3,000, 5,000, and 10,000 Years, and (b,c,d) Scatterplots and Boxplots for *EXPDOSE* at 10,000 Years

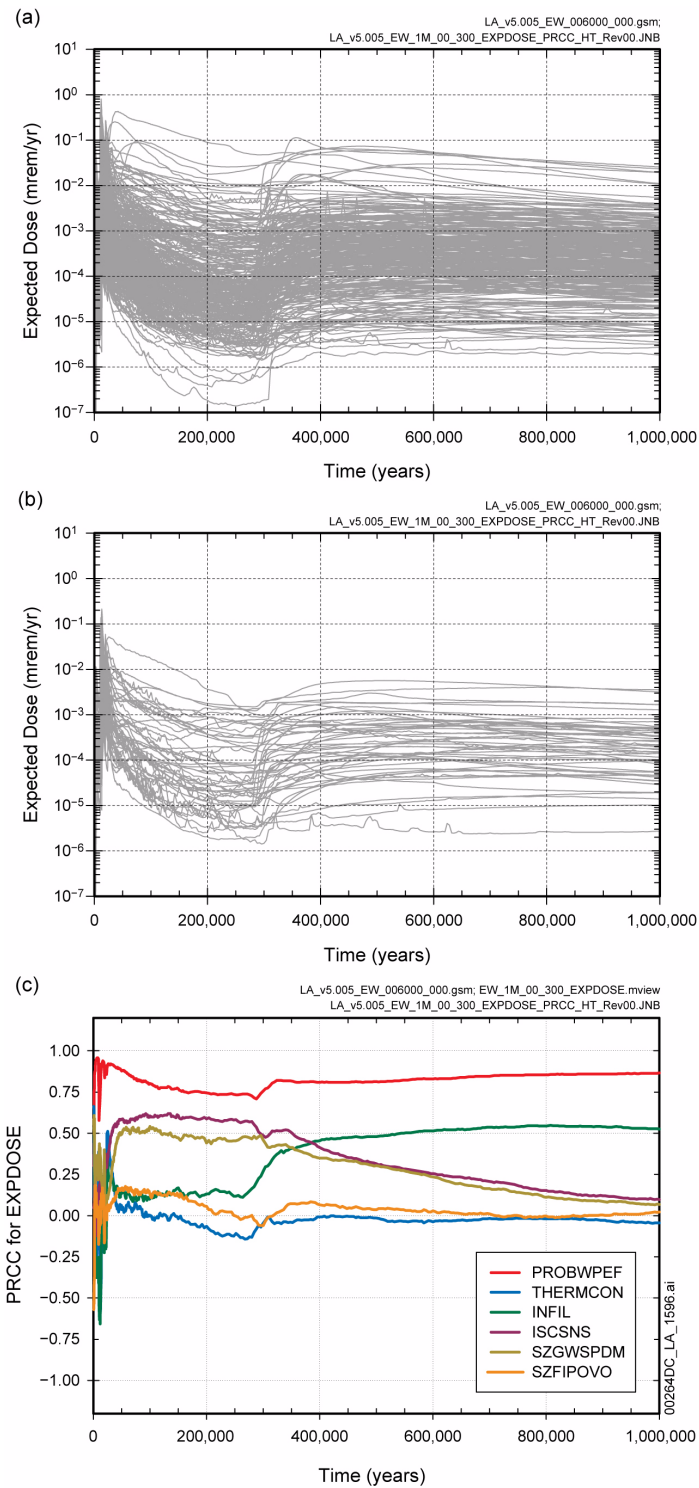Source: SNL 2008a, Appendix K, Figure K5.7.2-2[a].

Figure 2.4-146. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive
Species for the Early Waste Package Failure Modeling Case: (a) *EXPDOSE* for All (i.e.,
300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank
Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K5.7.2-3[a].

(a)

Step[a]	EXPDOSE: 50,000 Years			EXPDOSE: 200,000 Years			EXPDOSE: 500,000 Years		
	Variable[b]	R^{2}[c]	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	PROBWPEF	0.60	0.79	PROBWPEF	0.37	0.62	PROBWPEF	0.39	0.70
2	ISCSNS	0.66	0.25	ISCSNS	0.50	0.38	INFIL	0.51	0.31
3	SZGWSPDM	0.72	0.22	SZGWSPDM	0.56	0.24	EP1LOWPU	0.55	0.20
4	EP1LOWPU	0.74	0.14	EP1LOWPU	0.58	0.15	SEEPPRM	0.59	−0.22
5	MICNP237	0.75	0.10	SZFISPVO	0.60	0.17	SZGWSPDM	0.62	0.17
6	SZFISPVO	0.75	0.08	SZDIFCVO	0.61	−0.14	SEEPUNC	0.65	0.19
7	SZKDSRAL	0.76	0.09	IGRATE	0.63	0.10	EP1LOWNU	0.67	0.17
8	COLU	0.77	0.08	SEEPPRM	0.64	−0.11	ALPHAL	0.69	−0.14
9				SEEPUNC	0.65	0.10	SZFISPVO	0.71	0.15
10				RHMU20	0.66	0.10	GOESITED	0.73	−0.14
11							HFOSA	0.74	−0.12
12							MICPU239	0.75	0.11
13							SZDIFCVO	0.76	−0.10
14							SEEPPRMN	0.77	−0.09
15							ISCSNS	0.77	0.09
16							HFOSITED	0.78	−0.08

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model
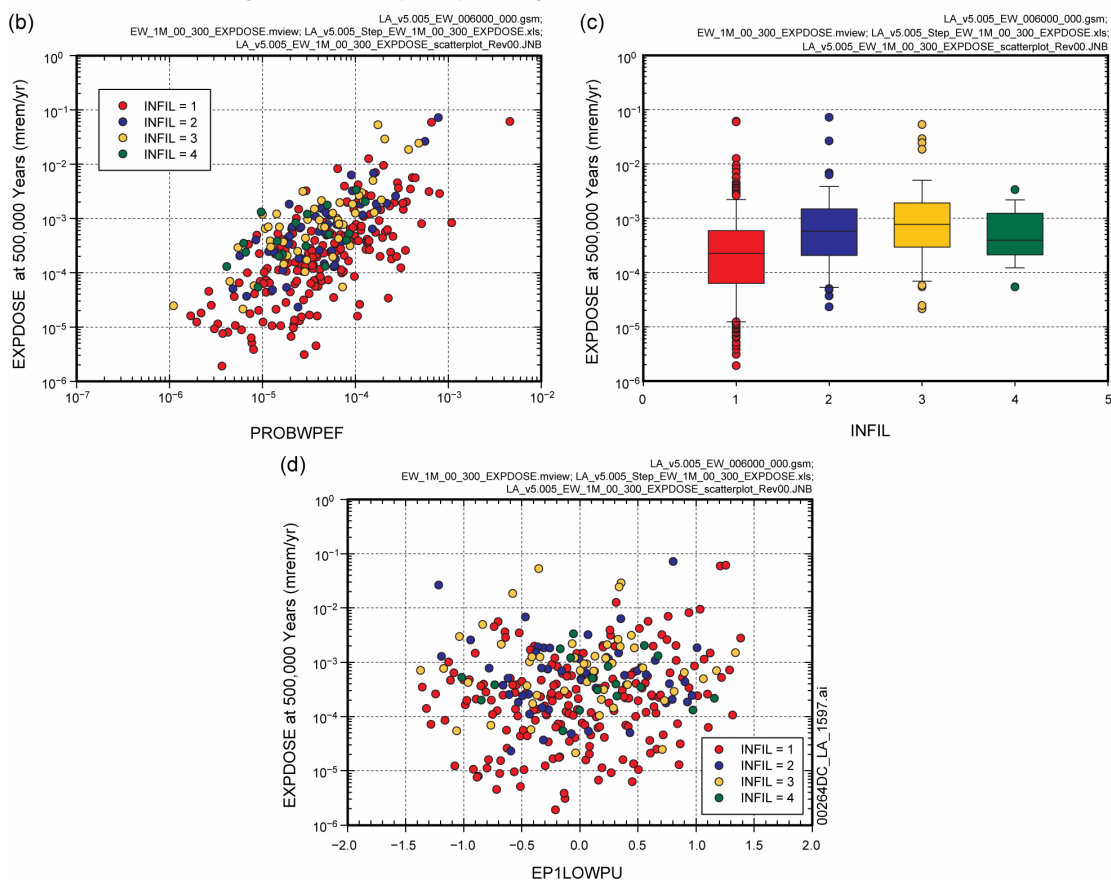

Figure 2.4-147. Stepwise Rank Regression Analyses and Selected Scatterplots and Boxplots for Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive species for the Early Waste Package Failure Modeling Case: (a) Regressions for *EXPDOSE* at 50,000, 200,000, and 500,000 Years, and (b,c,d) Scatterplots and Boxplots for *EXPDOSE* at 500,000 Years

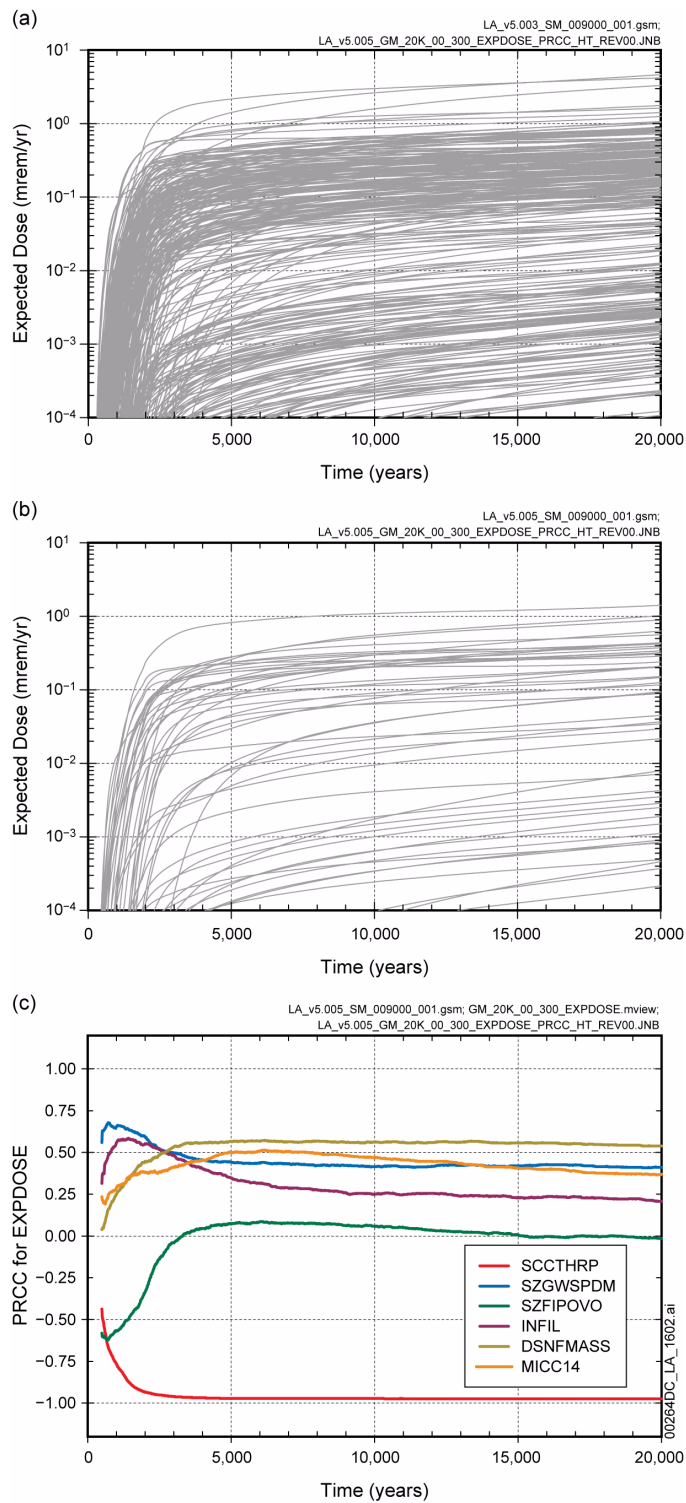Source: SNL 2008a, Appendix K, Figure K5.7.2-4[a]

Figure 2.4-148. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species for the Seismic Ground Motion Modeling Case: (a) *EXPDOSE* for All (i.e., 300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K7.7.1-1[a].

(a)

Step[a]	3,000 Years Variable[b]	R^{2} [c]	SRRC[d]	5,000 Years Variable	R^2	SRRC	10,000 Years Variable	R^2	SRRC
1	SCCTHRP	0.81	−0.87	SCCTHRP	0.86	−0.91	SCCTHRP	0.88	−0.93
2	SZGWSPDM	0.83	0.16	MICTC99	0.88	0.10	MICTC99	0.90	0.12
3	INFIL	0.85	0.13	DSNFMASS	0.89	0.14	DSNFMASS	0.91	0.14
4	MICTC99	0.87	0.10	SZGWSPDM	0.90	0.11	HLWDRACD	0.91	0.08
5	DSNFMASS	0.88	0.13	MICC14	0.90	0.10	MICC14	0.92	0.08
6	SZFISPVO	0.88	0.10	INFIL	0.91	0.07	WDCRCDEN	0.93	0.09
7	MICC14	0.89	0.10	WDCRCDEN	0.92	0.09	SZGWSPDM	0.93	0.07
8	WDCRCDEN	0.90	0.08	HLWDRACD	0.92	0.06	PH2DHLNS	0.93	−0.06
9	SZDIFCVO	0.90	−0.06	SZFISPVO	0.93	0.06	WFDEGEXF	0.94	0.07
10	UZFAG8	0.91	−0.06	UZFAG8	0.93	−0.07	INFIL	0.94	0.04
11	SEEPUNC	0.91	0.07	SEEPUNC	0.93	0.05	UZFAG8	0.94	−0.06
12	UZTORRG3	0.91	0.05	UZTORRG3	0.94	0.05	HLWDRALK	0.94	0.04
13	HLWDRACD	0.91	0.05	KDUSMEC	0.94	0.04	SZFISPVO	0.94	0.04
14	KDUSMEC	0.92	0.05	HLWDRALK	0.94	0.05	WDGCUA22	0.95	−0.04
15	GOESA	0.92	0.05	WFDEGEXF	0.94	0.05	UZGAM	0.95	−0.04
16	SZSREG4X	0.92	−0.05				SEEPUNC	0.95	0.04

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model
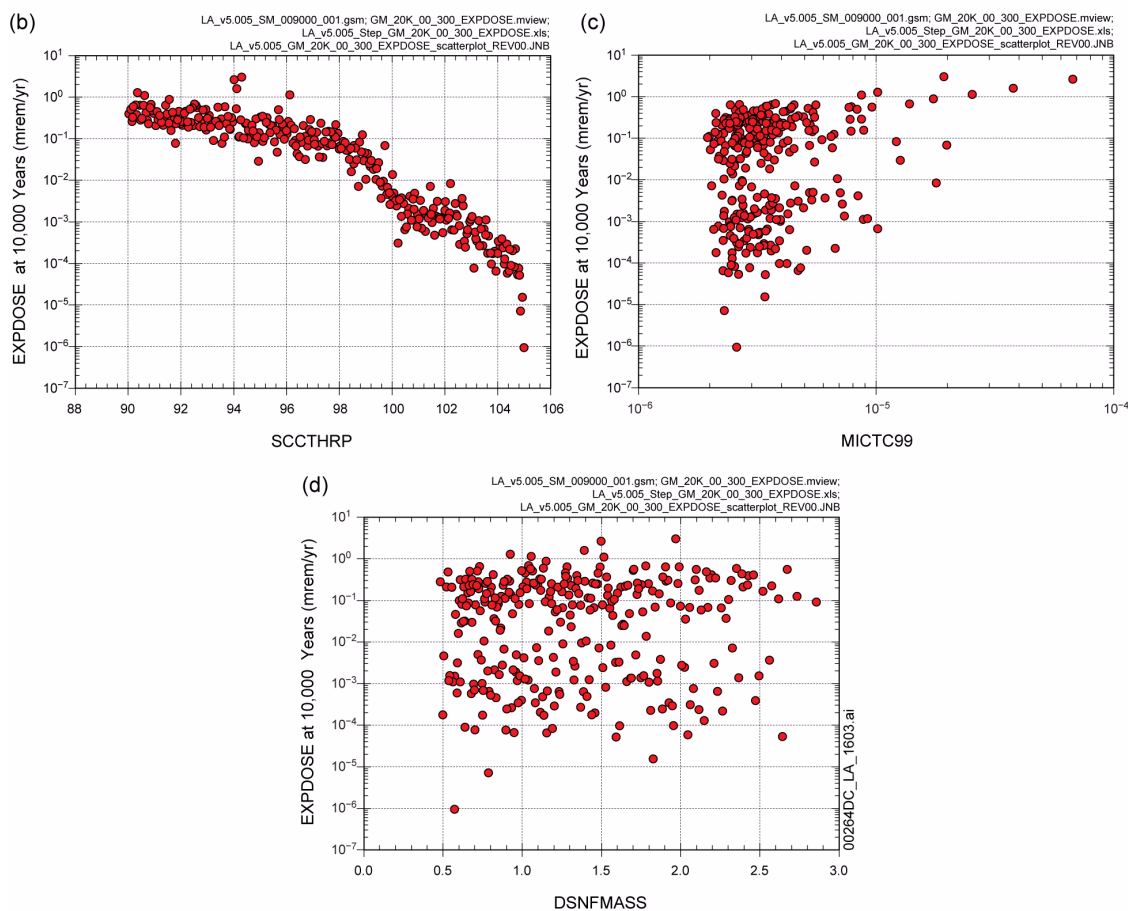

Figure 2.4-149. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species for the Seismic Ground Motion Modeling Case: (a) Regressions for *EXPDOSE* at 3000, 5000, and 10,000 Years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 Years

