

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-1. Time-dependent dose to the RMEI (*DOIC239*, mrem/yr) over 20,000 years for the movement of ²³⁹Pu irreversibly attached to slow colloids across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) *DOIC239* for all (i.e., 300) sample elements, (b) *DOIC239* for first 50 sample elements, and (c) PRCCs for *DOIC239*

(a)

Step ^a	DOIC239: 3000 yr			DOIC239: 5000 yr			DOIC239: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SZCOLRAL	0.26	-0.56	SZCOLRAL	0.32	-0.66	SZCOLRAL	0.26	-0.60
2	SZFIPOVO	0.39	-0.39	SZFIPOVO	0.44	-0.40	CPUCOLWF	0.33	0.26
3	SZGWSPDM	0.47	0.27	SZGWSPDM	0.51	0.28	SZGWSPDM	0.40	0.29
4	SZCOLRVO	0.49	-0.16	SZCOLRVO	0.53	-0.13	SZFIPOVO	0.45	-0.27
5	SZKDAMCO	0.51	0.17	INFIL	0.55	0.11	INFIL	0.50	0.18
6	INFIL	0.52	0.11	KDRASMEC	0.56	0.17	MICPU239	0.52	0.20
7	SZKDSRVO	0.53	0.11	CPUCOLWF	0.58	0.13	RUBMAXNL	0.55	-0.17
8	SZSREG1Y	0.55	0.11	RUBMAXNL	0.59	-0.10	SZSREG3Y	0.57	-0.11
9				MICPU239	0.61	0.16	KDRASMEC	0.58	0.12
10				UZFAG8	0.62	0.14	MICCL36	0.59	-0.12
11				MIC1129	0.63	-0.12	SZKDPUVO	0.60	0.11
12				SZKDPUVO	0.64	0.11	SZKDSRAL	0.61	0.11
13				RHMUNO20	0.65	0.11	PH2MCONS	0.62	-0.10

a: Steps in stepwise rank regression analysis

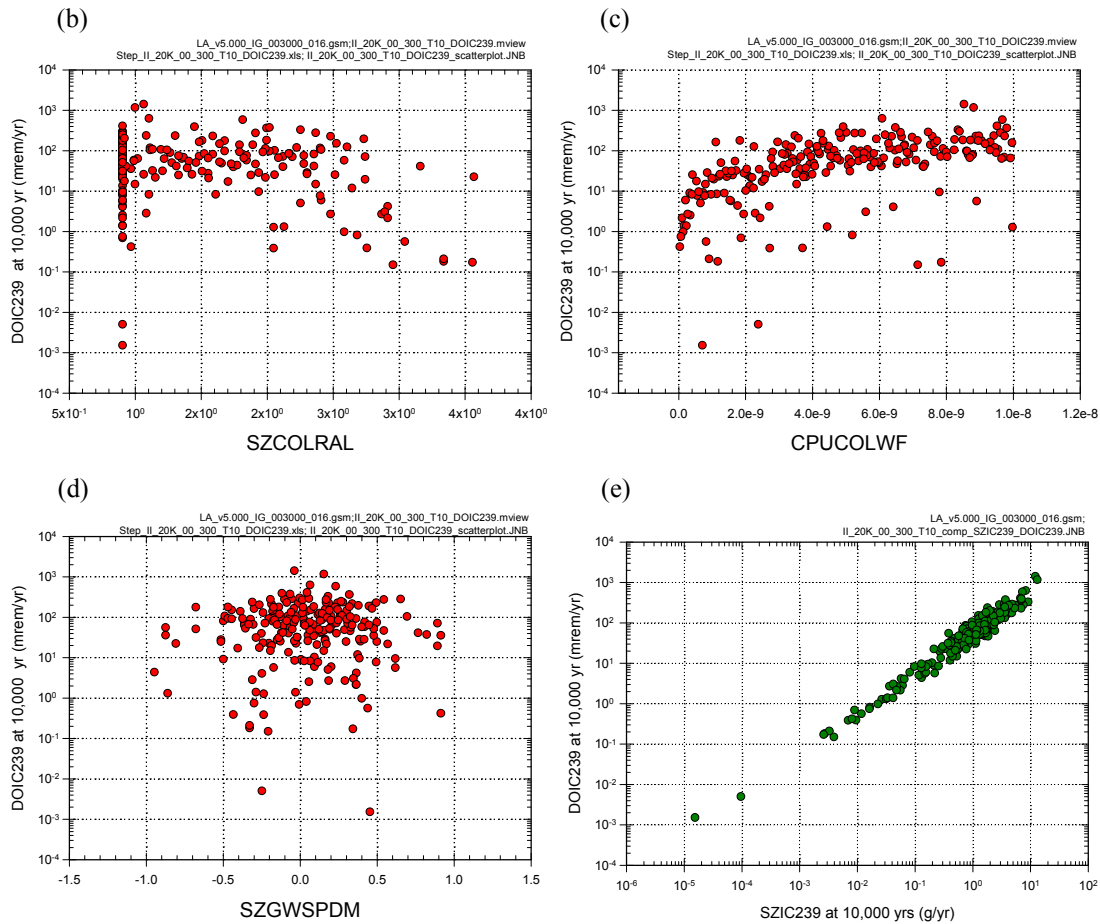
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

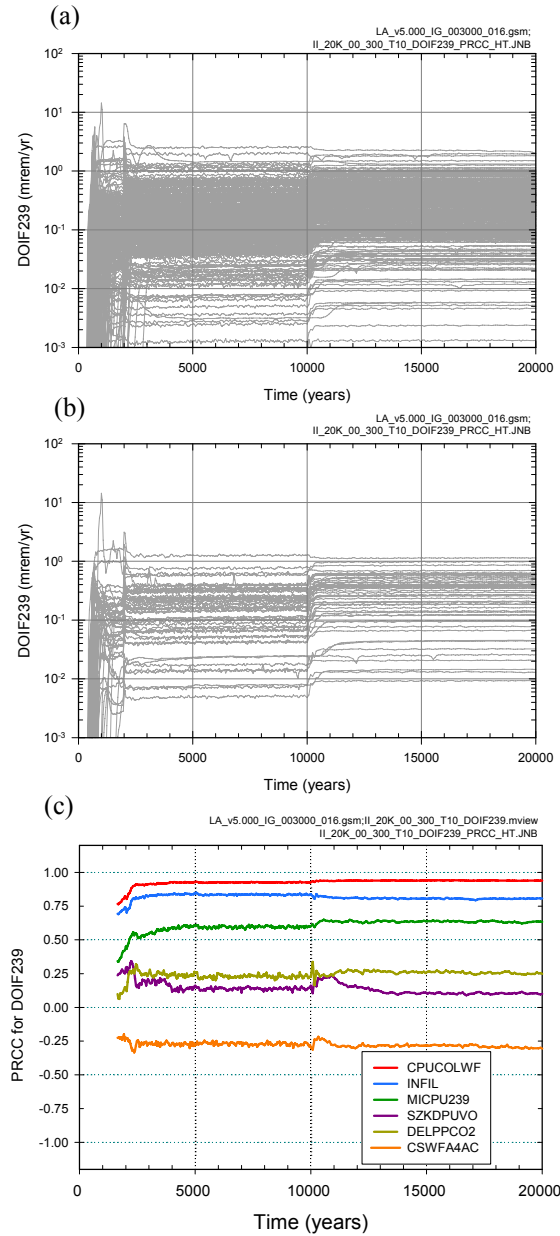
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-2. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOIC239*, mrem/yr) for the movement of ²³⁹Pu irreversibly attached to slow colloids across a subsurface plane at the location of the RMEI (*SZIC239*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOIC239* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DOIC239* at 10,000 years, and (e) Scatterplot comparing *SZIC239* and *DOIC239* at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-2. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOIC239*, mrem/yr) for the movement of ^{239}Pu irreversibly attached to slow colloids across a subsurface plane at the location of the RMEI (*SZIC239*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOIC239* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DOIC239* at 10,000 years, and (e) Scatterplot comparing *SZIC239* and *DOIC239* at 10,000 years (continued)



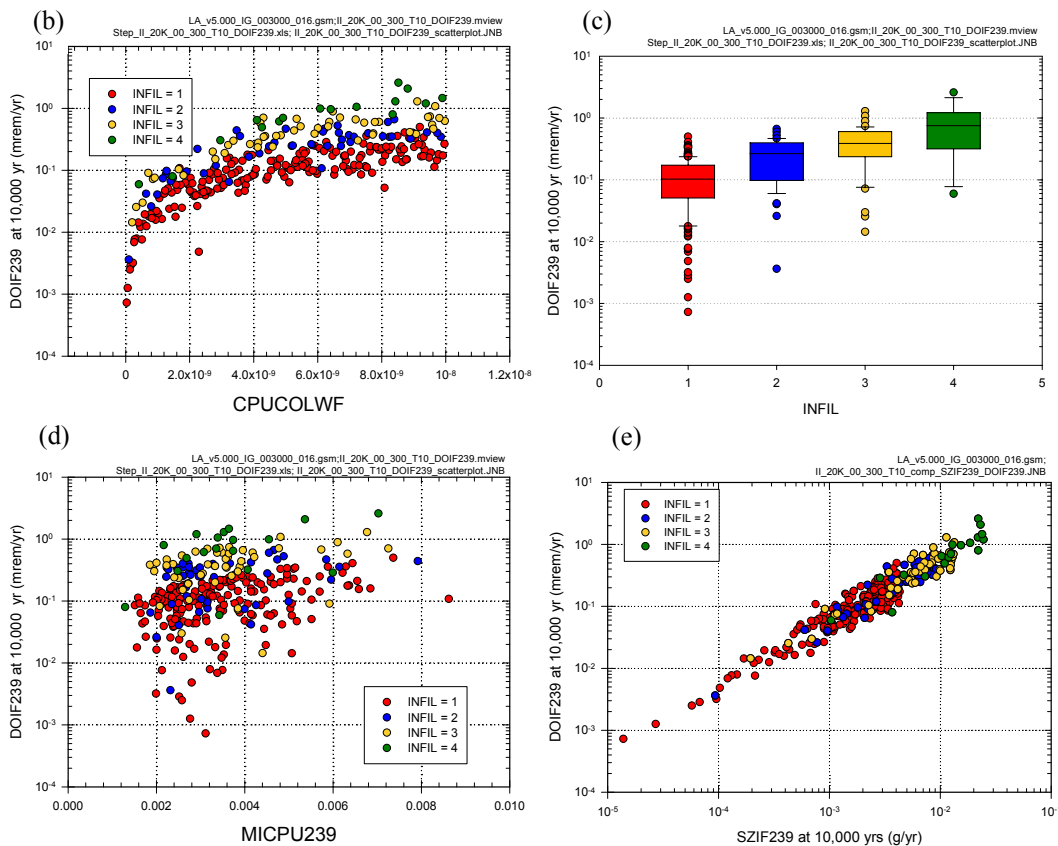
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-3. Time-dependent dose to the RMEI (*DOIF239*, mrem/yr) over 20,000 years for the movement of ^{239}Pu irreversibly attached to fast colloids across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) *DOIF239* for all (i.e., 300) sample elements, (b) *DOIF239* for first 50 sample elements, and (c) PRCCs for *DOIF239*

(a)

Step ^a	DOIF239: 3000 yr			DOIF239: 5000 yr			DOIF239: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	CPUCOLWF	0.52	0.69	CPUCOLWF	0.53	0.69	CPUCOLWF	0.54	0.70
2	INFIL	0.80	0.52	INFIL	0.81	0.51	INFIL	0.81	0.51
3	MICPU239	0.90	0.31	MICPU239	0.91	0.32	MICPU239	0.91	0.32
4	DWCSTERC	0.90	-0.05	DWCSTERC	0.92	-0.05	RUBMAXL	0.91	-0.04
5	DWCSTERB	0.91	-0.05	WPFLUX	0.92	0.05	DWCSTERC	0.92	-0.05
6	RUBMAXL	0.91	-0.05				WPFLUX	0.92	0.04

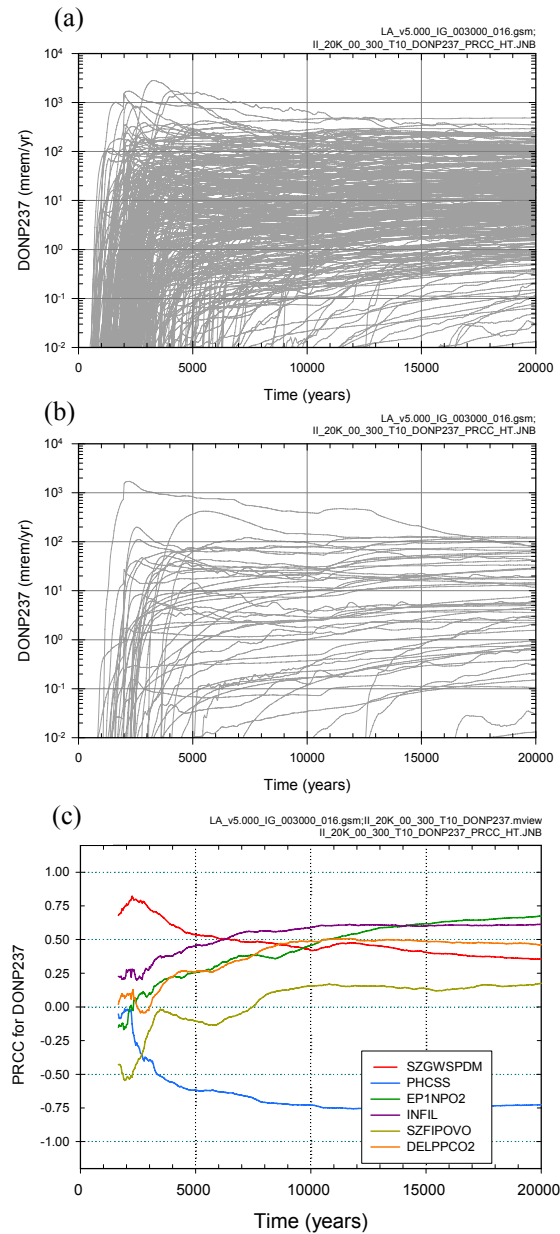
- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

NOTE: In (c), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K6.6.1-4. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOIF239*, mrem/yr) for the movement of ²³⁹Pu irreversibly attached to fast colloids across a subsurface plane at the location of the RMEI (*SZIF239*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOIF239* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DOIF239* at 10,000 years, and (e) Scatterplot comparing *SZIF239* and *DOIF239* at 10,000 years.



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-5. Time-dependent dose to the RMEI (*DONP237*, mrem/yr) over 20,000 years for the movement of dissolved ²³⁷Np across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) *DONP237* for all (i.e., 300) sample elements, (b) *DONP237* for first 50 sample elements, and (c) PRCCs for *DONP237*

(a)

Step ^a	DONP237: 3000 yr			DONP237: 5000 yr			DONP237: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SZGWSPDM	0.44	0.69	SZGWSPDM	0.18	0.44	PHCSS	0.19	-0.39
2	PHCSS	0.50	-0.23	PHCSS	0.33	-0.36	INFIL	0.40	0.42
3	INFIL	0.54	0.17	INFIL	0.45	0.32	EPINPO2	0.47	0.29
4	SZFIPOVO	0.58	-0.19	SZFISPVO	0.48	0.21	SZGWSPDM	0.54	0.25
5	SZKDSEAL	0.60	-0.16	SZDIFCVO	0.51	-0.20	CORRATSS	0.58	-0.16
6	SZFISPVO	0.62	0.16	MICTH229	0.53	0.11	SZFISPVO	0.61	0.21
7	MICTH229	0.64	0.12	EPILOWNU	0.55	0.14	MICNP237	0.64	0.17
8	SZDIFCVO	0.65	-0.14	DELPPCO2	0.57	0.14	DELPPCO2	0.66	0.16
9	WDGCA22	0.66	-0.11	EPINPO2	0.58	0.14	EPILOWAM	0.69	0.17
10	EPILOWAM	0.68	0.11	SZKDUAL	0.59	-0.10	EPILOWNU	0.70	0.14
11	SZPORUAL	0.69	-0.09	HLWDRACD	0.61	-0.12	SZDIFCVO	0.72	-0.12
12	WDLCRATE	0.69	0.09	EPILOWAM	0.62	0.12	COLGW	0.73	0.11
13				SZKDCSVO	0.63	-0.10	SZKDNPVO	0.73	-0.09

a: Steps in stepwise rank regression analysis

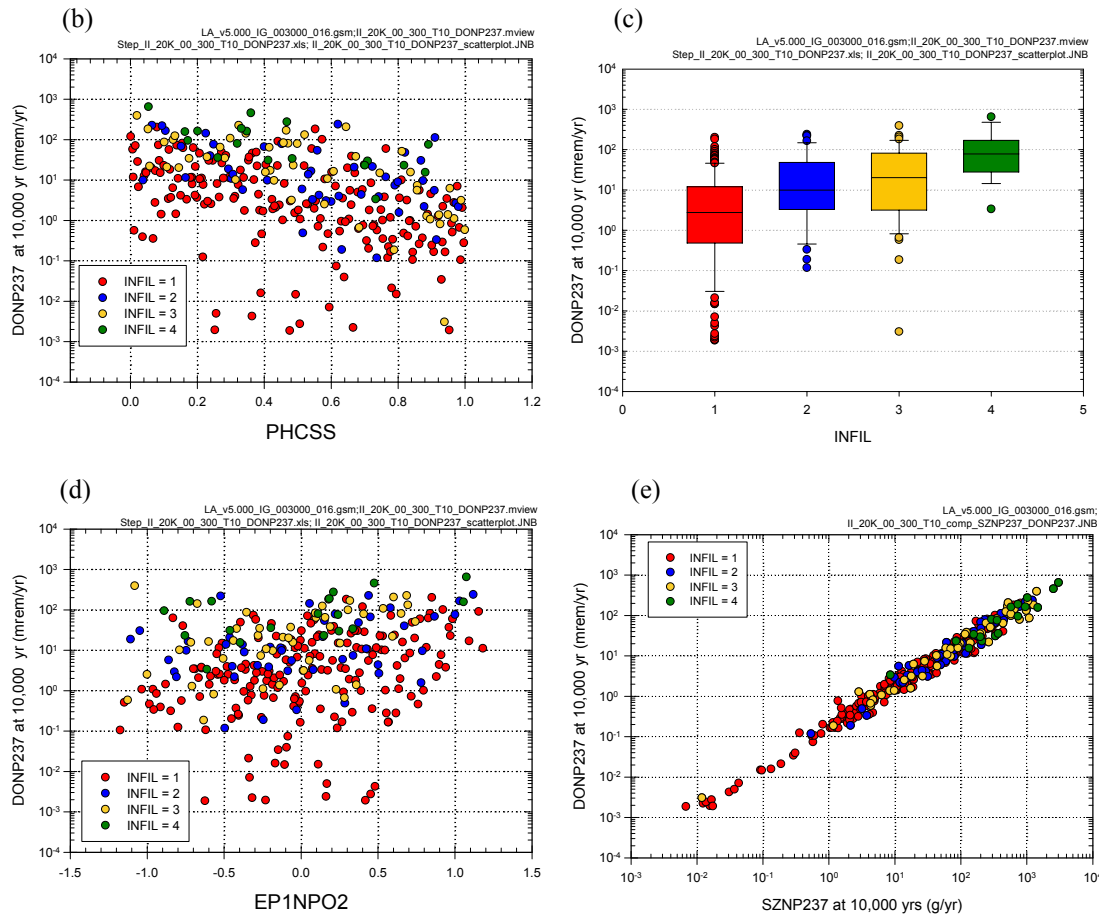
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

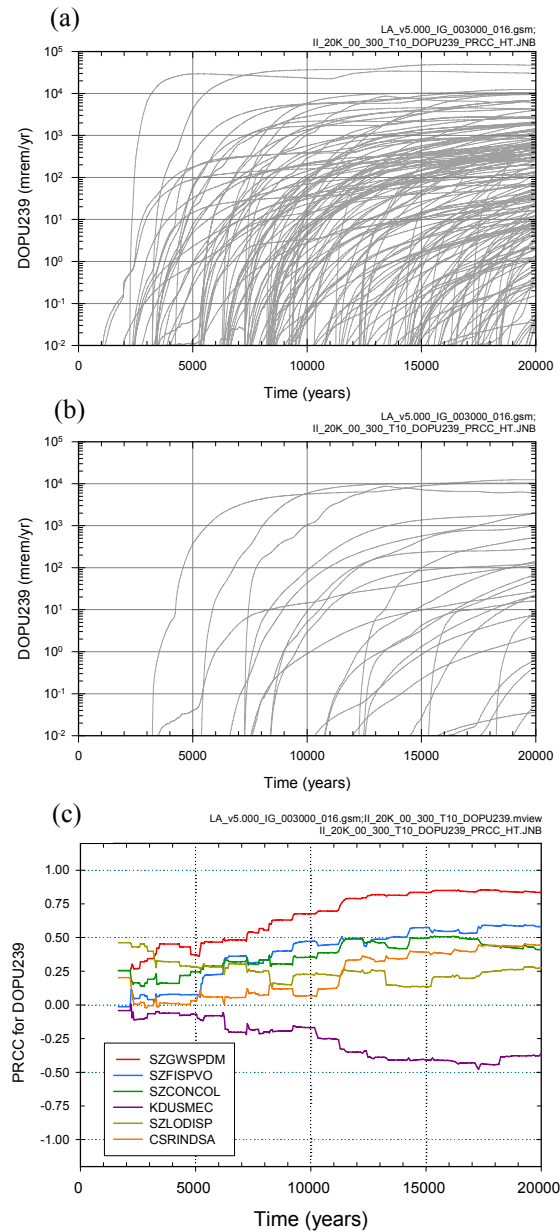
Figure K6.6.1-6. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DONP237*, mrem/yr) for the movement of dissolved ²³⁷Np across a subsurface plane at the location of the RMEI (*SZNP237*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DONP237* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DONP237* at 10,000 years, and (e) Scatterplot comparing *SZNP237* and *DONP237* at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

NOTE: In (c), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K6.6.1-6. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI ($DONP_{237}$, mrem/yr) for the movement of dissolved ^{237}Np across a subsurface plane at the location of the RMEI ($SZNP_{237}$, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for $DONP_{237}$ at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for $DONP_{237}$ at 10,000 years, and (e) Scatterplot comparing $SZNP_{237}$ and $DONP_{237}$ at 10,000 years (continued).



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-7. Time-dependent dose to the RMEI (*DOPU239*, mrem/yr) over 20,000 years for the movement of dissolved ²³⁹Pu across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) *DOPU239* for all (i.e., 300) sample elements, (b) *DOPU239* for first 50 sample elements, and (c) PRCCs for *DOPU239*

(a)

Step ^a	DOPU239: 3000 yr			DOPU239: 5000 yr			DOPU239: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SZGWSPDM	0.07	0.27	SZGWSPDM	0.12	0.35	SZGWSPDM	0.44	0.67
2	SZLODISP	0.11	0.23	SZLODISP	0.17	0.24	SZFISPVO	0.49	0.25
3	UZFAG9	0.13	0.16	SZKDCSCO	0.21	0.21	SZKDPUVO	0.53	-0.22
4	CSWFA1AK	0.15	-0.14	SZPORUAL	0.23	-0.16	SZPORUAL	0.55	-0.17
5				SZSREG1X	0.25	-0.17	SZCONCOL	0.58	0.14
6				SZKDPUVO	0.27	-0.19	SZLODISP	0.59	0.12
7				SZKDSNAL	0.30	-0.20	SZSREG1X	0.61	-0.12
8				DELPPCO2	0.32	-0.15	MICC14	0.62	-0.13
9				WDDSGC29	0.34	0.14	NIOSA	0.63	0.11
10				SZKDAMCO	0.36	0.13	CSRINDPO	0.64	0.10
11				CSWFA1AK	0.37	-0.13			

a: Steps in stepwise rank regression analysis

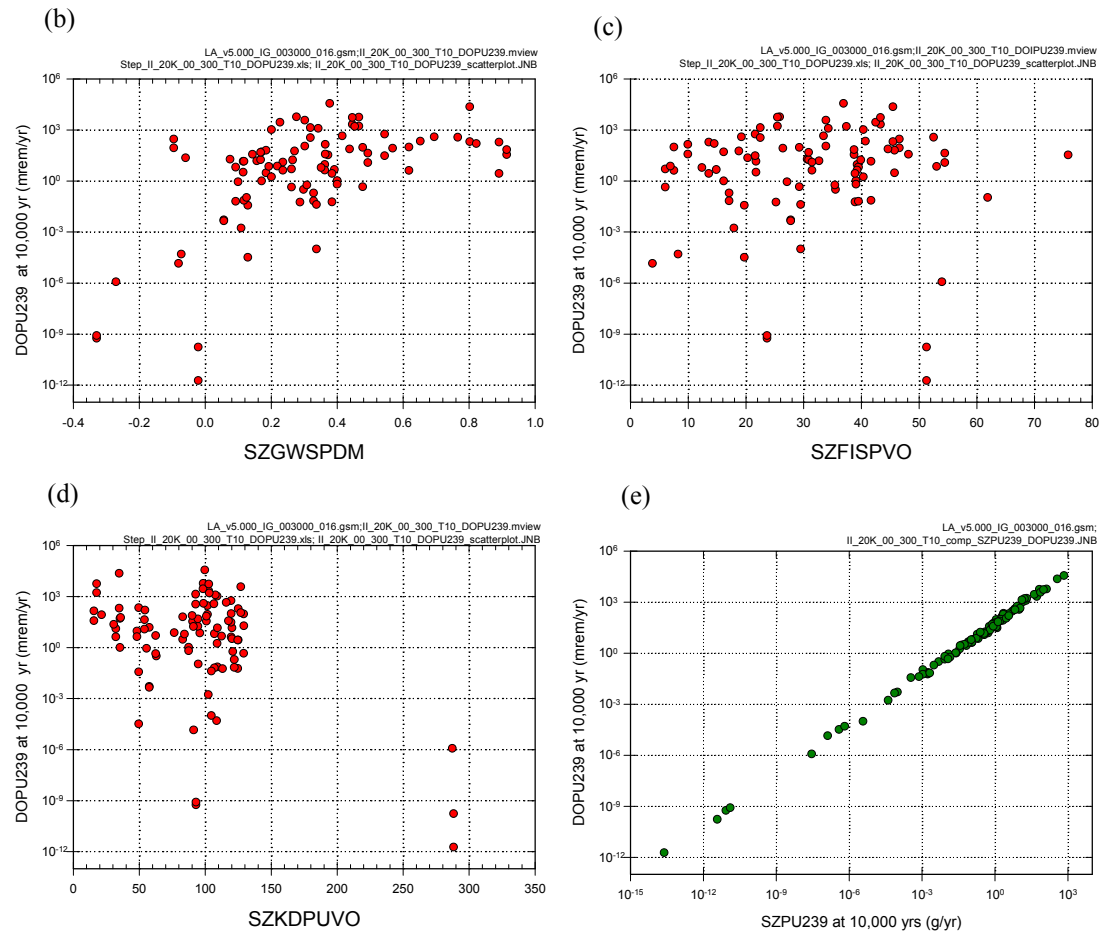
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

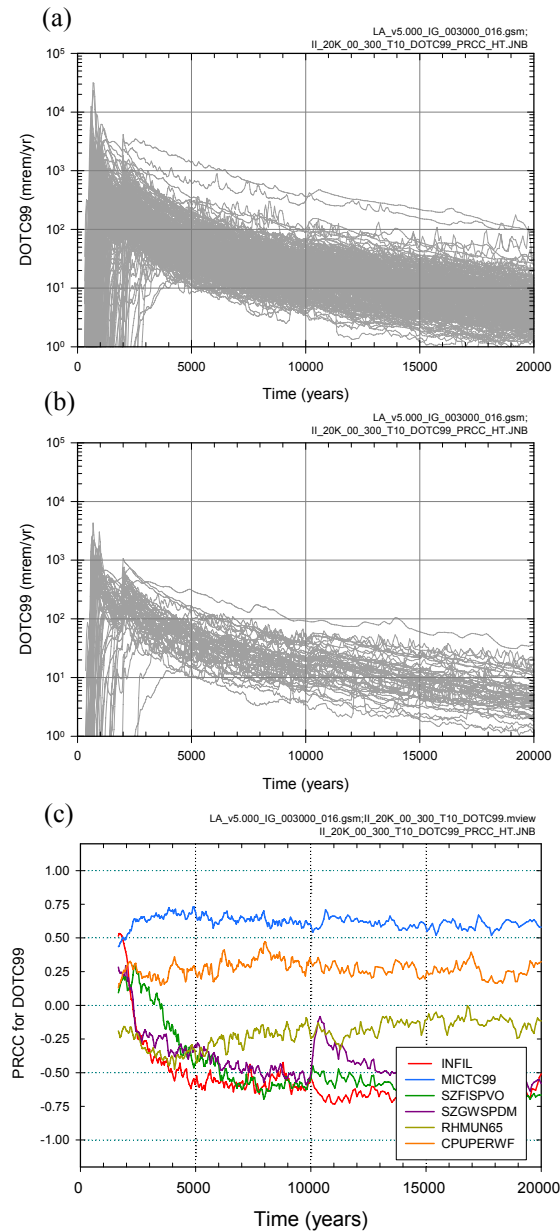
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-8. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOPU239*, mrem/yr) for the movement of dissolved ²³⁹Pu across a subsurface plane at the location of the RMEI (*SZPU239*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOPU239* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DOPU239* at 10,000 years, and (e) Scatterplot comparing *SZPU239* and *DOPU239* at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-8. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOPU239*, mrem/yr) for the movement of dissolved ²³⁹Pu across a subsurface plane at the location of the RMEI (*SZPU239*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOPU239* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DOPU239* at 10,000 years, and (e) Scatterplot comparing *SZPU239* and *DOPU239* at 10,000 years (continued).



