

Table 6.9.6-15. Results for UNX crystal content in packaging calculation model

case name	np	unh (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
nciaunhct11_8_1_1_3	0.0	1000	471	9840	557.20	46	1.0e-04	0.62610	0.00112	0.62834	hciaunhct12_8_1_1_3	0.62341	0.00104	0.62549
with can spacers (np thickness = 1.4 in.)														
nciaunhct11_8_24_2_1	1.4	24000	11303	1007	14.33	1177	1.0e-20	0.88169	0.00124	0.88418	hciaunhct12_8_24_2_1	0.87843	0.00147	0.88137
nciaunhct11_8_24_2_2	1.4	24000	11303	1007	14.33	1177	1.0e-05	0.87724	0.00123	0.87969	hciaunhct12_8_24_2_2	0.88061	0.00126	0.88313
nciaunhct11_8_24_2_3	1.4	24000	11303	1007	14.33	1177	1.0e-04	0.87818	0.00104	0.88027	hciaunhct12_8_24_2_3	0.87868	0.00123	0.88113
nciaunhct11_8_24_2_4	1.4	24000	11303	1007	14.33	1177	1.0e-03	0.87676	0.00139	0.87955	hciaunhct12_8_24_2_4	0.87715	0.00119	0.87953
nciaunhct11_8_24_2_5	1.4	24000	11303	1007	14.33	1177	1.0e-02	0.85172	0.00136	0.85444	hciaunhct12_8_24_2_5	0.85461	0.00110	0.85681
nciaunhct11_8_24_2_6	1.4	24000	11303	1007	14.33	1177	1.0e-01	0.73197	0.00128	0.73452	hciaunhct12_8_24_2_6	0.74520	0.00136	0.74791
nciaunhct11_8_24_2_8	1.4	24000	11303	1007	14.33	1177	3.0e-01	0.66425	0.00116	0.66657	hciaunhct12_8_24_2_8	0.67546	0.00116	0.67778
nciaunhct11_8_24_2_15	1.4	24000	11303	1007	14.33	1177	1.0e+00	0.67973	0.00136	0.68245	hciaunhct12_8_24_2_15	0.68252	0.00144	0.68541
nciaunhct11_8_24_2_3	1.4	24000	11303	1007	14.33	1177	1.0e-04	0.87818	0.00104	0.88027	hciaunhct12_8_24_2_3	0.87868	0.00123	0.88113
nciaunhct11_8_23_2_3	1.4	23000	10832	1364	15.29	1128	1.0e-04	0.88086	0.00123	0.88331	hciaunhct12_8_23_2_3	0.87953	0.00119	0.88192
nciaunhct11_8_22_2_3	1.4	22000	10361	1722	16.34	1079	1.0e-04	0.88112	0.00127	0.88365	hciaunhct12_8_22_2_3	0.88166	0.00119	0.88404
nciaunhct11_8_21_2_3	1.4	21000	9890	2079	17.49	1030	1.0e-04	0.88540	0.00132	0.88804	hciaunhct12_8_21_2_3	0.88640	0.00131	0.88902
nciaunhct11_8_20_2_3	1.4	20000	9419	2436	18.75	981	1.0e-04	0.88474	0.00120	0.88714	hciaunhct12_8_20_2_3	0.88568	0.00129	0.88826
nciaunhct11_8_19_2_3	1.4	19000	8948	2794	20.15	932	1.0e-04	0.88857	0.00116	0.89088	hciaunhct12_8_19_2_3	0.88686	0.00122	0.88931
nciaunhct11_8_18_2_3	1.4	18000	8477	3151	21.70	883	1.0e-04	0.89172	0.00149	0.89470	hciaunhct12_8_18_2_3	0.89120	0.00140	0.89401
nciaunhct11_8_17_2_3	1.4	17000	8006	3508	23.44	834	1.0e-04	0.88902	0.00142	0.89186	hciaunhct12_8_17_2_3	0.89064	0.00125	0.89314
nciaunhct11_8_16_2_3	1.4	16000	7536	3866	25.39	785	1.0e-04	0.89262	0.00141	0.89545	hciaunhct12_8_16_2_3	0.89208	0.00133	0.89474
nciaunhct11_8_15_2_3	1.4	15000	7064	4223	27.60	736	1.0e-04	0.89306	0.00140	0.89586	hciaunhct12_8_15_2_3	0.89166	0.00118	0.89402
nciaunhct11_8_14_2_3	1.4	14000	6594	4580	30.13	687	1.0e-04	0.88994	0.00122	0.89237	hciaunhct12_8_14_2_3	0.89280	0.00152	0.89584
nciaunhct11_8_13_2_3	1.4	13000	6123	4938	33.05	638	1.0e-04	0.89195	0.00128	0.89451	hciaunhct12_8_13_2_3	0.89290	0.00128	0.89545
nciaunhct11_8_12_2_3	1.4	12000	5652	5295	36.45	589	1.0e-04	0.89043	0.00130	0.89302	hciaunhct12_8_12_2_3	0.88951	0.00141	0.89232
nciaunhct11_8_11_2_3	1.4	11000	5181	5652	40.48	540	1.0e-04	0.89160	0.00118	0.89395	hciaunhct12_8_11_2_3	0.88848	0.00139	0.89126
nciaunhct11_8_10_2_3	1.4	10000	4710	6010	45.31	491	1.0e-04	0.88769	0.00171	0.89111	hciaunhct12_8_10_2_3	0.89145	0.00132	0.89408
nciaunhct11_8_9_2_3	1.4	9000	4239	6367	51.21	441	1.0e-04	0.88716	0.00145	0.89006	hciaunhct12_8_9_2_3	0.88530	0.00143	0.88816