Source: SNL 2008a, Appendix K, Figure K7.7.1-2[a].
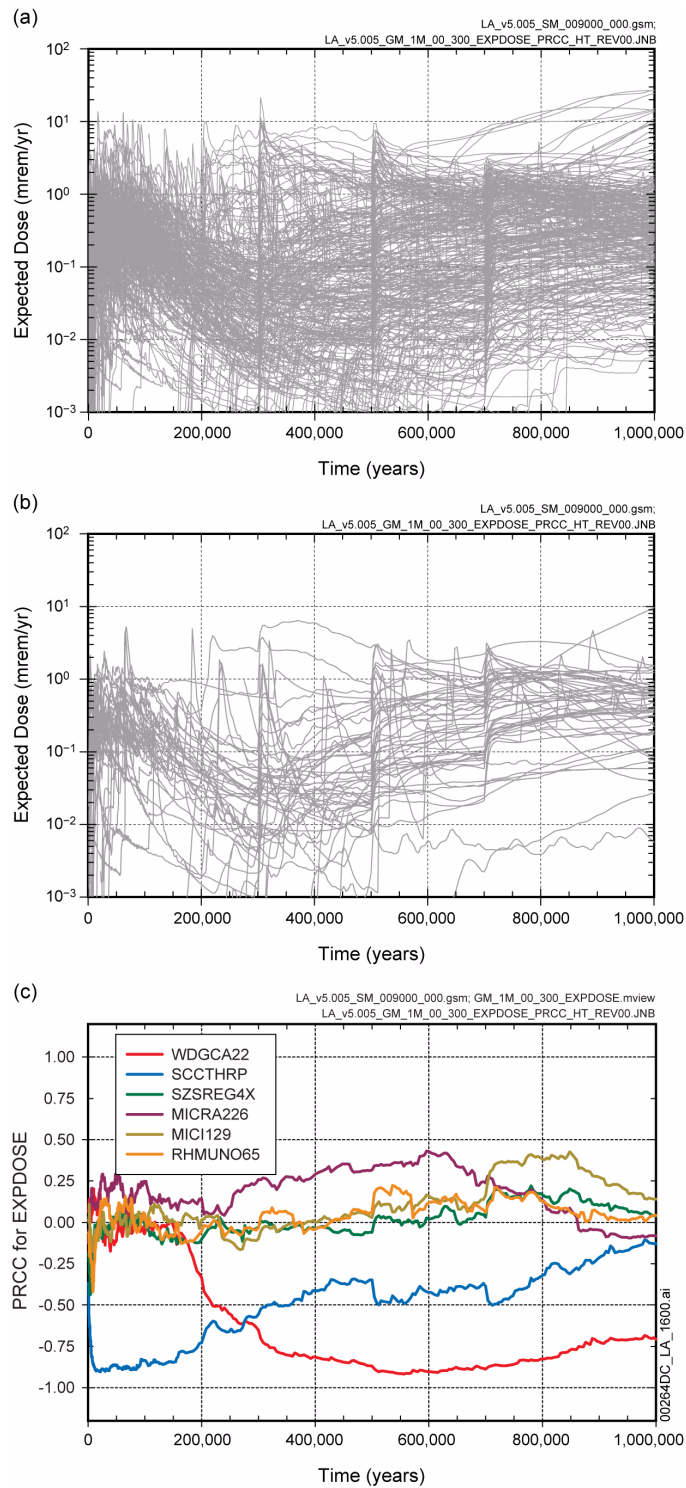
Figure 2.4-150. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive
                Species for the Seismic Ground Motion Modeling Case: (a) *EXPDOSE* for All (i.e., 300)
                Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank
   Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K7.7.2-1[a].

(a)

	50,000 Years			200,000 Years			500,000 Years		
Step[a]	Variable[b]	$R^{2\,c}$	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	SCCTHRP	0.71	−0.85	SCCTHRP	0.54	−0.72	WDGCA22	0.62	−0.77
2	MICTC99	0.72	0.09	WDDSGC29	0.58	−0.18	SCCTHRP	0.71	−0.28
3	HLWDRACD	0.73	0.10	WDGCA22	0.60	−0.14	WDNSCC	0.72	−0.12
4	DSNFMASS	0.74	0.11	DSNFMASS	0.61	0.11	SZPORSAL	0.73	0.08
5	SZLODISP	0.75	−0.10	CSNFMASS	0.62	0.10	SZGWSPDM	0.73	0.11
6	SZKDSEVO	0.76	−0.09				SZCONCOL	0.74	0.09
7	CPUPERCS	0.77	0.09				EP1LOWNU	0.75	0.10
8							UZFAG4	0.76	−0.08

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model
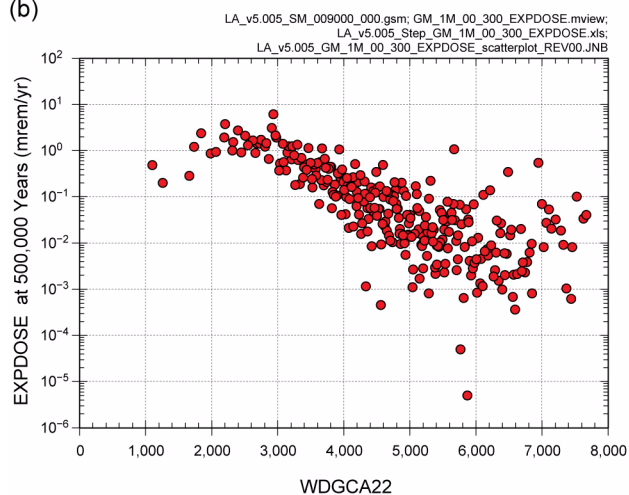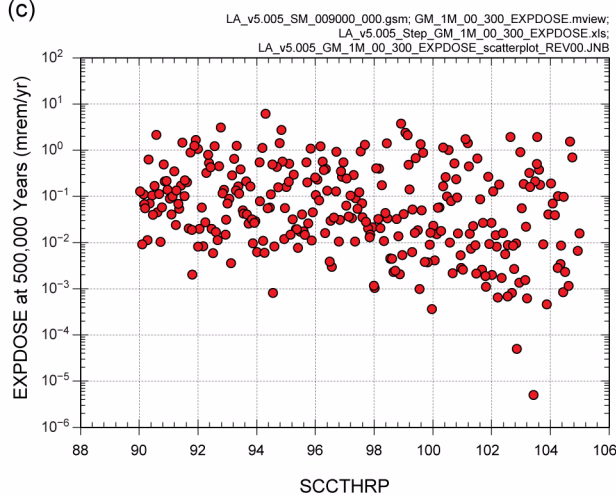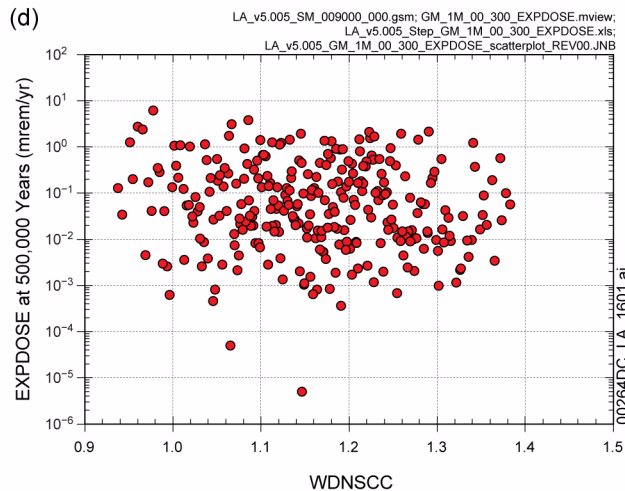
Figure 2.4-151. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to
RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive Species for the
Seismic Ground Motion Modeling Case: (a) Regressions for *EXPDOSE* at 50,000,
200,000, and 500,000 Years, and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 Years

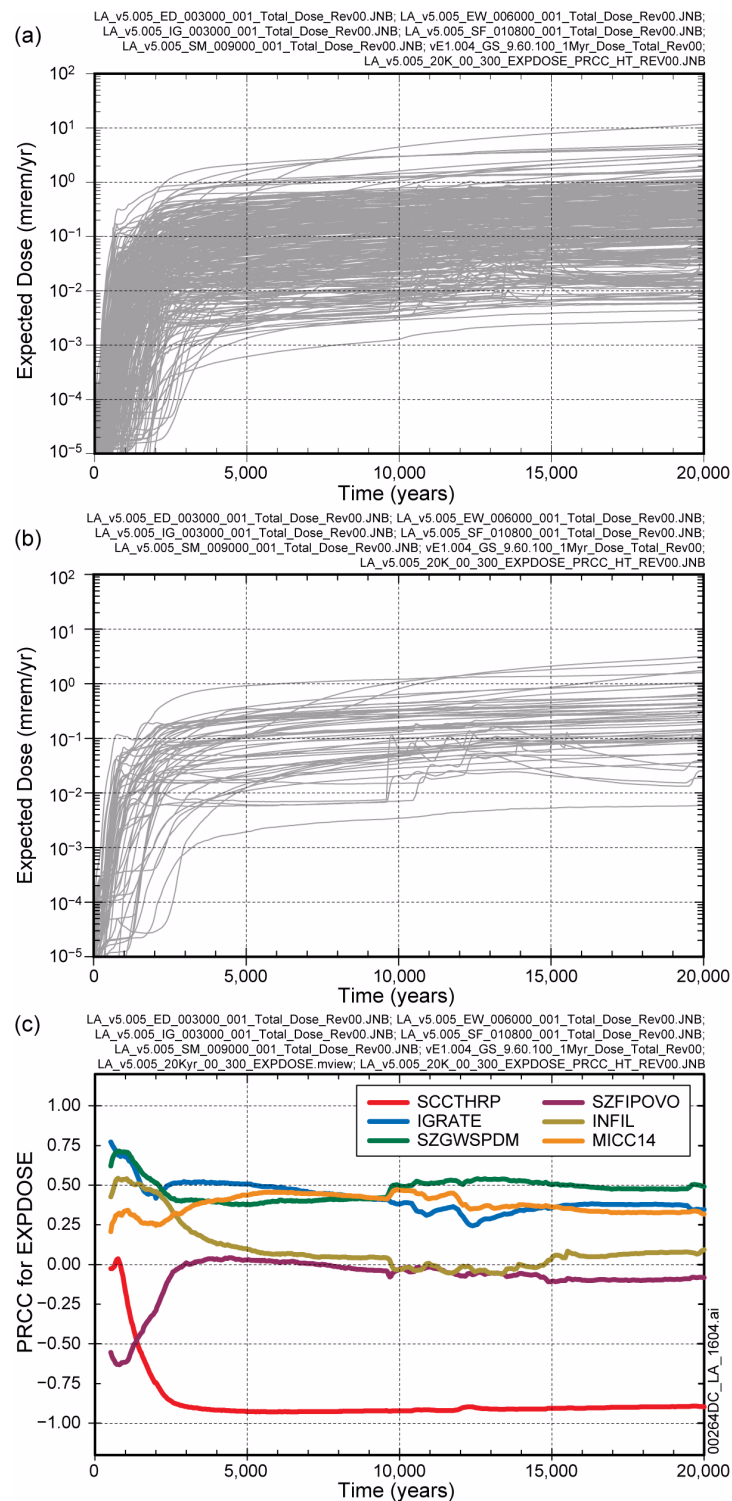Source: SNL 2008a, Appendix K, Figure K7.7.2-2[a].

Figure 2.4-152. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species Summed over All Modeling Cases: (a) *EXPDOSE* for All (i.e., 300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K8.1-1[a].

(a)

Step[a]	3,000 Years			5,000 Years			10,000 Years		
	Variable[b]	R[2c]	SRRC[d]	Variable	R[2]	SRRC	Variable	R[2]	SRRC
1	SCCTHRP	0.55	−0.72	SCCTHRP	0.66	−0.79	SCCTHRP	0.69	−0.83
2	IGRATE	0.62	0.28	IGRATE	0.71	0.24	IGRATE	0.73	0.22
3	SZGWSPDM	0.67	0.21	SZGWSPDM	0.74	0.15	SZGWSPDM	0.76	0.16
4	INFIL	0.71	0.19	MICTC99	0.76	0.14	MICTC99	0.77	0.14
5	MICTC99	0.73	0.15	MICC14	0.78	0.12	WFDEGEXF	0.78	0.10
6	SZFISPVO	0.75	0.14	INFIL	0.79	0.11	MICC14	0.79	0.11
7	MICC14	0.76	0.12	DSNFMASS	0.80	0.11	UZGAM	0.80	−0.09
8	DSNFMASS	0.77	0.10	SZFISPVO	0.81	0.09	INFIL	0.81	0.09
9	UZFAG8	0.78	−0.10	UZFAG8	0.82	−0.10	CSWFA0AC	0.81	−0.07
10	UZGAM	0.79	−0.09	UZGAM	0.82	−0.10	UZKDSRDT	0.82	0.07
11	SZDIFCVO	0.79	−0.08	WFDEGEXF	0.83	0.10			
12	WFDEGEXF	0.80	0.08	WDCRCDEN	0.83	0.08			
13	KDUSMEC	0.80	0.08	WDZOLID	0.84	−0.07			
14	MICPA231	0.81	−0.08	WDGCUA22	0.84	0.07			
15				BCKRA226	0.85	−0.06			

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
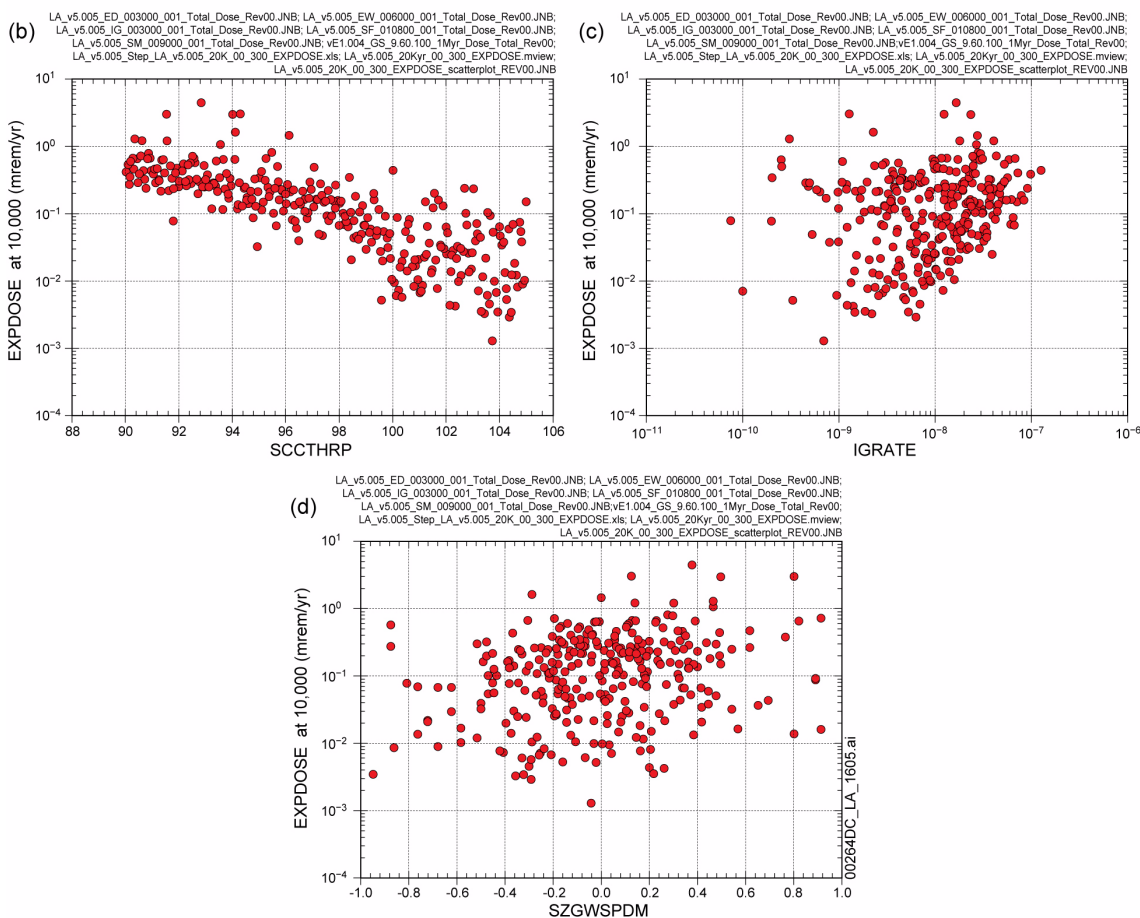d: Standardized rank regression coefficients (SRRCs) in final regression model

Figure 2.4-153. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to the RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 Year] for All Radioactive Species Summed over All Modeling Cases: (a) Regressions for *EXPDOSE* at 3,000, 5,000, and 10,000 Years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 Years