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.1-9. Time-dependent dose to the RMEI (*DOTC99*, mrem/yr) over 20,000 years for the movement of dissolved ⁹⁹Tc across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) *DOTC99* for all (i.e., 300) sample elements, (b) *DOTC99* for first 50 sample elements, and (c) PRCCs for *DOTC99*

(a)

Step ^a	DOTC99: 3000 yr			DOTC99: 5000 yr			DOTC99: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	MICTC99	0.39	0.64	MICTC99	0.35	0.61	MICTC99	0.29	0.57
2	INFIL	0.46	-0.28	INFIL	0.50	-0.39	INFIL	0.47	-0.43
3	CSNFMASS	0.52	0.24	SZGWSPDM	0.57	-0.26	SZGWSPDM	0.59	-0.33
4	UZFAG8	0.56	-0.21	CSNFMASS	0.61	0.21	SZFISPVO	0.64	-0.30
5	SZFIPOVO	0.58	0.19	SZFISPVO	0.64	-0.21	CSNFMASS	0.70	0.24
6	UZGAM	0.60	-0.14	SZDIFCVO	0.66	0.15	SZDIFCVO	0.72	0.13
7	SZGWSPDM	0.61	-0.11	SZFIPOVO	0.67	0.15	KDRACOL	0.73	0.09
8				UZFAG8	0.68	-0.11	SZCOLRVO	0.73	-0.08
9				UZGAM	0.69	-0.11			
10				IS2DHLNS	0.70	-0.09			

a: Steps in stepwise rank regression analysis

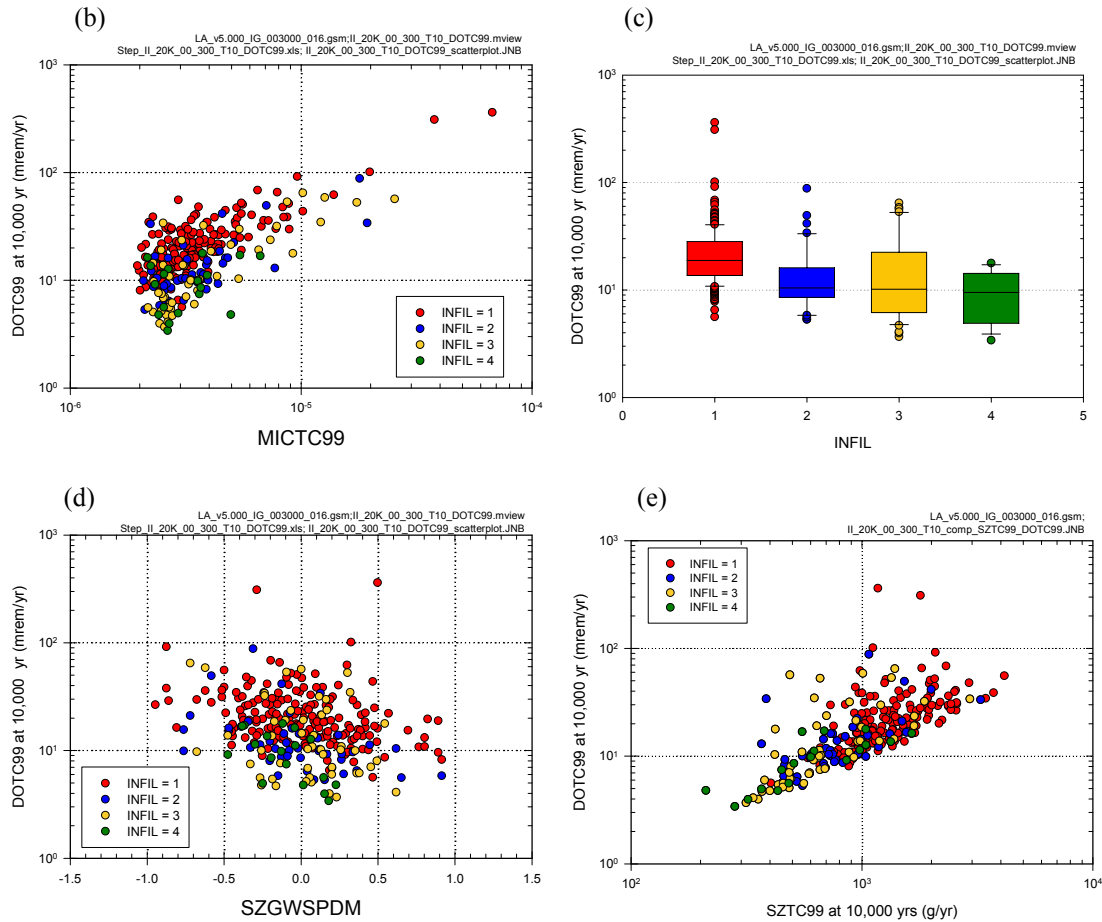
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

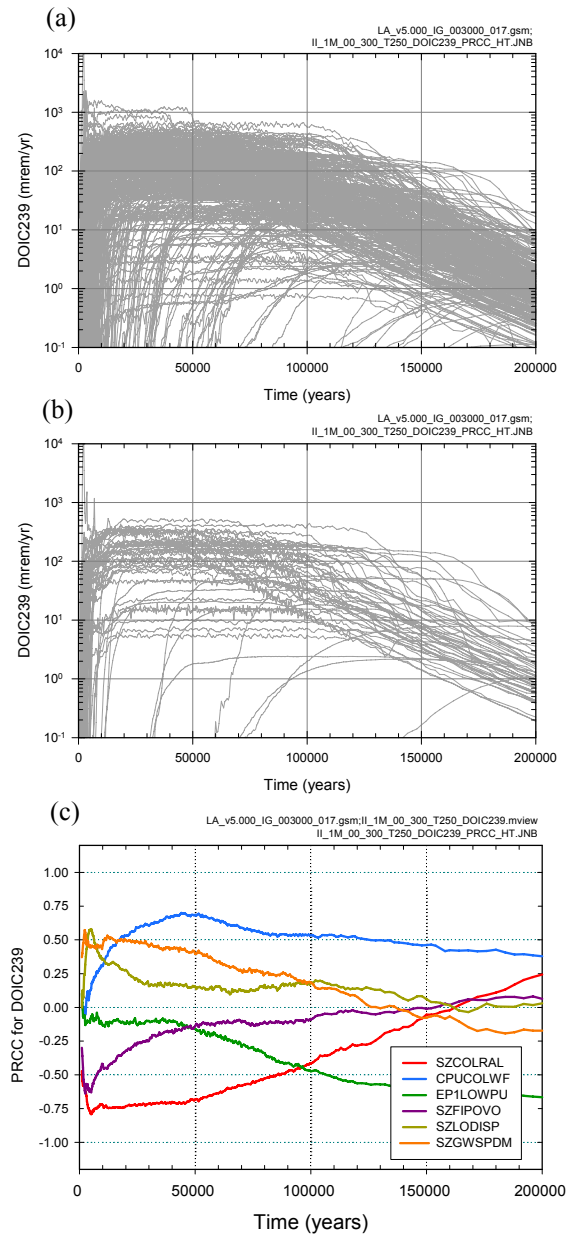
Figure K6.6.1-10. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOTC99*, mrem/yr) for the movement of dissolved ⁹⁹Tc across a subsurface plane at the location of the RMEI (*SZTC99*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOTC99* at 3000, 5000 and 10,000 years, (b,c,d) Scatterplots for *DOTC99* at 10,000 years, and (e) Scatterplot comparing *SZTC99* and *DOTC99* at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

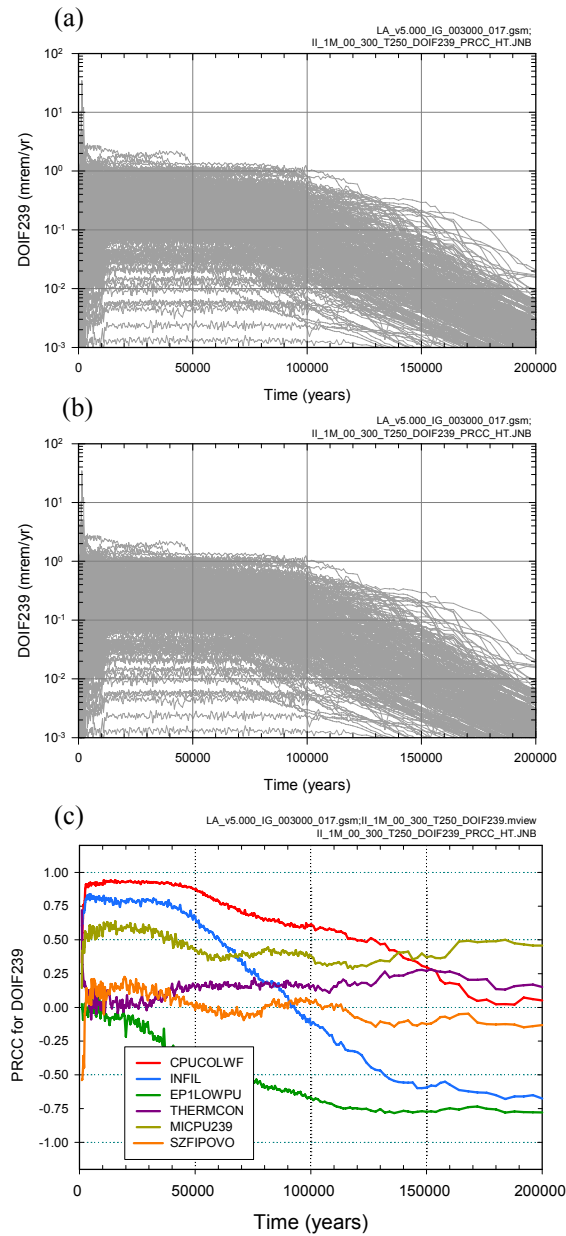
NOTE: In (c), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K6.6.1-10. Stepwise rank regression analyses and selected scatterplots for time-dependent dose to the RMEI (*DOTC99*, mrem/yr) for the movement of dissolved ^{99}Tc across a subsurface plane at the location of the RMEI (*SZTC99*, g/yr) resulting from an igneous intrusive event at 10 years that destroys all WPs in the repository: (a) Regressions for *DOTC99* at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for *DOTC99* at 10,000 years, and (e) Scatterplot comparing *SZTC99* and *DOTC99* at 10,000 years (continued).



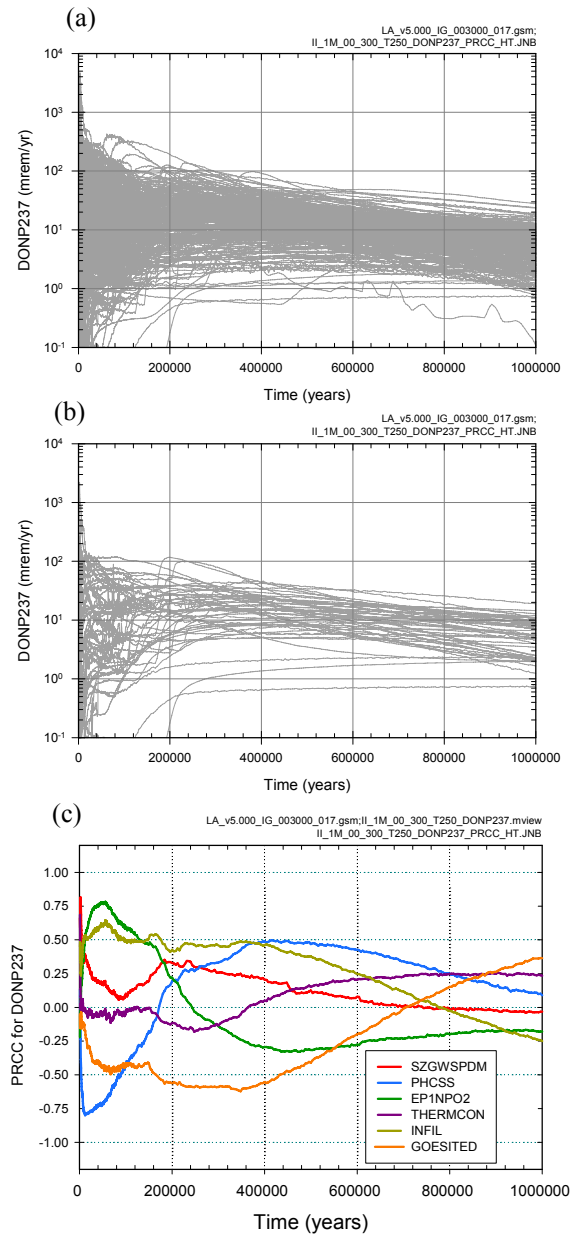
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.2-1. Time-dependent dose to the RMEI (*DOIC239*, mrem/yr) over 200,000 years for the movement of ^{239}Pu irreversibly attached to slow colloids across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 250 years that destroys all WPs in the repository: (a) *DOIC239* for all (i.e., 300) sample elements, (b) *DOIC239* for first 50 sample elements, and (c) PRCCs for *DOIC239*



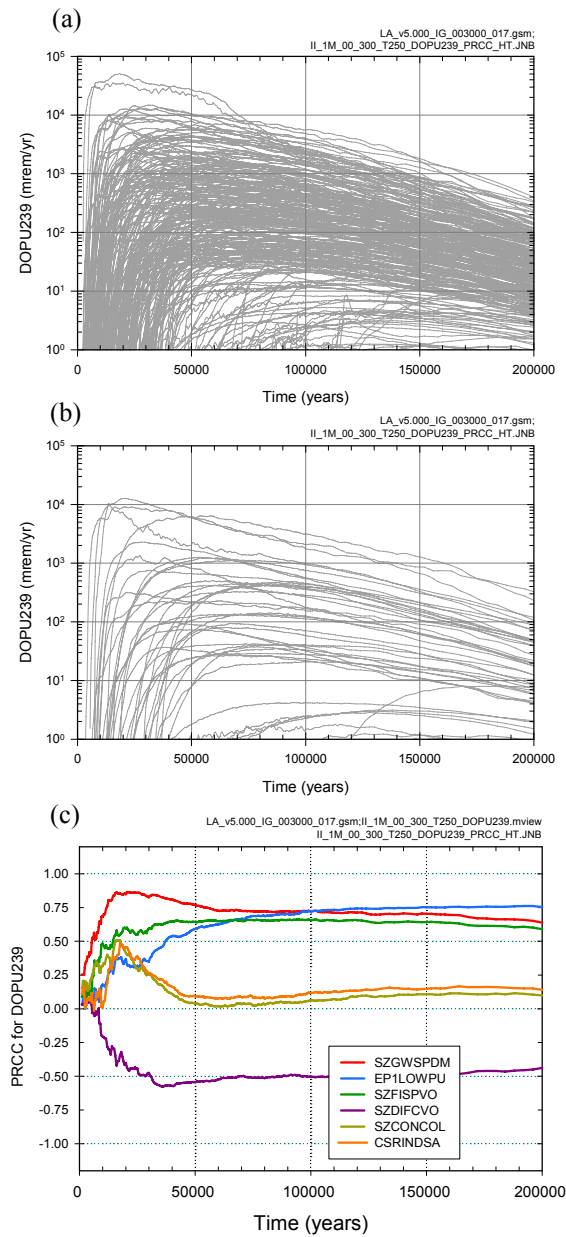
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.2-2. Time-dependent dose to the RMEI (*DOIF239*, mrem/yr) over 200,000 years for the movement of ^{239}Pu irreversibly attached to fast colloids across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 250 years that destroys all WPs in the repository: (a) *DOIF239* for all (i.e., 300) sample elements, (b) *DOIF239* for first 50 sample elements, and (c) PRCCs for *DOIF239*



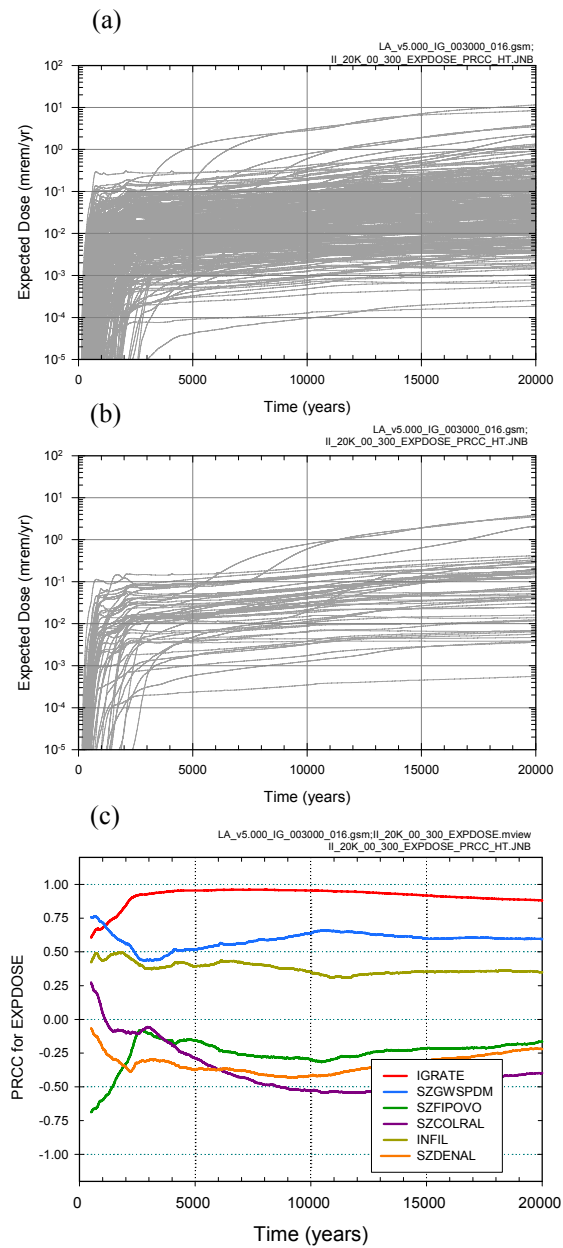
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.2-3. Time-dependent dose to the RMEI (*DONP237*, mrem/yr) over 1,000,000 years for the movement of dissolved ²³⁷Np across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 250 years that destroys all WPs in the repository: (a) *DONP237* for all (i.e., 300) sample elements, (b) *DONP237* for first 50 sample elements, and (c) PRCCs for *DONP237*



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.6.2-4. Time-dependent dose to the RMEI (*DOPU239*, mrem/yr) over 200,000 years for the movement of dissolved ²³⁹Pu across a subsurface plane at the location of the RMEI resulting from an igneous intrusive event at 250 years that destroys all WPs in the repository: (a) *DOPU239* for all (i.e., 300) sample elements, (b) *DOPU239* for first 50 sample elements, and (c) PRCCs for *DOPU239*



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.7.1-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from igneous intrusion: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

(a)

Step ^a	EXPDOSE: 3000 yr			EXPDOSE: 5000 yr			EXPDOSE: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	IGRATE	0.74	0.88	IGRATE	0.80	0.90	IGRATE	0.78	0.90
2	SZGWSPDM	0.79	0.21	SZGWSPDM	0.84	0.18	SZGWSPDM	0.83	0.21
3	INFIL	0.83	0.17	MICTC99	0.87	0.14	MICTC99	0.85	0.12
4	MICTC99	0.86	0.16	INFIL	0.89	0.16	INFIL	0.86	0.12
5	SZFISPVO	0.87	0.13	SZFISPVO	0.90	0.07	CPUCOLWF	0.87	0.10
6	CSNFMASS	0.88	0.09	MICC14	0.90	0.08	SZCOLRAL	0.88	-0.11
7	SZDIFCVO	0.88	-0.09	CSNFMASS	0.91	0.07	SZFISPVO	0.89	0.08
8	MICC14	0.89	0.08	SZFIPOVO	0.91	-0.06	MICPU239	0.90	0.09
9	SZCOLRVO	0.89	-0.06	MICNP237	0.92	0.07	SZFIPOVO	0.90	-0.08
10	MICNP237	0.90	0.07	SZCOLRAL	0.92	-0.07	SZDENAL	0.91	-0.08
11	SZSREG3Y	0.90	-0.05	SZDENAL	0.93	-0.06	EPINPO2	0.91	0.06
12	SZFIPOVO	0.90	-0.05	CPUCOLWF	0.93	0.06	BCKRA226	0.91	-0.06
13	ISCSNS	0.90	0.05	KDPUSMEC	0.93	0.05	MICC14	0.92	0.05
14	KDSNCOL	0.91	0.05	BCKRA226	0.93	-0.05			
15				SZSREG3Y	0.93	-0.04			

a: Steps in stepwise rank regression analysis

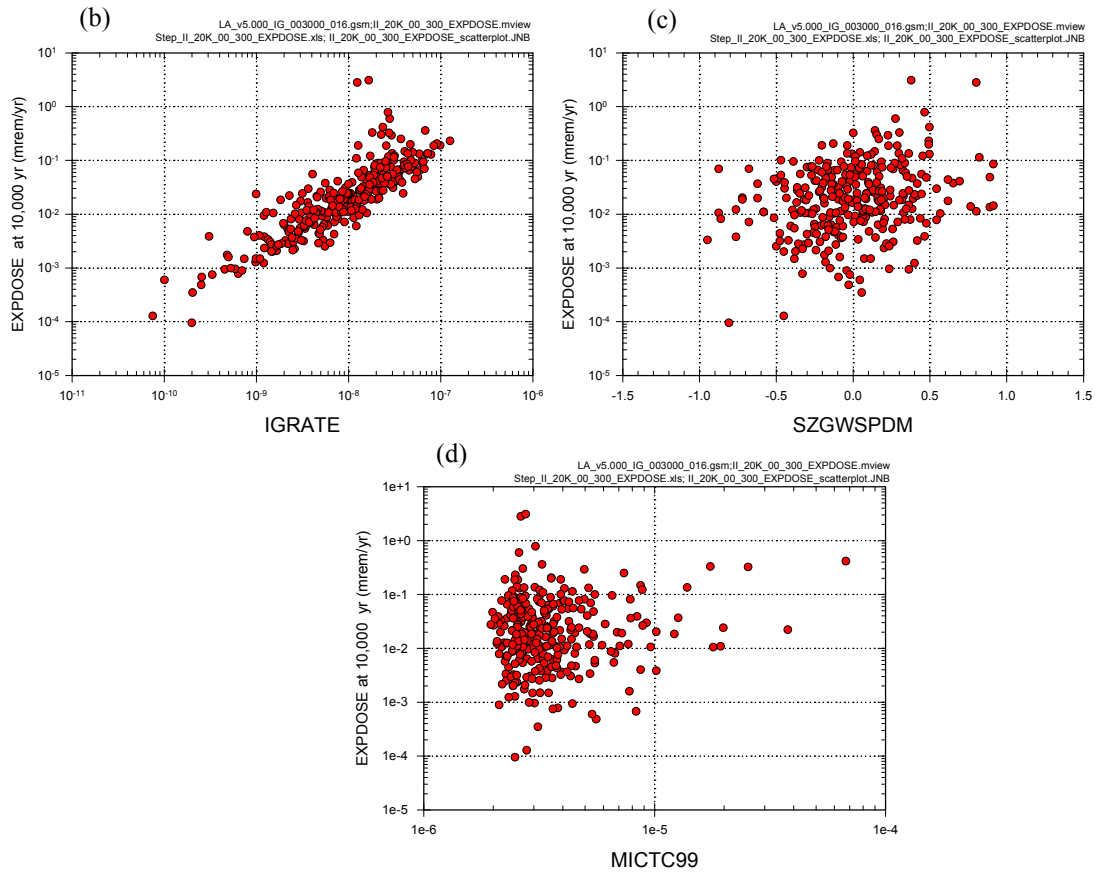
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

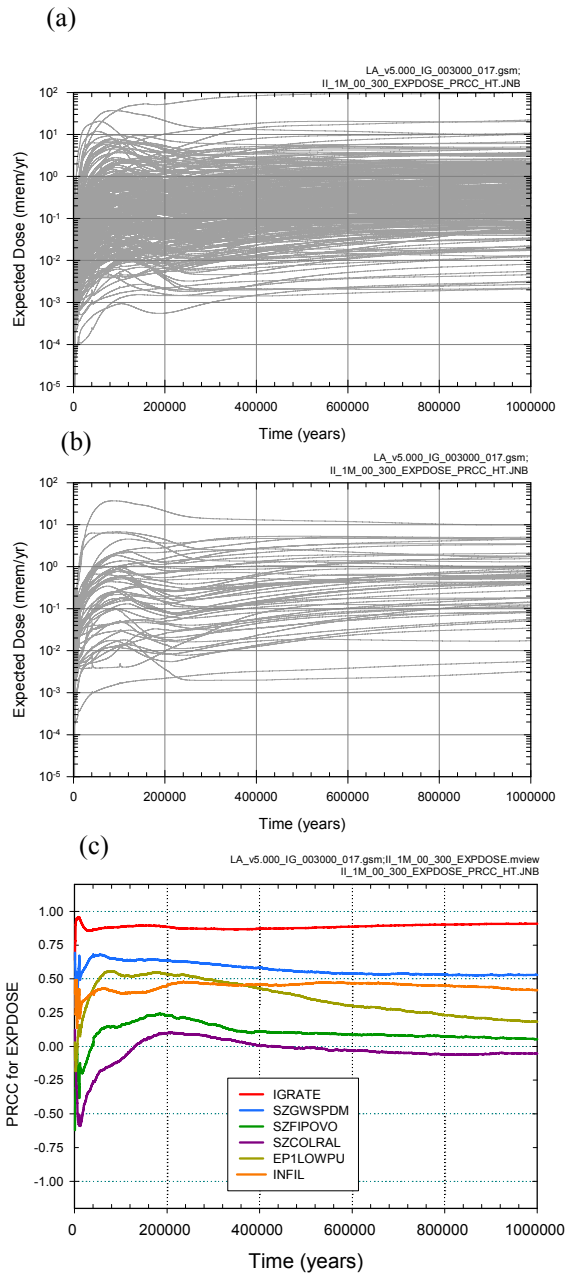
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.7.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from igneous intrusion: (a) Regressions for EXPDOSE at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for EXPDOSE at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.7.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from igneous intrusion: (a) Regressions for *EXPDOSE* at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 years (continued).