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case name	np	unh (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
nciaunhct11_8_8_2_3	1.4	8000	3768	6725	58.58	392	1.0e-04	0.88191	0.00137	0.88465	nciaunhct12_8_8_2_3	0.88088	0.00125	0.88339
nciaunhct11_8_7_2_3	1.4	7000	3297	7082	68.07	343	1.0e-04	0.87230	0.00126	0.87482	nciaunhct12_8_7_2_3	0.87327	0.00146	0.87619
nciaunhct11_8_6_2_3	1.4	6000	2826	7439	80.71	294	1.0e-04	0.86325	0.00138	0.86601	nciaunhct12_8_6_2_3	0.86345	0.00145	0.86635
nciaunhct11_8_5_2_3	1.4	5000	2355	7797	98.42	245	1.0e-04	0.84962	0.00133	0.85229	nciaunhct12_8_5_2_3	0.85077	0.00131	0.85338
nciaunhct11_8_4_2_3	1.4	4000	1884	8154	124.97	196	1.0e-04	0.82699	0.00136	0.82970	nciaunhct12_8_4_2_3	0.82867	0.00137	0.83141
nciaunhct11_8_3_2_3	1.4	3000	1413	8511	169.23	147	1.0e-04	0.79380	0.00130	0.79639	nciaunhct12_8_3_2_3	0.79363	0.00122	0.79606
nciaunhct11_8_2_2_3	1.4	2000	942	8869	257.74	98	1.0e-04	0.73345	0.00130	0.73606	nciaunhct12_8_2_2_3	0.73333	0.00116	0.73565
nciaunhct11_8_1_2_3	1.4	1000	471	9226	523.21	49	1.0e-04	0.59900	0.00127	0.60153	nciaunhct12_8_1_2_3	0.59901	0.00114	0.60129
content in flooded containment vessel, array packaging calculation model for CSI=0.4														
NCT											HAC			
no can spacers (np thickness = 0.0 in.)														
ncf1unhct11_8_24_1_1	0.0	24000	11303	1620	15.74	1106	1.0e-20	0.86782	0.00126	0.87033	hcf2unhct12_8_24_1_1	0.83376	0.00137	0.83649
ncf1unhct11_8_24_1_2	0.0	24000	11303	1620	15.74	1106	1.0e-05	0.86681	0.00125	0.86931	hcf2unhct12_8_24_1_2	0.83195	0.00121	0.83438
ncf1unhct11_8_24_1_3	0.0	24000	11303	1620	15.74	1106	1.0e-04	0.86774	0.00127	0.87027	hcf2unhct12_8_24_1_3	0.82915	0.00145	0.83205
ncf1unhct11_8_24_1_4	0.0	24000	11303	1620	15.74	1106	1.0e-03	0.86503	0.00153	0.86810	hcf2unhct12_8_24_1_4	0.83314	0.00125	0.83563
ncf1unhct11_8_24_1_5	0.0	24000	11303	1620	15.74	1106	1.0e-02	0.84956	0.00157	0.85270	hcf2unhct12_8_24_1_5	0.81975	0.00148	0.82270
ncf1unhct11_8_24_1_6	0.0	24000	11303	1620	15.74	1106	1.0e-01	0.75592	0.00148	0.75888	hcf2unhct12_8_24_1_6	0.75313	0.00124	0.75561
ncf1unhct11_8_24_1_8	0.0	24000	11303	1620	15.74	1106	3.0e-01	0.70402	0.00136	0.70674	hcf2unhct12_8_24_1_8	0.70687	0.00133	0.70954
ncf1unhct11_8_24_1_15	0.0	24000	11303	1620	15.74	1106	1.0e+00	0.71902	0.00143	0.72187	hcf2unhct12_8_24_1_15	0.72036	0.00133	0.72302
ncf1unhct11_8_24_1_3	0.0	24000	11303	1620	15.74	1106	1.0e-04	0.86774	0.00127	0.87027	hcf2unhct12_8_24_1_3	0.82915	0.00145	0.83205
ncf1unhct11_8_23_1_3	0.0	23000	10832	1978	16.77	1060	1.0e-04	0.87034	0.00138	0.87309	hcf2unhct12_8_23_1_3	0.83527	0.00104	0.83735
ncf1unhct11_8_22_1_3	0.0	22000	10361	2335	17.88	1014	1.0e-04	0.87196	0.00119	0.87433	hcf2unhct12_8_22_1_3	0.83666	0.00147	0.83960
ncf1unhct11_8_21_1_3	0.0	21000	9890	2693	19.11	968	1.0e-04	0.87142	0.00134	0.87410	hcf2unhct12_8_21_1_3	0.84024	0.00115	0.84254
ncf1unhct11_8_20_1_3	0.0	20000	9419	3050	20.45	922	1.0e-04	0.87625	0.00141	0.87907	hcf2unhct12_8_20_1_3	0.84321	0.00136	0.84593
ncf1unhct11_8_19_1_3	0.0	19000	8948	3407	21.94	876	1.0e-04	0.87853	0.00137	0.88126	hcf2unhct12_8_19_1_3	0.84479	0.00141	0.84761
ncf1unhct11_8_18_1_3	0.0	18000	8477	3765	23.59	830	1.0e-04	0.87825	0.00152	0.88129	hcf2unhct12_8_18_1_3	0.84556	0.00121	0.84798