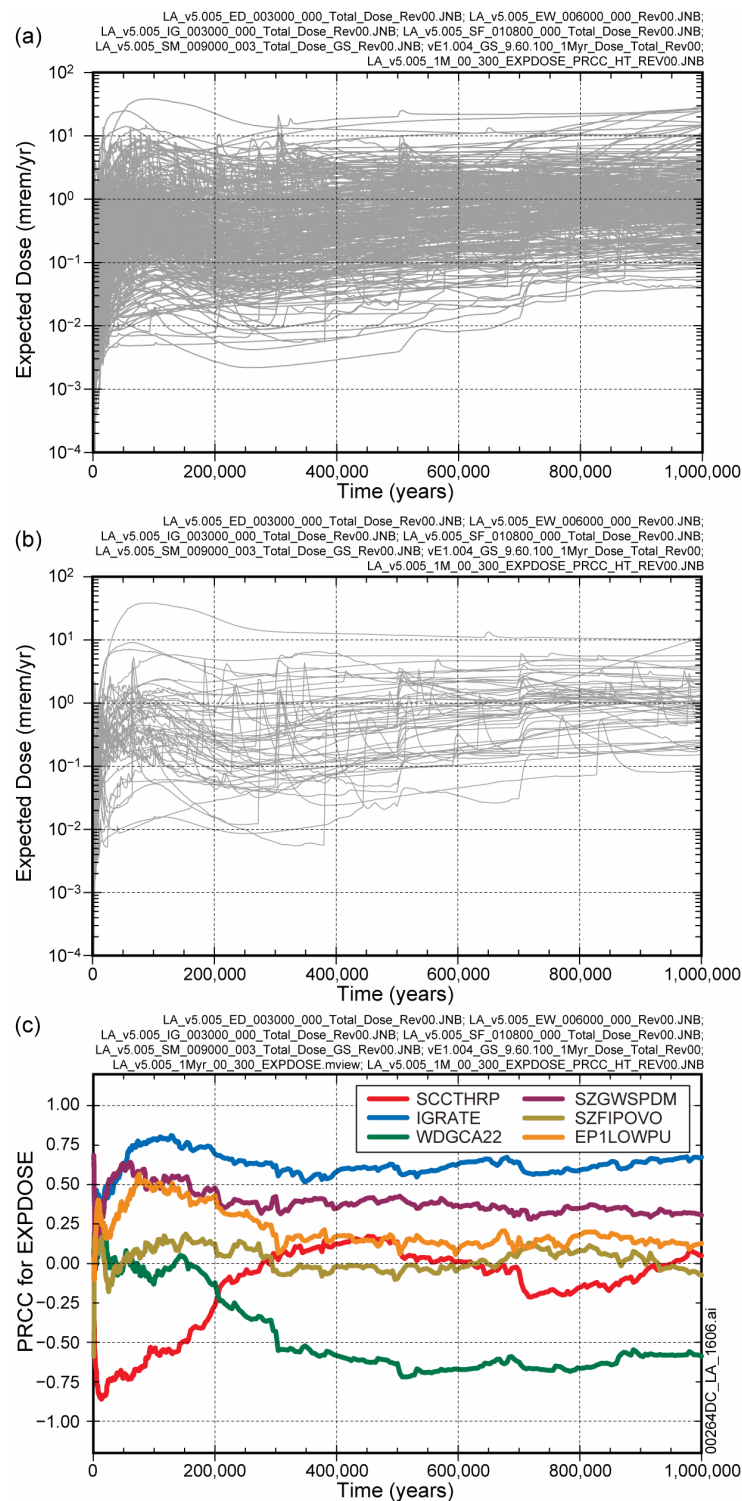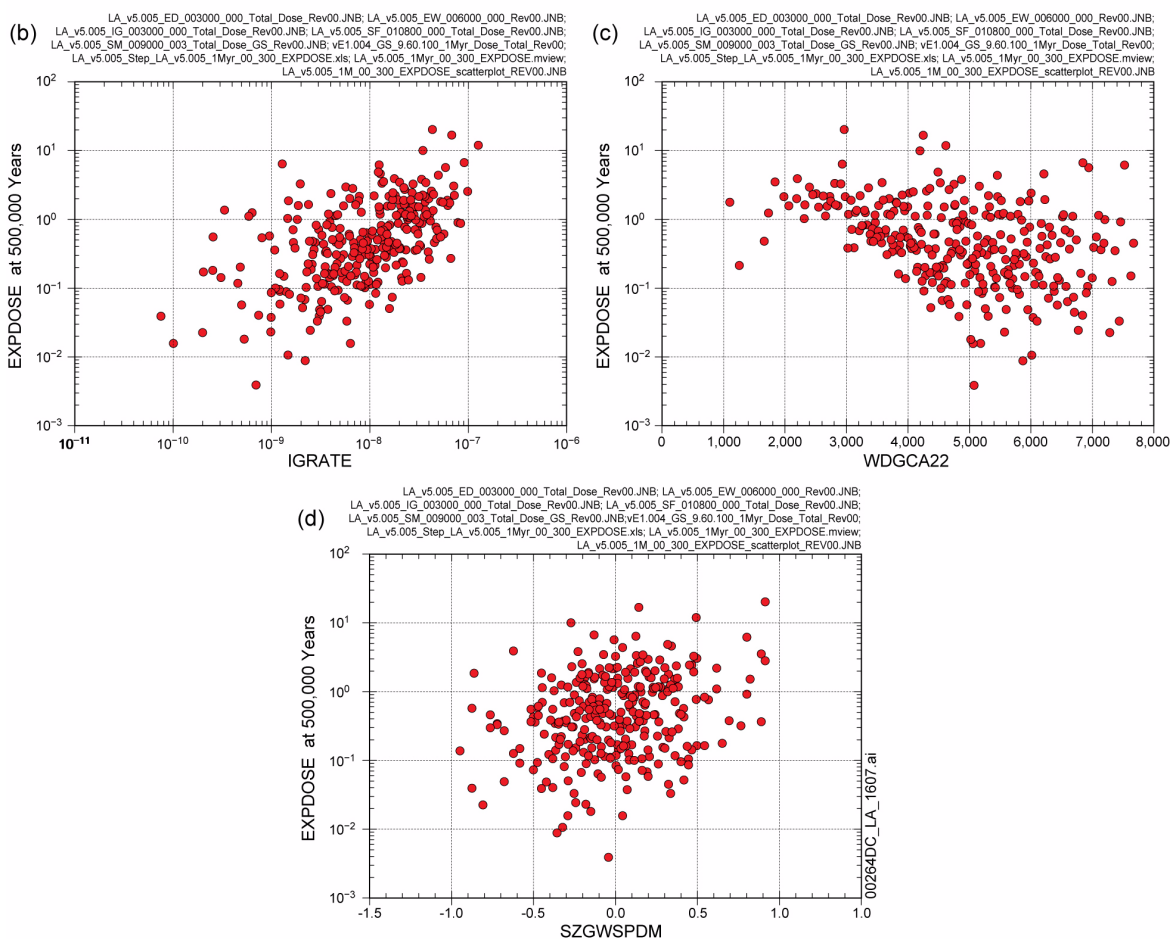Source: SNL 2008a, Appendix K, Figure K8.1-2[a].

Figure 2.4-154. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for All Radioactive Species Summed over All Modeling Cases: (a) *EXPDOSE* for All (i.e., 300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K8.2-1[a].

(a)

Step[a]	EXPDOSE: 50,000 Years			EXPDOSE: 200,000 Years			EXPDOSE: 500,000 Years		
	Variable[b]	R^2[c]	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	SCCTHRP	0.27	−0.48	IGRATE	0.38	0.61	IGRATE	0.29	0.54
2	IGRATE	0.43	0.41	SZGWSPDM	0.48	0.28	WDGCA22	0.46	−0.38
3	SZGWSPDM	0.55	0.33	EP1LOWPU	0.53	0.23	SZGWSPDM	0.53	0.24
4	EP1LOWPU	0.60	0.20	SCCTHRP	0.57	−0.21	EP1LOWNU	0.56	0.19
5	MICNP237	0.62	0.11	SZFISPVO	0.60	0.15	MICNP237	0.59	0.16
6	INFIL	0.63	0.13	INFIL	0.62	0.16	EP1L0WPU	0.61	0.17
7	EP1NPO2	0.65	0.13	EP1NPO2	0.64	0.14	SZCONCOL	0.64	0.15
8	MICTC99	0.66	0.11	GOESITED	0.66	−0.14	SZFISPVO	0.66	0.15
9	ALPHAL	0.67	0.10	MICSE79	0.68	0.09	INFIL	0.67	0.11
10				MICNP237	0.69	0.14	GOESITED	0.68	−0.10
11				EP1LOWNU	0.70	0.11	SZKDCSVO	0.69	−0.10
12				SZCONCOL	0.71	0.11	HFOSITED	0.69	−0.09
13				PHCSS	0.72	−0.11	SZDIFCVO	0.70	−0.09
14				HFOSA	0.73	−0.09			
15				SZDIFCVO	0.73	−0.09			
16				SEEPCOND	0.74	−0.09			

(b)

LA_v5.005_ED_003000_000_Total_Dose_Rev00.JNB; LA_v5.005_EW_006000_000_Rev00.JNB;
LA_v5.005_IG_003000_000_Total_Dose_Rev00.JNB; LA_v5.005_SF_010800_000_Total_Dose_Rev00.JNB;
LA_v5.005_SM_009000_003_Total_Dose_GS_Rev00.JNB; vE1.004_GS_9.60.100_1Myr_Dose_Total_Rev00;
LA_v5.005_Step_LA_v5.005_1Myr_00_300_EXPDOSE.xls; LA_v5.005_1Myr_00_300_EXPDOSE.mview;
LA_v5.005_1M_00_300_EXPDOSE_scatterplot_REV00.JNB

(c)

LA_v5.005_ED_003000_000_Total_Dose_Rev00.JNB; LA_v5.005_EW_006000_000_Rev00.JNB;
LA_v5.005_IG_003000_000_Total_Dose_Rev00.JNB; LA_v5.005_SF_010800_000_Total_Dose_Rev00.JNB;
LA_v5.005_SM_009000_003_Total_Dose_GS_Rev00.JNB; vE1.004_GS_9.60.100_1Myr_Dose_Total_Rev00;
LA_v5.005_Step_LA_v5.005_1Myr_00_300_EXPDOSE.xls; LA_v5.005_1Myr_00_300_EXPDOSE.mview;
LA_v5.005_1M_00_300_EXPDOSE_scatterplot_REV00.JNB

(d)

LA_v5.005_ED_003000_000_Total_Dose_Rev00.JNB; LA_v5.005_EW_006000_000_Rev00.JNB;
LA_v5.005_IG_003000_000_Total_Dose_Rev00.JNB; LA_v5.005_SF_010800_000_Total_Dose_Rev00.JNB;
LA_v5.005_SM_009000_003_Total_Dose_GS_Rev00.JNB;vE1.004_GS_9.60.100_1Myr_Dose_Total_Rev00;
LA_v5.005_Step_LA_v5.005_1Myr_00_300_EXPDOSE.xls; LA_v5.005_1Myr_00_300_EXPDOSE.mview;
LA_v5.005_1M_00_300_EXPDOSE_scatterplot_REV00.JNB

00264DC_LA_1607.ai

Figure 2.4-155. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 Year] for all Radioactive Species Summed over All Modeling Cases: (a) Regressions for *EXPDOSE* at 50,000, 200,000, and 500,000 Years, and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 Years
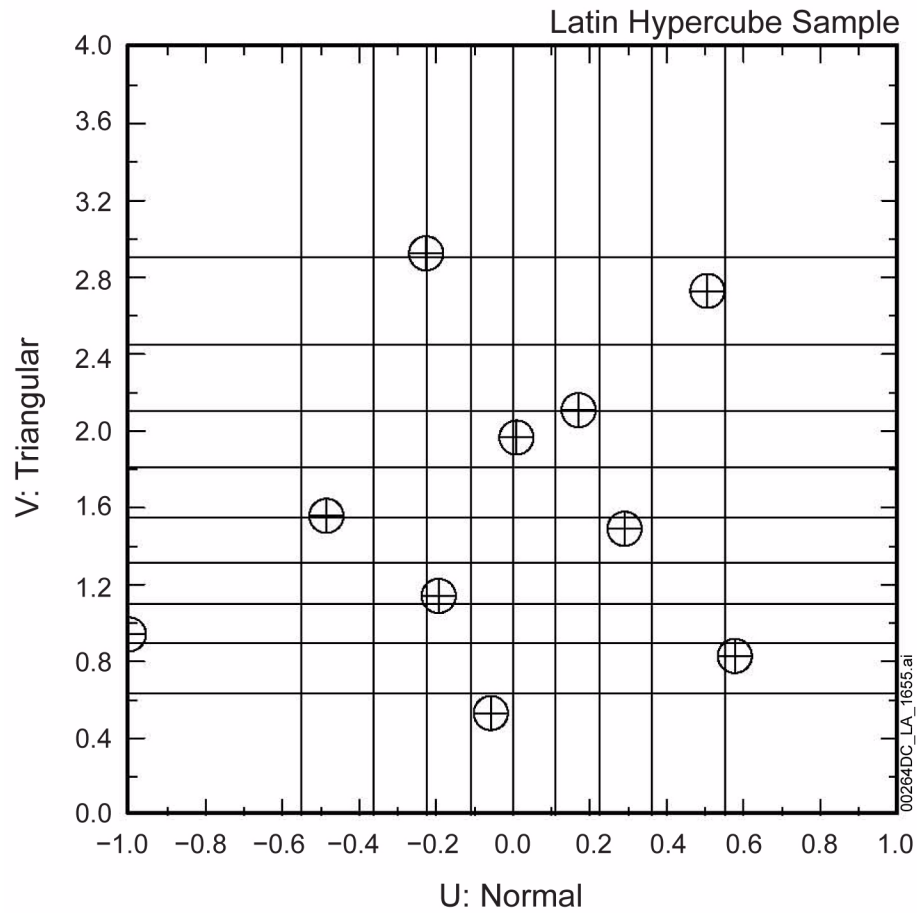
Source: SNL 2008a, Appendix K, Figure K8.2-2[a].

Figure 2.4-156. Example of a Latin Hypercube Sampling of Size N_{LHS} = 10 from Variables *U* and *V* with *U* Normal on [−1, 1] (Mean = 0, 0.01 Quantile = −1, 0.99 Quantile = 1) and *V* Triangular on [0, 4] (Mode = 1)

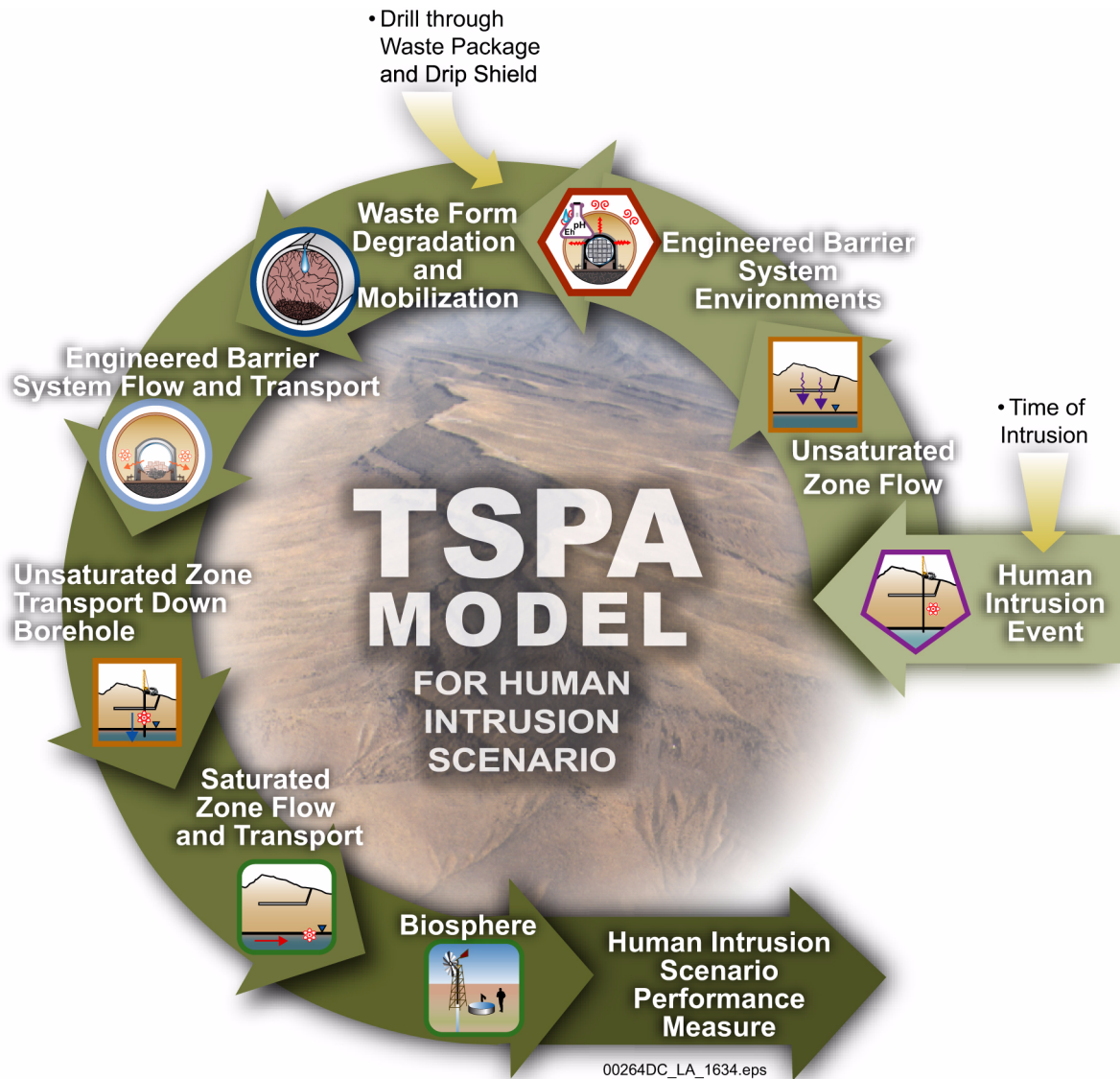Source: SNL 2008a, Appendix J, Figure J3.5-2.