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.7.2-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from igneous intrusion: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

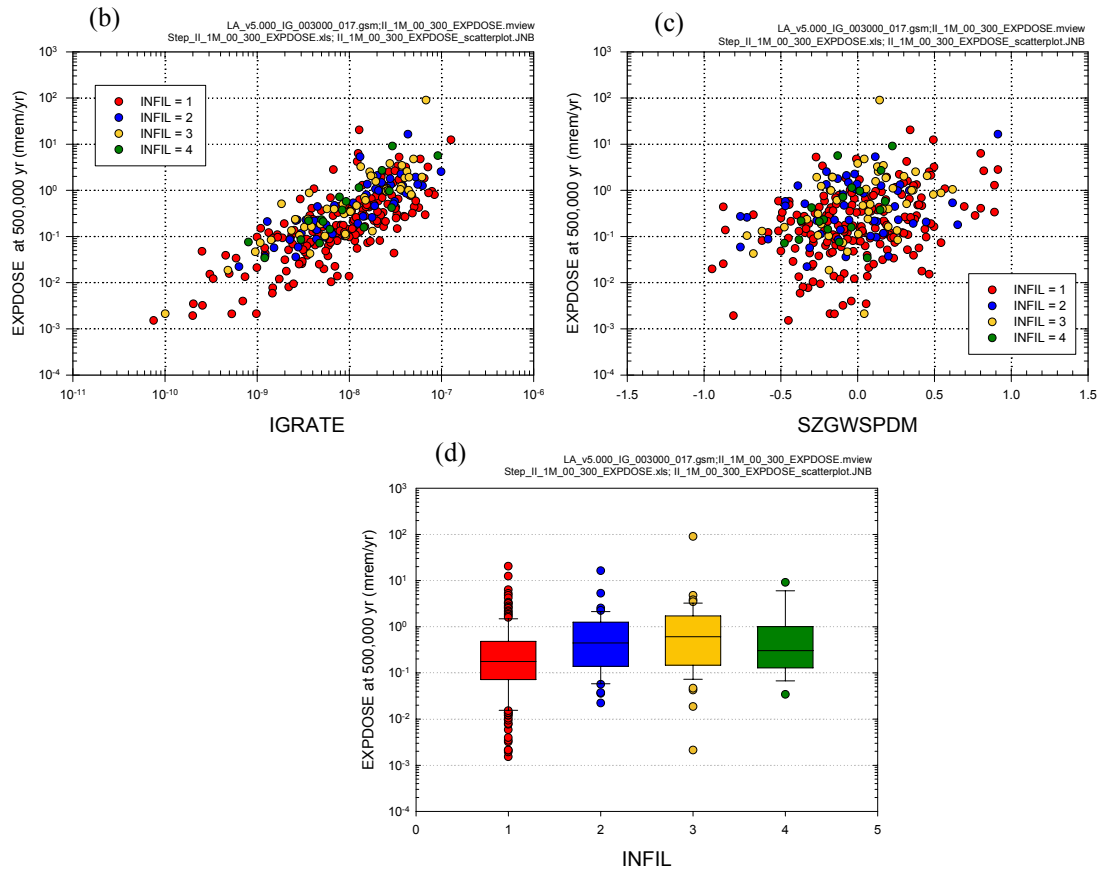
(a)

Step ^a	EXPDOSE: 50,000 yr			EXPDOSE: 200,000 yr			EXPDOSE: 500,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	IGRATE	0.52	0.73	IGRATE	0.55	0.75	IGRATE	0.59	0.77
2	SZGWSPDM	0.69	0.39	SZGWSPDM	0.69	0.34	SZGWSPDM	0.68	0.30
3	EPILOWPU	0.74	0.19	INFIL	0.73	0.19	INFIL	0.73	0.19
4	INFIL	0.77	0.18	EPILOWPU	0.76	0.19	SZFISPVO	0.75	0.15
5	EP1NPO2	0.78	0.12	SZFISPVO	0.79	0.16	EPILOWNU	0.77	0.13
6	CPUCOLWF	0.80	0.12	MICNP237	0.80	0.11	EPILOWPU	0.79	0.15
7	MICNP237	0.81	0.12	EPILOWNU	0.81	0.10	MICNP237	0.80	0.12
8	SZFISPVO	0.82	0.09	SZDIFCVO	0.82	-0.10	SZCONCOL	0.81	0.08
9	KDRASMEC	0.83	0.07	EP1NPO2	0.83	0.10	GOESITED	0.82	-0.09
10	EP2HICAM	0.84	0.07	SZCONCOL	0.83	0.08	SZDIFCVO	0.83	-0.09
11	SZKDSEAL	0.84	-0.12	GOESITED	0.84	-0.09	SZWBNDAL	0.83	-0.08
12	SZKDAMAL	0.84	0.08	HFOSA	0.85	-0.08	SZKDRAAL	0.84	-0.07
13	PH2RGER	0.85	-0.08	SZKDAMCO	0.85	0.07	KDPUSMEC	0.84	0.06
14	SZKDUVO	0.85	0.09				WDGCUA22	0.84	0.07

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

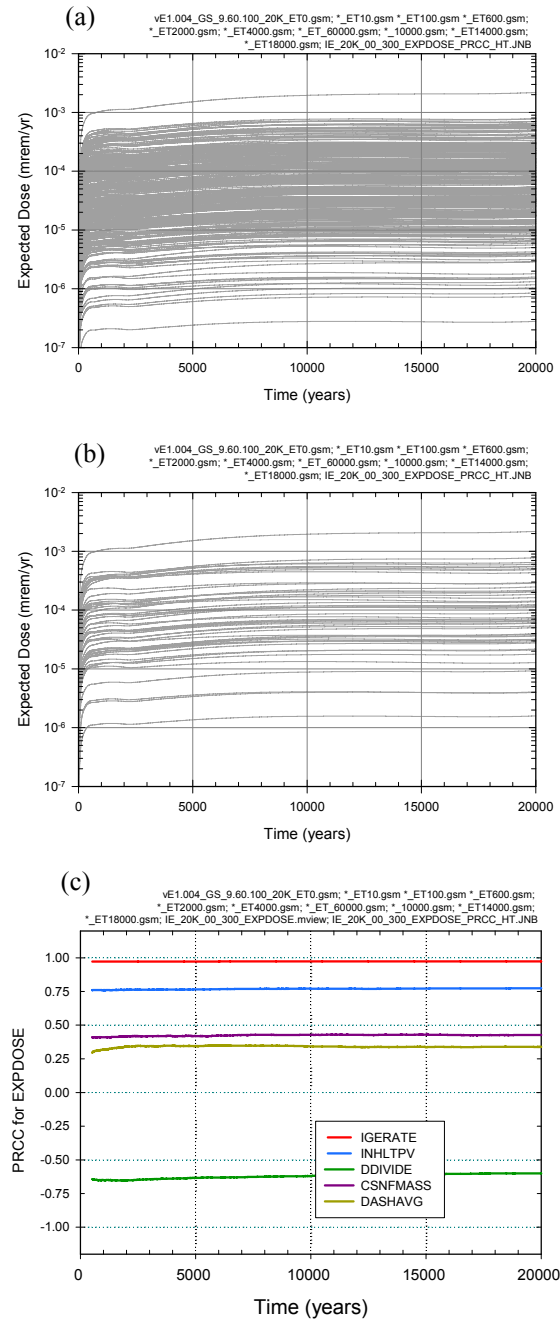
Figure K6.7.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from igneous intrusion: (a) Regressions for EXPDOSE at 50,000, 200,000 and 500,000 years, and (b,c,d) Scatterplots for EXPDOSE at 500,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

NOTE: In (d), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K6.7.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from igneous intrusion: (a) Regressions for *EXPDOSE* at 50,000, 200,000 and 500,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 years (continued).



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

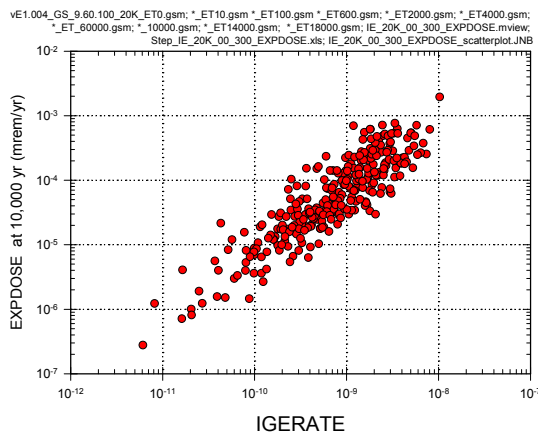
Figure K6.8.1-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from igneous eruption: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

(a)

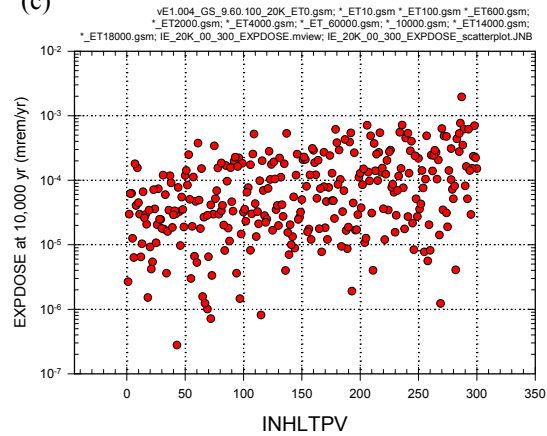
Step ^a	EXPDOSE: 3000 yr			EXPDOSE: 5000 yr			EXPDOSE: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	IGERATE	0.76	0.87	IGERATE	0.76	0.87	IGERATE	0.76	0.87
2	INHLTPV	0.91	0.38	INHLTPV	0.91	0.38	INHLTPV	0.91	0.38
3	DDIVIDE	0.94	-0.17	DDIVIDE	0.94	-0.17	DDIVIDE	0.94	-0.16
4	CSNFMASS	0.95	0.10	CSNFMASS	0.95	0.10	CSNFMASS	0.95	0.10
5	DASHAVG	0.95	0.09	DASHAVG	0.95	0.09	DASHAVG	0.95	0.08

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

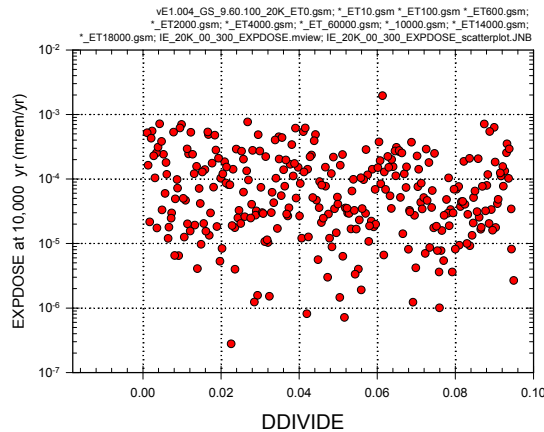
(b)



(c)

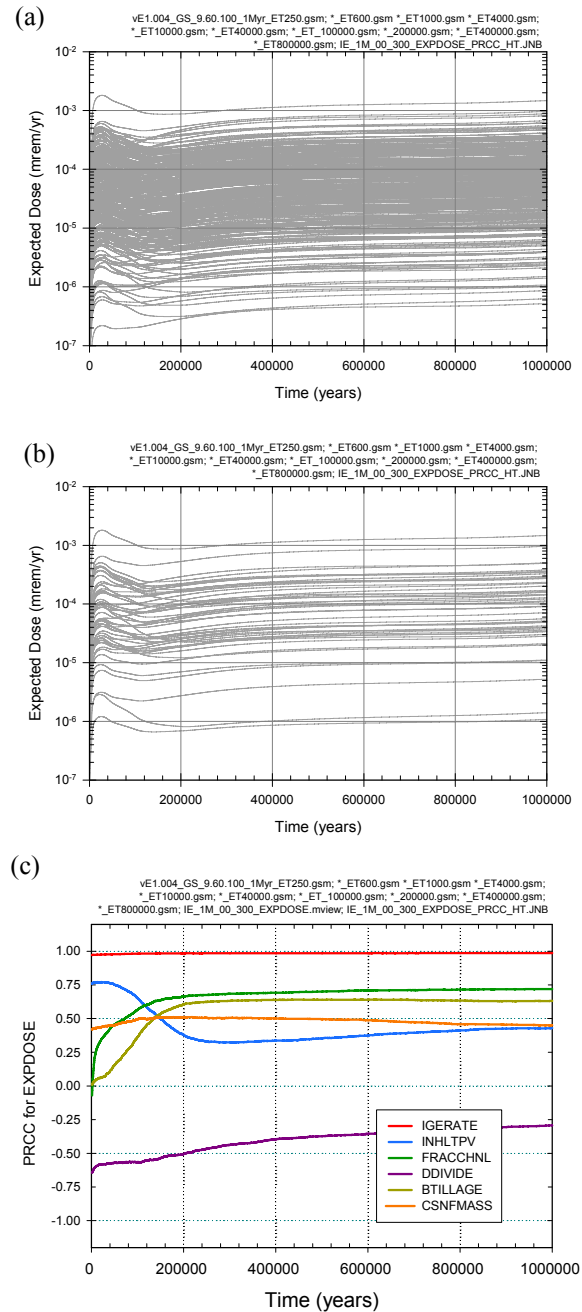


(d)



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.8.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from igneous eruption: (a) Regressions for *EXPDOSE* at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

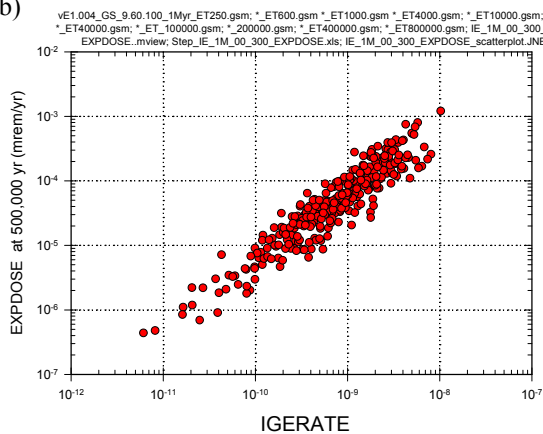
Figure K6.8.2-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from igneous eruption: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

(a)

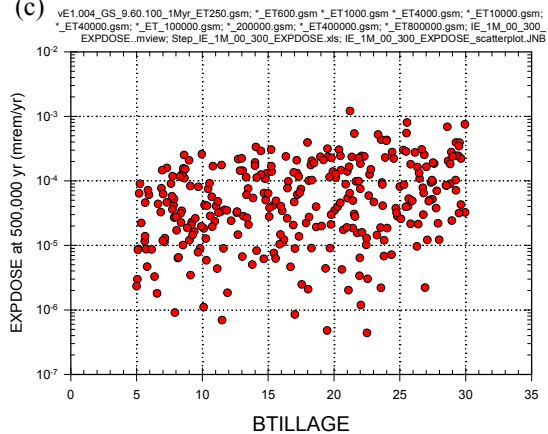
	EXPDOSE: 50,000 yr			EXPDOSE: 200,000 yr			EXPDOSE: 500,000 yr		
Step ^a	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	IGERATE	0.80	0.88	IGERATE	0.86	0.89	IGERATE	0.86	0.89
2	INHLPV	0.91	0.33	BTILLAGE	0.91	0.21	BTILLAGE	0.92	0.23
3	DDIVIDE	0.93	-0.13	FRACCHNL	0.93	0.15	FRACCHNL	0.94	0.16
4	CSNFMAS	0.94	0.09	INHLPV	0.95	0.11	INHLPV	0.96	0.10
5	FRACCHNL	0.95	0.10	CSNFMAS	0.96	0.09	CSNFMAS	0.96	0.09
6	DASHAVG	0.96	0.08	DDIVIDE	0.96	-0.09	CRITSLOP	0.97	-0.06
7	BTILLAGE	0.96	0.05	DASHAVG	0.97	0.07	DASHAVG	0.97	0.07
8	CRITSLOP	0.96	-0.05	CRITSLOP	0.97	-0.06	DDIVIDE	0.98	-0.06
9	DCHANL	0.96	-0.03	DCHANL	0.97	-0.03	DRAINDNS	0.98	0.03
10				DRAINDNS	0.97	0.03			

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

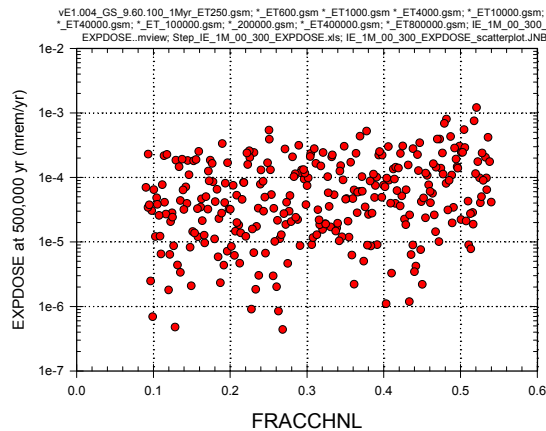
(b)



(c)



(d)



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K6.8.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from igneous eruption: (a) Regressions for *EXPDOSE* at 50,000, 200,000 and 500,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 years

Figure Removed. See discussion in Section K7.3.

Figure K7.3-1. Time-dependent release rates (*ESIC239*, g/yr) and cumulative (i.e., integrated) releases (*ESIC239C*, g) over 20,000 years for the movement of ²³⁹Pu irreversibly attached to glass colloids from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) *ESIC239* and *ESIC239C* for all (i.e., 300) sample elements, (c, d) *ESIC239* and *ESIC239C* for first 50 sample elements, and (e, f) PRCCs for *ESIC239* and *ESIC239C*

Figure Removed. See discussion in Section K7.3.

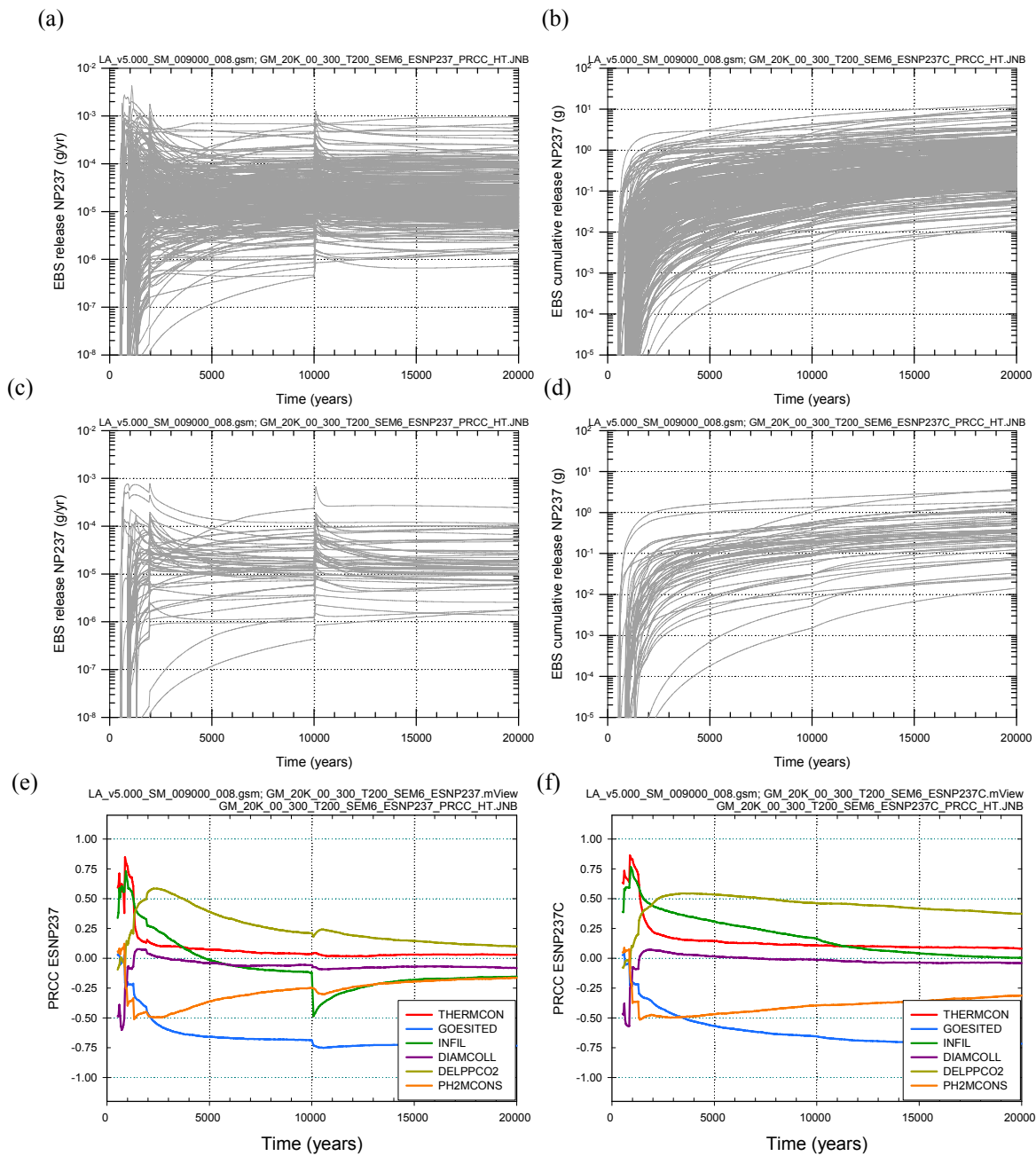
Figure K7.3-2. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESIC239*, g/yr) and cumulative (i.e., integrated) releases (*ESIC239C*, g) for the movement of ²³⁹Pu irreversibly attached to glass colloids from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶ (32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESIC239* and *ESIC239C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESIC239* and *ESIC239C* at 10,000 years

Figure Removed. See discussion in Section K7.3.