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case name	np	unh (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncf1unhct11_8_17_1_3	0.0	17000	8006	4122	25.44	784	1.0e-04	0.88101	0.00151	0.88402	hcf2unhct12_8_17_1_3	0.85099	0.00121	0.85340
ncf1unhct11_8_16_1_3	0.0	16000	7536	4479	27.51	738	1.0e-04	0.88480	0.00137	0.88754	hcf2unhct12_8_16_1_3	0.84701	0.00125	0.84951
ncf1unhct11_8_15_1_3	0.0	15000	7064	4837	29.87	692	1.0e-04	0.88508	0.00151	0.88811	hcf2unhct12_8_15_1_3	0.85057	0.00136	0.85329
ncf1unhct11_8_14_1_3	0.0	14000	6594	5194	32.56	645	1.0e-04	0.88341	0.00131	0.88604	hcf2unhct12_8_14_1_3	0.85058	0.00158	0.85374
ncf1unhct11_8_13_1_3	0.0	13000	6123	5551	35.67	599	1.0e-04	0.88375	0.00150	0.88674	hcf2unhct12_8_13_1_3	0.85050	0.00146	0.85342
ncf1unhct11_8_12_1_3	0.0	12000	5652	5909	39.29	553	1.0e-04	0.88287	0.00133	0.88554	hcf2unhct12_8_12_1_3	0.85267	0.00165	0.85597
ncf1unhct11_8_11_1_3	0.0	11000	5181	6266	43.57	507	1.0e-04	0.88535	0.00133	0.88802	hcf2unhct12_8_11_1_3	0.85565	0.00134	0.85833
ncf1unhct11_8_10_1_3	0.0	10000	4710	6623	48.71	461	1.0e-04	0.88182	0.00140	0.88461	hcf2unhct12_8_10_1_3	0.85153	0.00132	0.85416
ncf1unhct11_8_9_1_3	0.0	9000	4239	6981	54.99	415	1.0e-04	0.87935	0.00138	0.88210	hcf2unhct12_8_9_1_3	0.84985	0.00158	0.85302
ncf1unhct11_8_8_1_3	0.0	8000	3768	7338	62.83	369	1.0e-04	0.87641	0.00152	0.87945	hcf2unhct12_8_8_1_3	0.84439	0.00144	0.84728
ncf1unhct11_8_7_1_3	0.0	7000	3297	7695	72.92	323	1.0e-04	0.86998	0.00155	0.87308	hcf2unhct12_8_7_1_3	0.84048	0.00135	0.84319
ncf1unhct11_8_6_1_3	0.0	6000	2826	8053	86.38	277	1.0e-04	0.85889	0.00137	0.86163	hcf2unhct12_8_6_1_3	0.83206	0.00126	0.83459
ncf1unhct11_8_5_1_3	0.0	5000	2355	8410	105.22	231	1.0e-04	0.84658	0.00124	0.84905	hcf2unhct12_8_5_1_3	0.82095	0.00150	0.82395
ncf1unhct11_8_4_1_3	0.0	4000	1884	8768	133.47	184	1.0e-04	0.82667	0.00145	0.82957	hcf2unhct12_8_4_1_3	0.80047	0.00146	0.80339
ncf1unhct11_8_3_1_3	0.0	3000	1413	9125	180.57	138	1.0e-04	0.79564	0.00130	0.79825	hcf2unhct12_8_3_1_3	0.76930	0.00160	0.77249
ncf1unhct11_8_2_1_3	0.0	2000	942	9482	274.74	92	1.0e-04	0.73600	0.00132	0.73864	hcf2unhct12_8_2_1_3	0.71105	0.00125	0.71355
ncf1unhct11_8_1_1_3	0.0	1000	471	9840	557.20	46	1.0e-04	0.60011	0.00143	0.60297	hcf2unhct12_8_1_1_3	0.58199	0.00107	0.58414
with can spacers (np thickness = 1.4 in.)														
ncsrnhct11_24_2_1	1.4	24000	11303	1007	14.33	1177	1.0e-20	0.55429	0.00112	0.55653	hcsrnhct12_24_2_1	0.55844	0.00137	0.56119
ncf1unhct11_8_24_2_1	1.4	24000	11303	1007	14.33	1177	1.0e-20	0.82746	0.00125	0.82996	hcf2unhct12_8_24_2_1	0.79181	0.00129	0.79439
ncf1unhct11_8_24_2_2	1.4	24000	11303	1007	14.33	1177	1.0e-05	0.83076	0.00139	0.83354	hcf2unhct12_8_24_2_2	0.79113	0.00112	0.79337
ncf1unhct11_8_24_2_3	1.4	24000	11303	1007	14.33	1177	1.0e-04	0.83082	0.00119	0.83320	hcf2unhct12_8_24_2_3	0.79445	0.00136	0.79716
ncf1unhct11_8_24_2_4	1.4	24000	11303	1007	14.33	1177	1.0e-03	0.82902	0.00129	0.83160	hcf2unhct12_8_24_2_4	0.79108	0.00120	0.79347
ncf1unhct11_8_24_2_5	1.4	24000	11303	1007	14.33	1177	1.0e-02	0.81201	0.00108	0.81417	hcf2unhct12_8_24_2_5	0.77827	0.00140	0.78108
ncf1unhct11_8_24_2_6	1.4	24000	11303	1007	14.33	1177	1.0e-01	0.71366	0.00122	0.71611	hcf2unhct12_8_24_2_6	0.71340	0.00129	0.71597
ncf1unhct11_8_24_2_8	1.4	24000	11303	1007	14.33	1177	3.0e-01	0.66023	0.00133	0.66289	hcf2unhct12_8_24_2_8	0.66528	0.00139	0.66806