Figure 2.4-157. TSPA Model Components for the Human Intrusion Modeling Case
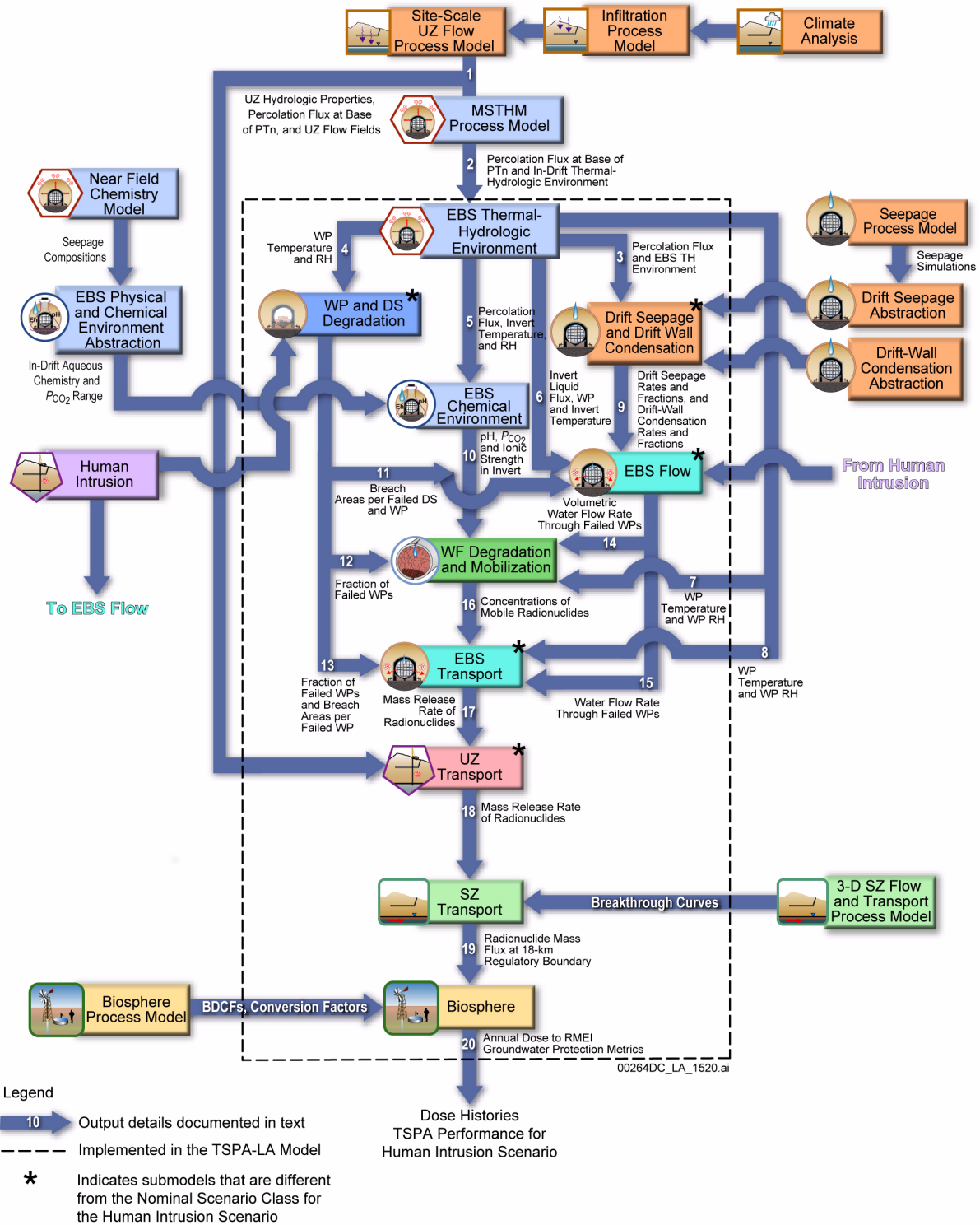
Source: SNL 2008a, Figure 6.7-1.

Figure 2.4-158. Information Transfer between the Model Components and Submodels of the TSPA Human Intrusion Scenario

Source: SNL 2008a, Figure 6.1.4-7.
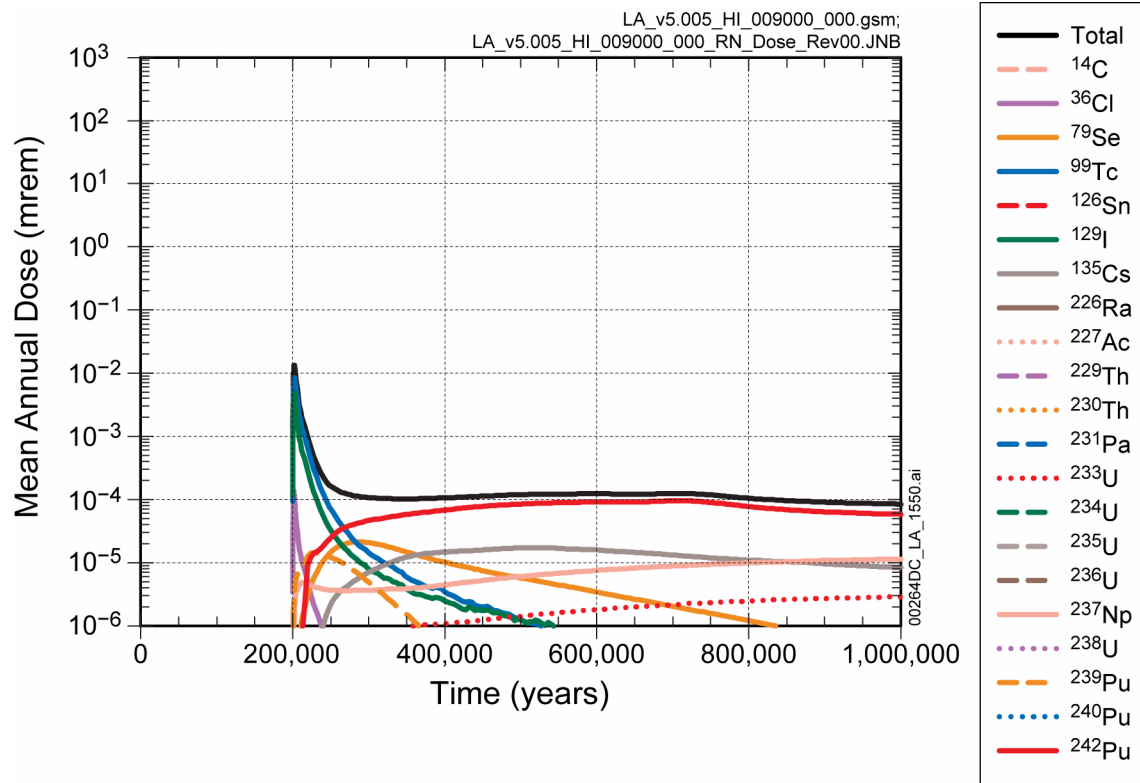
Figure 2.4-159. Contribution of Individual Radionuclides to Mean Annual Dose for the Human Intrusion Modeling Case for the Post-10,000 Year Period after Permanent Closure, with Drilling Intrusion Event at 200,000 Years

Source: SNL 2008a, Figure 8.1-17[a].

(a)

(b)
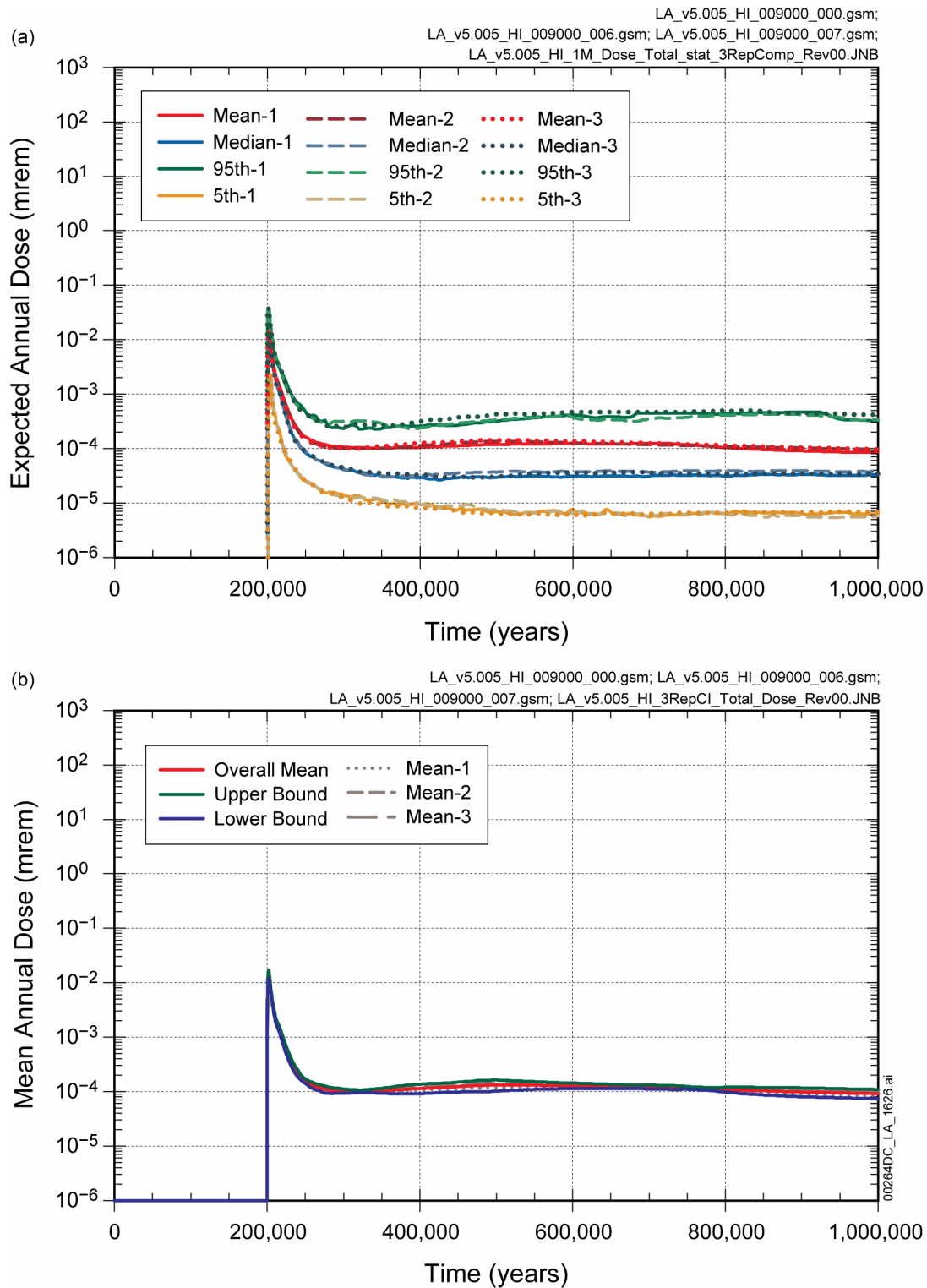
Figure 2.4-160. Stability of Human Intrusion Modeling Case for 1 Million Years, (a) Comparison of
Expected Annual Dose Statistics for Three Replicates and (b) Confidence Interval around
Mean Annual Dose

Source: SNL 2008a, Figure 7.3.1-14.
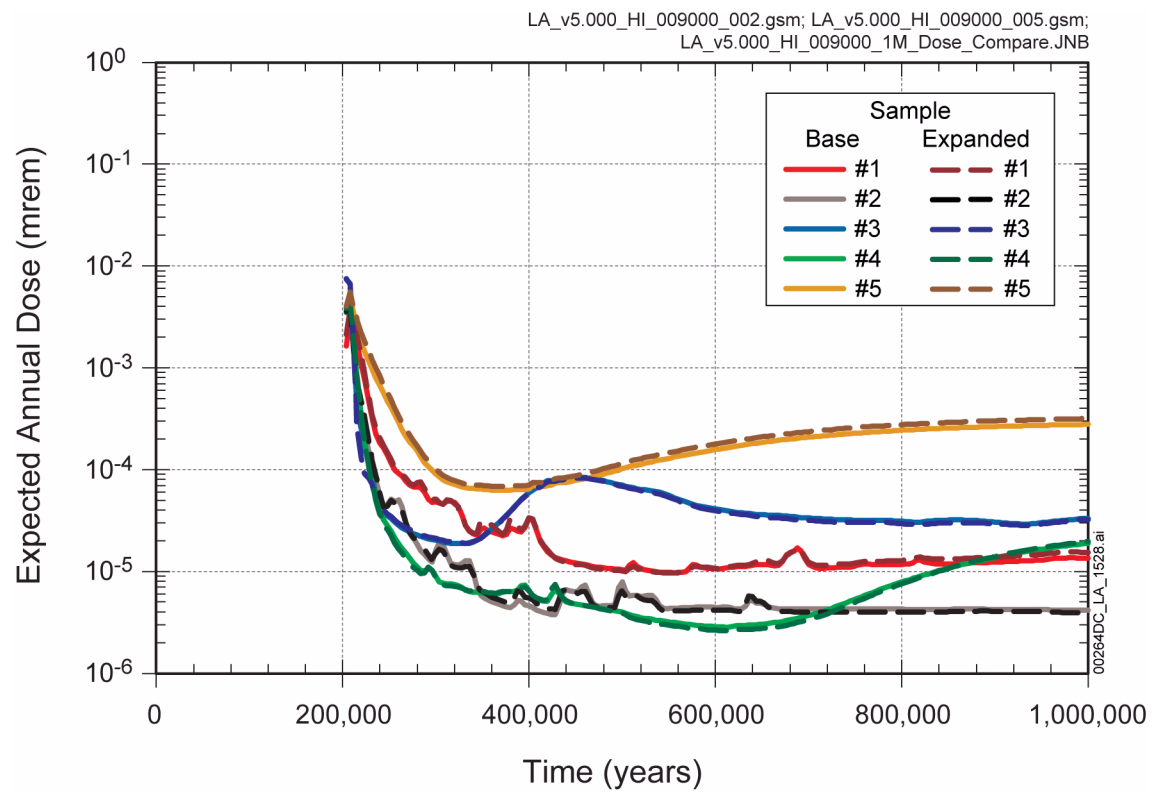
Figure 2.4-161. Expected Annual Dose over 1 Million Years for the Human Intrusion Modeling Case
Considering Increased Aleatory Sample Size

Source: SNL 2008a, Figure 7.3.2-27.
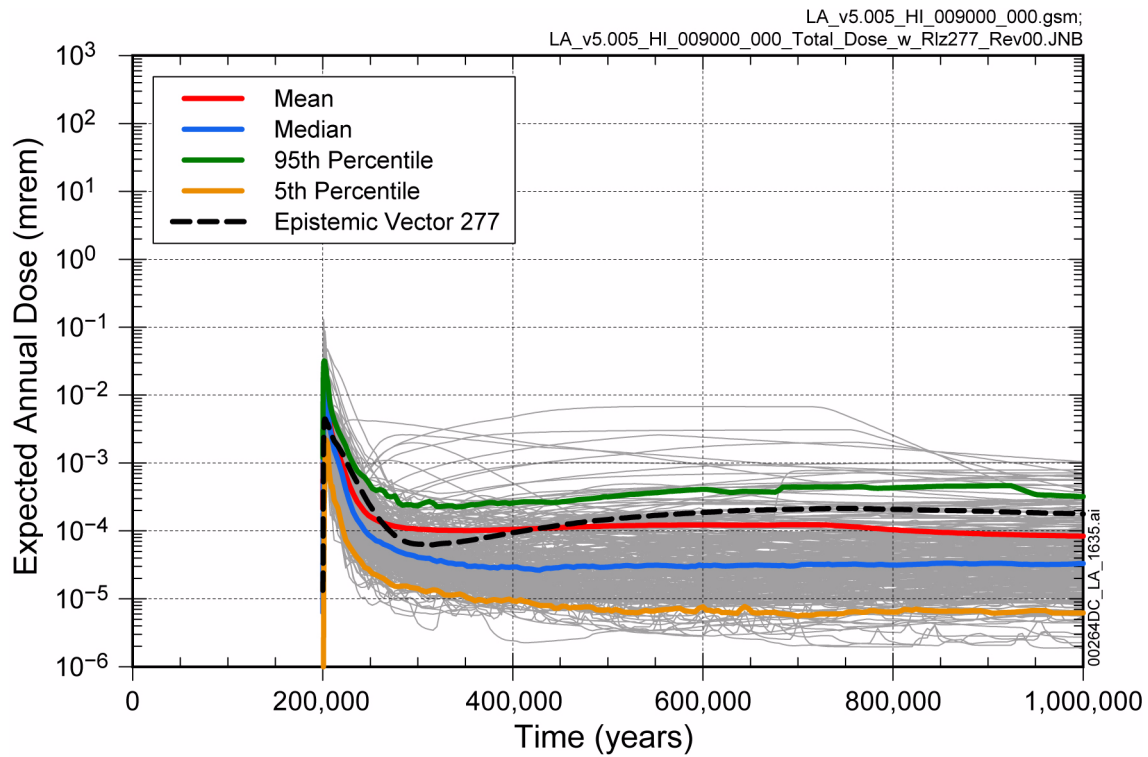
Figure 2.4-162. Expected Annual Dose from the 300 Epistemic Uncertainty Vectors along with Their
Quantiles and Expected Dose from Epistemic Uncertainty Vector 277 for the Human
Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

Source: SNL 2008a, Figure 7.7.1-92[a]
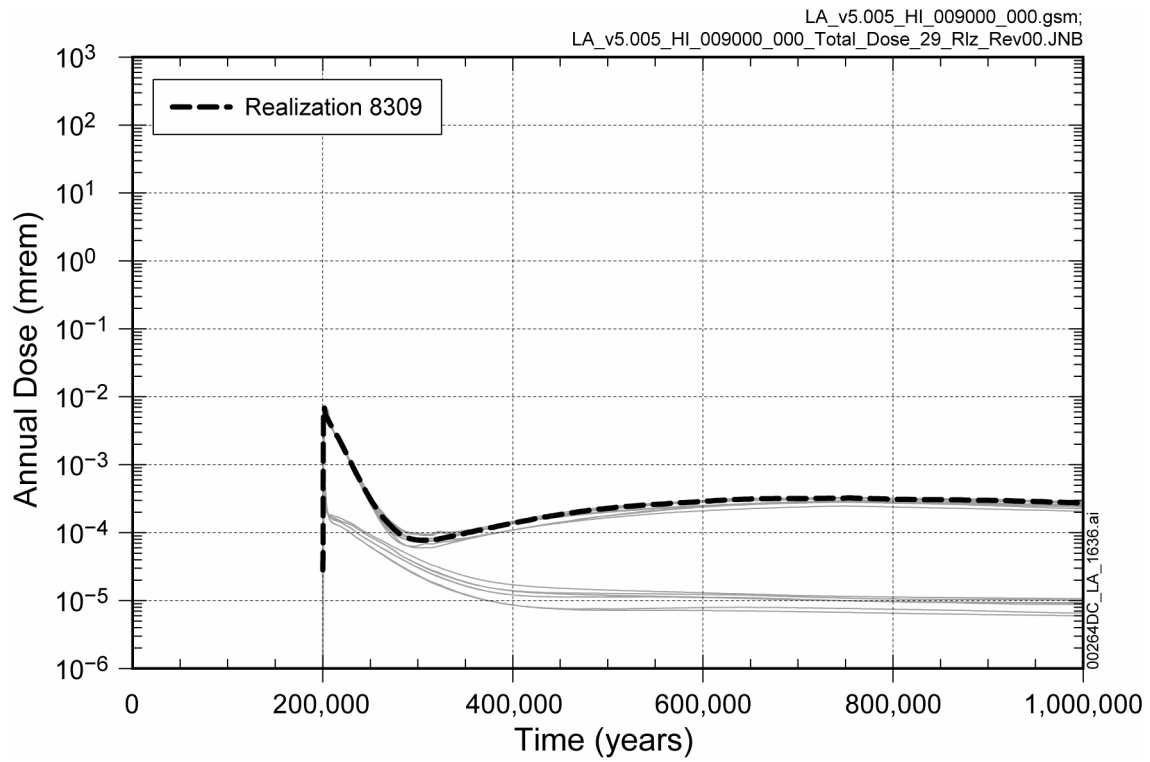
Figure 2.4-163. Annual Dose from the 30 Aleatory Vectors Associated with the Epistemic Vector 277 for the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

NOTE: The dashed line is the annual dose from aleatory vector 29, which is equivalent to GoldSim Realization 8,309.