Figure K7.3-3. Time-dependent release rates (*ESIF239*, g/yr) and cumulative (i.e., integrated) releases (*ESIF239C*, g) over 20,000 years for the movement of ²³⁹Pu irreversibly attached to ferrous colloids from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) *ESIF239* and *ESIF239C* for all (i.e., 300) sample elements, (c, d) *ESIC239* and *ESIC239C* for first 50 sample elements, and (e, f) PRCCs for *ESIF239* and *ESIF239C*

Figure Removed. See discussion in Section K7.3

Figure K7.3-4. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESIF239*, g/yr) and cumulative (i.e., integrated) releases (*ESIF239C*, g) for the movement of ²³⁹Pu irreversibly attached to ferrous colloids from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESIF239* and *ESIF239C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESIF239* and *ESIF239C* at 10,000 years



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-5. Time-dependent release rates (*ESNP237*, g/yr) and cumulative (i.e., integrated) releases (*ESNP237C*, g) over 20,000 years for the movement of dissolved ^{237}Np from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) *ESNP237* and *ESNP237C* for all (i.e., 300) sample elements, (c, d) *ESNP237* and *ESNP237C* for first 50 sample elements, and (e, f) PRCCs for *ESNP237* and *ESNP237C*

(a)

Step	ESNP237: 3000 yr			ESNP237: 5000 yr			ESNP237: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	GOESITED	0.14	-0.39	GOESITED	0.20	-0.46	GOESITED	0.24	-0.52
2	DELPPCO2	0.28	0.42	DSNFMAS	0.32	0.27	EPILOWNU	0.34	0.32
3	PH2MCONS	0.39	-0.34	DELPPCO2	0.36	0.28	DSNFMAS	0.44	0.26
4	DSNFMAS	0.46	0.27	EPILOWNU	0.41	0.23	HFOSA	0.50	-0.30
5	HFOSA	0.50	-0.20	HFOSA	0.46	-0.25	GOESA	0.52	0.15
6	INFIL	0.53	0.17	PH2MCONS	0.51	-0.24	IS2MCONS	0.54	0.13
7	GOESA	0.54	0.14	GOESA	0.53	0.15	DELPPCO2	0.56	0.14
8	CSRINDSA	0.56	0.13	EP1NPO2	0.55	0.16	PH2MCONS	0.58	-0.13
9	EP1NPO2	0.58	0.15	CSRINDSA	0.57	0.13	CSRINDSA	0.59	0.13
10	FHHISSCP	0.60	-0.14	IS2MCONS	0.58	0.11	EP1NPO2	0.61	0.15
11	EPILOWNU	0.61	0.12	GOERELAB	0.59	0.11	GOERELAB	0.62	0.12
12				FHHISSCP	0.60	-0.10	HFOSITED	0.64	-0.12

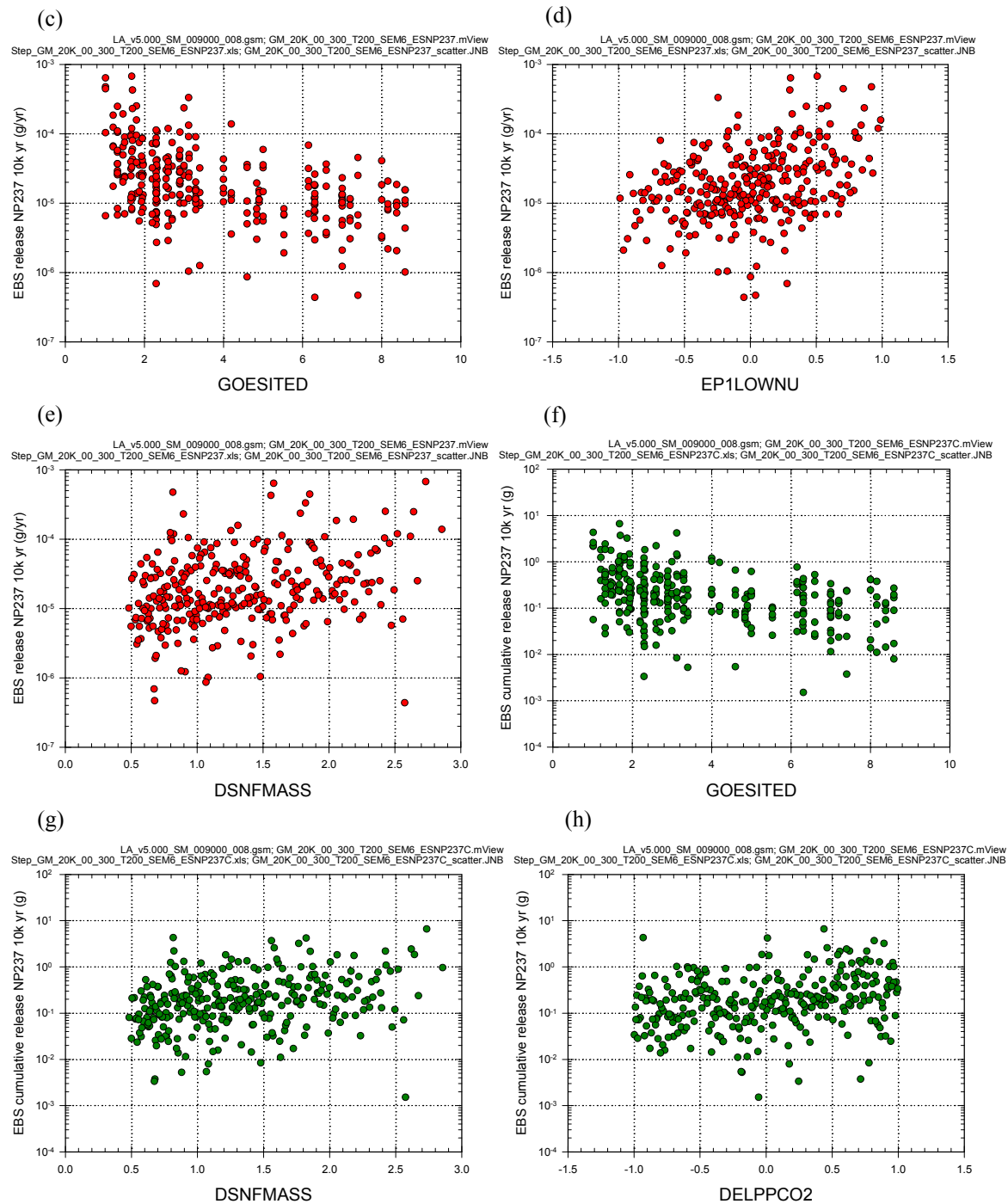
(b)

Step ^a	ESNP237C: 3000 yr			ESNP237C: 5000 yr			ESNP237C: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	DELPPCO2	0.13	0.41	DELPPCO2	0.13	0.40	GOESITED	0.19	-0.45
2	PH2MCONS	0.27	-0.36	GOESITED	0.24	-0.35	DSNFMAS	0.29	0.25
3	INFIL	0.37	0.34	PH2MCONS	0.35	-0.32	DELPPCO2	0.36	0.33
4	GOESITED	0.45	-0.28	INFIL	0.42	0.26	HFOSA	0.40	-0.26
5	DSNFMAS	0.49	0.21	DSNFMAS	0.48	0.25	PH2MCONS	0.46	-0.24
6	HFOSA	0.51	-0.16	HFOSA	0.52	-0.20	EPILOWNU	0.50	0.20
7	EP1NPO2	0.53	0.18	EP1NPO2	0.53	0.16	INFIL	0.52	0.14
8	FHHISSCP	0.55	-0.14	FHHISSCP	0.55	-0.13	GOESA	0.54	0.16
9	GOESA	0.57	0.14	GOESA	0.57	0.15	EP1NPO2	0.56	0.12
10	THERMCON	0.58	0.14	SEEPUNC	0.58	0.11	SEEPUNC	0.57	0.15
11	SEEPUNC	0.60	0.11	CSRINDSA	0.59	0.11	IS2MCONS	0.59	0.12
12	CSRINDSA	0.61	0.11	THERMCON	0.60	0.12	GOERELAB	0.60	0.12
13				EPILOWNU	0.62	0.10	PHCSS	0.61	-0.10
14							KDUSMEC	0.62	0.10

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

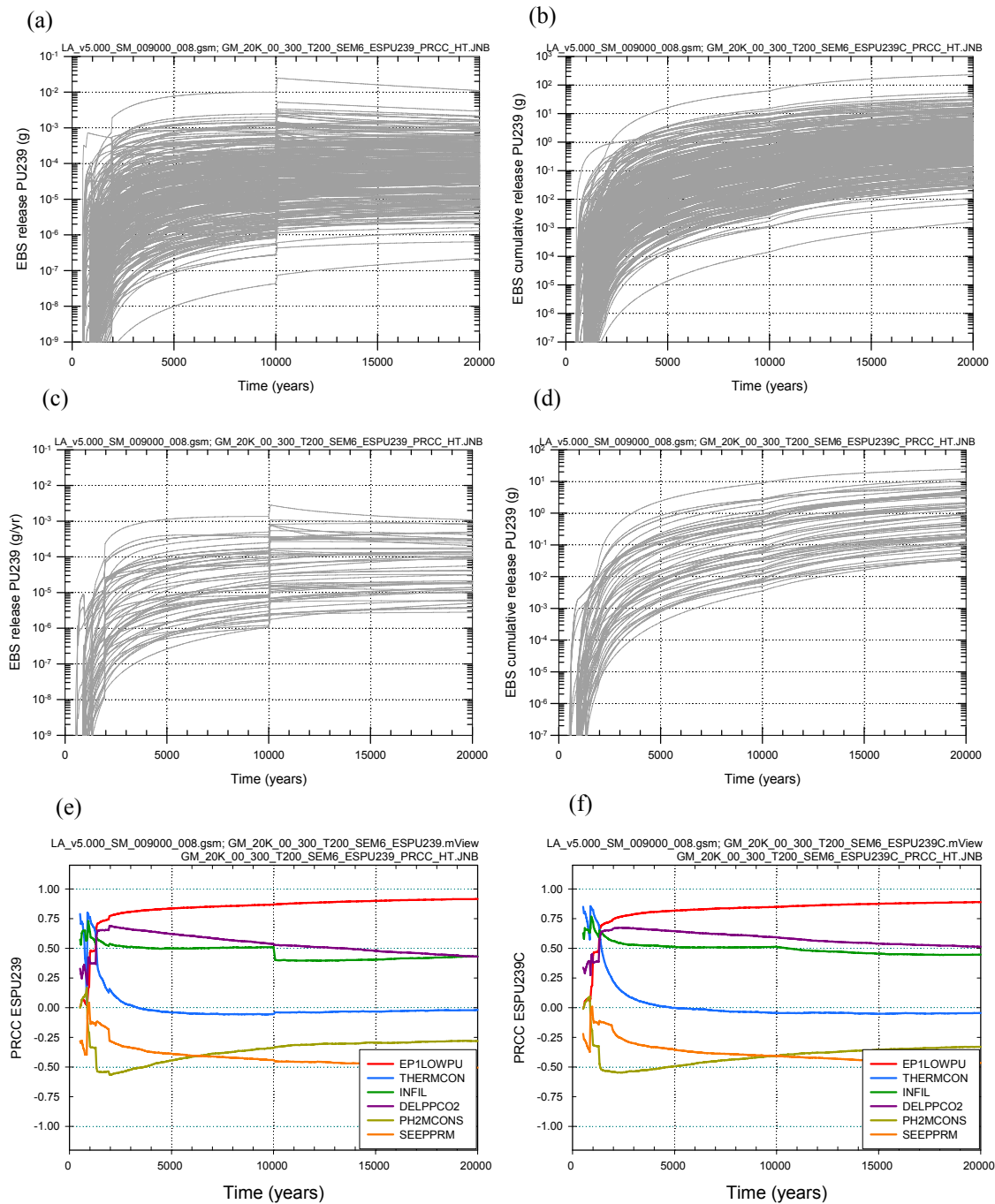
Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-6. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESNP237*, g/yr) and cumulative (i.e., integrated) releases (*ESNP237C*, g) for the movement of dissolved ²³⁷Np from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESNP237* and *ESNP237C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESNP237* and *ESNP237C* at 10,000 years



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-6. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESNP237*, g/yr) and cumulative (i.e., integrated) releases (*ES NP237C*, g) for the movement of dissolved ²³⁷Np from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESNP237* and *ESNP237C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESNP237* and *ESNP237C* at 10,000 years (continued)



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-7. Time-dependent release rates (*ESPU239*, g/yr) and cumulative (i.e., integrated) releases (*ESPU239C*, g) over 20,000 years for the movement of dissolved ²³⁹Pu from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶ (32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) *ESPU239* and *ESPU239C* for all (i.e., 300) sample elements, (c, d) *ESPU239* and *ESPU239C* for first 50 sample elements, and (e, f) PRCCs for *ESPU239* and *ESPU239C*

(a)

Step ^a	ESPU239: 3000 yr			ESPU239: 5000 yr			ESPU239: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	EP1LOWPU	0.34	0.63	EP1LOWPU	0.41	0.67	EP1LOWPU	0.51	0.74
2	DELPPCO2	0.49	0.42	DELPPCO2	0.53	0.36	DELPPCO2	0.59	0.28
3	INFIL	0.58	0.29	INFIL	0.61	0.28	INFIL	0.65	0.26
4	PH2MCONS	0.67	-0.28	PH2MCONS	0.67	-0.23	SEEPARM	0.70	-0.20
5	GOESITED	0.71	-0.19	SEEPARM	0.71	-0.18	PH2MCONS	0.73	-0.16
6	SEEPARM	0.73	-0.17	GOESITED	0.74	-0.17	GOESITED	0.75	-0.15
7	SEEPUNC	0.74	0.12	SEEPUNC	0.75	0.11	SEEPUNC	0.77	0.12
8	GOESA	0.75	0.10	GOESA	0.76	0.11	GOESA	0.78	0.12
9	GP2NO3	0.76	-0.08	GP2NO3	0.77	-0.10	GP2NO3	0.79	-0.09
10	IS2MCONS	0.77	0.08	ALPHAL	0.78	-0.08	ALPHAL	0.79	-0.08
11	ALPHAL	0.77	-0.08	RHPH75	0.78	-0.08	RHPH75	0.80	-0.08
12				CORRATSS	0.79	-0.08	CORRATSS	0.81	-0.08

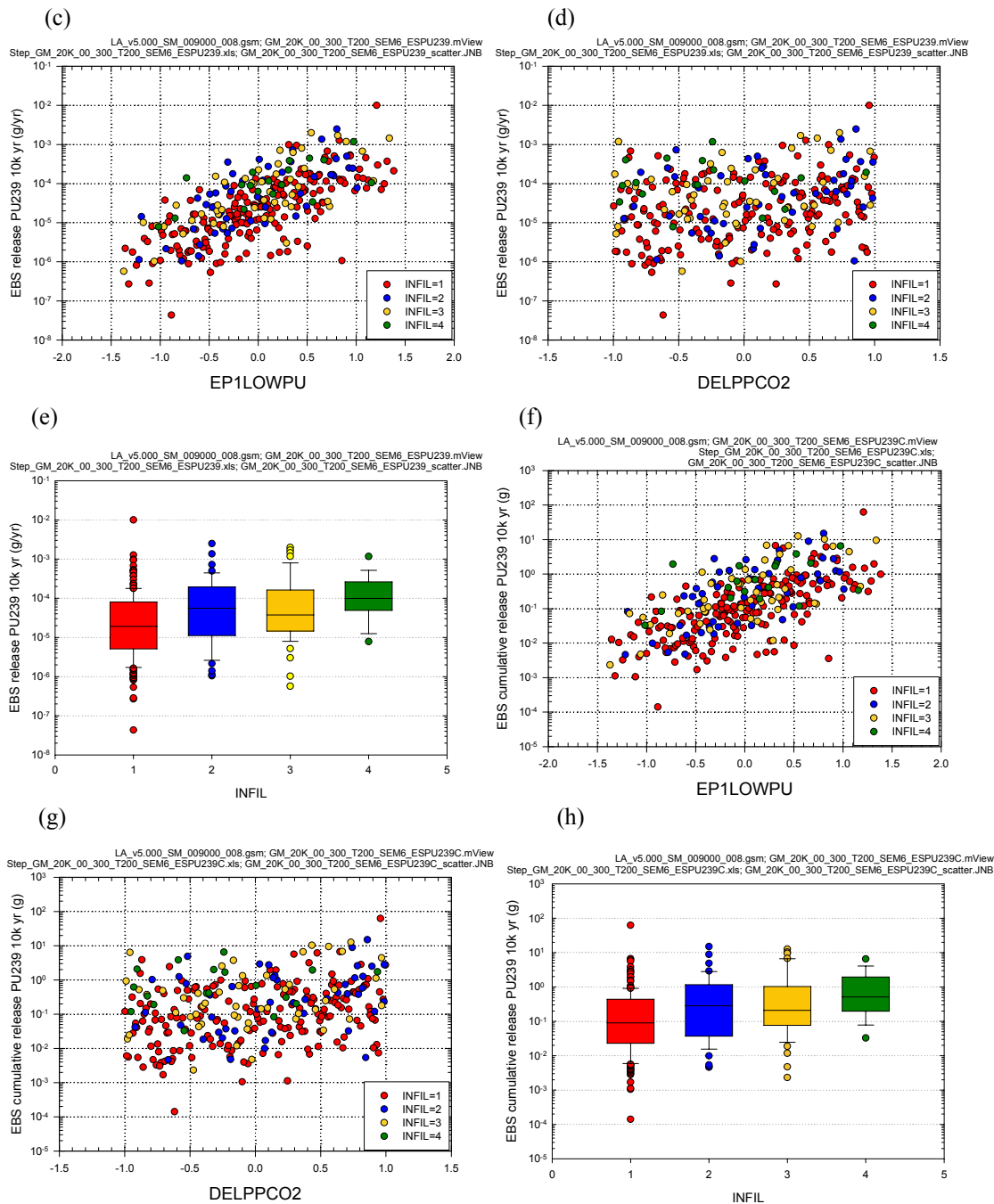
(b)

Step ^a	ESPU239C: 3000 yr			ESPU239C: 5000 yr			ESPU239C: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	EP1LOWPU	0.30	0.59	EP1LOWPU	0.36	0.65	EP1LOWPU	0.45	0.69
2	DELPPCO2	0.46	0.44	DELPPCO2	0.50	0.40	DELPPCO2	0.55	0.33
3	INFIL	0.57	0.33	INFIL	0.59	0.30	INFIL	0.63	0.28
4	PH2MCONS	0.66	-0.30	PH2MCONS	0.67	-0.26	PH2MCONS	0.68	-0.20
5	GOESITED	0.70	-0.19	GOESITED	0.71	-0.18	SEEPARM	0.72	-0.19
6	SEEPARM	0.72	-0.16	SEEPARM	0.73	-0.18	GOESITED	0.75	-0.16
7	GP2NO3	0.73	-0.09	SEEPUNC	0.75	0.12	SEEPUNC	0.76	0.11
8	CPUCOLCS	0.74	-0.09	GOESA	0.76	0.11	GOESA	0.77	0.11
9	SEEPUNC	0.75	0.11	GP2NO3	0.76	-0.09	GP2NO3	0.78	-0.10
10	IS2MCONS	0.76	0.10	ALPHAL	0.77	-0.08	ALPHAL	0.79	-0.08
11	GOESA	0.76	0.09	IS2MCONS	0.78	0.08	RHPH75	0.79	-0.08
12	ALPHAL	0.77	-0.08				CORRATSS	0.80	-0.08

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

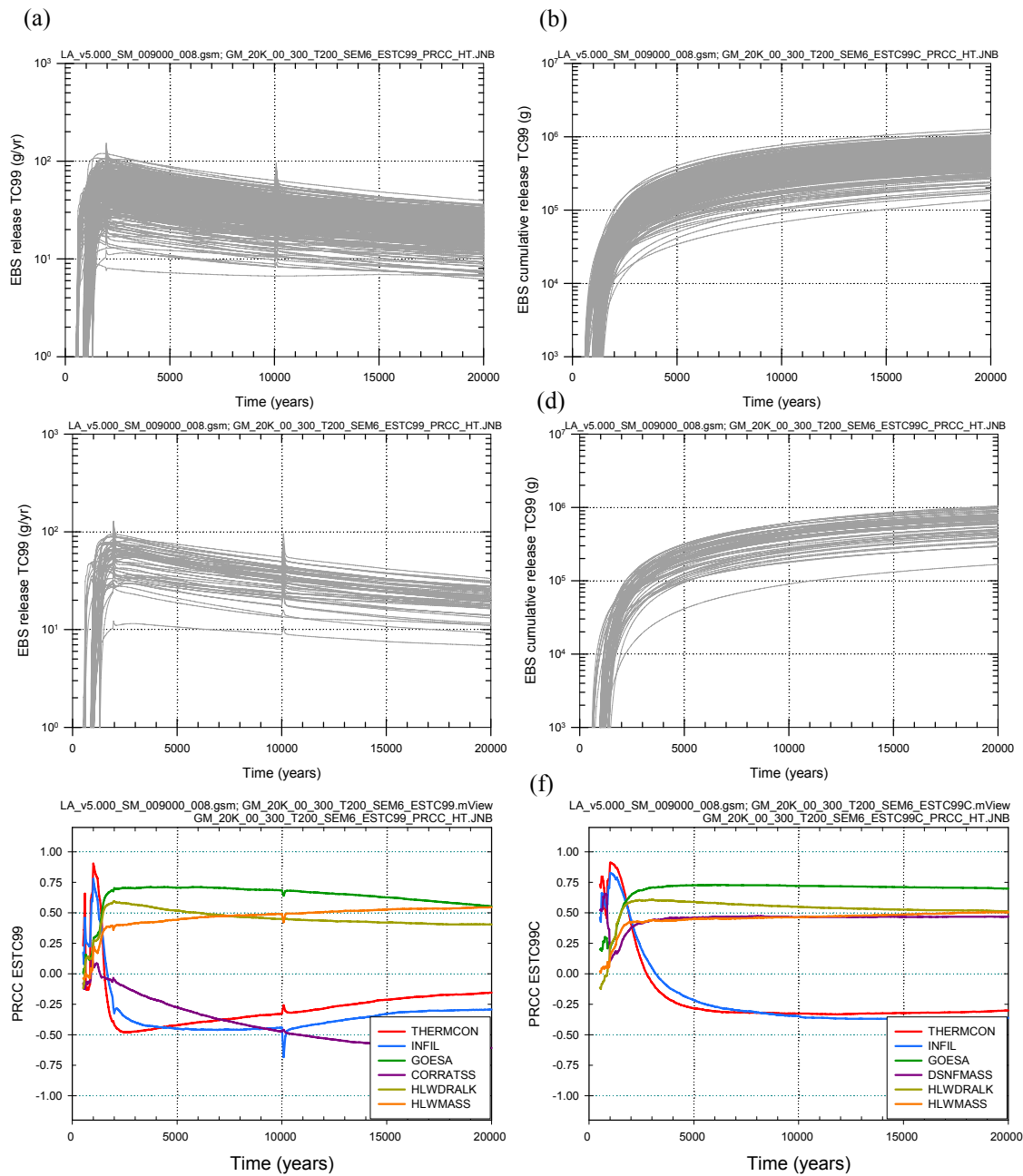
Figure K7.3-8. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESPU239*, g/yr) and cumulative (i.e., integrated) releases (*ESPU239*, g) for the movement of dissolved ²³⁹Pu from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESPU239* and *ESPU239C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESPU239* and *ESPU239C* at 10,000 years



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

NOTE: In (e,h), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K7.3-8. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESPU239*, g/yr) and cumulative (i.e., integrated) releases (*ESPU239*, g) for the movement of dissolved ²³⁹Pu from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESPU239* and *ESPU239C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESPU239* and *ESPU239C* at 10,000 years (continued).



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-9. Time-dependent release rates (*ESTC99*, g/yr) and cumulative (i.e., integrated) releases (*ESTC99C*, g) over 20,000 years for the movement of dissolved ^{99}Tc from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) *ESTC99* and *ESTC99C* for all (i.e., 300) sample elements, (c, d) *ESTC99* and *ESTC99C* for first 50 sample elements, and (e, f) PRCCs for *ESTC99* and *ESTC99C*

(a)

Step ^a	ESTC99: 3000 yr			ESTC99: 5000 yr			ESTC99: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	GOESA	0.18	0.45	GOESA	0.18	0.46	GOESA	0.14	0.43
2	HLWDRALK	0.37	0.39	HLWDRALK	0.32	0.33	HLWMASS	0.29	0.33
3	HLWMASS	0.46	0.27	HLWMASS	0.43	0.29	CORRATSS	0.39	-0.30
4	THERMCON	0.55	-0.31	THERMCON	0.51	-0.29	HLWDRALK	0.49	0.29
5	DSNFMASS	0.60	0.28	INFIL	0.57	-0.28	INFIL	0.55	-0.26
6	INFIL	0.65	-0.25	DSNFMASS	0.63	0.28	THERMCON	0.60	-0.24
7	PH2DHLNS	0.69	-0.18	PH2DHLNS	0.67	-0.21	DSNFMASS	0.65	0.27
8	WFDEGEXF	0.71	0.16	CORRATSS	0.71	-0.17	PH2DHLNS	0.70	-0.23
9	HLWDRACD	0.73	0.13	WFDEGEXF	0.73	0.14	HLWDRACD	0.72	0.13
10	CORRATSS	0.75	-0.12	HLWDRACD	0.75	0.13	WFDEGEXF	0.74	0.13
11	FHHISSCP	0.76	-0.12	FHHISSCP	0.76	-0.12	FHHISSCP	0.75	-0.12
12	DIAMCOLL	0.77	-0.08	RUBMAXNL	0.77	0.08	RUBMAXNL	0.76	0.09
13				DIAMCOLL	0.78	-0.08	DIAMCOLL	0.77	-0.08
14							RHPH0	0.77	0.08
15							WDGCUA22	0.78	-0.08

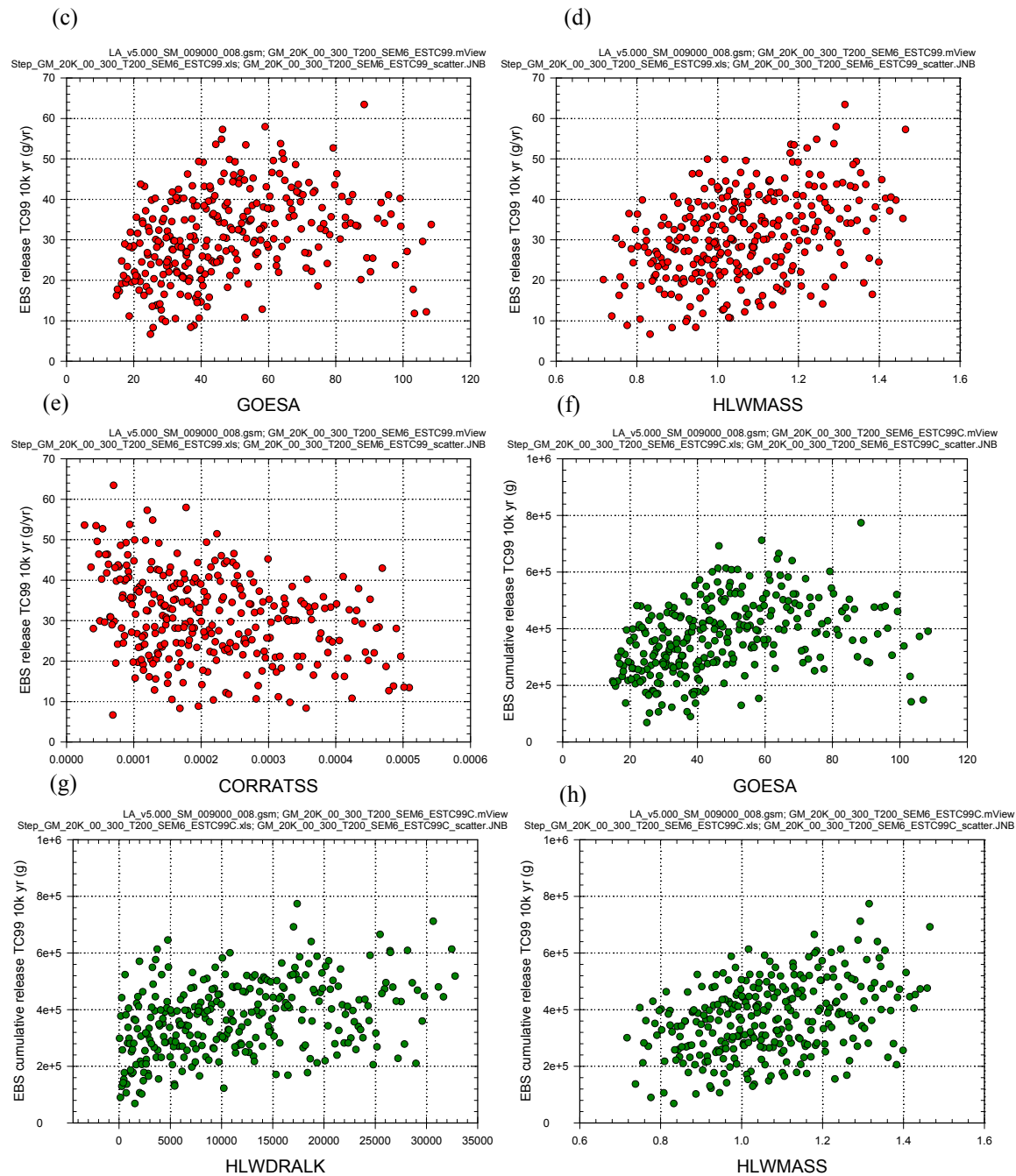
(b)