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case name	np	unh (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncf1unhct11_8_24_2_15	1.4	24000	11303	1007	14.33	1177	1.0e+00	0.67317	0.00136	0.67590	hcf2unhct12_8_24_2_15	0.68073	0.00149	0.68371
ncf1unhct11_8_24_2_3	1.4	24000	11303	1007	14.33	1177	1.0e-04	0.83082	0.00119	0.83320	hcf2unhct12_8_24_2_3	0.79445	0.00136	0.79716
ncf1unhct11_8_23_2_3	1.4	23000	10832	1364	15.29	1128	1.0e-04	0.83194	0.00142	0.83479	hcf2unhct12_8_23_2_3	0.79474	0.00150	0.79774
ncf1unhct11_8_22_2_3	1.4	22000	10361	1722	16.34	1079	1.0e-04	0.83240	0.00119	0.83478	hcf2unhct12_8_22_2_3	0.79918	0.00132	0.80182
ncf1unhct11_8_21_2_3	1.4	21000	9890	2079	17.49	1030	1.0e-04	0.83595	0.00134	0.83862	hcf2unhct12_8_21_2_3	0.80180	0.00129	0.80438
ncf1unhct11_8_20_2_3	1.4	20000	9419	2436	18.75	981	1.0e-04	0.84024	0.00138	0.84299	hcf2unhct12_8_20_2_3	0.80217	0.00158	0.80534
ncf1unhct11_8_19_2_3	1.4	19000	8948	2794	20.15	932	1.0e-04	0.83995	0.00138	0.84270	hcf2unhct12_8_19_2_3	0.80465	0.00143	0.80751
ncf1unhct11_8_18_2_3	1.4	18000	8477	3151	21.70	883	1.0e-04	0.84239	0.00124	0.84488	hcf2unhct12_8_18_2_3	0.80575	0.00151	0.80878
ncf1unhct11_8_17_2_3	1.4	17000	8006	3508	23.44	834	1.0e-04	0.84316	0.00138	0.84592	hcf2unhct12_8_17_2_3	0.80888	0.00140	0.81168
ncf1unhct11_8_16_2_3	1.4	16000	7536	3866	25.39	785	1.0e-04	0.84562	0.00150	0.84861	hcf2unhct12_8_16_2_3	0.80967	0.00124	0.81216
ncf1unhct11_8_15_2_3	1.4	15000	7064	4223	27.60	736	1.0e-04	0.84704	0.00139	0.84983	hcf2unhct12_8_15_2_3	0.81115	0.00147	0.81408
ncf1unhct11_8_14_2_3	1.4	14000	6594	4580	30.13	687	1.0e-04	0.84877	0.00133	0.85142	hcf2unhct12_8_14_2_3	0.81466	0.00123	0.81711
ncf1unhct11_8_13_2_3	1.4	13000	6123	4938	33.05	638	1.0e-04	0.84900	0.00136	0.85171	hcf2unhct12_8_13_2_3	0.81226	0.00128	0.81483
ncf1unhct11_8_12_2_3	1.4	12000	5652	5295	36.45	589	1.0e-04	0.84639	0.00122	0.84882	hcf2unhct12_8_12_2_3	0.81400	0.00153	0.81707
ncf1unhct11_8_11_2_3	1.4	11000	5181	5652	40.48	540	1.0e-04	0.84564	0.00131	0.84826	hcf2unhct12_8_11_2_3	0.81199	0.00140	0.81478
ncf1unhct11_8_10_2_3	1.4	10000	4710	6010	45.31	491	1.0e-04	0.84331	0.00155	0.84641	hcf2unhct12_8_10_2_3	0.81222	0.00137	0.81497
ncf1unhct11_8_9_2_3	1.4	9000	4239	6367	51.21	441	1.0e-04	0.84405	0.00128	0.84662	hcf2unhct12_8_9_2_3	0.80872	0.00167	0.81206
ncf1unhct11_8_8_2_3	1.4	8000	3768	6725	58.58	392	1.0e-04	0.83858	0.00133	0.84123	hcf2unhct12_8_8_2_3	0.80452	0.00135	0.80723
ncf1unhct11_8_7_2_3	1.4	7000	3297	7082	68.07	343	1.0e-04	0.83150	0.00174	0.83498	hcf2unhct12_8_7_2_3	0.80245	0.00130	0.80505
ncf1unhct11_8_6_2_3	1.4	6000	2826	7439	80.71	294	1.0e-04	0.82343	0.00134	0.82612	hcf2unhct12_8_6_2_3	0.79030	0.00148	0.79326
ncf1unhct11_8_5_2_3	1.4	5000	2355	7797	98.42	245	1.0e-04	0.81226	0.00128	0.81483	hcf2unhct12_8_5_2_3	0.78223	0.00117	0.78456
ncf1unhct11_8_4_2_3	1.4	4000	1884	8154	125.0	196	1.0e-04	0.79322	0.00141	0.79605	hcf2unhct12_8_4_2_3	0.76174	0.00128	0.76429
ncf1unhct11_8_3_2_3	1.4	3000	1413	8511	169.2	147	1.0e-04	0.75718	0.00133	0.75983	hcf2unhct12_8_3_2_3	0.73351	0.00140	0.73630
ncf1unhct11_8_2_2_3	1.4	2000	942	8869	257.7	98	1.0e-04	0.70101	0.00133	0.70366	hcf2unhct12_8_2_2_3	0.67770	0.00145	0.68059
ncf1unhct11_8_1_2_3	1.4	1000	471	9226	523.2	49	1.0e-04	0.57136	0.00112	0.57360	hcf2unhct12_8_1_2_3	0.55328	0.00093	0.55513

Table 6.9.6-16. Results for leakage of UNX crystal content out of containment vessel