Source: SNL 2008a, Figure 7.7.1-93[a].
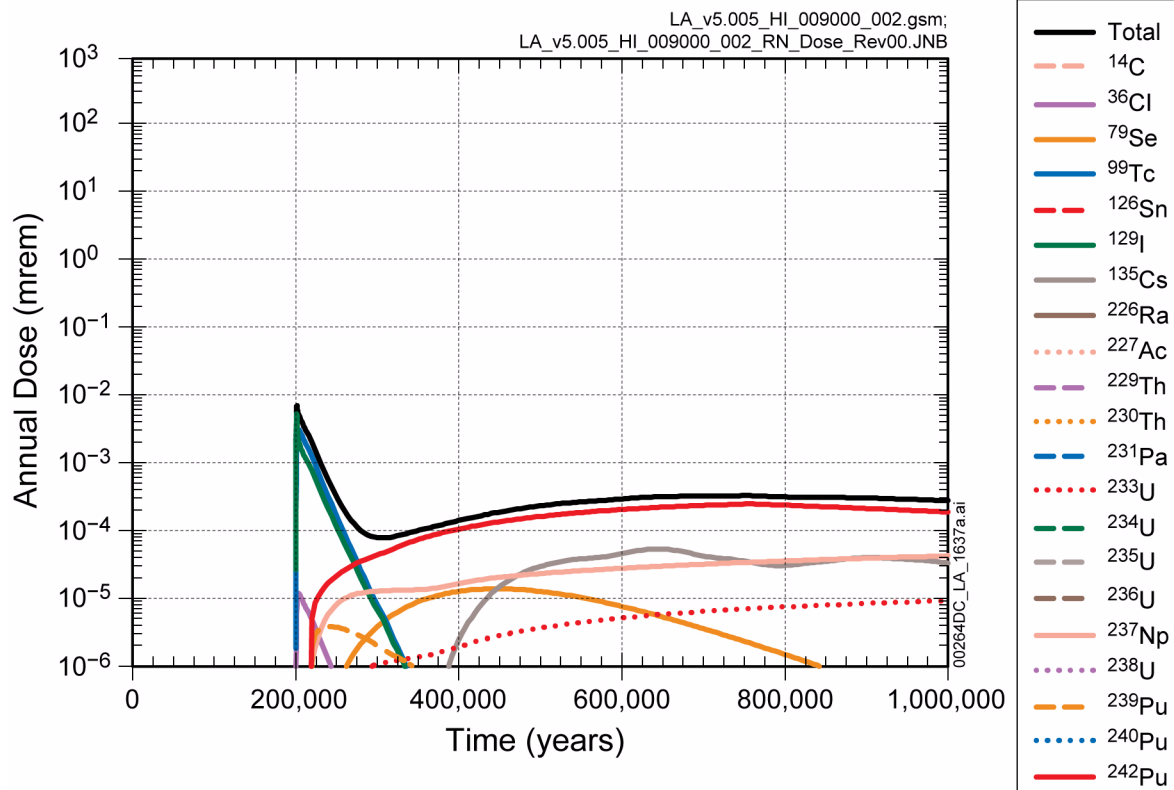
Figure 2.4-164. Annual Dose along with Major Radionuclide Dose Contributors for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

Source: SNL 2008a, Figure 7.7.1-94[a].
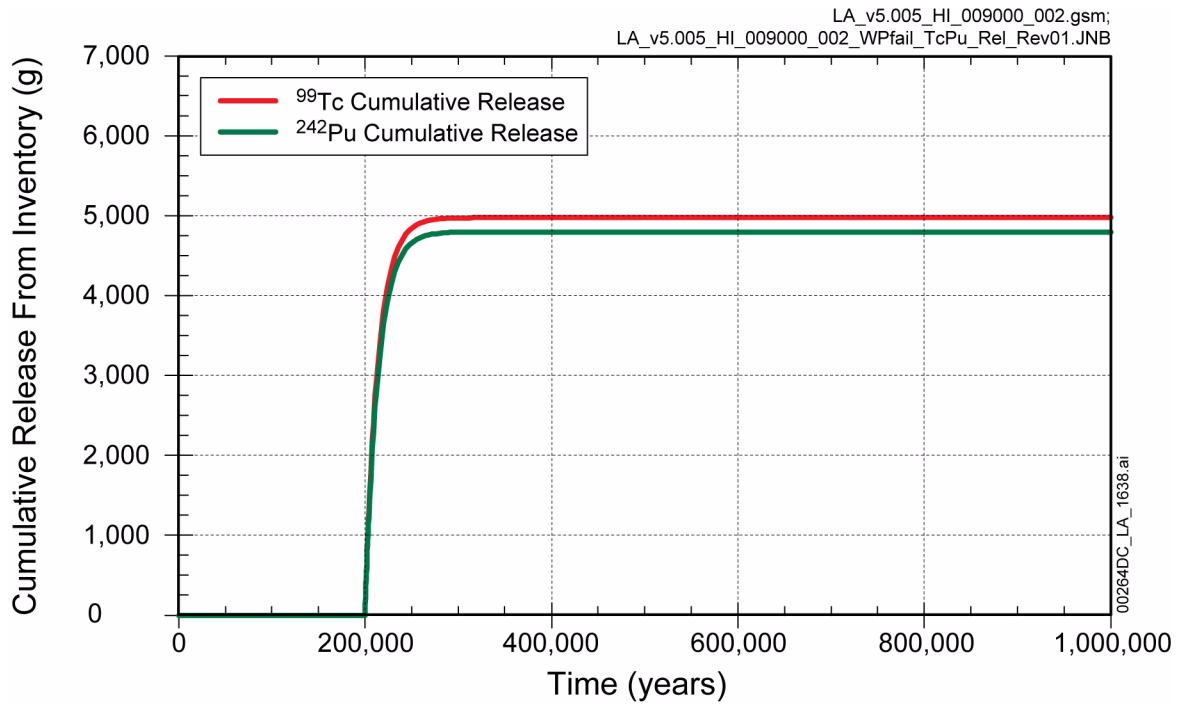
Figure 2.4-165. Commercial SNF Waste Package Failure along with the Cumulative Release of ^{99}Tc and ^{242}Pu from the Inventory for Percolation Subregion 4 for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

Source: SNL 2008a, Figure 7.7.1-95[a].
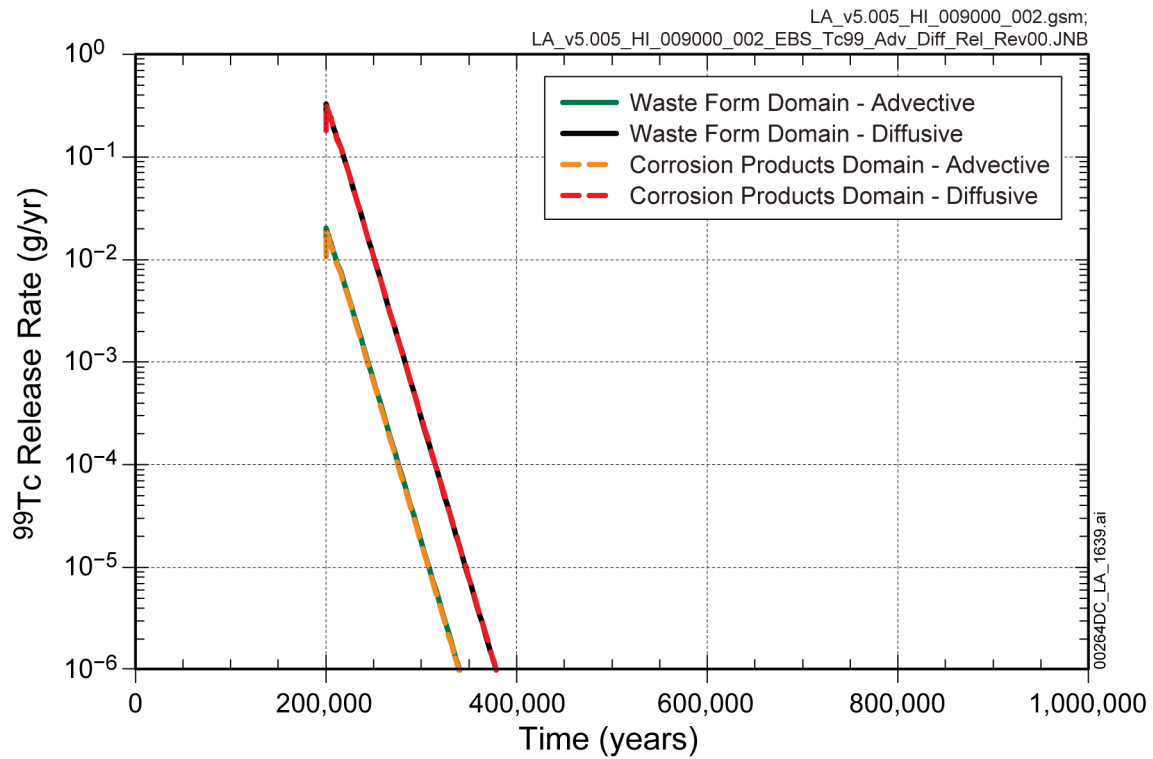
Figure 2.4-166. Advective and Diffusive Release Rates of ^{99}Tc from Waste Form and Corrosion Products Domain for Failed Commercial SNF Waste Packages for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure
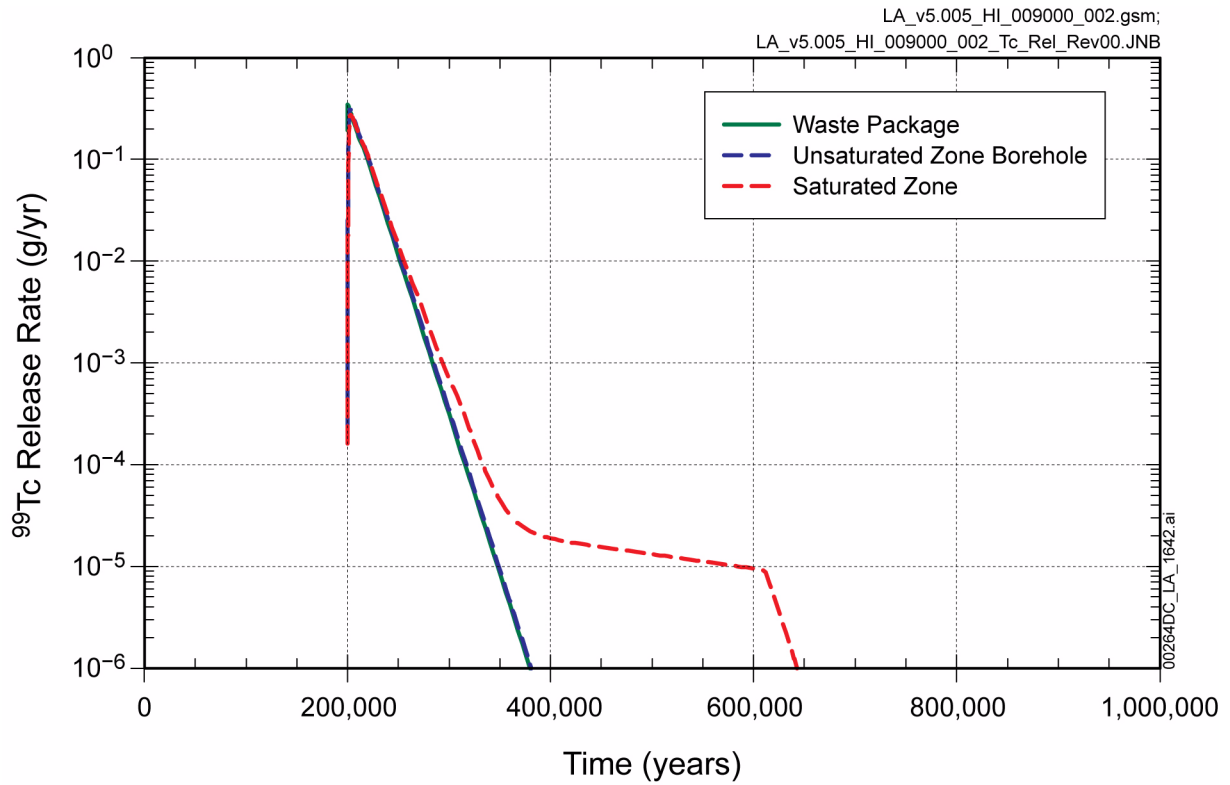
Source: SNL 2008a, Figure 7.7.1-96[a].
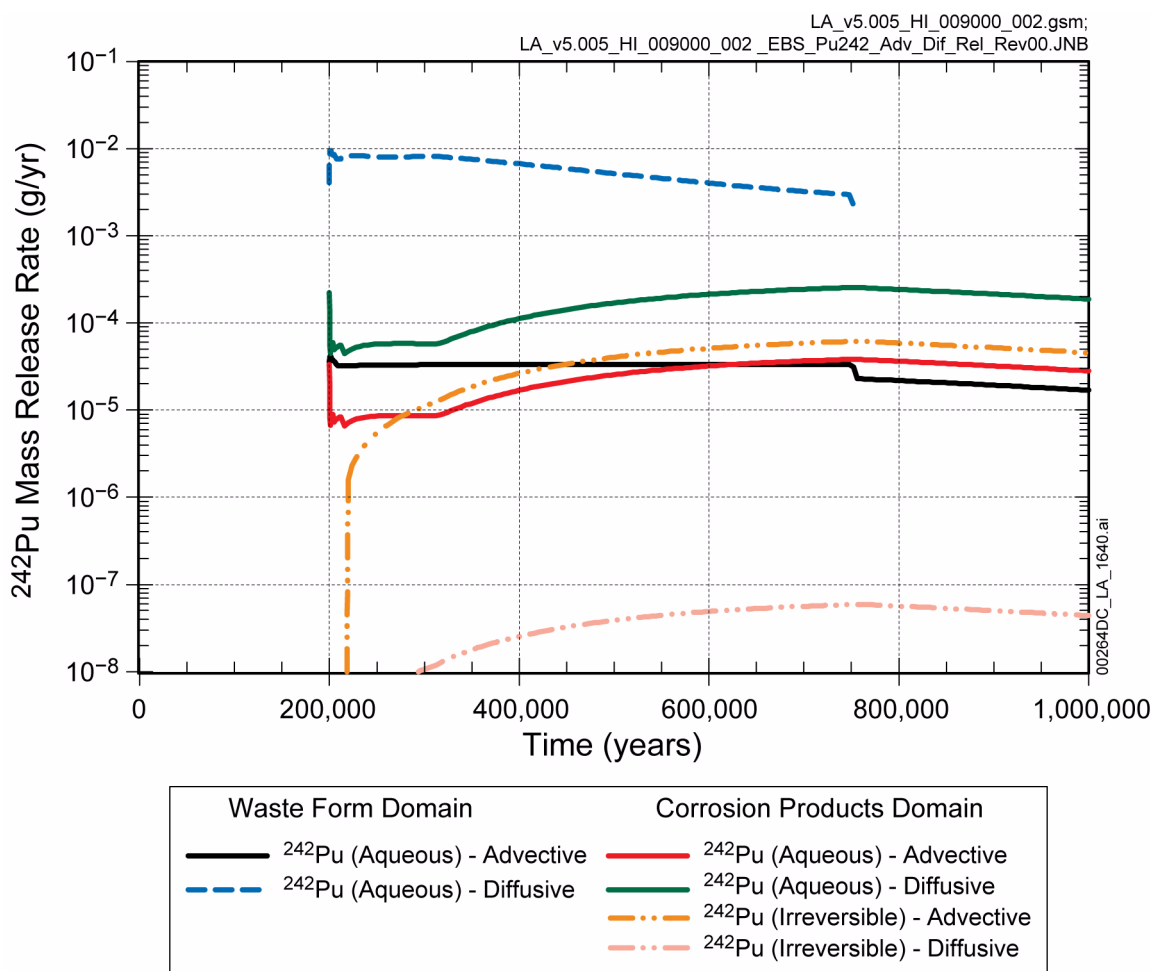
Figure 2.4-167. Advective and Diffusive Release Rates of [242]Pu (Aqueous) from Waste Form and Corrosion Products Domain and [242]Pu (Irreversibly Sorbed on Iron Oxyhydroxide Colloids) from Corrosion Products Domain for Failed Commercial SNF Waste Packages for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

NOTE: Plutonium dissolved and reversibly associated with colloids is denoted as aqueous.