Step ^a	ESTC99C: 3000 yr			ESTC99C: 5000 yr			ESTC99C: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	GOESA	0.22	0.49	GOESA	0.22	0.50	GOESA	0.20	0.48
2	HLWDRALK	0.45	0.44	HLWDRALK	0.43	0.42	HLWDRALK	0.37	0.37
3	HLWMASS	0.54	0.28	HLWMASS	0.53	0.30	HLWMASS	0.48	0.30
4	DSNFMASS	0.60	0.28	DSNFMASS	0.59	0.29	DSNFMASS	0.53	0.29
5	WFDEGEXF	0.64	0.21	WFDEGEXF	0.62	0.18	CORRATSS	0.58	-0.19
6	PH2DHLNS	0.66	-0.15	THERMCON	0.65	-0.16	THERMCON	0.62	-0.22
7	HLWDRACD	0.69	0.14	PH2DHLNS	0.67	-0.18	INFIL	0.66	-0.21
8	FHHISSCP	0.70	-0.12	HLWDRACD	0.70	0.14	PH2DHLNS	0.69	-0.20
9	WDGCUA22	0.71	-0.10	INFIL	0.71	-0.14	WFDEGEXF	0.72	0.16
10	SEPPRM	0.71	-0.09	FHHISSCP	0.73	-0.12	HLWDRACD	0.74	0.13
11	EP1LOWTH	0.72	-0.09	CORRATSS	0.74	-0.11	FHHISSCP	0.75	-0.13
12							DIAMCOLL	0.76	-0.08

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

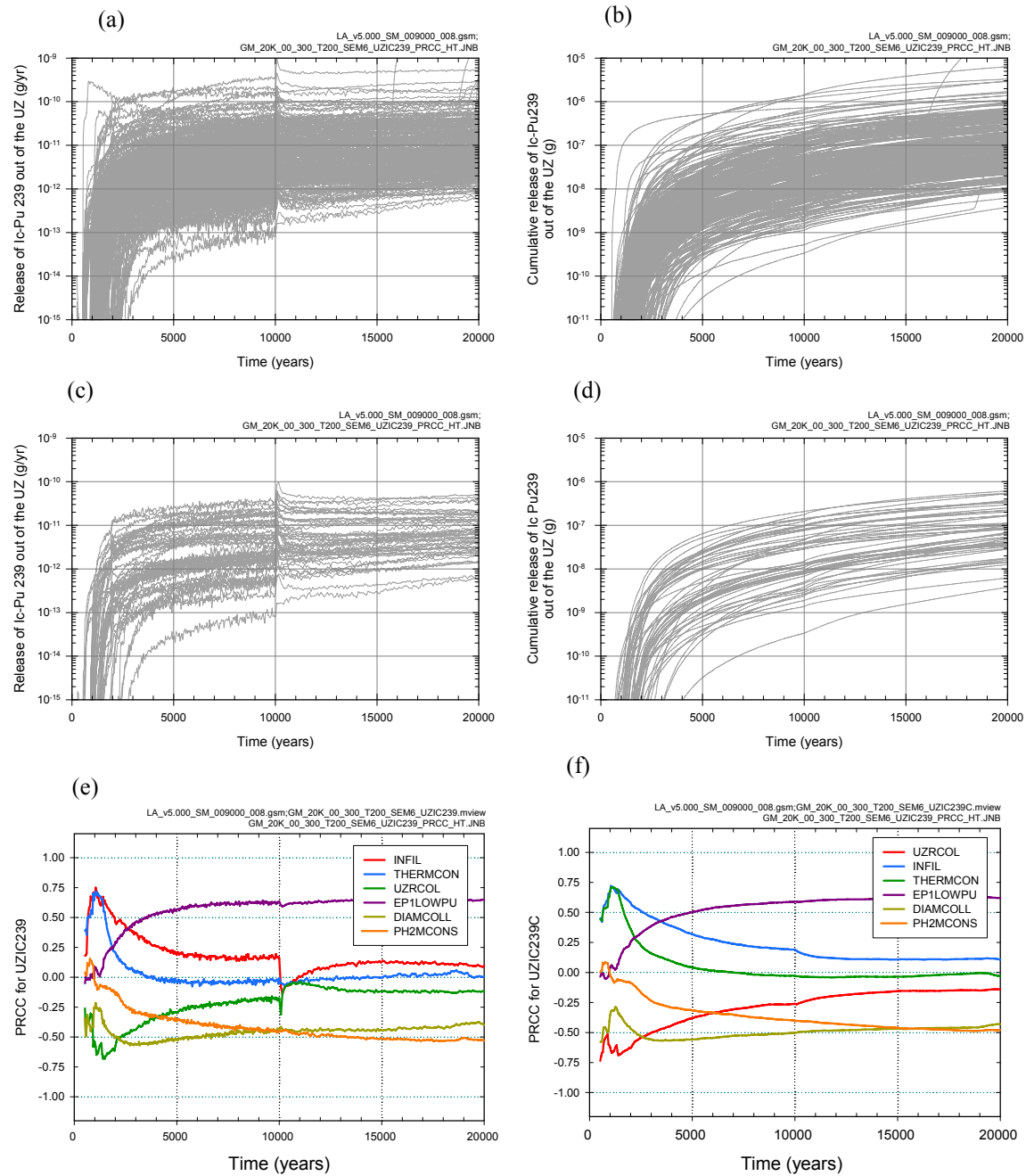
Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-10. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESTC99*, g/yr) and cumulative (i.e., integrated) releases (*ESTC99C*, g) for the movement of dissolved ⁹⁹Tc from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESTC99* and *ESTC99C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESTC99* and *ESTC99C* at 10,000 years



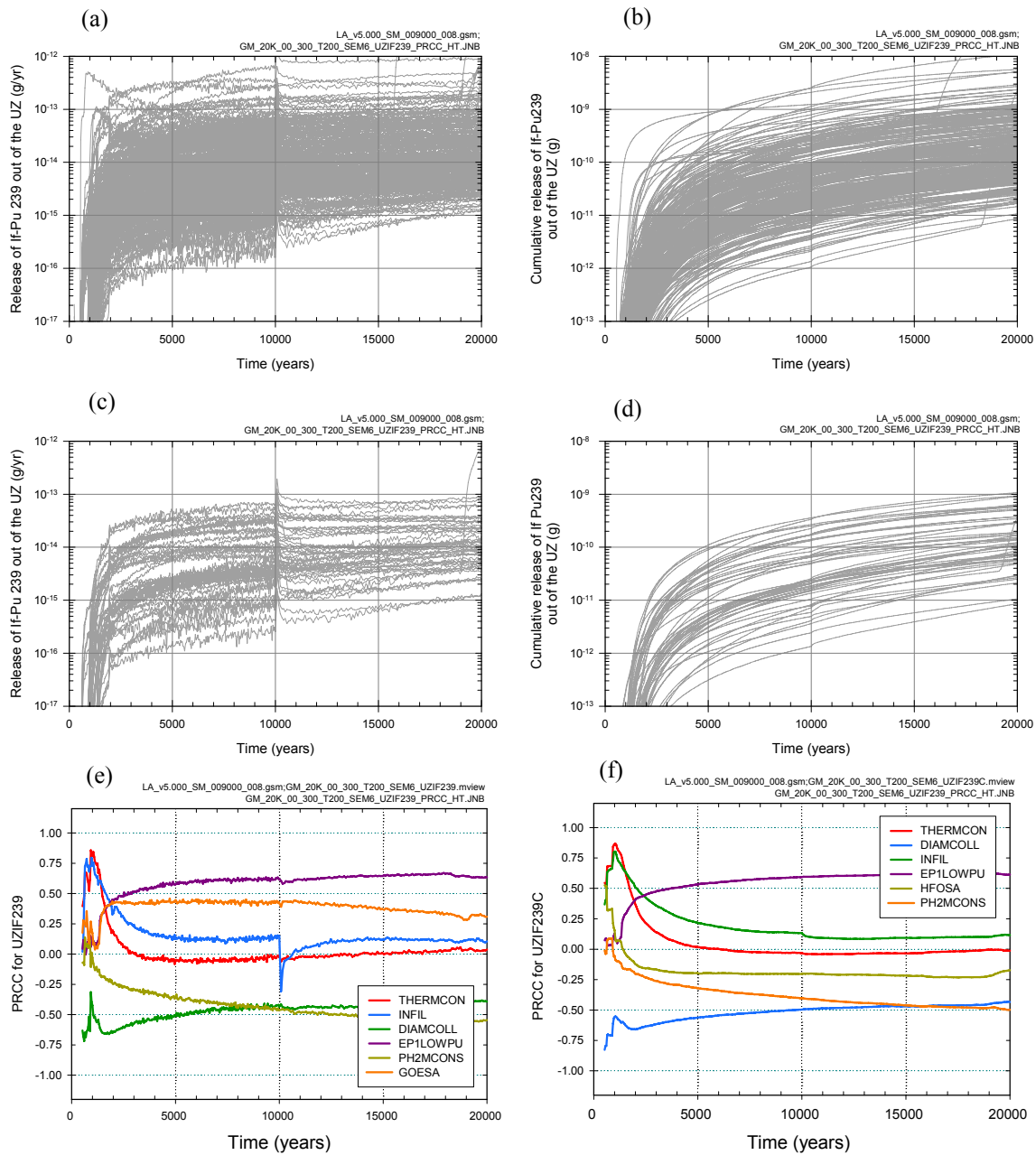
Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K7.3-10. Stepwise rank regression analyses and selected scatterplots for time-dependent release rates (*ESTC99*, g/yr) and cumulative (i.e., integrated) releases (*ESTC99*, g) for the movement of dissolved ⁹⁹Tc from the EBS to the UZ resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) Regressions for *ESTC99* and *ESTC99C* at 3000, 5000 and 10,000 years, and (c-h) Scatterplots for *ESTC99* and *ESTC99C* at 10,000 years (continued)



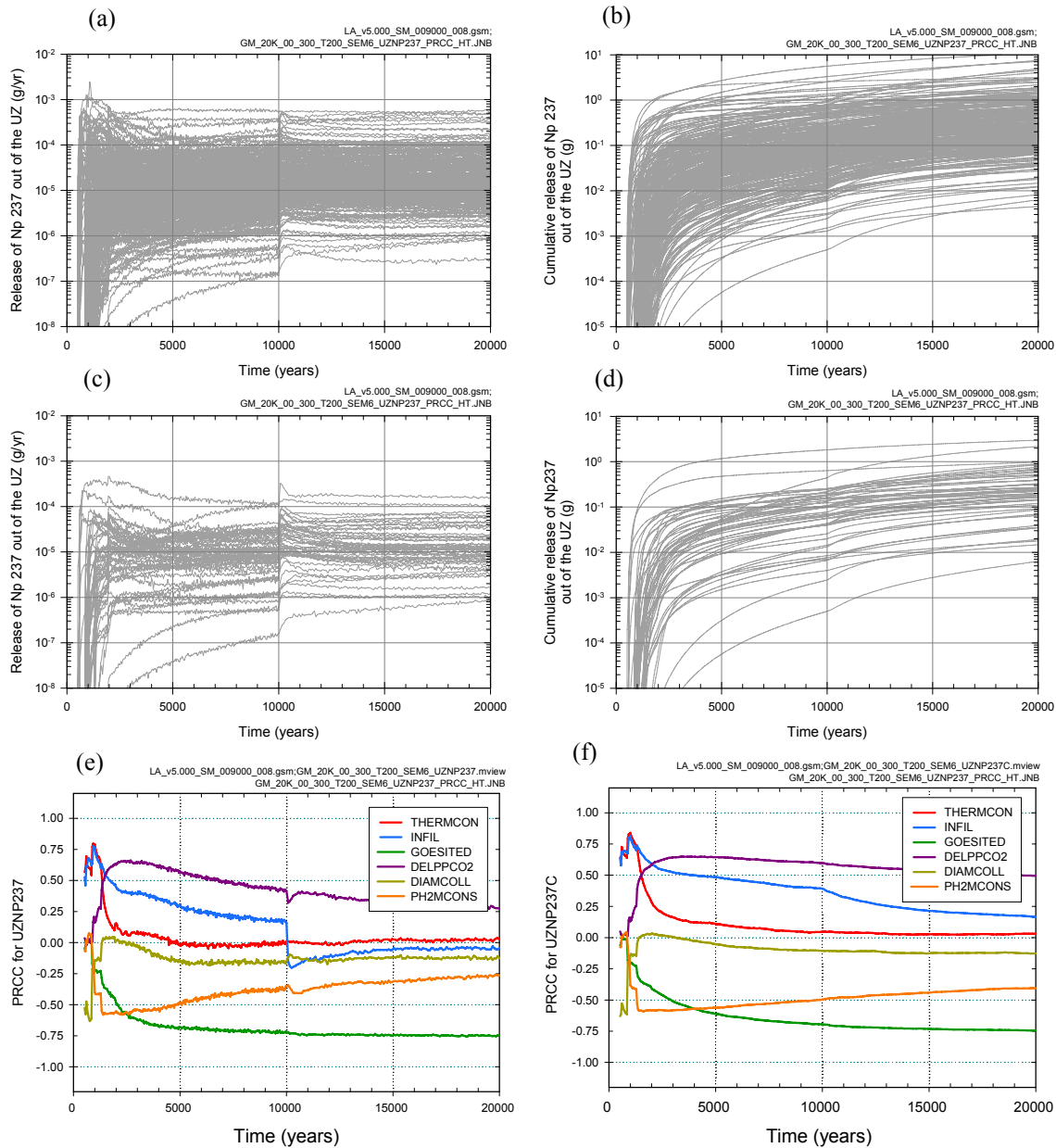
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Figure K7.4-1. Time-dependent release rates (*UZIC239*, g/yr) and cumulative (i.e., integrated) releases (*UZIC239C*, g) over 20,000 years for the movement of ^{239}Pu irreversibly attached to glass colloids from the UZ to the SZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) *UZIC239* and *UZIC239C* for all (i.e., 300) sample elements, (c, d) *UZIC239* and *UZIC239C* for first 50 sample elements, and (e, f) PRCCs for *UZIC239* and *UZIC239C*



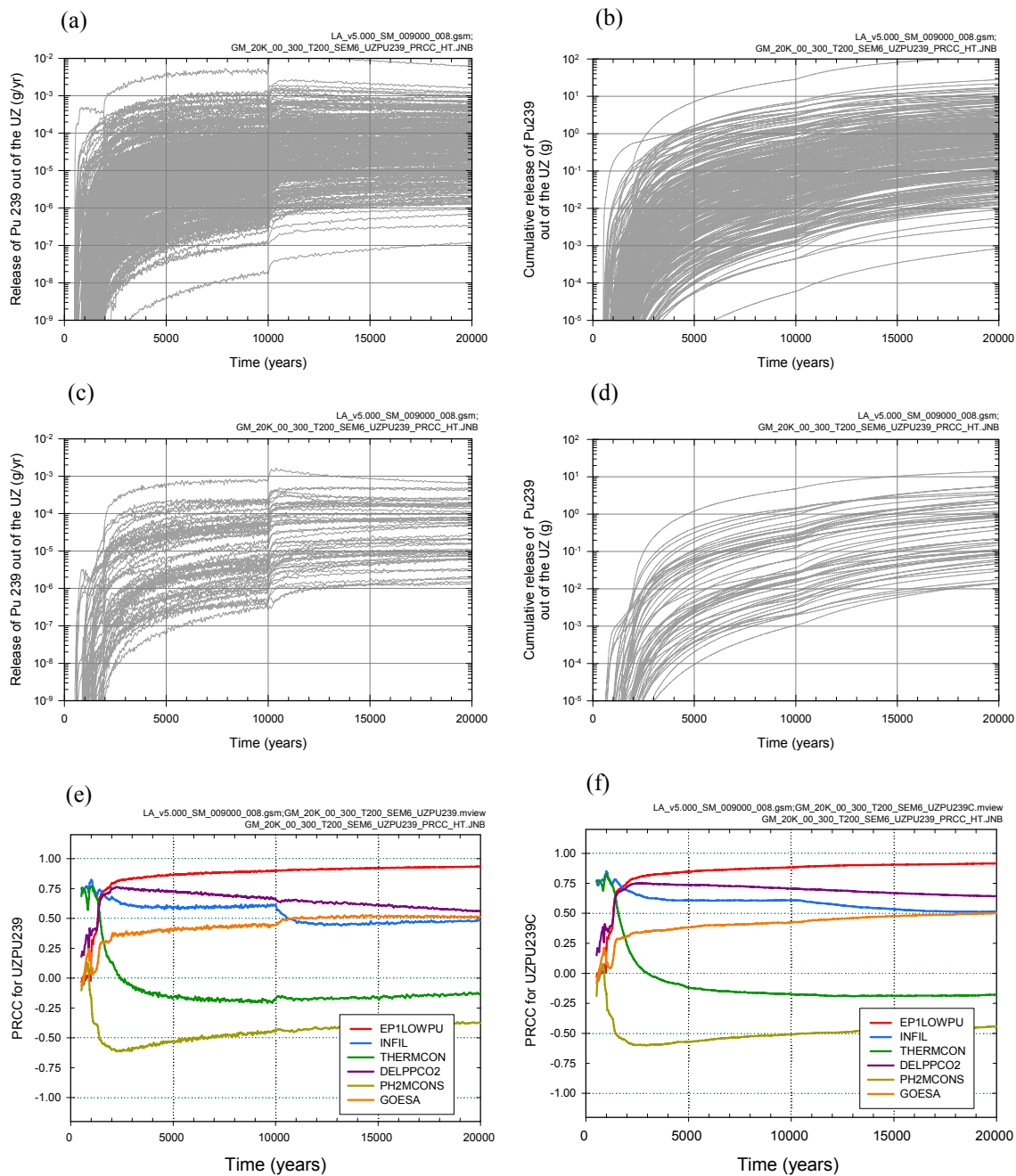
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Figure K7.4-2. Time-dependent release rates (*UZIF239*, g/yr) and cumulative (i.e., integrated) releases (*UZIF239C*, g) over 20,000 years for the movement of ^{239}Pu irreversibly attached to glass colloids from the UZ to the SZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) *UZIF239* and *UZIF239C* for all (i.e., 300) sample elements, (c, d) *UZIC239* and *UZIC239C* for first 50 sample elements, and (e, f) PRCCs for *UZIF239* and *UZIF239C*



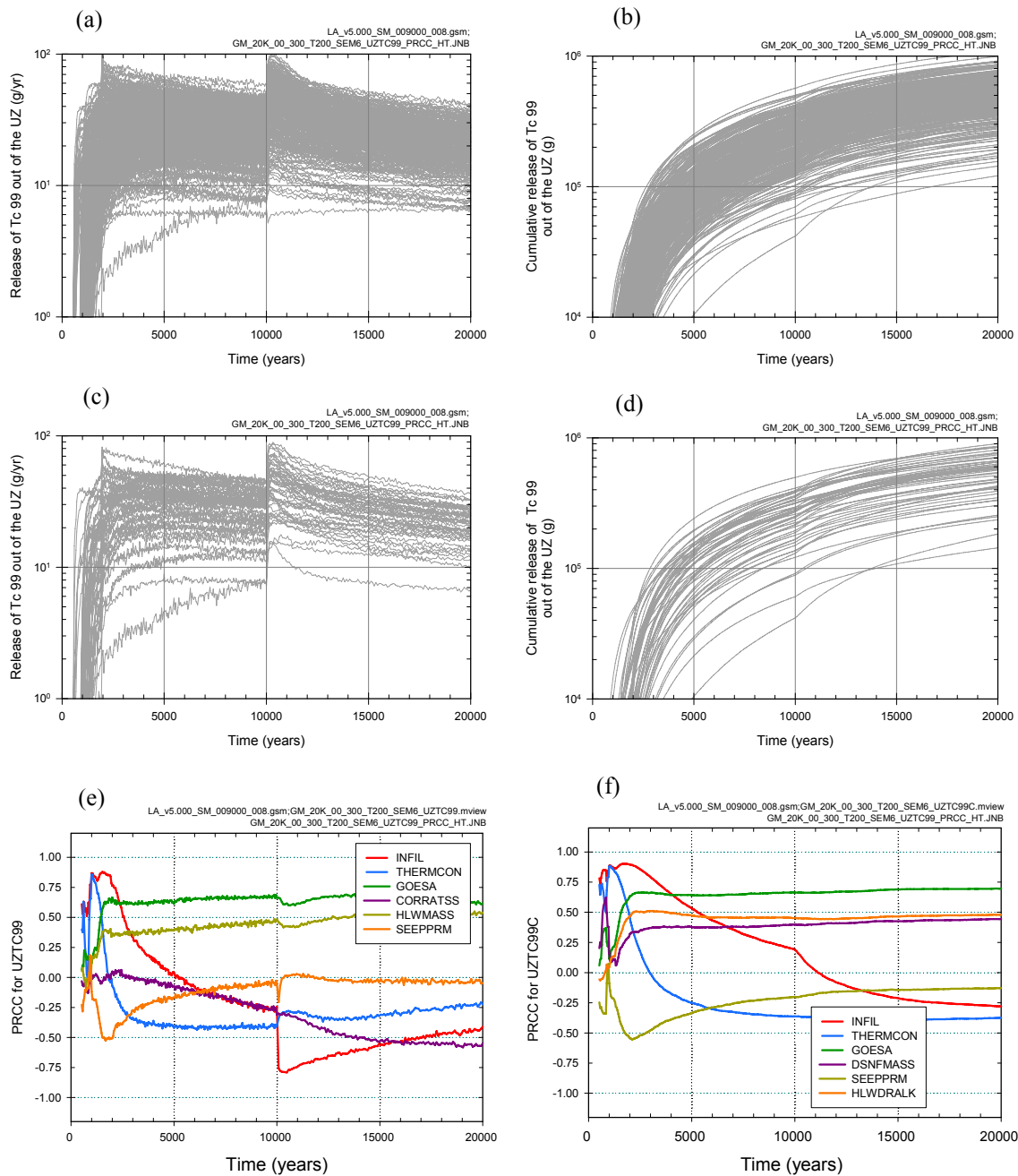
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Figure K7.4-3. Time-dependent release rates (*UZNP237*, g/yr) and cumulative (i.e., integrated) releases (*UZNP2379C*, g) over 20,000 years for the movement of dissolved ^{237}Np from the UZ to the SZ resulting from a seismically induced fractional damaged area of 10^6 (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) *UZNP237* and *UZNP237C* for all (i.e., 300) sample elements, (c, d) *UZNP237* and *UZNP237C* for first 50 sample elements, and (e, f) PRCCs for *UZNP237* and *UZNP237C*



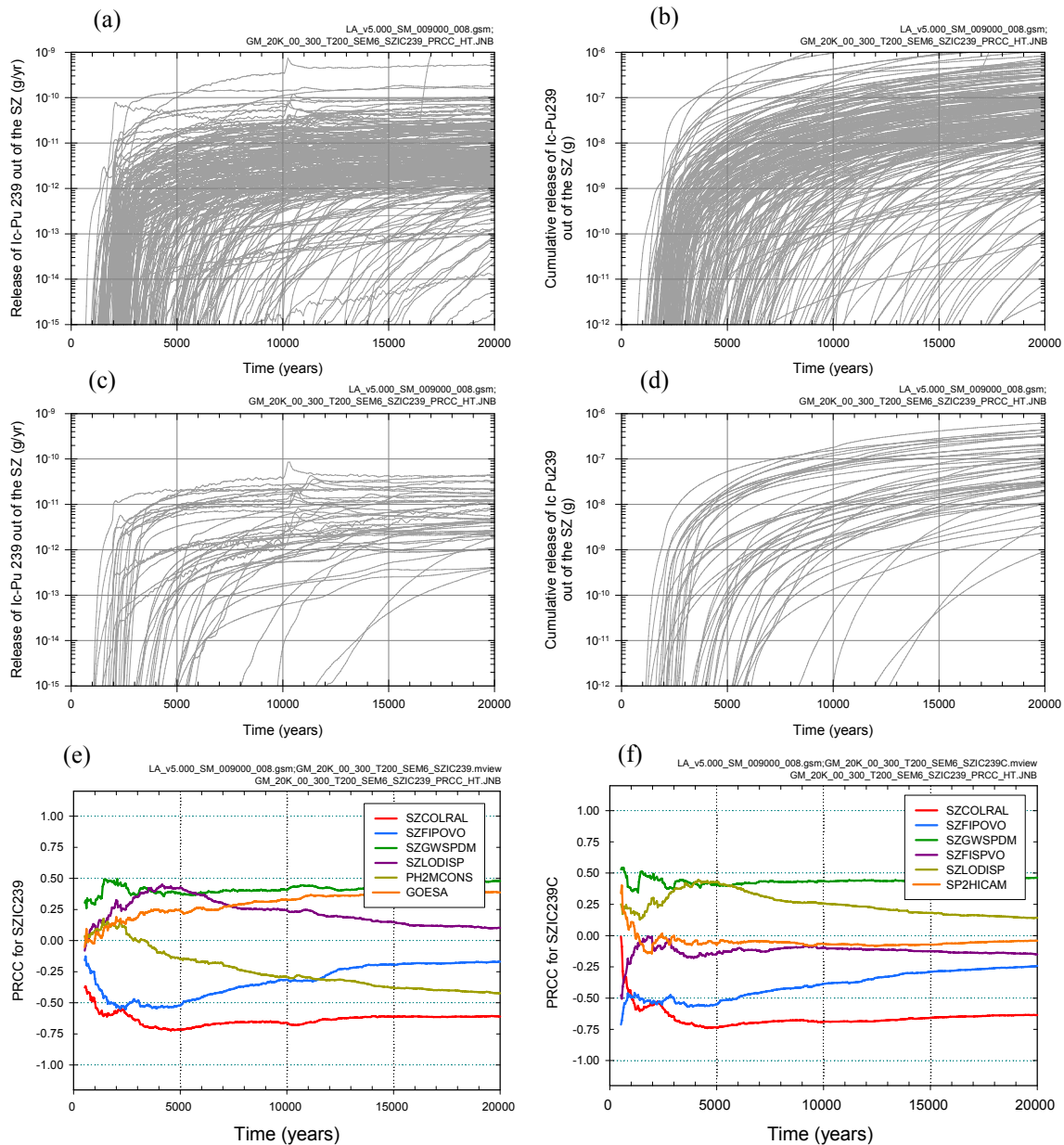
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Figure K7.4-4. Time-dependent release rates (*UZPU239*, g/yr) and cumulative (i.e., integrated) releases (*UZPU239C*, g) over 20,000 years for the movement of dissolved ^{239}Pu from the UZ to the SZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) *UZPU239* and *UZPU239C* for all (i.e., 300) sample elements, (c, d) *UZPU239* and *UZPU239C* for first 50 sample elements, and (e, f) PRCCs for *UZPU239* and *UZPU239C*