case_name	np	U (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ				
content in flooded containment vessel, out leakage, single package reflected														
HAC														
no can spacers (np thickness = 0.0 in.)														
icsrunhct12_24_1_1	0.0	24000	11303	4875	30.14	687	1.0e-20	0.78331	0.00139	0.78609				
icsrunhct12_24_1_2	0.0	24000	11303	4875	30.14	687	1.0e-05	0.78291	0.00159	0.78610				
icsrunhct12_24_1_3	0.0	24000	11303	4875	30.14	687	1.0e-04	0.78197	0.00153	0.78503				
icsrunhct12_24_1_4	0.0	24000	11303	4875	30.14	687	1.0e-03	0.78003	0.00145	0.78294				
icsrunhct12_24_1_5	0.0	24000	11303	4875	30.14	687	1.0e-02	0.78443	0.00140	0.78723				
icsrunhct12_24_1_6	0.0	24000	11303	4875	30.14	687	1.0e-01	0.78426	0.00151	0.78729				
icsrunhct12_24_1_8	0.0	24000	11303	4875	30.14	687	3.0e-01	0.78841	0.00153	0.79146				
icsrunhct12_24_1_15	0.0	24000	11303	4875	30.14	687	1.0e+00	0.79193	0.00164	0.79521				
icsrunhct12_24_1_15	0.0	24000	11303	4875	30.14	687	1.0e+00	0.79193	0.00164	0.79521				
icsrunhct12_23_1_15	0.0	23000	10832	5097	31.79	658	1.0e+00	0.79465	0.00130	0.79724				
icsrunhct12_22_1_15	0.0	22000	10361	5318	33.59	629	1.0e+00	0.79665	0.00145	0.79956				
icsrunhct12_21_1_15	0.0	21000	9890	5540	35.56	601	1.0e+00	0.79533	0.00156	0.79845				
icsrunhct12_20_1_15	0.0	20000	9419	5762	37.73	572	1.0e+00	0.79937	0.00179	0.80295				
icsrunhct12_19_1_15	0.0	19000	8948	5984	40.13	544	1.0e+00	0.80059	0.00135	0.80329				
icsrunhct12_18_1_15	0.0	18000	8477	6205	42.79	515	1.0e+00	0.79930	0.00144	0.80219				
icsrunhct12_17_1_15	0.0	17000	8006	6427	45.77	486	1.0e+00	0.80320	0.00153	0.80626				
icsrunhct12_16_1_15	0.0	16000	7536	6649	49.11	458	1.0e+00	0.80113	0.00142	0.80396				
icsrunhct12_15_1_15	0.0	15000	7064	6871	52.91	429	1.0e+00	0.80445	0.00148	0.80740				
icsrunhct12_14_1_15	0.0	14000	6594	7092	57.24	401	1.0e+00	0.79995	0.00124	0.80243				
icsrunhct12_13_1_15	0.0	13000	6123	7314	62.25	372	1.0e+00	0.80425	0.00139	0.80703				
icsrunhct12_12_1_15	0.0	12000	5652	7536	68.09	343	1.0e+00	0.79843	0.00129	0.80100				
icsrunhct12_11_1_15	0.0	11000	5181	7758	74.98	315	1.0e+00	0.80002	0.00147	0.80297				
icsrunhct12_10_1_15	0.0	10000	4710	7979	83.26	286	1.0e+00	0.79540	0.00162	0.79864				

Table 6.9.6-16. Results for leakage of UNX crystal content out of containment vessel

case name	np	U (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ			
icsrunhct12_9_1_15	0.0	9000	4239	8201	93.38	257	1.0e+00	0.79147	0.00156	0.79459			
icsrunhct12_8_1_15	0.0	8000	3768	8423	106.03	229	1.0e+00	0.78224	0.00165	0.78553			
icsrunhct12_7_1_15	0.0	7000	3297	8645	122.29	200	1.0e+00	0.77559	0.00131	0.77821			
icsrunhct12_6_1_15	0.0	6000	2826	8866	143.98	172	1.0e+00	0.76261	0.00136	0.76532			
icsrunhct12_5_1_15	0.0	5000	2355	9088	174.33	143	1.0e+00	0.74504	0.00138	0.74781			
icsrunhct12_4_1_15	0.0	4000	1884	9310	219.86	114	1.0e+00	0.72070	0.00131	0.72333			
icsrunhct12_3_1_15	0.0	3000	1413	9532	295.76	86	1.0e+00	0.68185	0.00131	0.68447			
icsrunhct12_2_1_15	0.0	2000	942	9753	447.52	57	1.0e+00	0.61401	0.00117	0.61635			
icsrunhct12_1_1_15	0.0	1000	471	9975	902.71	29	1.0e+00	0.47625	0.00103	0.47831			
with can spacers (np thickness = 1.4 in.)													
icsrunhct12_24_2_1	1.4	24000	11303	4388	28.72	713	1.0e-20	0.74408	0.00145	0.74697			
icsrunhct12_24_2_2	1.4	24000	11303	4388	28.72	713	1.0e-05	0.74447	0.00144	0.74734			
icsrunhct12_24_2_3	1.4	24000	11303	4388	28.72	713	1.0e-04	0.74441	0.00167	0.74775			
icsrunhct12_24_2_4	1.4	24000	11303	4388	28.72	713	1.0e-03	0.74591	0.00159	0.74910			
icsrunhct12_24_2_5	1.4	24000	11303	4388	28.72	713	1.0e-02	0.74303	0.00139	0.74582			
icsrunhct12_24_2_6	1.4	24000	11303	4388	28.72	713	1.0e-01	0.74879	0.00136	0.75150			
icsrunhct12_24_2_8	1.4	24000	11303	4388	28.72	713	3.0e-01	0.75168	0.00119	0.75405			
icsrunhct12_24_2_15	1.4	24000	11303	4388	28.72	713	1.0e+00	0.75381	0.00146	0.75673			
content in flooded containment vessel, out leakage, array packaging calculation model for CSI=0.0													
HAC													
no can spacers (np thickness = 0.0 in.)													
iciaunhct12_8_24_1_1	0.0	24000	11303	4875	30.14	687	1.0e-20	1.11980	0.00138	1.12257			
iciaunhct12_8_24_1_2	0.0	24000	11303	4875	30.14	687	1.0e-05	1.12135	0.00136	1.12407			
iciaunhct12_8_24_1_3	0.0	24000	11303	4875	30.14	687	1.0e-04	1.11615	0.00118	1.11850			
iciaunhct12_8_24_1_4	0.0	24000	11303	4875	30.14	687	1.0e-03	1.12007	0.00129	1.12264			
iciaunhct12_8_24_1_5	0.0	24000	11303	4875	30.14	687	1.0e-02	1.10479	0.00128	1.10735			
iciaunhct12_8_24_1_6	0.0	24000	11303	4875	30.14	687	1.0e-01	1.01178	0.00159	1.01497			