Source: SNL 2008a, Figure 7.7.1-97[a].
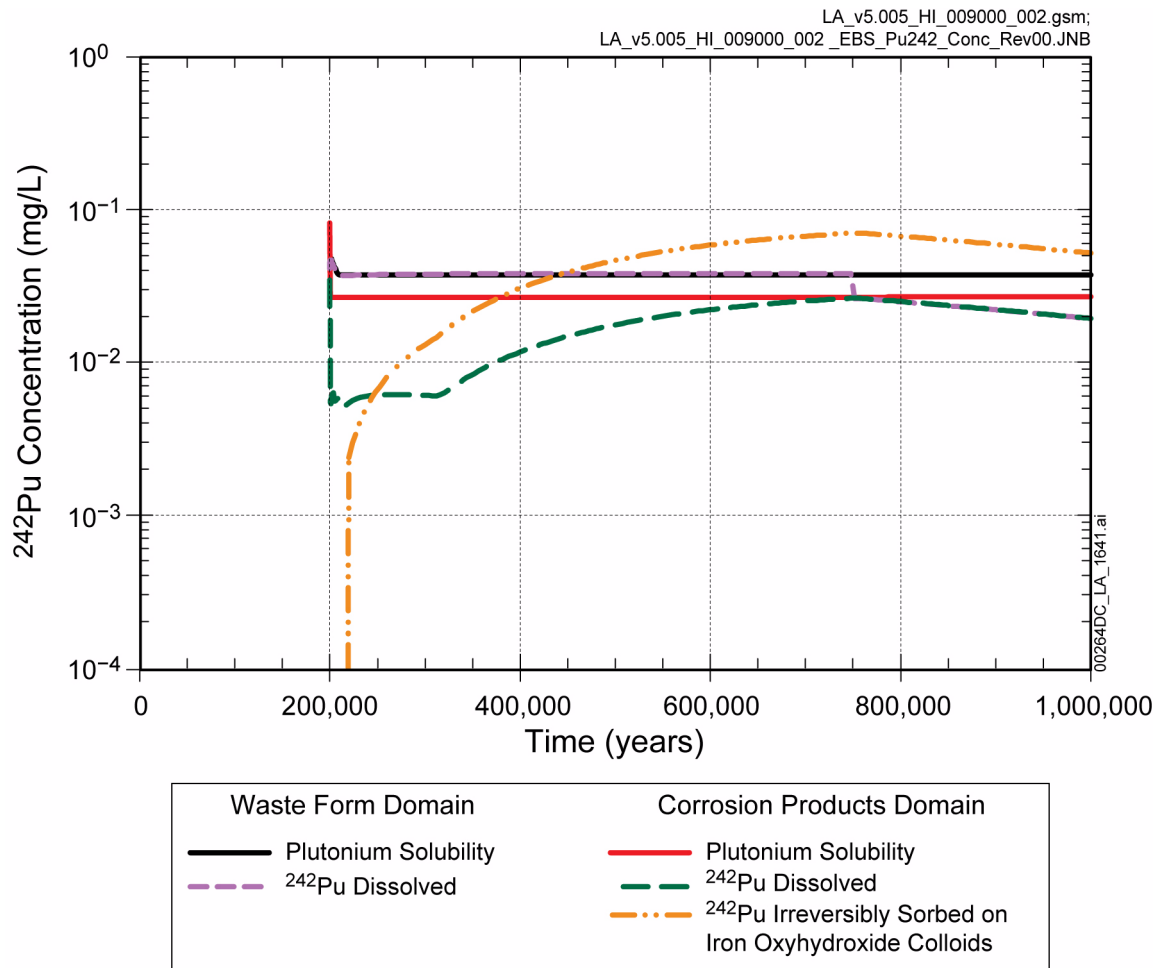
Figure 2.4-168. Dissolved Concentration of [242]Pu in the Waste Form and Corrosion Products Domains, the Plutonium Solubility in Respective Domains, and Concentration of [242]Pu Irreversibly Sorbed on Iron Oxyhydroxide Colloids for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure
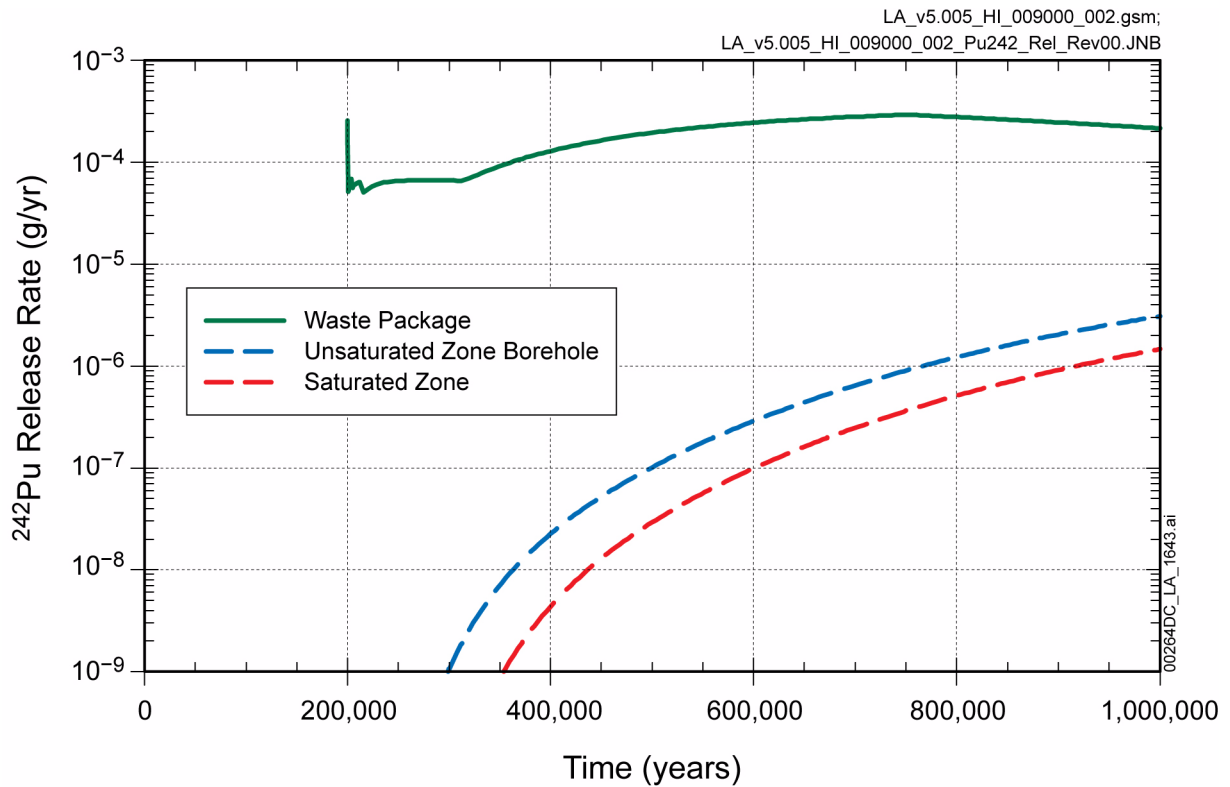
Source: SNL 2008a, Figure 7.7.1-98[a].

Figure 2.4-169. Comparison of ^{99}Tc Release from Waste Package, Unsaturated Zone Borehole, and Saturated Zone for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

Source: SNL 2008a, Figure 7.7.1-99[a].

Figure 2.4-170. Comparison of ^{242}Pu (Dissolved and Reversibly Associated with Colloids) Release from Waste Package, Unsaturated Zone Borehole, and Saturated Zone for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

NOTE: Plutonium dissolved and reversibly associated with colloids is denoted as aqueous.

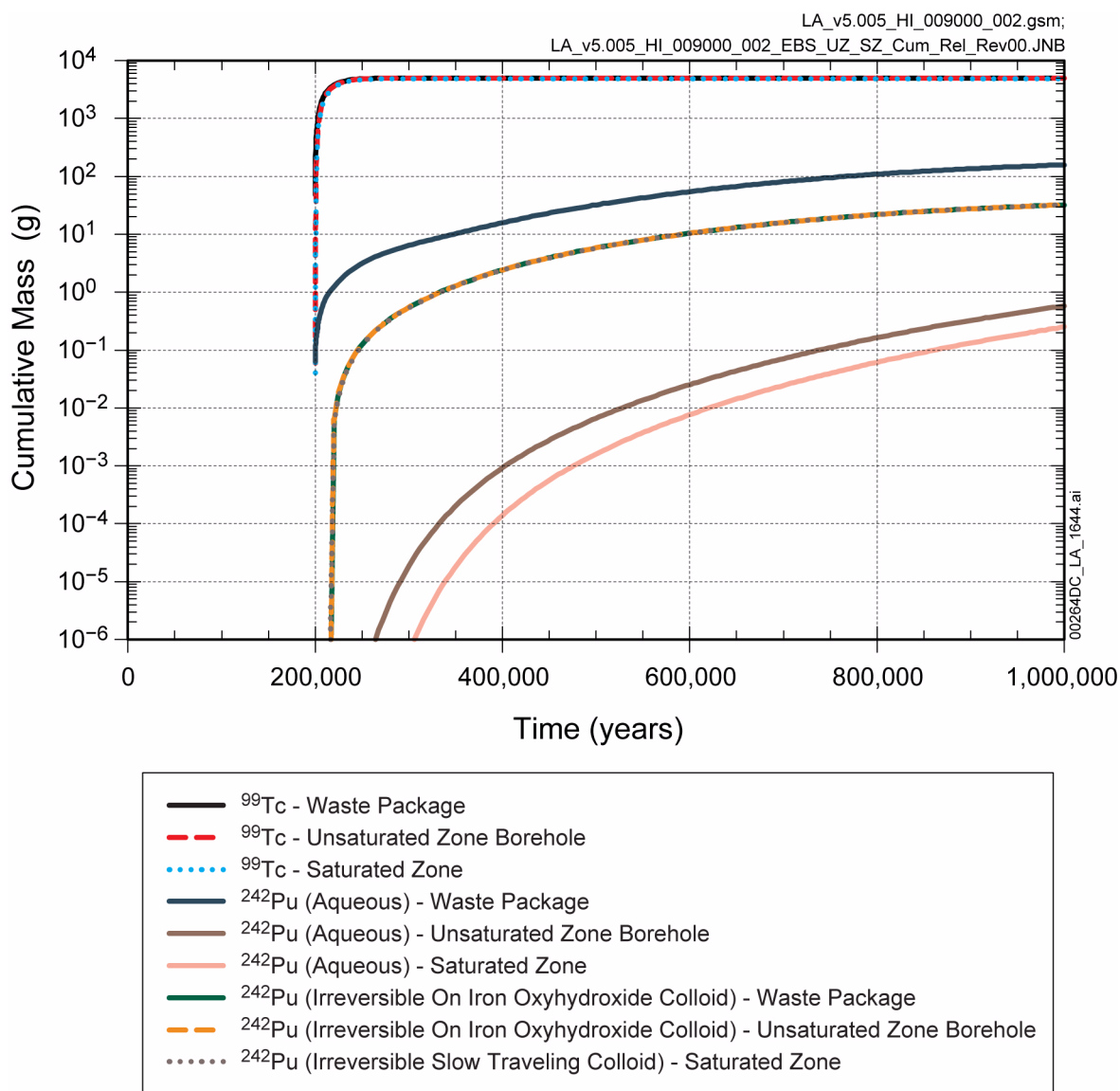Source: SNL 2008a, Figure 7.7.1-100[a].

Figure 2.4-171. Cumulative Release Comparison of ^{99}Tc, [242]Pu (Aqueous), and [242]Pu (Irreversibly Sorbed on Colloids) from Waste Package, Unsaturated Zone Borehole, and Saturated Zone for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

NOTE: Plutonium dissolved and reversibly associated with colloids is denoted as aqueous.

Source: SNL 2008a, Figure 7.7.1-101[a].
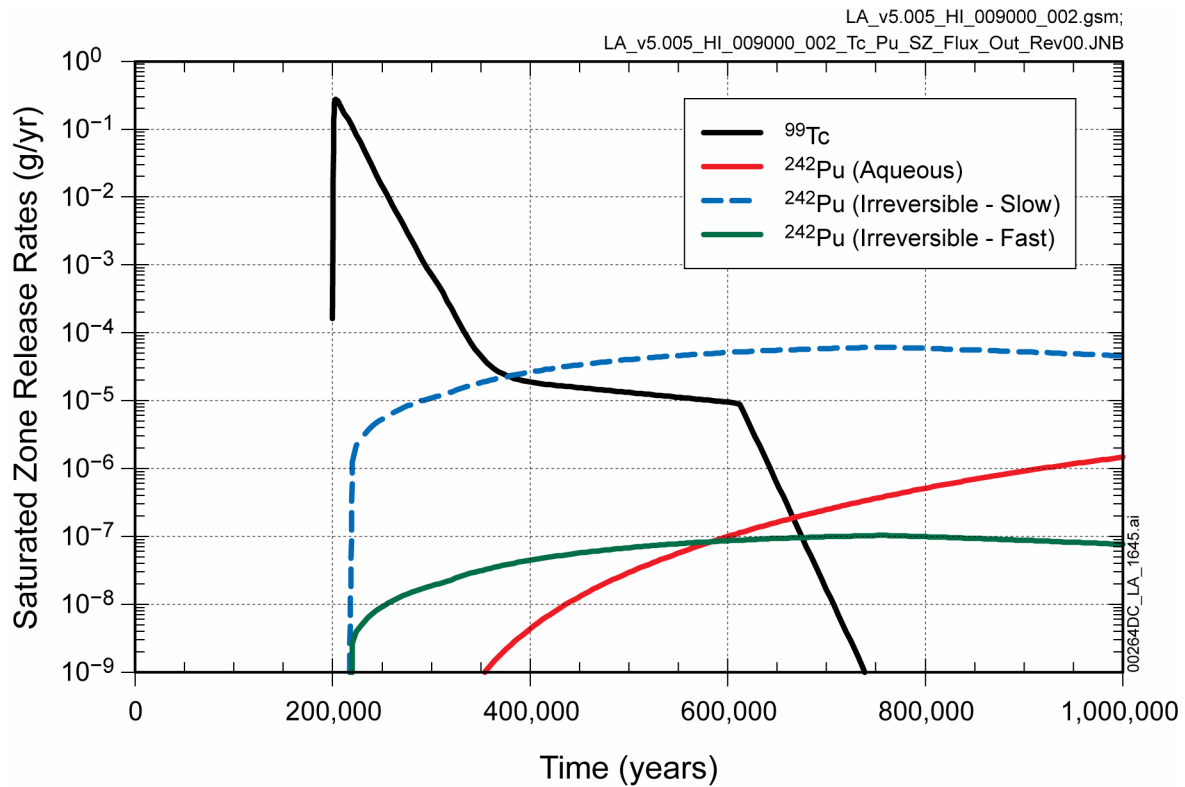
Figure 2.4-172. Saturated Zone Release Rates to the Biosphere for ^{99}Tc, ^{242}Pu (Aqueous), ^{242}Pu (Irreversibly Sorbed on Colloids that Travel Slowly due to Retardation), and ^{242}Pu (Irreversibly Sorbed on Colloids that Travel Fast Due to No Retardation) for Realization 8,309 of the Human Intrusion Modeling Case for the 1-Million-Year Period after Repository Closure

NOTE: Plutonium dissolved and reversibly associated with colloids is denoted as aqueous.
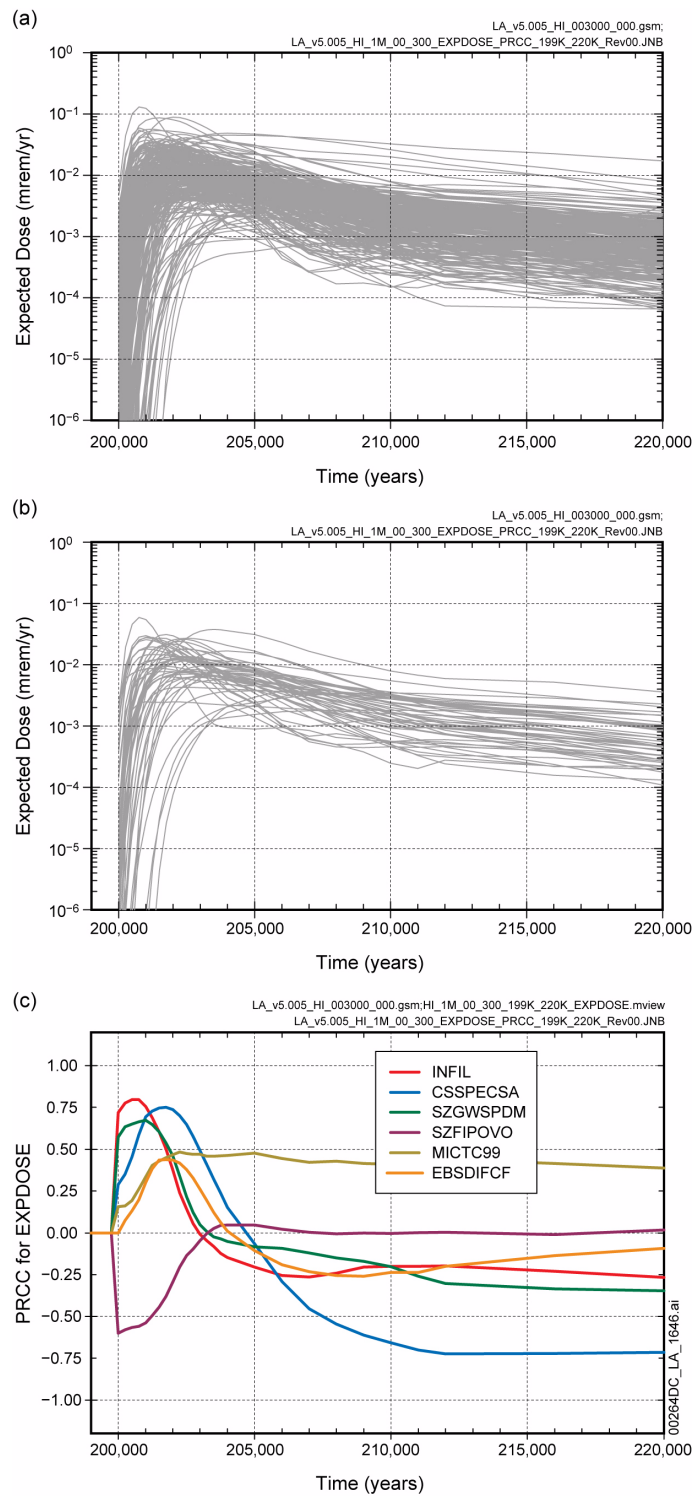
Source: SNL 2008a, Figure 7.7.1-102[a].