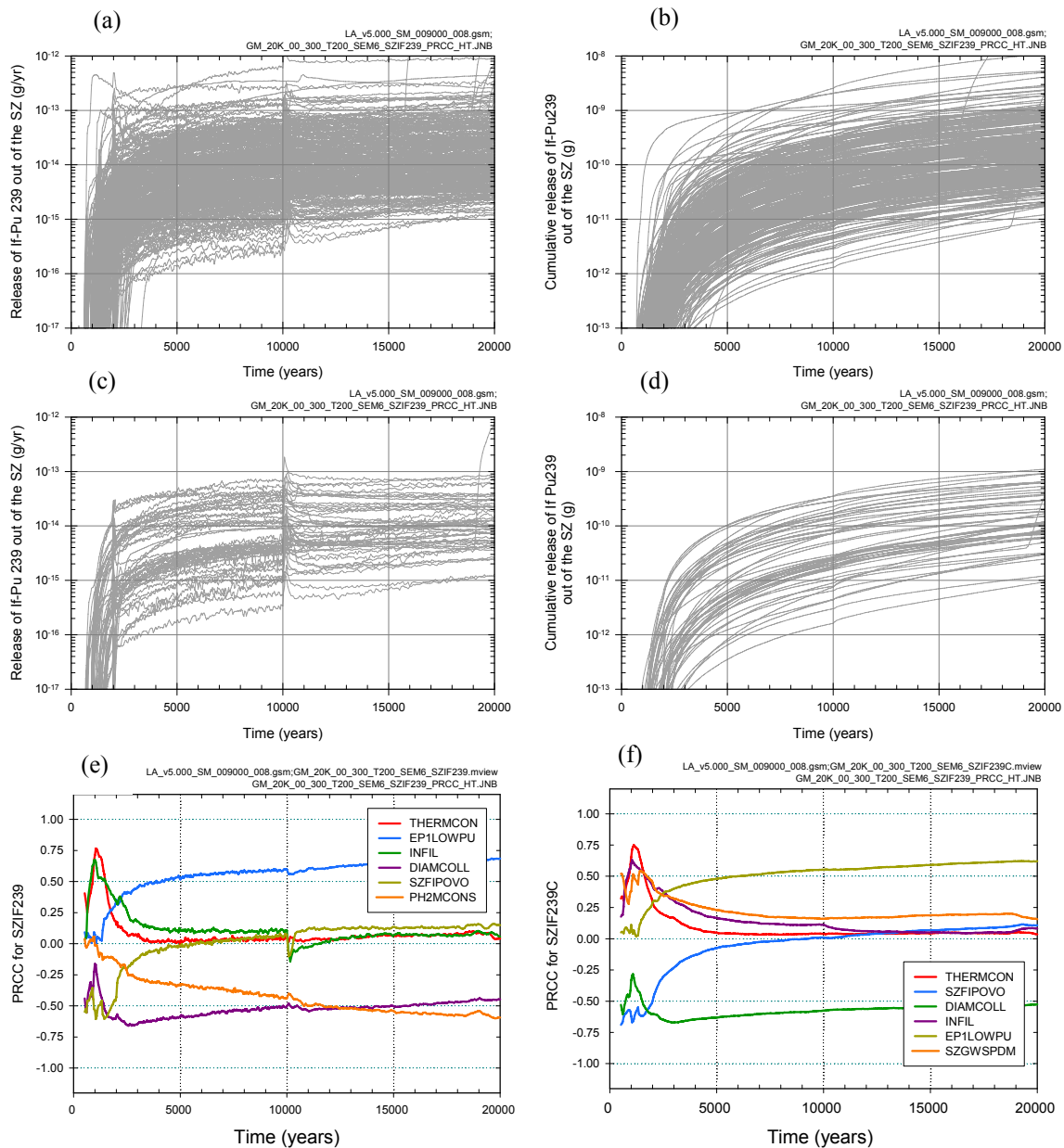
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Figure K7.4-5. Time-dependent release rates (*UZTC99*, g/yr) and cumulative (i.e., integrated) releases (*UZTC99C*, g) over 20,000 years for the movement of dissolved ^{99}Tc from the UZ to the SZ resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) *UZTC99* and *UZTC99C* for all (i.e., 300) sample elements, (c, d) *UZTC99* and *UZTC99C* for first 50 sample elements, and (e, f) PRCCs for *UZTC99* and *UZTC99C*



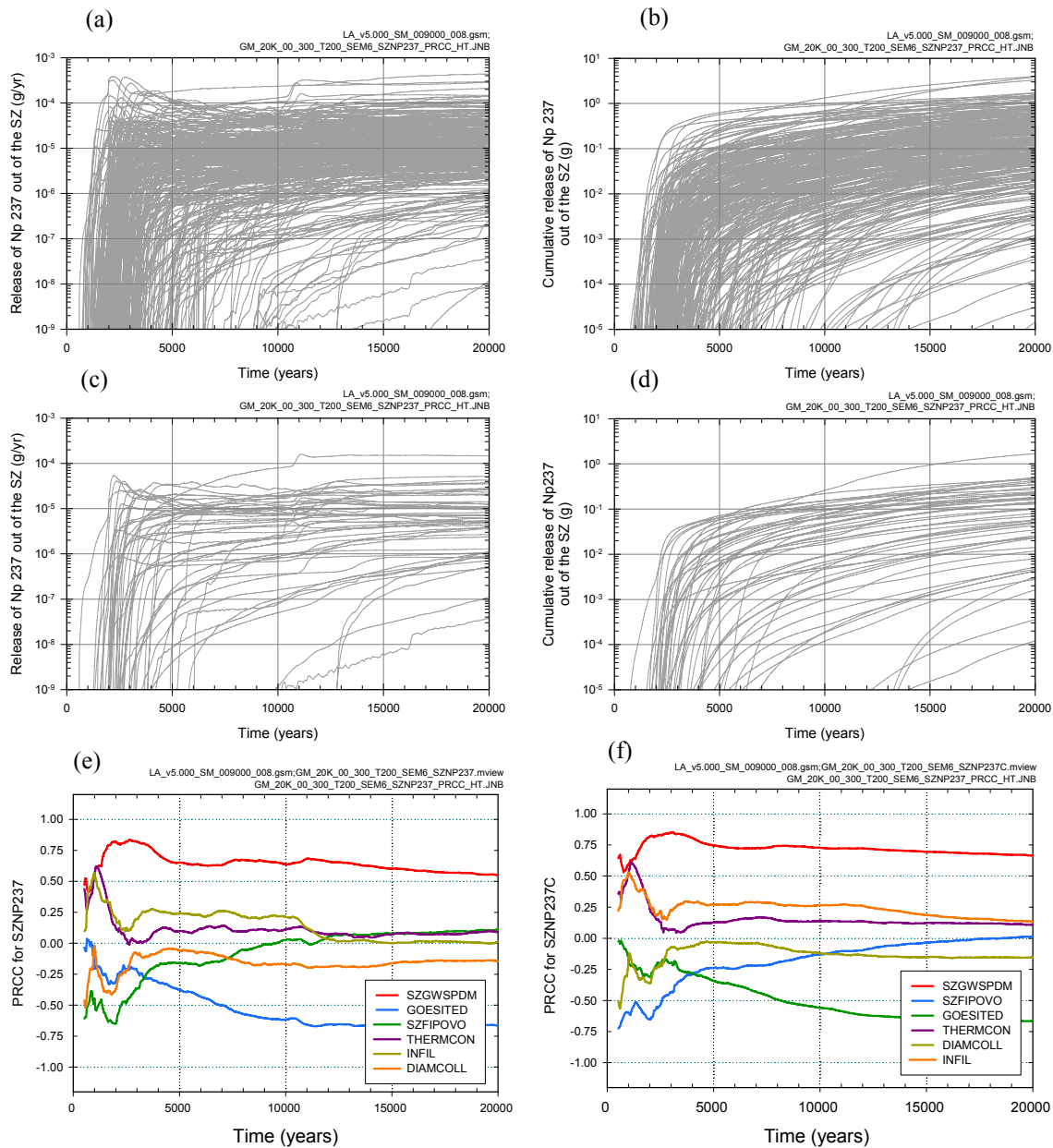
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Figure K7.5-1. Time-dependent release rates (SZIC239, g/yr) and cumulative (i.e., integrated) releases (SZIC239C, g) over 20,000 years for the movement of ^{239}Pu irreversibly attached to glass colloids across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) SZIC239 and SZIC239C for all (i.e., 300) sample elements, (c, d) SZIC239 and SZIC239C for first 50 sample elements, and (e, f) PRCCs for SZIC239 and SZIC239C



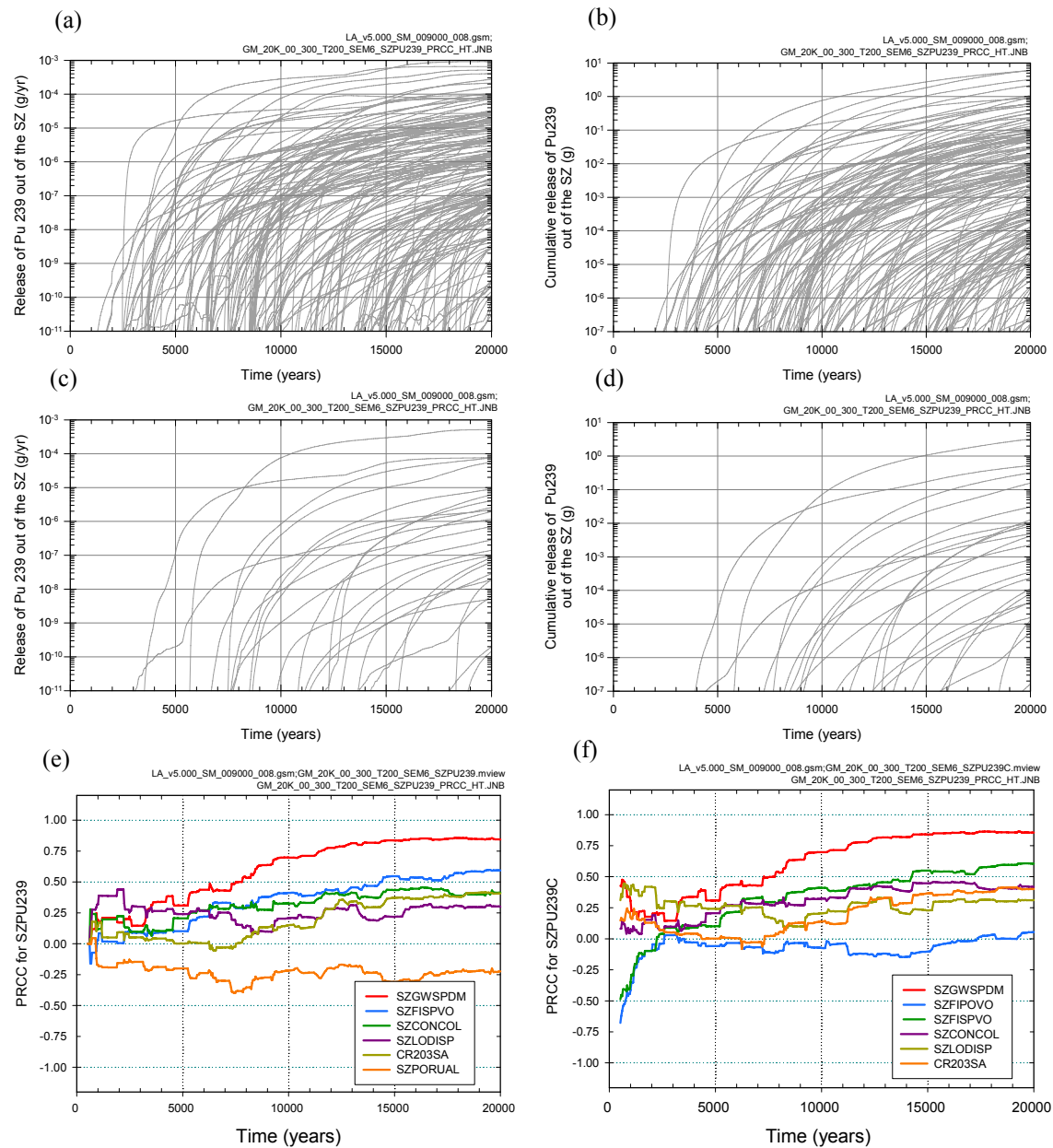
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Figure K7.5-2. Time-dependent release rates (SZIF239, g/yr) and cumulative (i.e., integrated) releases (SZIF239C, g) over 20,000 years for the movement of ^{239}Pu irreversibly attached to glass colloids across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a, b) SZIF239 and SZIF239C for all (i.e., 300) sample elements, (c, d) SZIC239 and SZIC239C for first 50 sample elements, and (e, f) PRCCs for SZIF239 and SZIF239C



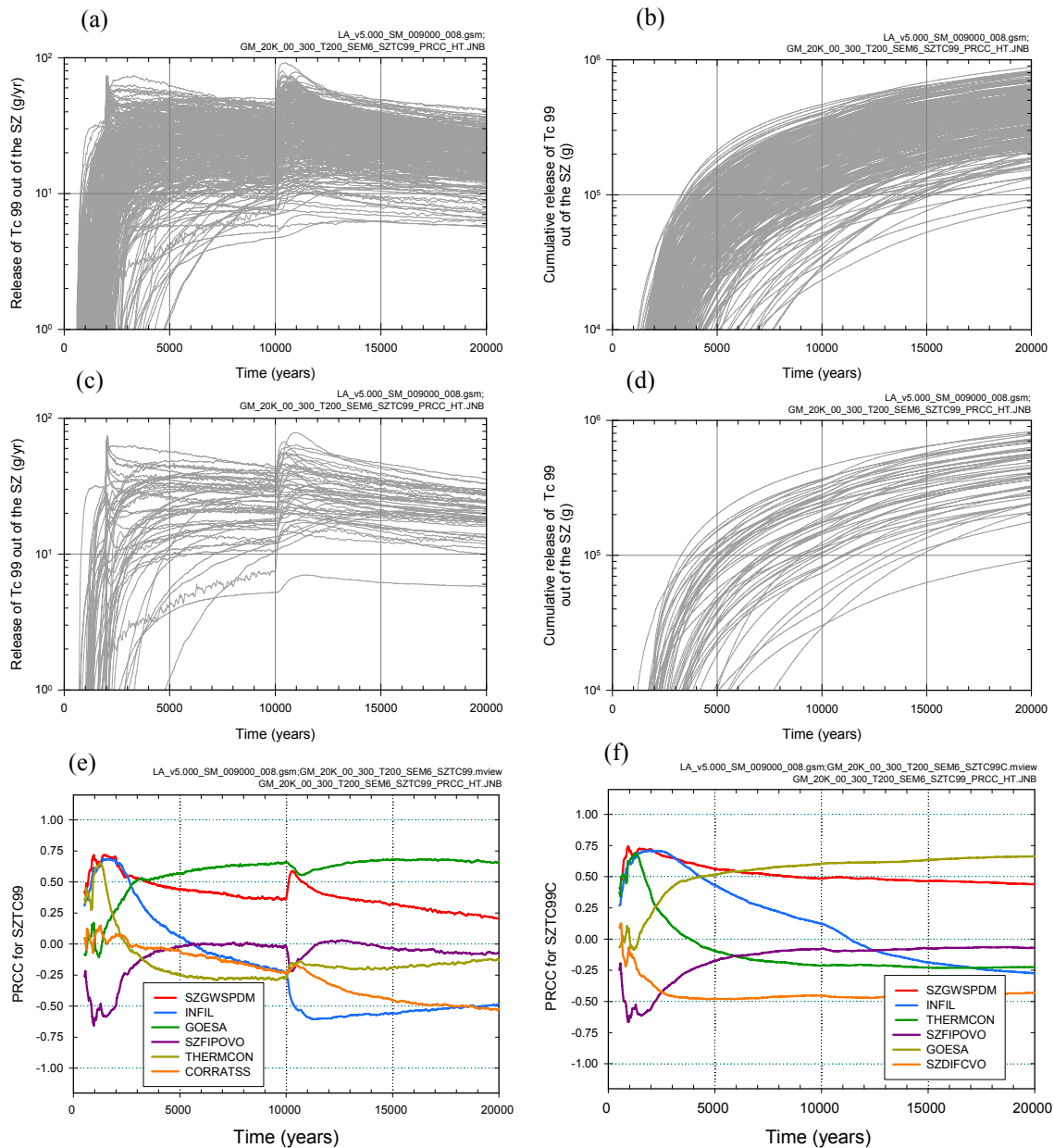
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Figure K7.5-3. Time-dependent release rates (*SZNP237*, g/yr) and cumulative (i.e., integrated) releases (*SZNP2379C*, g) over 20,000 years for the movement of dissolved ²³⁷Np across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) *SZNP237* and *SZNP237C* for all (i.e., 300) sample elements, (c, d) *SZNP237* and *SZNP237C* for first 50 sample elements, and (e, f) PRCCs for *SZNP237* and *SZNP237C*



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

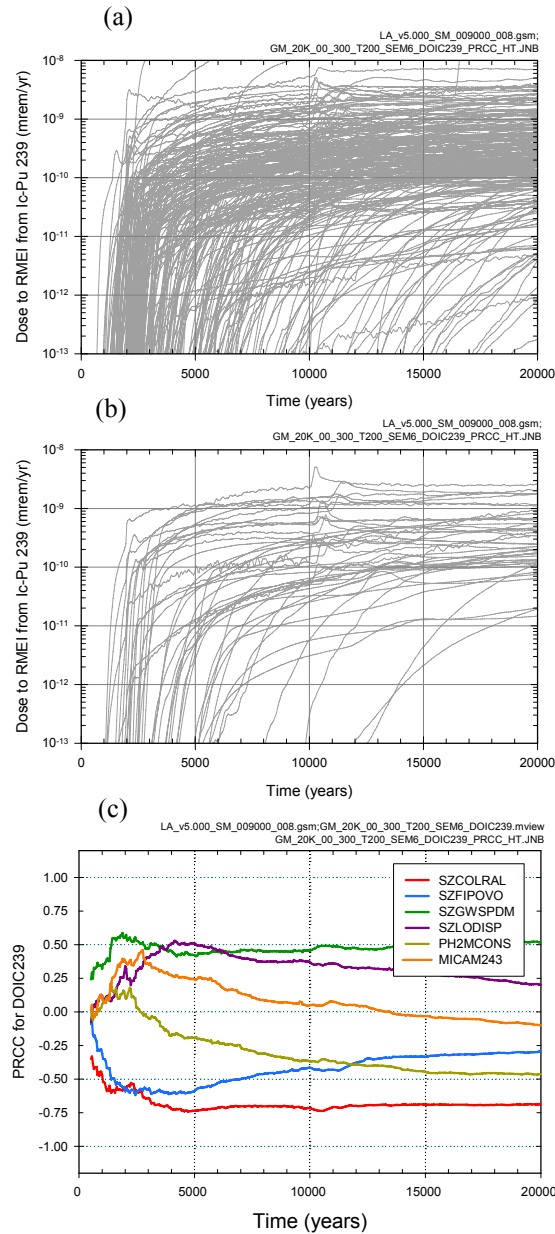
Figure K7.5-4. Time-dependent release rates (*SZPU239*, g/yr) and cumulative (i.e., integrated) releases (*SZPU239C*, g) over 20,000 years for the movement of dissolved ²³⁹Pu across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) *SZPU239* and *SZPU239C* for all (i.e., 300) sample elements, (c, d) *SZPU239* and *SZPU239C* for first 50 sample elements, and (e, f) PRCCs for *SZPU239* and *SZPU239C*



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

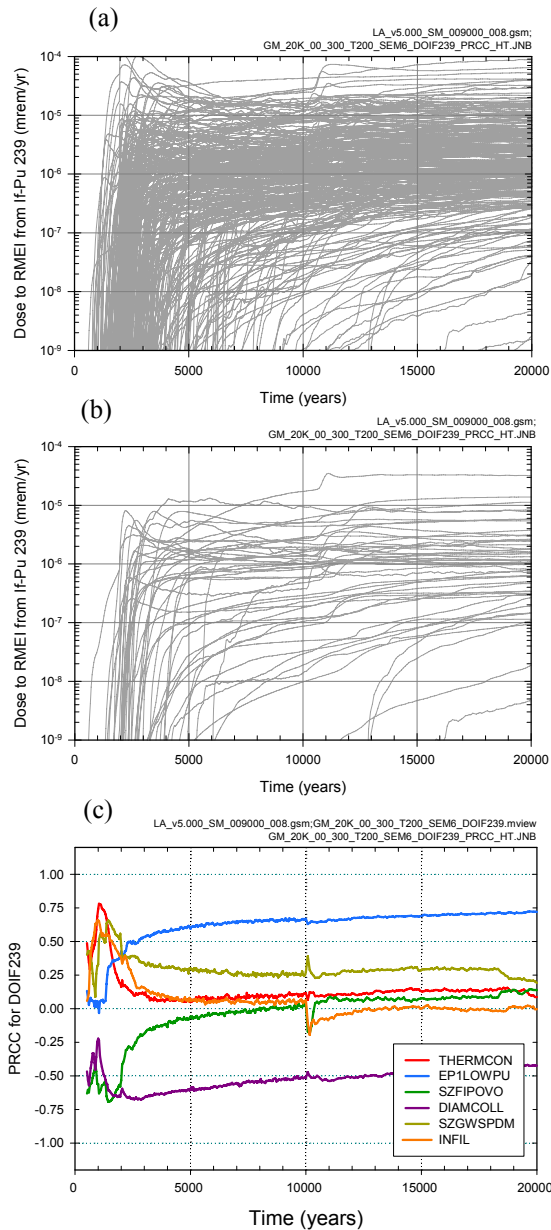
Figure K7.5-5. Time-dependent release rates (SZTC99, g/yr) and cumulative (i.e., integrated) releases (SZTC99C, g) over 20,000 years for the movement of dissolved ⁹⁹Tc from across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a, b) SZTC99 and SZTC99C for all (i.e., 300) sample elements, (c, d) SZTC99 and SZTC99C for first 50 sample elements, and (e, f) PRCCs for SZTC99 and SZTC99C

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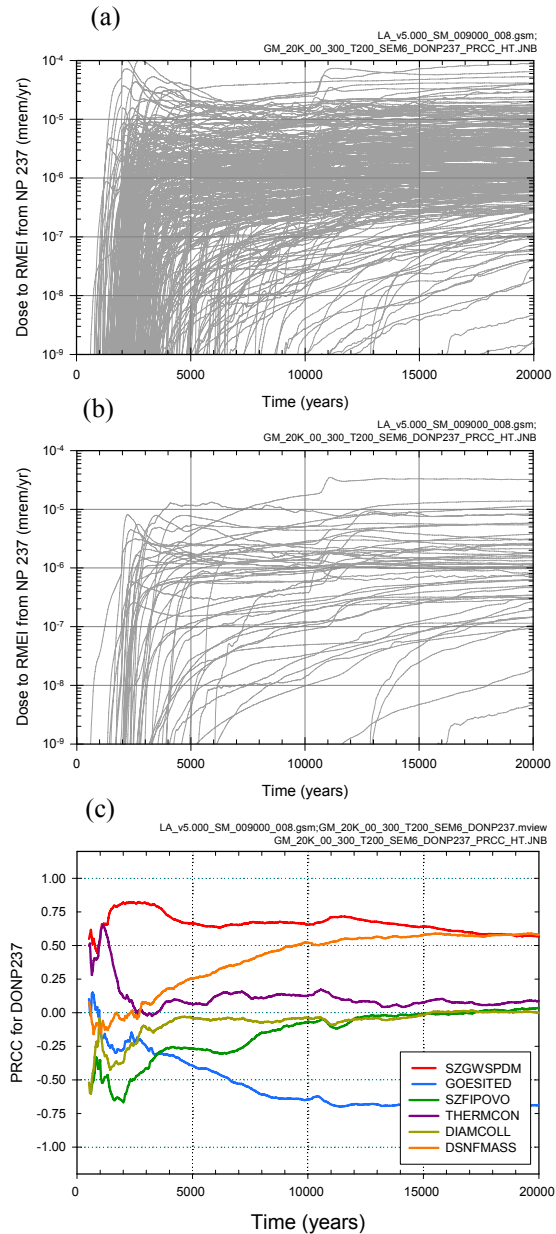
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Figure K.7.6-1. Time-dependent dose to the RMEI (*DOIC239*, mrem/yr) over 20,000 years for the movement of ^{239}Pu irreversibly attached to slow colloids across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m^2) at 200 years to all CDSP WPs in the repository: (a) *DOIC239* for all (i.e., 300) sample elements, (b) *DOIC239* for first 50 sample elements, and (c) PRCCs for *DOIC239*