Table 6.9.6-16. Results for leakage of UNX crystal content out of containment vessel

case name	np	U (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ				
iciaunhct12_8_24_1_8	0.0	24000	11303	4875	30.14	687	3.0e-01	0.91665	0.00132	0.91929				
iciaunhct12_8_24_1_15	0.0	24000	11303	4875	30.14	687	1.0e+00	0.83508	0.00134	0.83776				
iciaunhct12_8_24_1_3	0.0	24000	11303	4875	30.14	687	1.0e-04	1.11615	0.00118	1.11850				
iciaunhct12_8_23_1_3	0.0	23000	10832	5097	31.79	658	1.0e-04	1.11871	0.00117	1.12106				
iciaunhct12_8_22_1_3	0.0	22000	10361	5318	33.59	629	1.0e-04	1.11610	0.00129	1.11869				
iciaunhct12_8_21_1_3	0.0	21000	9890	5540	35.56	601	1.0e-04	1.11307	0.00125	1.11556				
iciaunhct12_8_20_1_3	0.0	20000	9419	5762	37.73	572	1.0e-04	1.11080	0.00152	1.11385				
iciaunhct12_8_19_1_3	0.0	19000	8948	5984	40.13	544	1.0e-04	1.11105	0.00114	1.11334				
iciaunhct12_8_18_1_3	0.0	18000	8477	6205	42.79	515	1.0e-04	1.10553	0.00122	1.10797				
iciaunhct12_8_17_1_3	0.0	17000	8006	6427	45.77	486	1.0e-04	1.10282	0.00148	1.10579				
iciaunhct12_8_16_1_3	0.0	16000	7536	6649	49.11	458	1.0e-04	1.10179	0.00135	1.10450				
iciaunhct12_8_15_1_3	0.0	15000	7064	6871	52.91	429	1.0e-04	1.09599	0.00129	1.09856				
iciaunhct12_8_14_1_3	0.0	14000	6594	7092	57.24	401	1.0e-04	1.09413	0.00122	1.09658				
iciaunhct12_8_13_1_3	0.0	13000	6123	7314	62.25	372	1.0e-04	1.08611	0.00119	1.08849				
iciaunhct12_8_12_1_3	0.0	12000	5652	7536	68.09	343	1.0e-04	1.07769	0.00149	1.08067				
iciaunhct12_8_11_1_3	0.0	11000	5181	7758	74.98	315	1.0e-04	1.07102	0.00128	1.07359				
iciaunhct12_8_10_1_3	0.0	10000	4710	7979	83.26	286	1.0e-04	1.05888	0.00135	1.06159				
iciaunhct12_8_9_1_3	0.0	9000	4239	8201	93.38	257	1.0e-04	1.04998	0.00151	1.05300				
iciaunhct12_8_8_1_3	0.0	8000	3768	8423	106.03	229	1.0e-04	1.03445	0.00129	1.03703				
iciaunhct12_8_7_1_3	0.0	7000	3297	8645	122.29	200	1.0e-04	1.02011	0.00138	1.02287				
iciaunhct12_8_6_1_3	0.0	6000	2826	8866	143.98	172	1.0e-04	0.99280	0.00138	0.99556				
iciaunhct12_8_5_1_3	0.0	5000	2355	9088	174.33	143	1.0e-04	0.96609	0.00140	0.96889				
iciaunhct12_8_4_1_3	0.0	4000	1884	9310	219.86	114	1.0e-04	0.92426	0.00134	0.92695				
iciaunhct12_8_3_1_3	0.0	3000	1413	9532	295.76	86	1.0e-04	0.86956	0.00127	0.87211				
iciaunhct12_8_2_1_3	0.0	2000	942	9753	447.52	57	1.0e-04	0.77459	0.00098	0.77656				

Table 6.9.6-16. Results for leakage of UNX crystal content out of containment vessel

case name	np	U (g)	²³⁵ U (g)	H ₂ O (g)	h/x	gU/l	moifr	k _{eff}	σ	k _{eff} +2σ				
iciaunhct12_8_1_1_3	0.0	1000	471	9975	902.71	29	1.0e-04	0.59084	0.00101	0.59285				
with can spacers (np thickness = 1.4 in.)														
iciaunhct12_8_24_2_1	1.4	24000	11303	4388	28.72	713	1.0e-20	1.09793	0.00130	1.10053				
iciaunhct12_8_24_2_2	1.4	24000	11303	4388	28.72	713	1.0e-05	1.09875	0.00136	1.10148				
iciaunhct12_8_24_2_3	1.4	24000	11303	4388	28.72	713	1.0e-04	1.09745	0.00122	1.09989				
iciaunhct12_8_24_2_4	1.4	24000	11303	4388	28.72	713	1.0e-03	1.09649	0.00120	1.09888				
iciaunhct12_8_24_2_5	1.4	24000	11303	4388	28.72	713	1.0e-02	1.08282	0.00152	1.08586				
iciaunhct12_8_24_2_6	1.4	24000	11303	4388	28.72	713	1.0e-01	0.98603	0.00152	0.98908				
iciaunhct12_8_24_2_8	1.4	24000	11303	4388	28.72	713	3.0e-01	0.89013	0.00146	0.89306				
iciaunhct12_8_24_2_15	1.4	24000	11303	4388	28.72	713	1.0e+00	0.80098	0.00124	0.80347				

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
flooded containment vessel, reflected														
513 g polyethylene, no can spacers														
cvcrsk3cc_1_15_17	11589	8063	4468	28.09	6828	4765	417	87518	4105	50.58	2596	0.82806	0.00135	0.83075
cvcrsk3cc_2_15_17	14934	11665	4015	17.79	9879	6858	504	73492	4105	33.41	2252	0.81716	0.00136	0.81989
cvcrsk3cc_3_15_17	13821	11876	4893	20.62	10058	7028	372	52930	3233	32.62	1060	0.82909	0.00144	0.83197
cvcrsk3cc_4_15_17	15246	14900	4599	15.52	12619	8842	60	6786	3235	25.07	-227	0.82622	0.00154	0.82930
cvcrsk3cc_5_15_17	21216	21036	3869	9.49	17815	12455	27	2168	3235	16.27	-360	0.81061	0.00116	0.81293
cvcrsk3cc_6_15_17	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.75711	0.00110	0.75932
cvcrsk3cc_7_15_17	13155	11666	3989	32.68	9886	3712	609	164054	4106	61.55	367	0.76196	0.00136	0.76469
cvcrsk3cc_8_15_17	13650	11689	4068	33.01	9906	3737	261	69834	4106	61.69	1187	0.76713	0.00137	0.76988
cvcrsk3cc_9_15_17	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.84737	0.00114	0.84965