Figure 2.4-173. Expected Dose to the RMEI (*EXPDOSE*, mrem) over [200,000, 220,000 Year] Resulting from a Human Intrusion Event at 200,000 Years: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K10-1[a].

(a)

Step[a]	EXPDOSE: 201,000 Year Variable[b]	R²[c]	SRRC[d]	EXPDOSE: 203,000 Year Variable	R²	SRRC	EXPDOSE: 205,000 Year Variable	R²	SRRC
1	SZGWSPDM	0.20	0.45	MICTC99	0.15	0.44	MICTC99	0.33	0.58
2	INFIL	0.40	0.48	CSSPECSA	0.33	0.44	CSNFMASS	0.38	0.22
3	CSSPECSA	0.54	0.41	SZFISPVO	0.40	0.26	INFIL	0.41	−0.18
4	SZFISPVO	0.61	0.28	SZGWSPDM	0.43	0.18			
5	SZFIPOVO	0.65	−0.20	CSNFMASS	0.47	0.19			
6	SZDIFCVO	0.68	−0.18	SZDIFCVO	0.50	−0.19			
7	MICTC99	0.70	0.14	INFIL	0.51	−0.13			
8	CSWFA4AC	0.71	0.11	CSRINDPO	0.53	−0.11			
9	PHCSS	0.72	−0.11						
10	EP1NP2O5	0.73	−0.10						
11	CSNFMASS	0.73	0.10						
12	SZPORSAL	0.74	0.09						
13	DIAMCOLL	0.75	0.08						

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model

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Figure 2.4-174. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to the RMEI (*EXPDOSE*, mrem) over [200,000, 220,000 Year] Resulting from a Human Intrusion Event at 200,000 Years: (a) Regressions for *EXPDOSE* at 201,000, 203,000 and 205,000 Years, (b,c,d) Scatterplots for *EXPDOSE* at 201,000 Years, and (e, f, g) Scatterplots for *EXPDOSE* at 205,000 Years
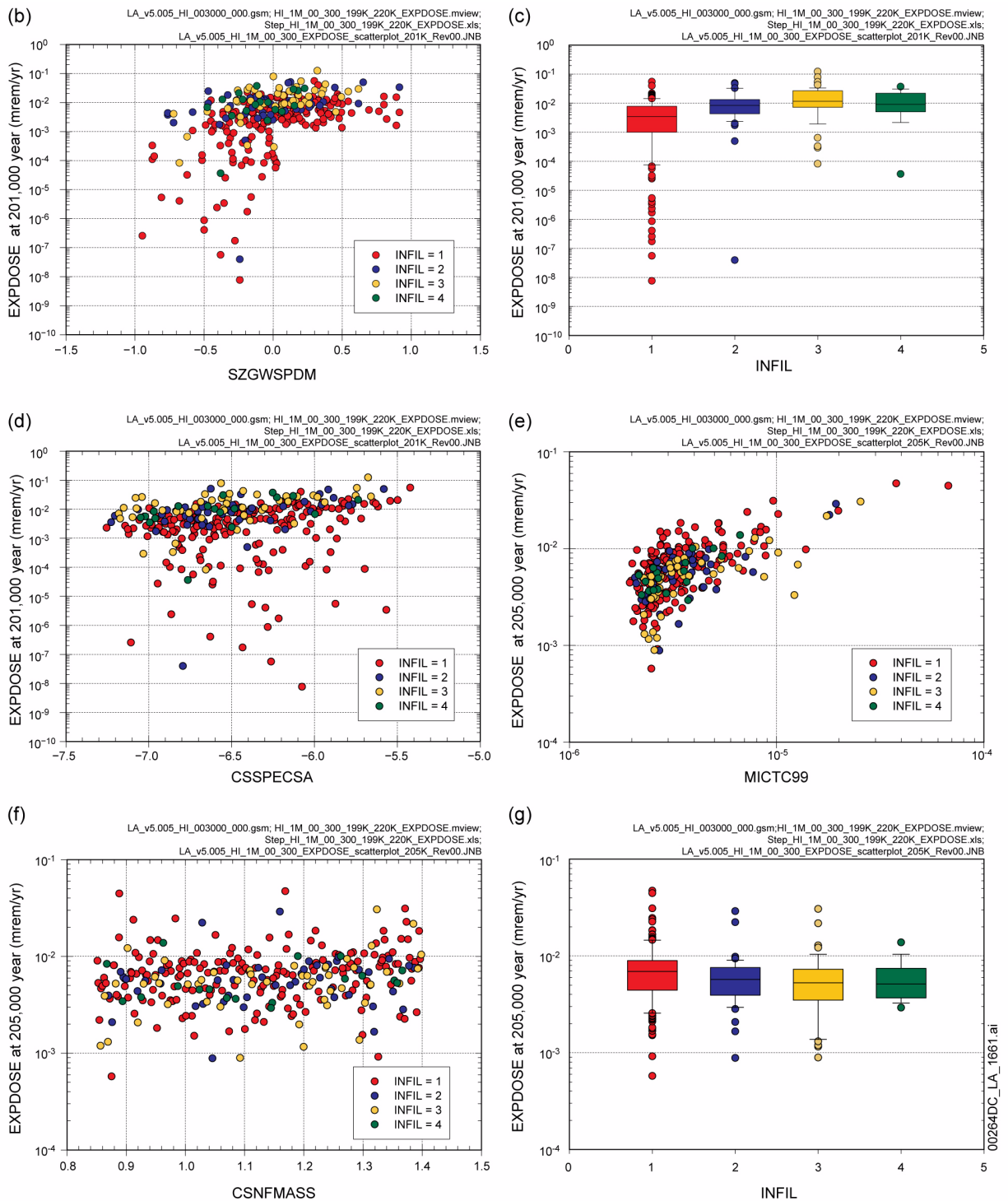
Source: SNL 2008a, Appendix K, Figure K10-2[a].

Figure 2.4-174. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to the RMEI (*EXPDOSE*, mrem) over [200,000, 220,000 Year] Resulting from a Human Intrusion Event at 200,000 Years: (a) Regressions for *EXPDOSE* at 201,000, 203,000 and 205,000 Years, (b,c,d) Scatterplots for *EXPDOSE* at 201,000 Years, and (e, f, g) Scatterplots for *EXPDOSE* at 205,000 Years (Continued)
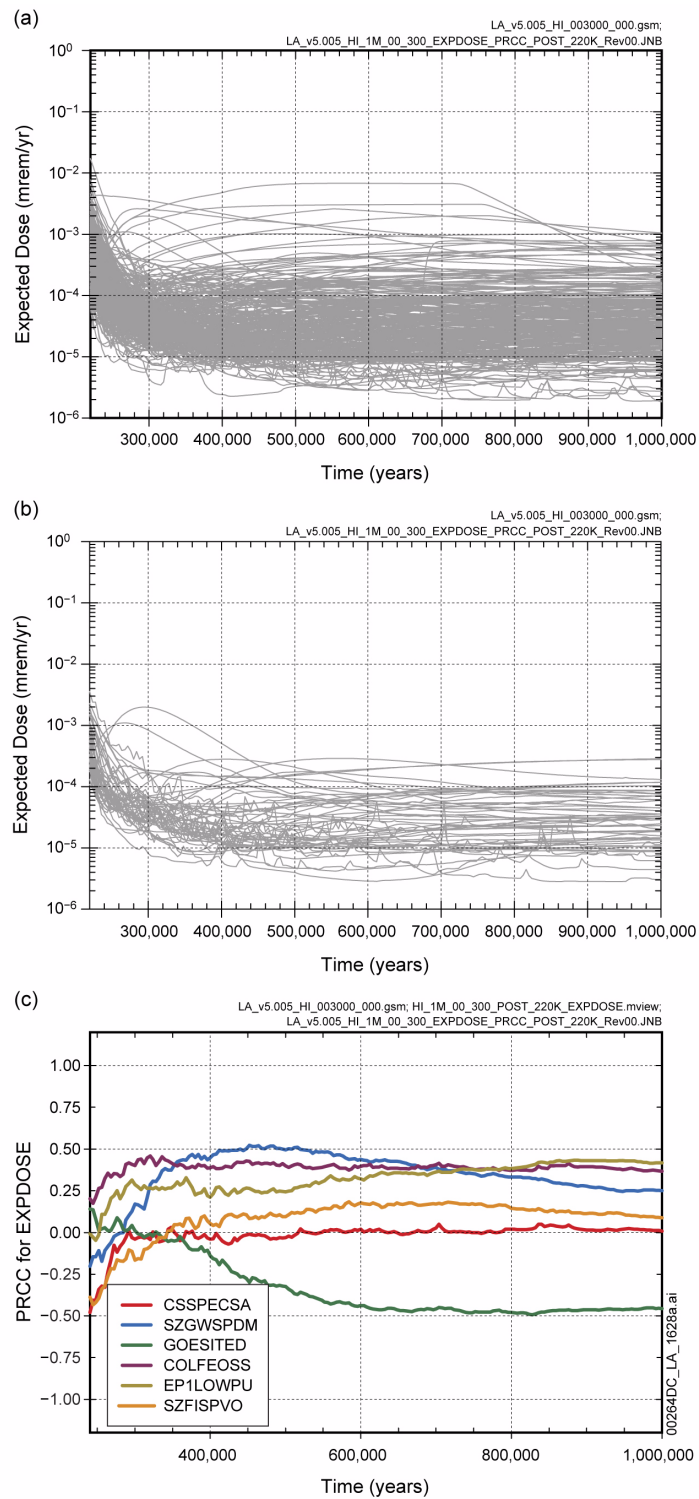
Source: SNL 2008a, Appendix K, Figure K10-2[a].

Figure 2.4-175. Expected Dose to RMEI (*EXPDOSE*, mrem/yr) over [220,000, 1 Million Year] Resulting from Human Intrusion at 200,000 Years: (a) *EXPDOSE* for All (i.e., 300) Sample Elements, (b) *EXPDOSE* for First 50 Sample Elements, and (c) Partial Rank Correlation Coefficients for *EXPDOSE*

Source: SNL 2008a, Appendix K, Figure K10-3[a].

(a)

Step[a]	EXPDOSE: 240,000 Years			EXPDOSE: 500,000 Years			EXPDOSE: 760,000 Years		
	Variable[b]	R^{2} [c]	SRRC[d]	Variable	R^2	SRRC	Variable	R^2	SRRC
1	CSSPECSA	0.20	−0.44	SZGWSPDM	0.15	0.37	GOESITED	0.10	−0.33
2	SZGWSPDM	0.29	−0.29	GOESITED	0.23	−0.27	SZGWSPDM	0.20	0.27
3	SZFISPVO	0.36	−0.34	ISCSS	0.29	−0.26	COLFEOSS	0.27	0.29
4	MICTC99	0.42	0.22	COLFEOSS	0.34	0.22	EP1LOWPU	0.34	0.23
5	SZDIFCVO	0.45	0.19	EP1LOWPU	0.39	0.22	ISCSS	0.39	−0.23
6	MICI129	0.46	0.14	HFOSA	0.43	−0.20	EP1LOWNU	0.44	0.18
7	UZKDCSDT	0.48	−0.12	EP1LOWNU	0.46	0.17	HFOSA	0.48	−0.20
8	CSNFMASS	0.49	0.12	MICCS135	0.48	0.14	MICCS135	0.51	0.17
9	ISCSS	0.50	−0.11	SZDIFCVO	0.49	−0.16	MICPU239	0.54	0.16
10				SZFISPVO	0.51	0.17	SZDIFCVO	0.55	−0.17
11				SZCOLRAL	0.53	−0.14	SZFISPVO	0.57	0.14
12				UZRCOL	0.54	0.12	HFOSITED	0.59	−0.15
13				HFOSITED	0.55	−0.11	WDGCUA22	0.60	0.12
14							SZSREG2Y	0.61	0.13
15							SZKDSRVO	0.62	−0.11
16							SZLODISP	0.63	−0.10

a: Steps in stepwise rank regression analysis
b: Variables listed in order of selection in stepwise regression
c: Cumulative R^2 value with entry of each variable into regression model
d: Standardized rank regression coefficients (SRRCs) in final regression model
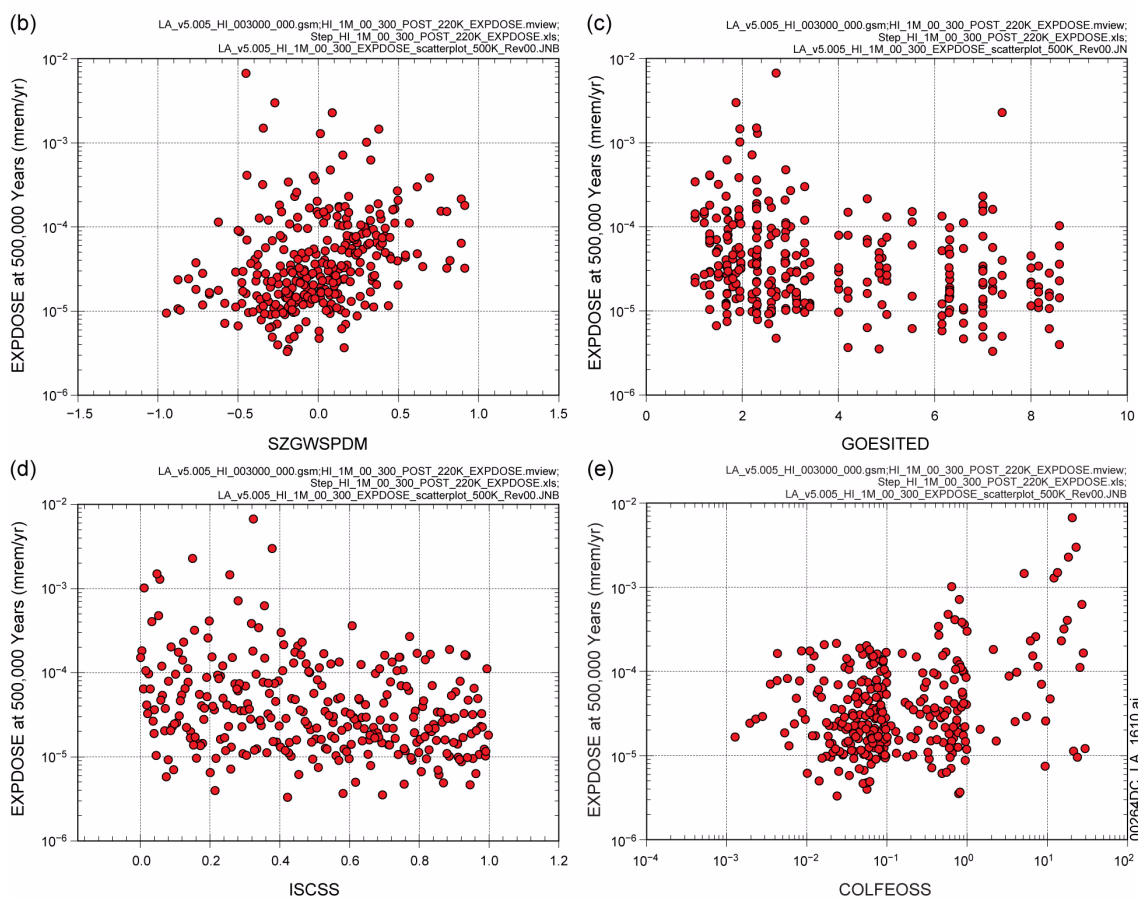

Figure 2.4-176. Stepwise Rank Regression Analyses and Selected Scatterplots for Expected Dose to RMEI (*EXPDOSE*, mrem) over [220,000, 1,000,000 Year] Resulting from a Human Intrusion Event at 200,000 Years: (a) Regressions for *EXPDOSE* at 240,000, 500,000 and 760,000 Years, and (b, c, d, e) Scatterplots for *EXPDOSE* at 500,000 Years

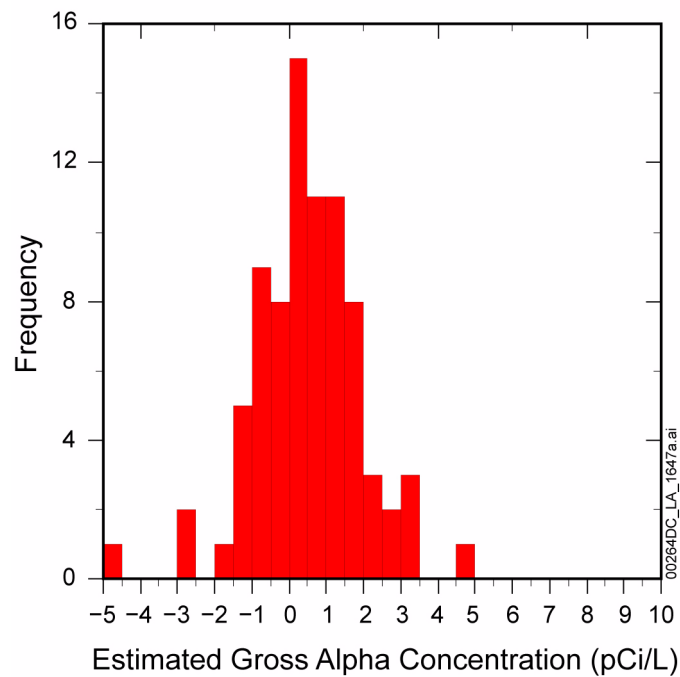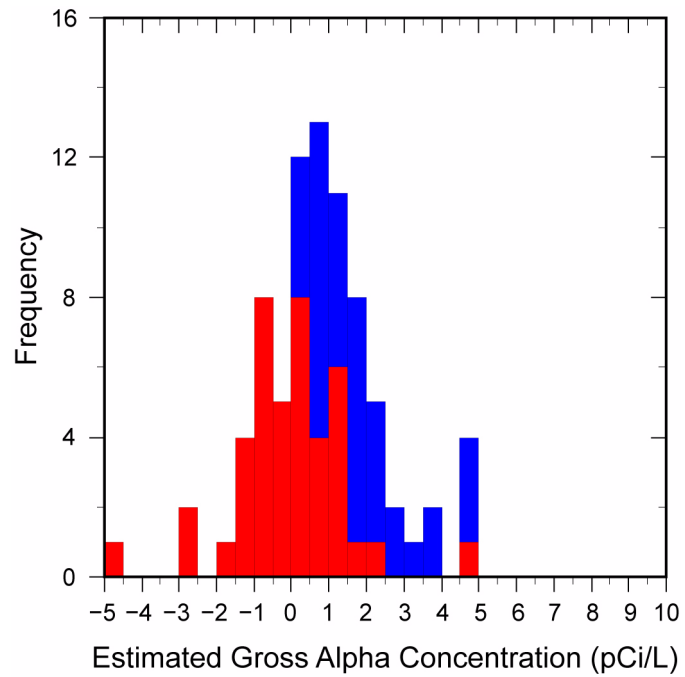Source: SNL 2008a, Appendix K, Figure K10-4[a].