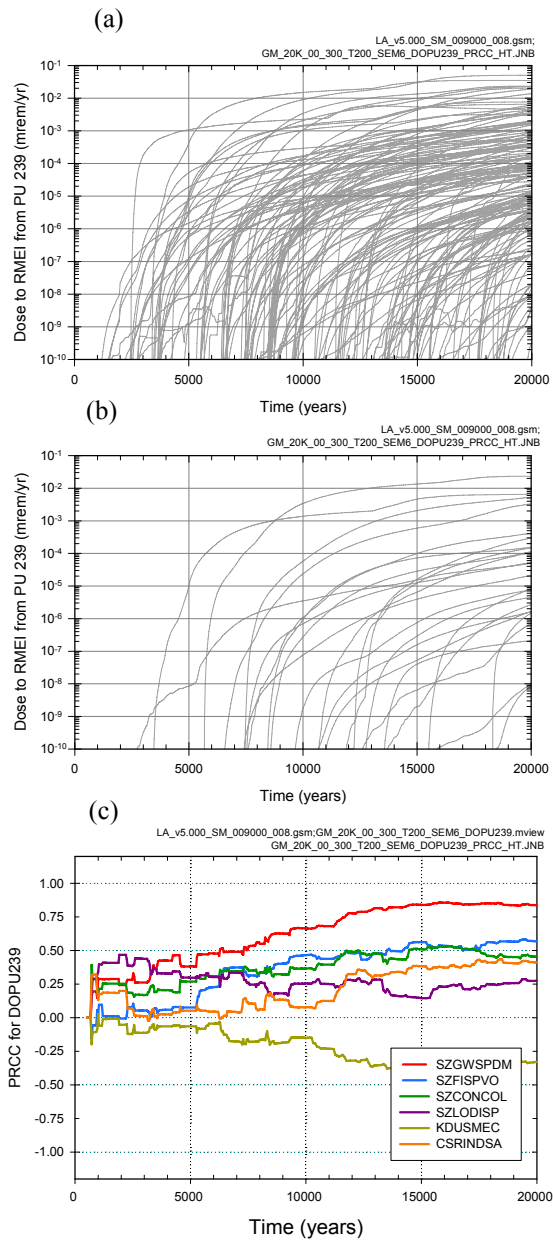
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Figure K.7.6-2. Time-dependent dose to the RMEI (*DOIF239*, mrem/yr) over 20,000 years for the movement of ²³⁹Pu irreversibly attached to fast colloids across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10⁻⁶ (32.6 m²) at 200 years to all CDSP WPs in the repository: (a) *DOIF239* for all (i.e., 300) sample elements, (b) *DOIF239* for first 50 sample elements, and (c) PRCCs for *DOIF239*



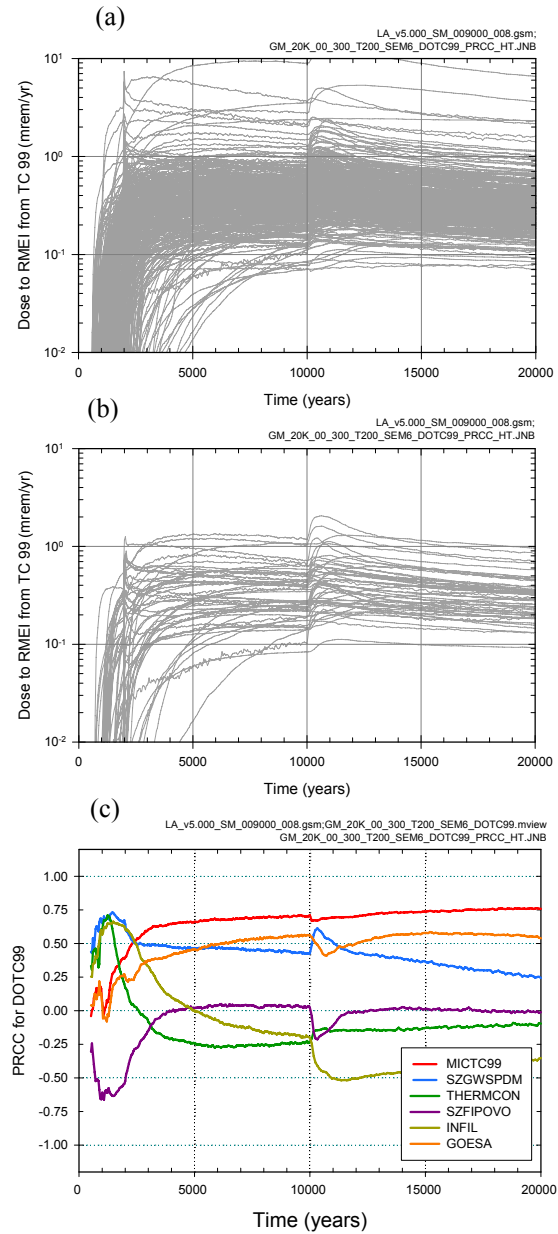
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Figure K.7.6-3. Time-dependent dose to the RMEI (*DONP237*, mrem/yr) over 20,000 years for the movement of dissolved ^{237}Np across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10^{-6} (32.6 m²) at 200 years to all CDSP WPs in the repository: (a) *DONP237* for all (i.e., 300) sample elements, (b) *DONP237* for first 50 sample elements, and (c) PRCCs for *DONP237*



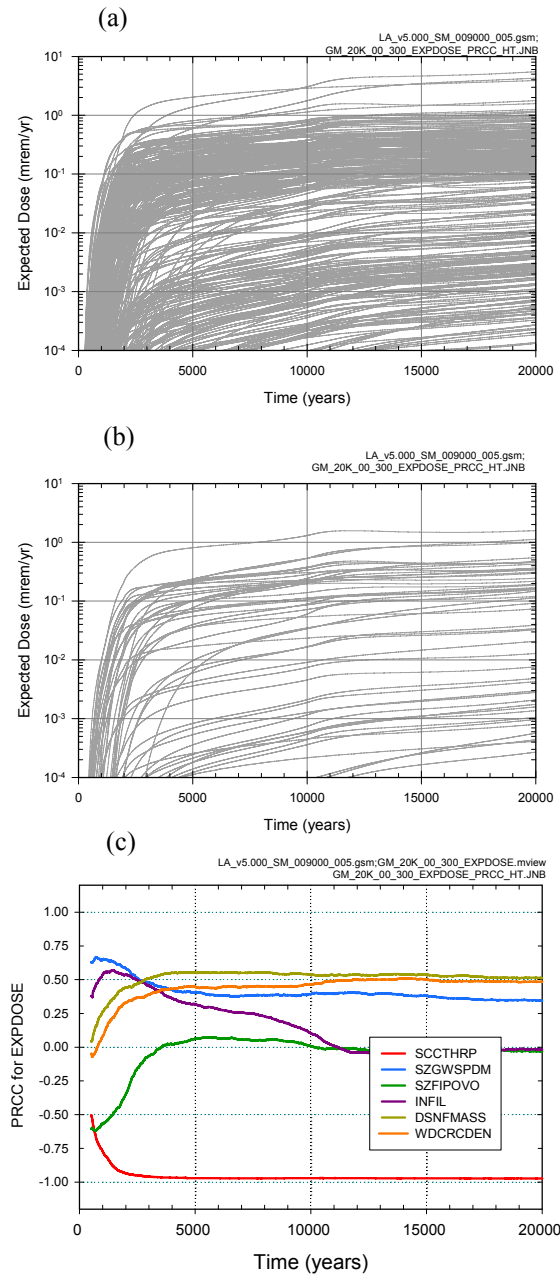
Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.6-4. Time-dependent dose to the RMEI (*DOPU239*, mrem/yr) over 20,000 years for the movement of dissolved ²³⁹Pu across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10⁻⁶ (32.6 m²) at 200 years to all CDSP WPs in the repository: (a) *DOPU239* for all (i.e., 300) sample elements, (b) *DOPU239* for first 50 sample elements, and (c) PRCCs for *DOPU239*



Source: Output DTNs: MO0709TSPASENS.000 [DIRS 183982]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.6-5. Time-dependent dose to the RMEI (*DOTC99*, mrem/yr) over 20,000 years for the movement of dissolved ⁹⁹Tc across a subsurface plane at the location of the RMEI resulting from a seismically induced fractional damaged area of 10⁻⁶(32.6 m²) at 200 years to all CDSP WPs in the repository: (a) *DOTC99* for all (i.e., 300) sample elements, (b) *DOTC99* for first 50 sample elements, and (c) PRCCs for *DOTC99*



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.7.1-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from seismic ground motion: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

(a)

Step ^a	EXPDOSE: 3000 yr			EXPDOSE: 5000 yr			EXPDOSE: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SCCTHRP	0.81	-0.87	SCCTHRP	0.86	-0.91	SCCTHRP	0.87	-0.93
2	SZGWSPDM	0.83	0.16	MICTC99	0.88	0.09	MICTC99	0.89	0.12
3	INFIL	0.85	0.14	DSNFMASS	0.89	0.13	DSNFMASS	0.90	0.14
4	MICTC99	0.87	0.10	MICC14	0.90	0.10	HLWDRACD	0.91	0.09
5	DSNFMASS	0.87	0.12	SZGWSPDM	0.90	0.10	MICC14	0.92	0.08
6	MICC14	0.88	0.11	INFIL	0.91	0.07	WDCRCDEN	0.92	0.10
7	SZFISPVO	0.89	0.09	WDCRCDEN	0.92	0.09	SZGWSPDM	0.93	0.08
8	WDCRCDEN	0.90	0.08	HLWDRACD	0.92	0.07	PH2DHLNS	0.93	-0.07
9	SZDIFCVO	0.90	-0.07	SEEPUNC	0.93	0.06	WFDEGEXF	0.94	0.07
10	SEEPUNC	0.90	0.08	SZFISPVO	0.93	0.06	WDGCUA22	0.94	-0.05
11	GOESA	0.91	0.06	UZFAG8	0.93	-0.06	UZFAG8	0.94	-0.05
12	KDPUSMEC	0.91	0.06	WFDEGEXF	0.93	0.06	SEEPUNC	0.94	0.04
13	HLWDRACD	0.91	0.06	HLWDRALK	0.94	0.04	SZFISPVO	0.94	0.04
14	SZSREG4X	0.92	-0.06	KDUSMEC	0.94	0.04	HLWDRALK	0.95	0.04
15	SEEPARM	0.92	-0.05	GOESA	0.94	0.04	UZGAM	0.95	-0.04
16	KDUSMEC	0.92	0.05	WDGCUA22	0.94	-0.04			

a: Steps in stepwise rank regression analysis

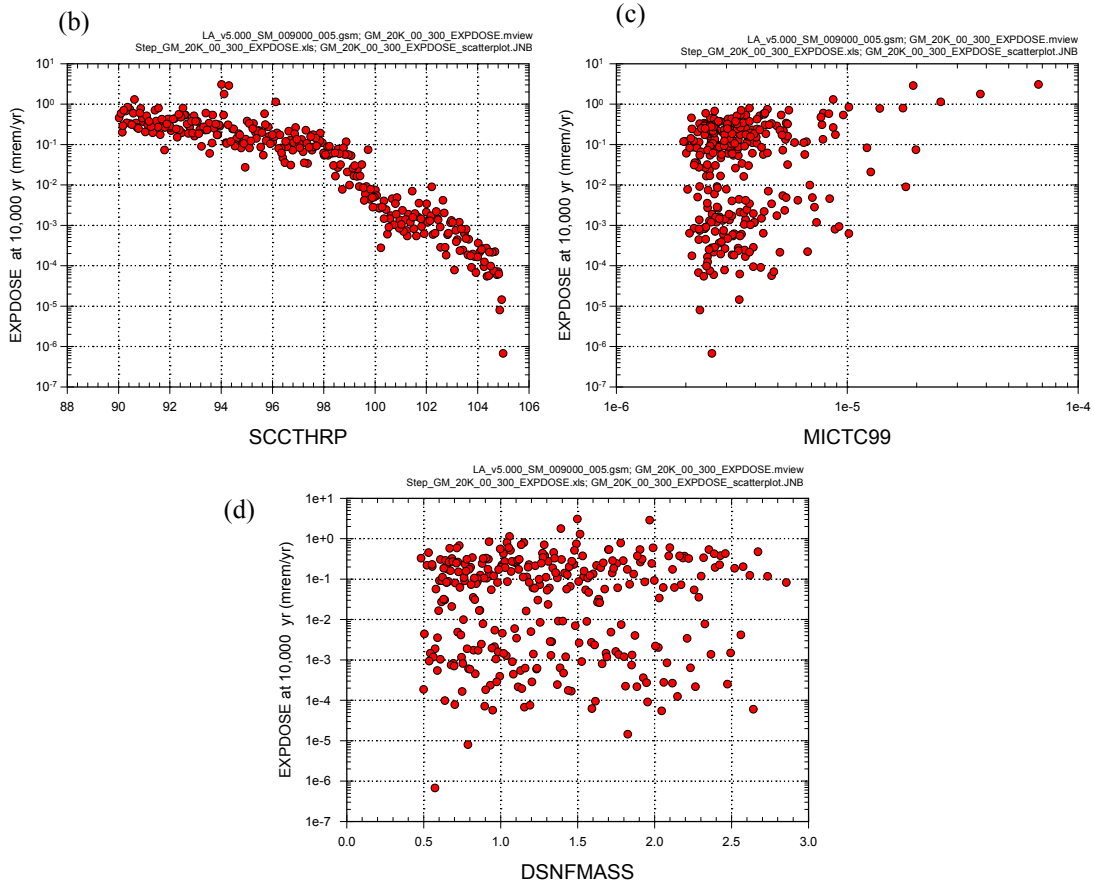
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

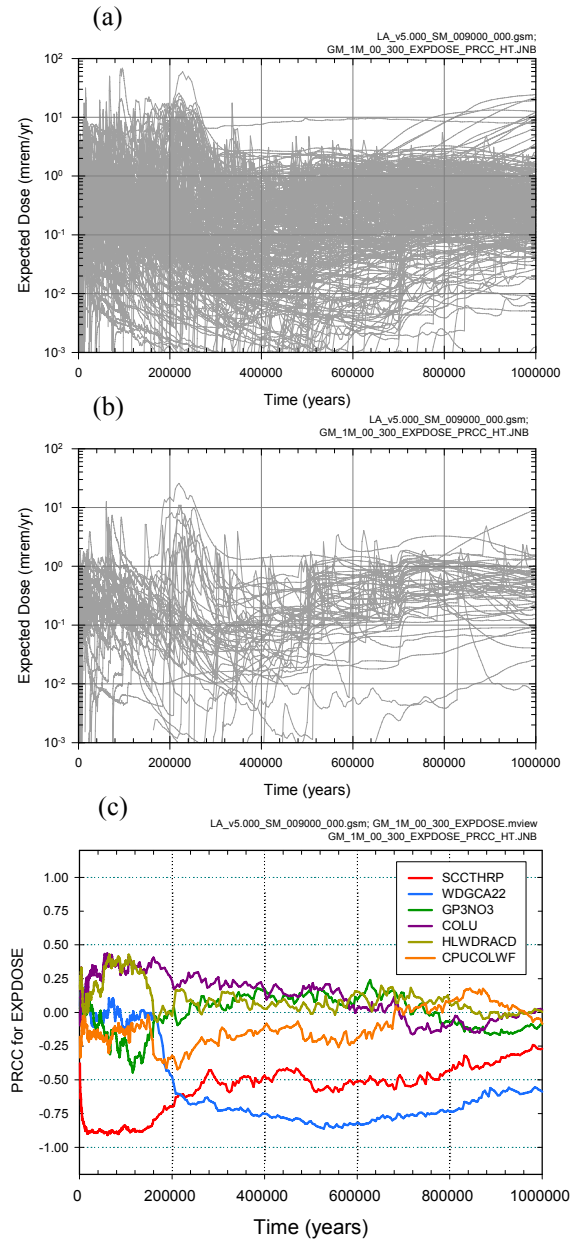
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.7.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from seismic ground motion: (a) Regressions for EXPDOSE at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for EXPDOSE at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.7.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from seismic ground motion: (a) Regressions for *EXPDOSE* at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 years (continued)



Source: OutputDTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.7.2-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from seismic ground motion: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

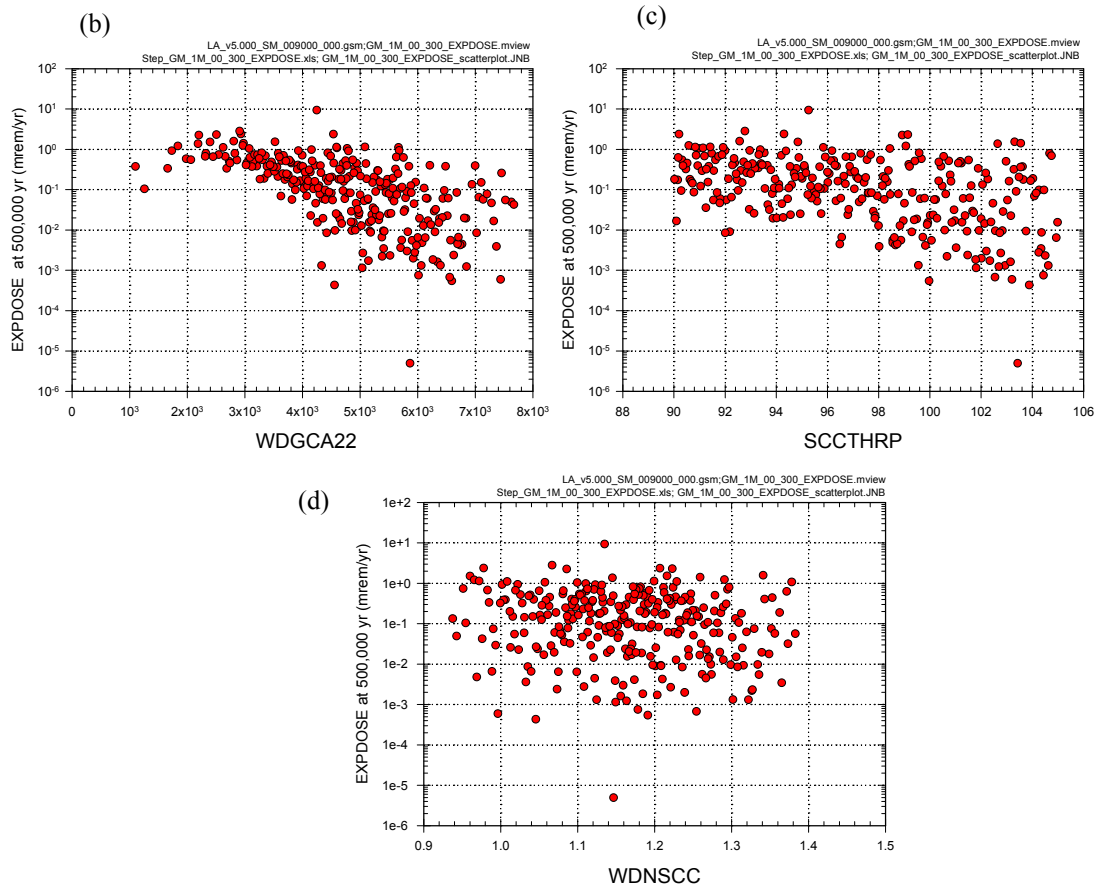
(a)

	EXPDOSE: 50,000 yr			EXPDOSE: 200,000 yr			EXPDOSE: 500,000 yr		
Step ^a	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SCCTHRP	0.71	-0.85	SCCTHRP	0.47	-0.68	WDGCA22	0.45	-0.67
2	SZKDSEVO	0.73	-0.13	WDGCA22	0.53	-0.24	SCCTHRP	0.64	-0.40
3	CPUPERCS	0.74	0.11	MICTC99	0.55	0.12	WDNSCC	0.65	-0.15
4	MICTC99	0.75	0.10	SZKDAMAL	0.56	-0.11	SZGWSPDM	0.67	0.13
5	DSNFMAS	0.76	0.11				SZPORSAL	0.68	0.09
6	SEPPRM	0.77	0.09				CORRATSS	0.69	-0.10
7	HLWDRACD	0.77	0.10				PH2DHLNS	0.70	0.10
8	KDAMCOL	0.78	-0.08				WDZOLID	0.71	0.09
9	SZLODISP	0.79	-0.08						

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

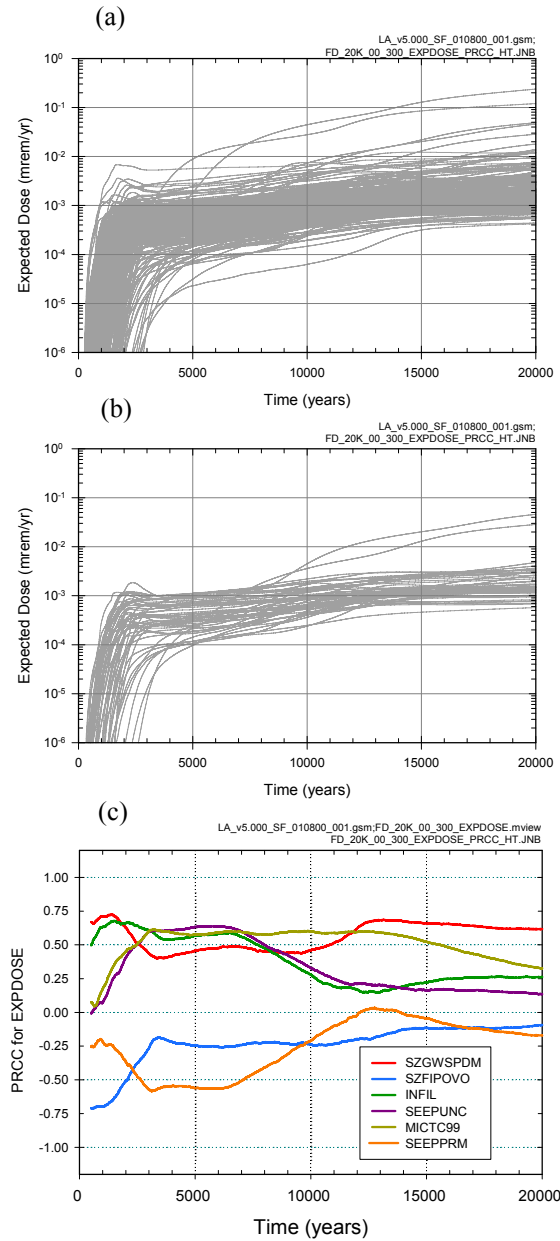
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.7.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from seismic ground motion: (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: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.7.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI ($EXPDOSE$, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from seismic ground motion: (a) Regressions for $EXPDOSE$ at 50,000, 200,000 and 500,000 years, and (b,c,d) Scatterplots for $EXPDOSE$ at 500,000 years (continued)



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.8.1-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from seismic fault displacement: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

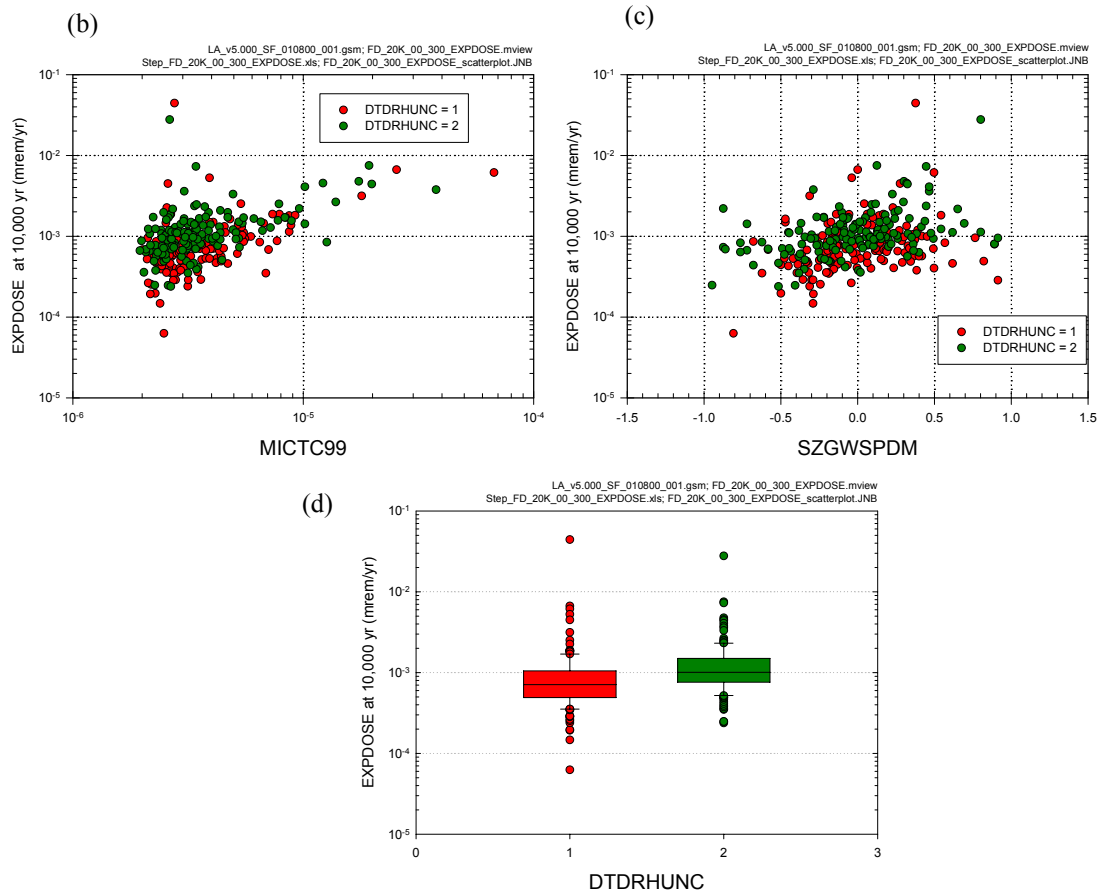
(a)

Step ^a	EXPDOSE: 3000 yr			EXPDOSE: 5000 yr			EXPDOSE: 10,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	INFIL	0.16	0.40	MICTC99	0.16	0.39	MICTC99	0.21	0.44
2	MICTC99	0.30	0.36	INFIL	0.32	0.41	SZGWSPDM	0.30	0.32
3	SZGWSPDM	0.39	0.31	SEPPRM	0.42	-0.30	DTDRHUNC	0.39	0.25
4	SEPPRM	0.47	-0.27	SEEPUNC	0.49	0.30	INFIL	0.45	0.25
5	SEEPUNC	0.55	0.29	SZGWSPDM	0.57	0.26	SZFISPVO	0.49	0.23
6	CSSPECSA	0.60	0.22	CSSPECSA	0.61	0.22	SEPPRM	0.52	-0.15
7	SZFISPVO	0.64	0.22	SZFISPVO	0.65	0.20	CSNFMAS	0.54	0.16
8	CSNFMAS	0.66	0.16	CSNFMAS	0.67	0.18	SZCOLRAL	0.56	-0.16
9	MICC14	0.68	0.14	ALPHAL	0.69	-0.16	SZDIFCVO	0.59	-0.16
10	SZDIFCVO	0.70	-0.15	MICC14	0.70	0.12	SZFIPOVO	0.61	-0.15
11	ALPHAL	0.71	-0.13	SZDIFCVO	0.71	-0.13	MICAM243	0.62	0.13
12	THERMCON	0.72	-0.09	SZFIPOVO	0.73	-0.10	CSSPECSA	0.63	0.13
13	SZFIPOVO	0.73	-0.09	SZCOLRAL	0.74	-0.11	CSWFA4AC	0.64	0.12
14	SZCOLRVO	0.74	-0.08	SZCOLRVO	0.74	-0.11	KDUSMEC	0.65	0.11
15				CSWFA4AC	0.75	0.09	INRFRCR	0.66	0.10
16							ALPHAL	0.67	-0.10

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

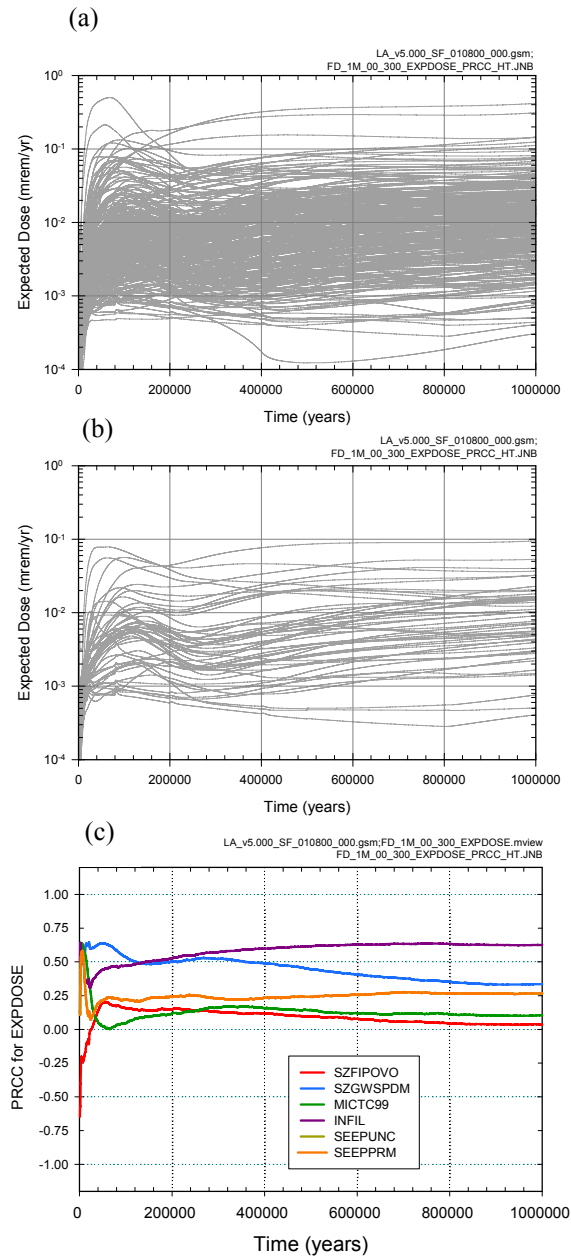
Figure K.7.8.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from seismic fault displacement: (a) Regressions for EXPDOSE at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for EXPDOSE at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

NOTE: In (d), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K.7.8.1-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all radioactive species resulting from seismic fault displacement: (a) Regressions for *EXPDOSE* at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 years (continued).