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_10_15_17	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.85155	0.00148	0.85451
cvcrsk3cc_4_1_1	15246	14900	0	1.95	12619	8842	0.00	0	0	1.95	-227	0.49030	0.00095	0.49220
cvcrsk3cc_4_1_2	15246	14900	0	1.95	12619	8842	3.75	424	0	1.95	-227	0.49148	0.00090	0.49328
cvcrsk3cc_4_1_3	15246	14900	0	1.95	12619	8842	7.50	848	0	1.95	-227	0.49081	0.00095	0.49270
cvcrsk3cc_4_1_4	15246	14900	0	1.95	12619	8842	11.25	1272	0	1.95	-227	0.49337	0.00123	0.49584
cvcrsk3cc_4_1_5	15246	14900	0	1.95	12619	8842	15.00	1696	0	1.95	-227	0.49100	0.00105	0.49309
cvcrsk3cc_4_1_6	15246	14900	0	1.95	12619	8842	18.75	2120	0	1.95	-227	0.49125	0.00112	0.49348
cvcrsk3cc_4_1_7	15246	14900	0	1.95	12619	8842	22.50	2545	0	1.95	-227	0.49155	0.00104	0.49363
cvcrsk3cc_4_1_8	15246	14900	0	1.95	12619	8842	26.25	2969	0	1.95	-227	0.49300	0.00105	0.49510
cvcrsk3cc_4_1_9	15246	14900	0	1.95	12619	8842	30.00	3393	0	1.95	-227	0.49295	0.00117	0.49530
cvcrsk3cc_4_1_10	15246	14900	0	1.95	12619	8842	33.75	3817	0	1.95	-227	0.49206	0.00092	0.49391
cvcrsk3cc_4_1_11	15246	14900	0	1.95	12619	8842	37.50	4241	0	1.95	-227	0.49004	0.00115	0.49233
cvcrsk3cc_4_1_12	15246	14900	0	1.95	12619	8842	41.25	4665	0	1.95	-227	0.49325	0.00116	0.49558
cvcrsk3cc_4_1_13	15246	14900	0	1.95	12619	8842	45.00	5089	0	1.95	-227	0.49242	0.00093	0.49429
cvcrsk3cc_4_1_14	15246	14900	0	1.95	12619	8842	48.75	5513	0	1.95	-227	0.49328	0.00119	0.49566
cvcrsk3cc_4_1_15	15246	14900	0	1.95	12619	8842	52.50	5937	0	1.95	-227	0.49139	0.00117	0.49373
cvcrsk3cc_4_1_16	15246	14900	0	1.95	12619	8842	56.25	6362	0	1.95	-227	0.49068	0.00105	0.49278
cvcrsk3cc_4_1_17	15246	14900	0	1.95	12619	8842	60.00	6786	0	1.95	-227	0.49303	0.00100	0.49502
cvcrsk3cc_4_6_1	15246	14900	460	3.3	12619	8842	0.00	0	323.51	4.26	-227	0.52088	0.00109	0.52306
cvcrsk3cc_4_6_2	15246	14900	460	3.3	12619	8842	3.75	424	323.51	4.26	-227	0.52247	0.00114	0.52474
cvcrsk3cc_4_6_3	15246	14900	460	3.3	12619	8842	7.50	848	323.51	4.26	-227	0.52250	0.00116	0.52482
cvcrsk3cc_4_6_4	15246	14900	460	3.3	12619	8842	11.25	1272	323.51	4.26	-227	0.52325	0.00103	0.52531
cvcrsk3cc_4_6_5	15246	14900	460	3.3	12619	8842	15.00	1696	323.51	4.26	-227	0.52252	0.00116	0.52485
cvcrsk3cc_4_6_6	15246	14900	460	3.3	12619	8842	18.75	2120	323.51	4.26	-227	0.52123	0.00113	0.52348