Figure 2.4-177. Histograms of Gross Alpha Concentration in Groundwater near Yucca Mountain

NOTE: Upper plot shows values of gross alpha concentration that have been corrected for uranium concentration in red and values that are uncorrected in blue. Lower plot shows all values corrected for uranium.
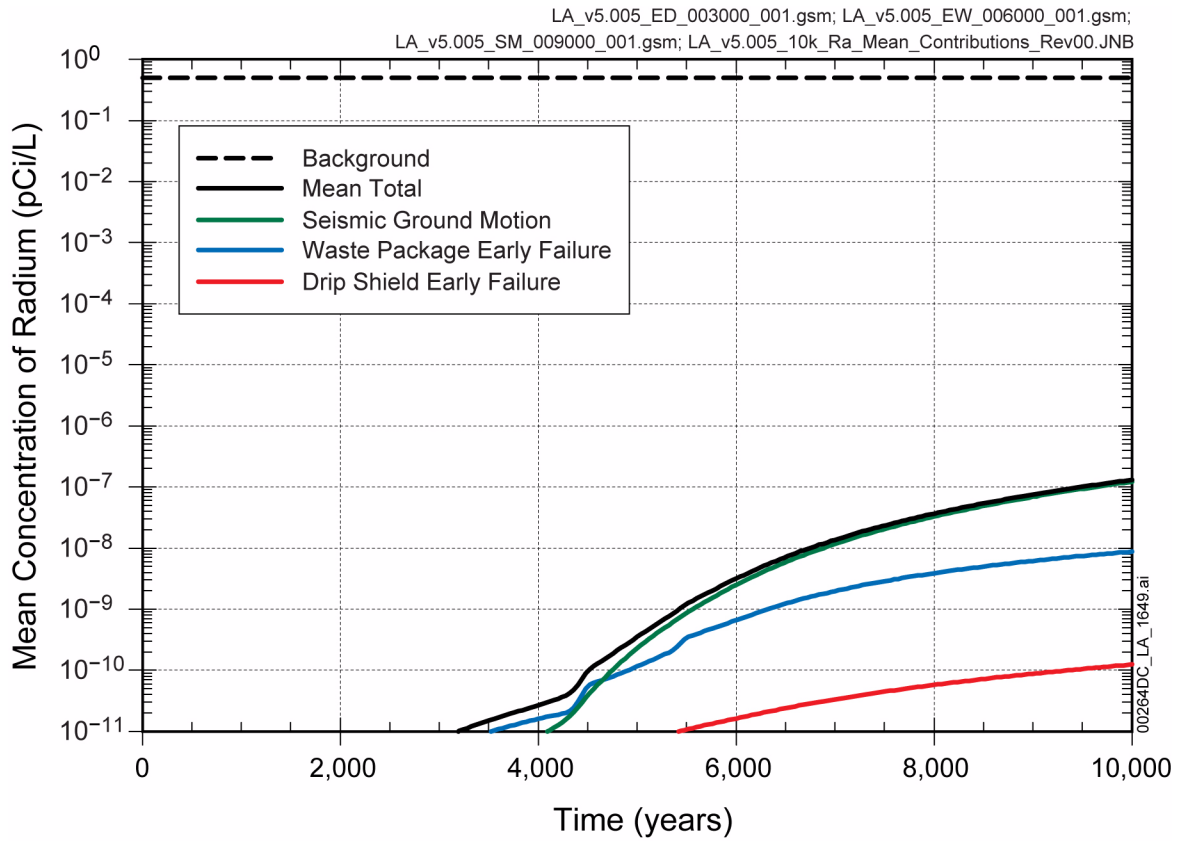
Source: SNL 2008f, Figure 6-48.

Figure 2.4-178. Contributions of the Modeling Cases to the Mean Combined ^{226}Ra and ^{228}Ra Activity
Concentration in Groundwater, Excluding Natural Background, for 10,000 Years after
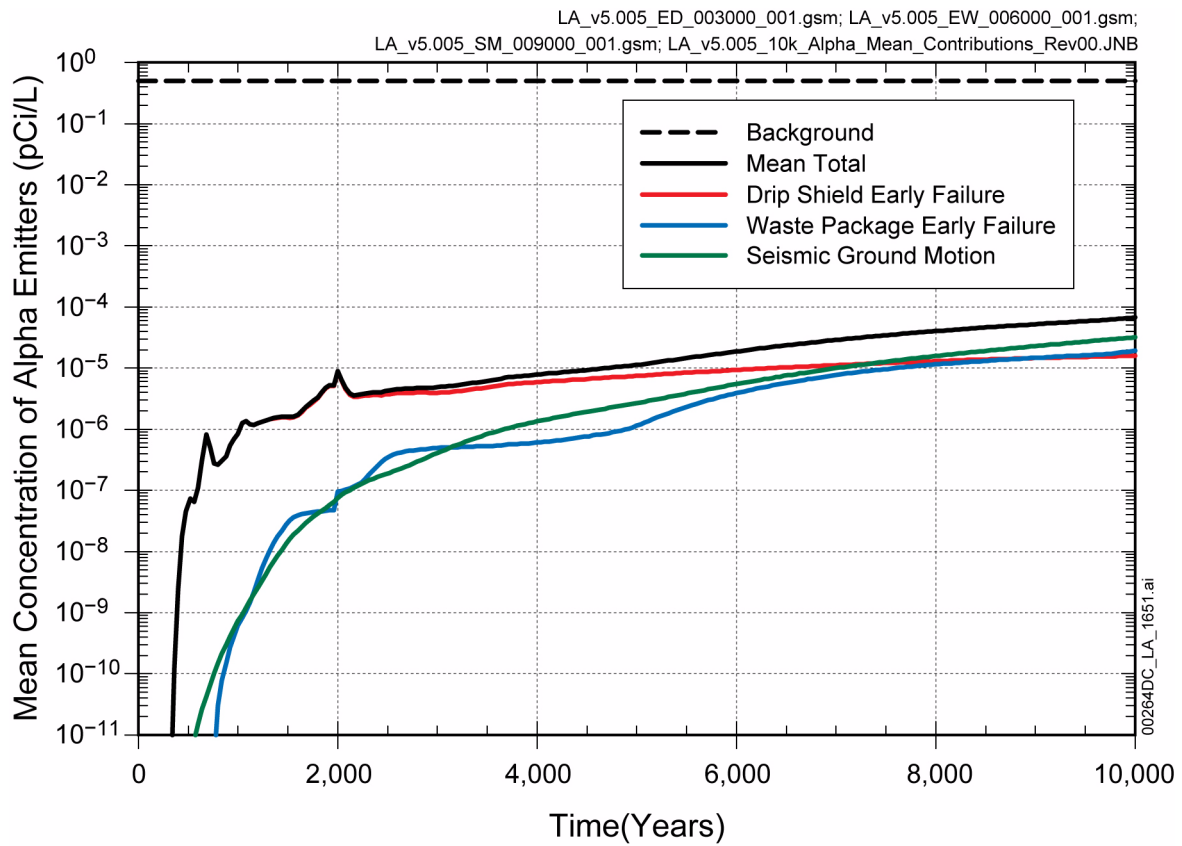Repository Closure

Source: SNL 2008a, 8.1-10[a].

Figure 2.4-179. Contributions of the Modeling Cases to the Mean Gross Alpha Activity Concentrations (Including ^{226}Ra but Excluding Radon and Uranium) in Groundwater for 10,000 Years after Repository Closure

Source: SNL 2008a, 8.1-12[a].
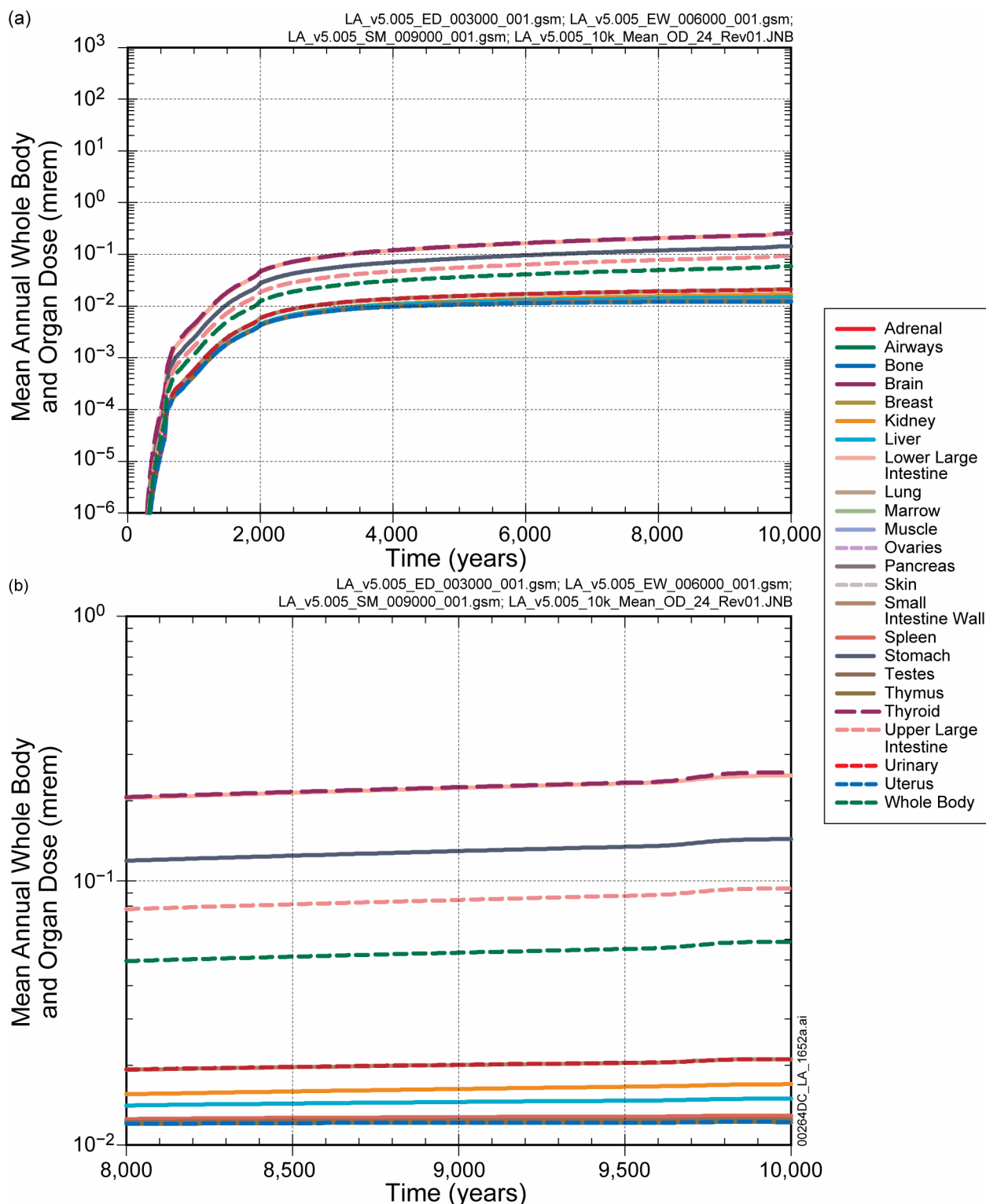
(a)

(b)

Figure 2.4-180. Mean Annual Beta-Photon Dose for All Organs, Including the Whole Body, for (a) 10,000
                Years after Disposal and (b) Detail for 8,000 to 10,000 Years after Disposal

NOTE: There are 24 dose histories in the plot: 23 organs and one for the whole body.
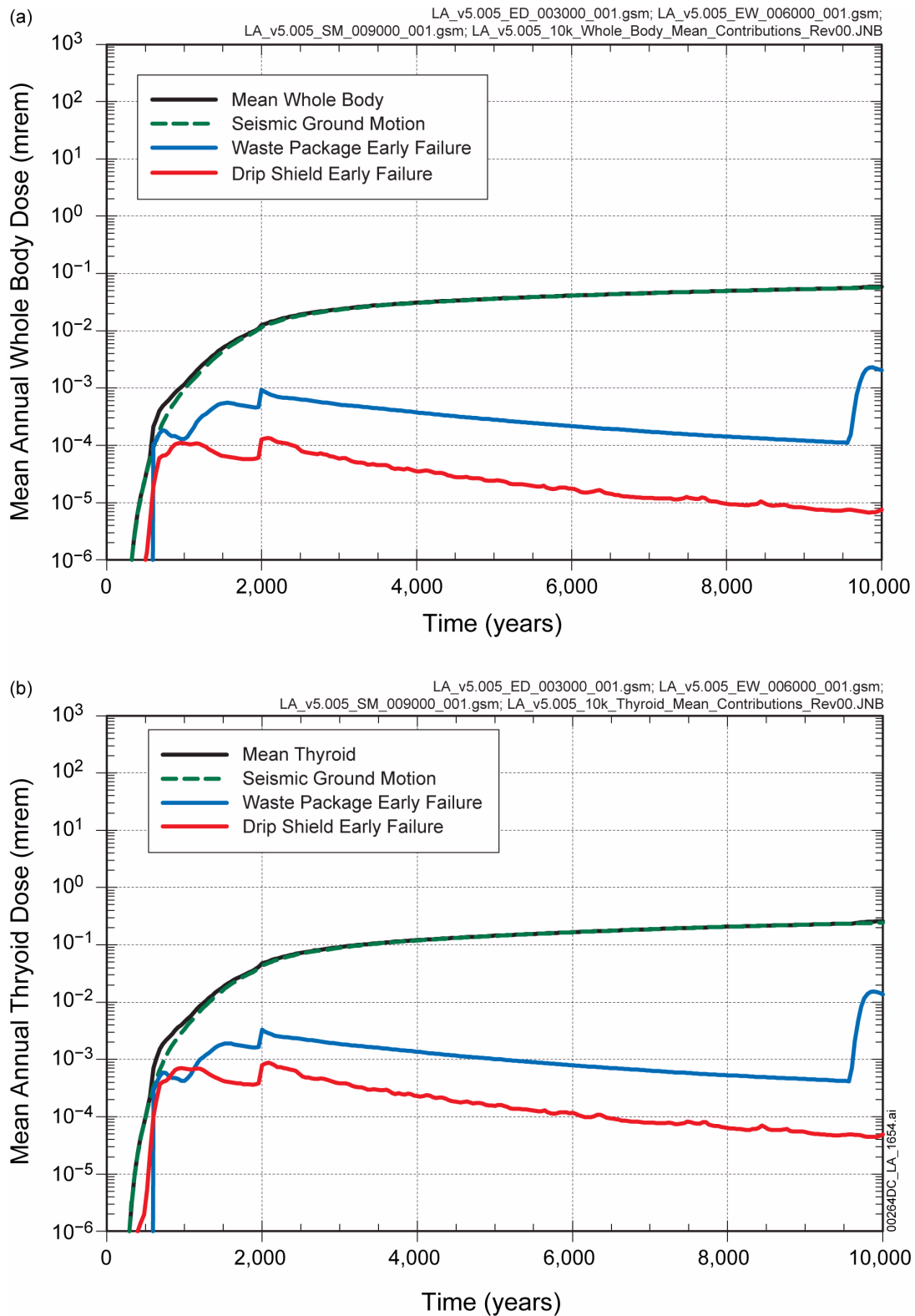
Source: SNL 2008a, 8.1-13[a].

(a)

(b)

Figure 2.4-181. Contributions of Modeling Cases to the (a) Whole Body Dose and (b) Thyroid for 10,000 Years after Repository Closure

Source: SNL 2008a, 8.1-15[a].