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.7.8.2-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from seismic fault displacement: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

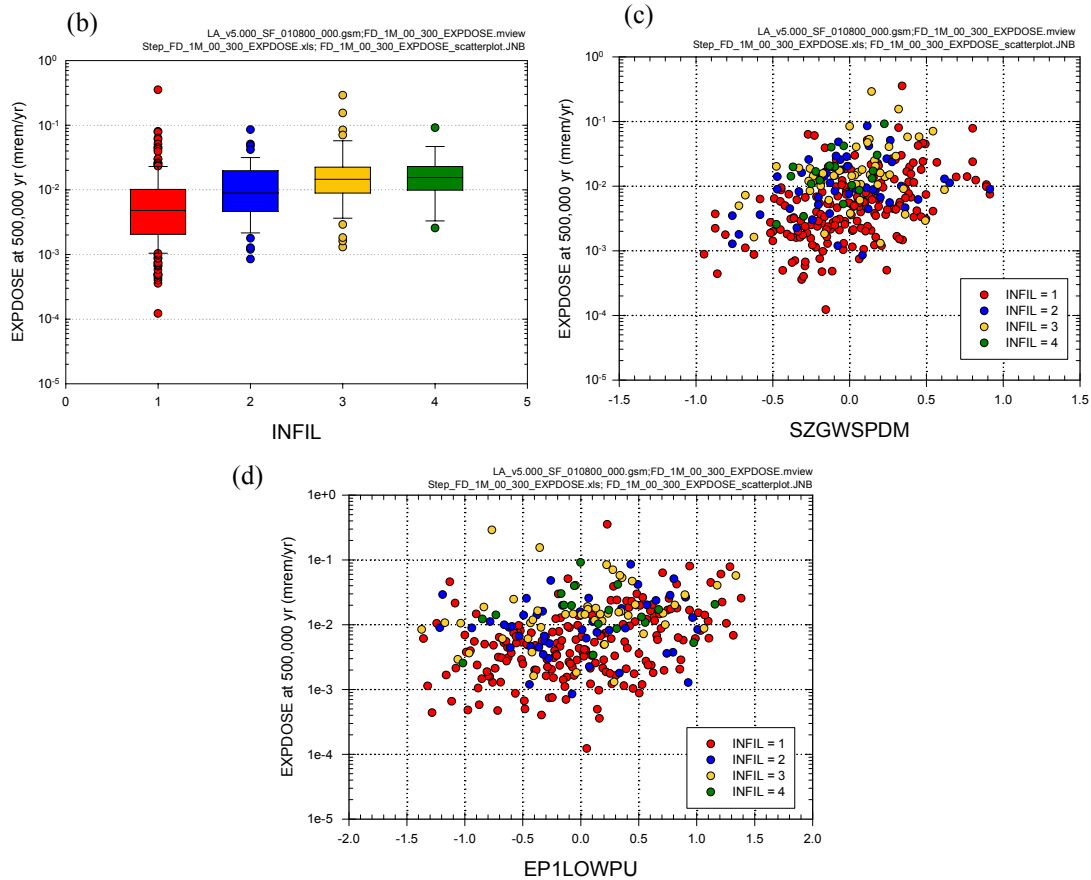
(a)

Step ^a	EXPDOSE: 50,000 yr			EXPDOSE: 200,000 yr			EXPDOSE: 500,000 yr		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SZGWSPDM	0.28	0.51	SZGWSPDM	0.17	0.44	INFIL	0.16	0.39
2	INFIL	0.40	0.31	INFIL	0.31	0.34	SZGWSPDM	0.31	0.44
3	WPFLUX	0.45	0.23	WPFLUX	0.39	0.29	EPILOWPU	0.39	0.30
4	EPILOWPU	0.49	0.20	EPILOWPU	0.45	0.25	WPFLUX	0.45	0.25
5	MICNP237	0.53	0.17	MICNP237	0.49	0.15	GOESITED	0.49	-0.16
6	CPUCOLWF	0.56	0.20	SZCONCOL	0.51	0.15	SZCONCOL	0.52	0.15
7	SEEPERM	0.58	-0.18	SEEPERM	0.54	-0.15	MICNP237	0.55	0.13
8	SZFISPVO	0.60	0.13	SZFISPVO	0.56	0.14	EPILOWNU	0.57	0.18
9	SZCOLRAL	0.62	-0.13	SEEPUNC	0.58	0.14	SEEPUNC	0.59	0.15
10	MICTC99	0.63	0.11	EPINPO2	0.59	0.13	SZFISPVO	0.61	0.12
11	HFOSA	0.65	-0.10	EPILOWNU	0.61	0.13	HFOSA	0.63	-0.12
12	PHCSS	0.66	-0.13	SZDIFCVO	0.63	-0.15	SEEPERM	0.64	-0.15
13	SZRAHAVO	0.67	0.10	SZKDAMCO	0.64	0.13	UZFAG4	0.66	-0.14
14	PH2RGER	0.68	-0.10	SZSREG1Y	0.66	0.14	KDPUSMEC	0.67	0.13
15	KDPUSMEC	0.69	0.10	MICAM243	0.67	0.11	MICRA226	0.68	0.11
16	SEEPUNC	0.69	0.10	GOESITED	0.68	-0.09	SZWBNDAL	0.69	-0.10

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

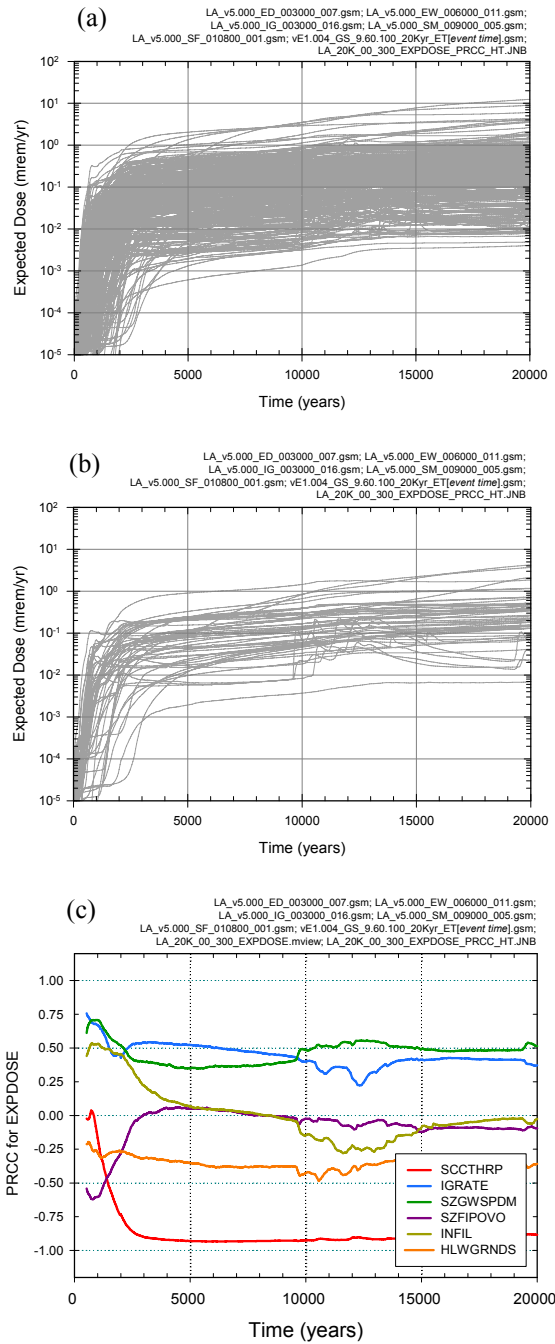
Figure K.7.8.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from seismic fault displacement: (a) Regressions for EXPDOSE at 50,000, 200,000 and 500,000 years, and (b,c,d) Scatterplots for EXPDOSE at 500,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

NOTE: In (b), the box extends from 0.25 to 0.75 quantile; lower and upper bar and whisker extend to 0.1 and 0.9 quantile, respectively; dots represent values outside 0.1 to 0.9 quantile range; median indicated by light horizontal line.

Figure K.7.8.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all radioactive species resulting from seismic fault displacement: (a) Regressions for *EXPDOSE* at 50,000, 200,000 and 500,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 years (continued).



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.8.1-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all scenario classes: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 50 sample elements, and (c) PRCCs for *EXPDOSE*

(a)

	EXPDOSE: 3000 yr			EXPDOSE: 5000 yr			EXPDOSE: 10,000 yr		
Step ^a	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SCCTHRP	0.55	-0.71	SCCTHRP	0.66	-0.80	SCCTHRP	0.69	-0.82
2	IGRATE	0.62	0.29	IGRATE	0.72	0.25	IGRATE	0.73	0.22
3	SZGWSPDM	0.67	0.21	MICTC99	0.74	0.15	SZGWSPDM	0.76	0.17
4	INFIL	0.71	0.19	SZGWSPDM	0.77	0.14	MICTC99	0.78	0.14
5	MICTC99	0.73	0.16	MICC14	0.78	0.12	WFDEGEXF	0.79	0.11
6	MICC14	0.75	0.12	INFIL	0.80	0.12	MICC14	0.80	0.10
7	SZFISPVO	0.76	0.14	WFDEGEXF	0.81	0.10	UZGAM	0.81	-0.10
8	DSNFMASS	0.77	0.09	UZGAM	0.81	-0.10	WDGCUA22	0.81	-0.07
9	UZFAG8	0.77	-0.09	DSNFMASS	0.82	0.11	HLWGRNDS	0.82	-0.08
10	KDUSMEC	0.78	0.08	SZFISPVO	0.83	0.08	CSWFA0AC	0.82	-0.07
11	MICPA231	0.79	-0.08	UZFAG8	0.83	-0.09	UZFAG5	0.83	-0.07
12	WFDEGEXF	0.79	0.08	WDGCUA22	0.84	-0.07			
13	UZGAM	0.80	-0.08	WDCRCDEN	0.84	0.07			
14	SZDIFCVO	0.80	-0.08	WDZOLID	0.84	-0.07			

a: Steps in stepwise rank regression analysis

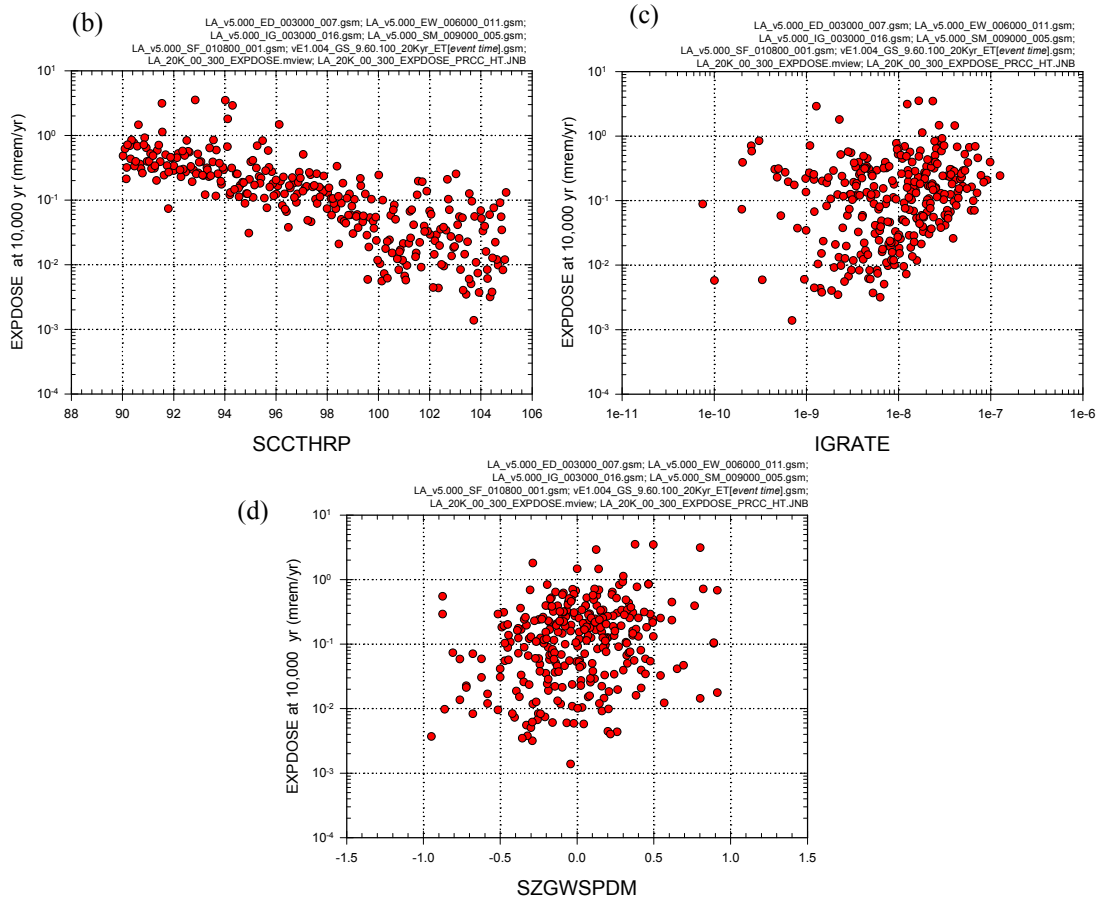
b: Variables listed in order of selection in stepwise regression

c: Cumulative R² value with entry of each variable into regression model

d: Standardized rank regression coefficients (SRRCs) in final regression model

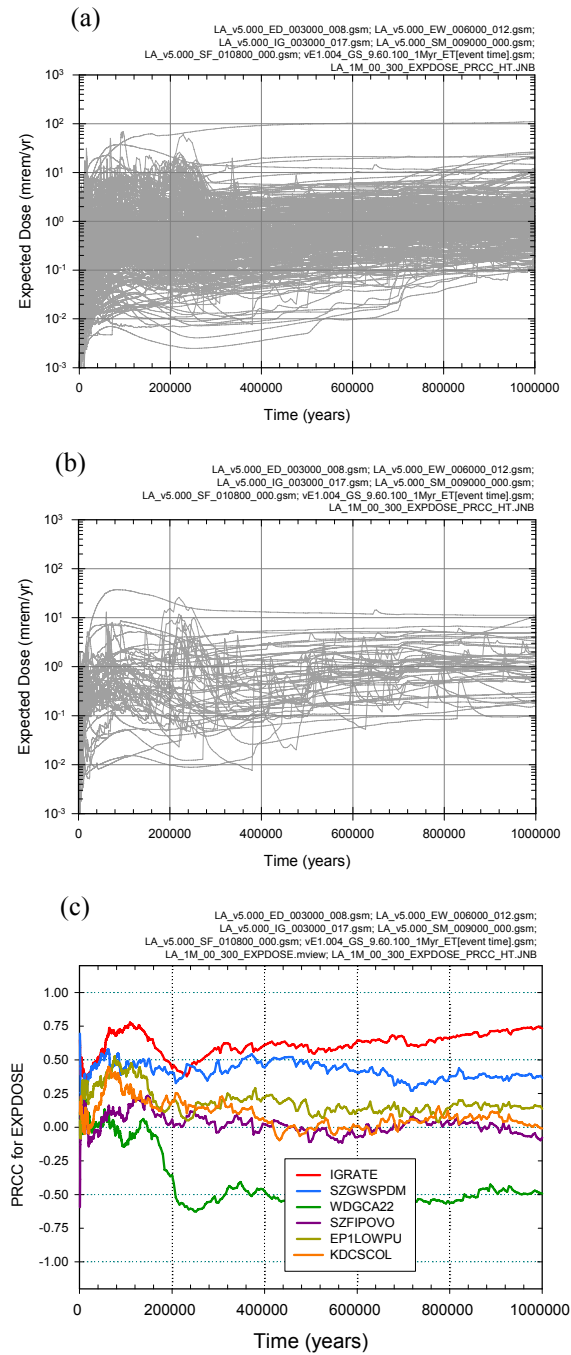
Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.8.1.-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (EXPDOSE, mrem/yr) over [0, 20,000 yr] for all scenario classes: (a) Regressions for EXPDOSE at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for EXPDOSE at 10,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.8.1.-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 20,000 yr] for all scenario classes: (a) Regressions for *EXPDOSE* at 3000, 5000 and 10,000 years, and (b,c,d) Scatterplots for *EXPDOSE* at 10,000 years (continued)



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.8.2-1. Expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all scenario classes: (a) *EXPDOSE* for all (i.e., 300) sample elements, (b) *EXPDOSE* for first 100 sample elements, and (c) PRCCs for *EXPDOSE*

(a)

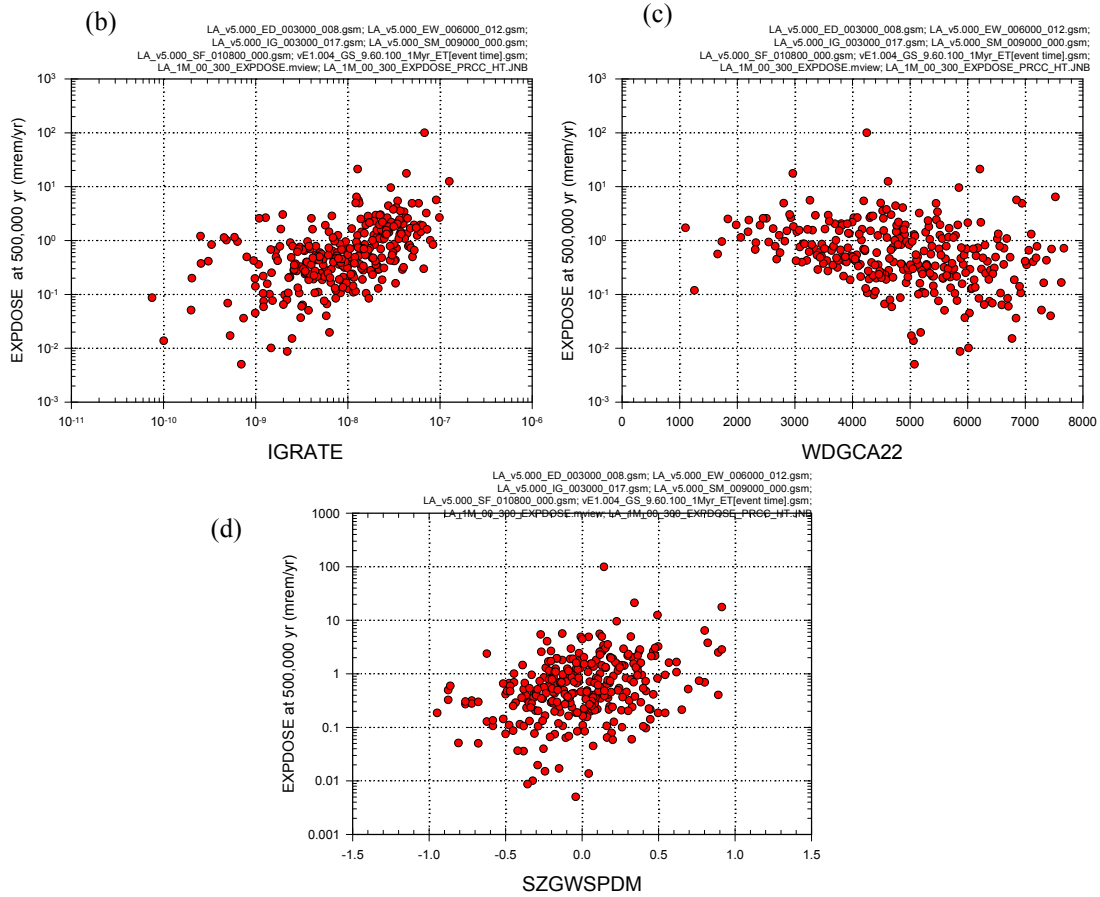
Step ^a	50,000 Years			200,000 Years			500,000 Years		
	Variable ^b	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	SCCTHRP	0.31	-0.53	IGRATE	0.23	0.47	IGRATE	0.29	0.52
2	IGRATE	0.45	0.40	SCCTHRP	0.34	-0.28	WDGCA22	0.41	-0.31
3	SZGWSPDM	0.56	0.31	SZGWSPDM	0.43	0.29	SZGWSPDM	0.52	0.31
4	EPILOWPU	0.59	0.17	WDGCA22	0.51	-0.30	EPILOWNU	0.56	0.18
5	MICNP237	0.61	0.10	EPILOWNU	0.53	0.15	MICNP237	0.59	0.18
6	INFIL	0.63	0.14	EPILOWPU	0.55	0.14	SCCTHRP	0.61	-0.15
7	WFDEGEXF	0.64	0.11	MICSR90	0.56	0.13	SZCONCOL	0.63	0.13
8	EP1NPO2	0.65	0.12	SCHOBOLT	0.57	0.11	EPILOWPU	0.64	0.14
9	MICTC99	0.67	0.11				SZFISPVO	0.66	0.14
10							SZDIFCVO	0.67	-0.12
11							RHMU20	0.68	0.10
12							SZKDSNAL	0.69	-0.10
13							INFIL	0.70	0.09
14							WDGCUA22	0.71	0.09

Step ^a	126,000 Years			252,000 Years			1,000,000 Years		
	Variable	R ^{2c}	SRRC ^d	Variable	R ²	SRRC	Variable	R ²	SRRC
1	IGRATE	0.29	0.56	WDGCA22	0.23	-0.46	IGRATE	0.32	0.56
2	SCCTHRP	0.46	-0.38	IGRATE	0.37	0.37	WDGCA22	0.41	-0.27
3	SZGWSPDM	0.57	0.29	SZGWSPDM	0.44	0.22	SZGWSPDM	0.49	0.28
4	EPILOWPU	0.61	0.18	SCCTHRP	0.48	-0.18	CSNFMAS	0.53	0.14
5	MICNP237	0.64	0.12	EPILOWNU	0.52	0.18	SZCONCOL	0.55	0.15
6	INFIL	0.66	0.16	MICNP237	0.54	0.15	EPILOWNU	0.57	0.16
7	MICSE79	0.67	0.11	SZFISPVO	0.56	0.15	MICNP237	0.59	0.14
8	SZDIFCVO	0.68	-0.13	EPILOWPU	0.57	0.14	SZFISPVO	0.61	0.14
9	SZFISPVO	0.69	0.10	UZFAG6	0.59	0.14	SZDIFCVO	0.62	-0.13
10	EP1NPO2	0.70	0.11	SZKDCSVO	0.60	-0.13	SCCTHRP	0.63	-0.10
11	MICTC99	0.72	0.12	RHMU0	0.61	0.11			
12	SZKDSEAL	0.72	-0.08	WDZOLID	0.62	0.10			

- a: Steps in stepwise rank regression analysis
- b: Variables listed in order of selection in stepwise regression
- c: Cumulative R² value with entry of each variable into regression model
- d: Standardized rank regression coefficients (SRRCs) in final regression model

Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.8.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all scenario classes: (a) Regressions for *EXPDOSE* and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 years



Source: Output DTNs: MO0709TSPAREGS.000 [DIRS 182976]; and MO0709TSPAPLOT.000 [DIRS 183010].

Figure K.8.2-2. Stepwise rank regression analyses and selected scatterplots for expected dose to RMEI (*EXPDOSE*, mrem/yr) over [0, 1,000,000 yr] for all scenario classes: (a) Regressions for *EXPDOSE* and (b,c,d) Scatterplots for *EXPDOSE* at 500,000 years (continued)

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