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁶ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_4_6_7	15246	14900	460	3.3	12619	8842	22.50	2545	323.51	4.26	-227	0.52156	0.00098	0.52353
cvcrsk3cc_4_6_8	15246	14900	460	3.3	12619	8842	26.25	2969	323.51	4.26	-227	0.52048	0.00106	0.52260
cvcrsk3cc_4_6_9	15246	14900	460	3.3	12619	8842	30.00	3393	323.51	4.26	-227	0.52115	0.00100	0.52315
cvcrsk3cc_4_6_10	15246	14900	460	3.3	12619	8842	33.75	3817	323.51	4.26	-227	0.52271	0.00114	0.52500
cvcrsk3cc_4_6_11	15246	14900	460	3.3	12619	8842	37.50	4241	323.51	4.26	-227	0.52221	0.00127	0.52474
cvcrsk3cc_4_6_12	15246	14900	460	3.3	12619	8842	41.25	4665	323.51	4.26	-227	0.52079	0.00104	0.52287
cvcrsk3cc_4_6_13	15246	14900	460	3.3	12619	8842	45.00	5089	323.51	4.26	-227	0.52323	0.00110	0.52543
cvcrsk3cc_4_6_14	15246	14900	460	3.3	12619	8842	48.75	5513	323.51	4.26	-227	0.52202	0.00129	0.52459
cvcrsk3cc_4_6_15	15246	14900	460	3.3	12619	8842	52.50	5937	323.51	4.26	-227	0.52288	0.00094	0.52476
cvcrsk3cc_4_6_16	15246	14900	460	3.3	12619	8842	56.25	6362	323.51	4.26	-227	0.52179	0.00106	0.52391
cvcrsk3cc_4_6_17	15246	14900	460	3.3	12619	8842	60.00	6786	323.51	4.26	-227	0.52265	0.00108	0.52481
cvcrsk3cc_4_7_1	15246	14900	920	4.66	12619	8842	0.00	0	647.03	6.57	-227	0.55466	0.00117	0.55699
cvcrsk3cc_4_7_2	15246	14900	920	4.66	12619	8842	3.75	424	647.03	6.57	-227	0.55192	0.00105	0.55402
cvcrsk3cc_4_7_3	15246	14900	920	4.66	12619	8842	7.50	848	647.03	6.57	-227	0.55432	0.00118	0.55668
cvcrsk3cc_4_7_4	15246	14900	920	4.66	12619	8842	11.25	1272	647.03	6.57	-227	0.55387	0.00107	0.55600
cvcrsk3cc_4_7_5	15246	14900	920	4.66	12619	8842	15.00	1696	647.03	6.57	-227	0.55390	0.00102	0.55595
cvcrsk3cc_4_7_6	15246	14900	920	4.66	12619	8842	18.75	2120	647.03	6.57	-227	0.55272	0.00112	0.55496
cvcrsk3cc_4_7_7	15246	14900	920	4.66	12619	8842	22.50	2545	647.03	6.57	-227	0.55292	0.00118	0.55529
cvcrsk3cc_4_7_8	15246	14900	920	4.66	12619	8842	26.25	2969	647.03	6.57	-227	0.55262	0.00111	0.55484
cvcrsk3cc_4_7_9	15246	14900	920	4.66	12619	8842	30.00	3393	647.03	6.57	-227	0.55242	0.00108	0.55457
cvcrsk3cc_4_7_10	15246	14900	920	4.66	12619	8842	33.75	3817	647.03	6.57	-227	0.55457	0.00137	0.55732
cvcrsk3cc_4_7_11	15246	14900	920	4.66	12619	8842	37.50	4241	647.03	6.57	-227	0.55376	0.00117	0.55610
cvcrsk3cc_4_7_12	15246	14900	920	4.66	12619	8842	41.25	4665	647.03	6.57	-227	0.55283	0.00131	0.55545
cvcrsk3cc_4_7_13	15246	14900	920	4.66	12619	8842	45.00	5089	647.03	6.57	-227	0.55393	0.00118	0.55630
cvcrsk3cc_4_7_14	15246	14900	920	4.66	12619	8842	48.75	5513	647.03	6.57	-227	0.55181	0.00107	0.55395

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_4_7_15	15246	14900	920	4.66	12619	8842	52.50	5937	647.03	6.57	-227	0.55425	0.00107	0.55640
cvcrsk3cc_4_7_16	15246	14900	920	4.66	12619	8842	56.25	6362	647.03	6.57	-227	0.55377	0.00105	0.55587
cvcrsk3cc_4_7_17	15246	14900	920	4.66	12619	8842	60.00	6786	647.03	6.57	-227	0.55425	0.00101	0.55628
cvcrsk3cc_4_8_1	15246	14900	1380	6.02	12619	8842	0.00	0	970.54	8.88	-227	0.58801	0.00133	0.59068
cvcrsk3cc_4_8_2	15246	14900	1380	6.02	12619	8842	3.75	424	970.54	8.88	-227	0.58867	0.00114	0.59095
cvcrsk3cc_4_8_3	15246	14900	1380	6.02	12619	8842	7.50	848	970.54	8.88	-227	0.58712	0.00112	0.58936
cvcrsk3cc_4_8_4	15246	14900	1380	6.02	12619	8842	11.25	1272	970.54	8.88	-227	0.58657	0.00115	0.58887
cvcrsk3cc_4_8_5	15246	14900	1380	6.02	12619	8842	15.00	1696	970.54	8.88	-227	0.58720	0.00105	0.58930
cvcrsk3cc_4_8_6	15246	14900	1380	6.02	12619	8842	18.75	2120	970.54	8.88	-227	0.58418	0.00122	0.58663
cvcrsk3cc_4_8_7	15246	14900	1380	6.02	12619	8842	22.50	2545	970.54	8.88	-227	0.58706	0.00118	0.58943
cvcrsk3cc_4_8_8	15246	14900	1380	6.02	12619	8842	26.25	2969	970.54	8.88	-227	0.58528	0.00110	0.58748
cvcrsk3cc_4_8_9	15246	14900	1380	6.02	12619	8842	30.00	3393	970.54	8.88	-227	0.58452	0.00119	0.58689
cvcrsk3cc_4_8_10	15246	14900	1380	6.02	12619	8842	33.75	3817	970.54	8.88	-227	0.58645	0.00113	0.58870
cvcrsk3cc_4_8_11	15246	14900	1380	6.02	12619	8842	37.50	4241	970.54	8.88	-227	0.58475	0.00109	0.58694
cvcrsk3cc_4_8_12	15246	14900	1380	6.02	12619	8842	41.25	4665	970.54	8.88	-227	0.58633	0.00110	0.58853
cvcrsk3cc_4_8_13	15246	14900	1380	6.02	12619	8842	45.00	5089	970.54	8.88	-227	0.58553	0.00107	0.58766
cvcrsk3cc_4_8_14	15246	14900	1380	6.02	12619	8842	48.75	5513	970.54	8.88	-227	0.58632	0.00118	0.58869
cvcrsk3cc_4_8_15	15246	14900	1380	6.02	12619	8842	52.50	5937	970.54	8.88	-227	0.58543	0.00106	0.58756
cvcrsk3cc_4_8_16	15246	14900	1380	6.02	12619	8842	56.25	6362	970.54	8.88	-227	0.58716	0.00123	0.58962
cvcrsk3cc_4_8_17	15246	14900	1380	6.02	12619	8842	60.00	6786	970.54	8.88	-227	0.58845	0.00113	0.59071
cvcrsk3cc_4_9_1	15246	14900	1840	7.38	12619	8842	0.00	0	1294.06	11.2	-227	0.62013	0.00104	0.62220
cvcrsk3cc_4_9_2	15246	14900	1840	7.38	12619	8842	3.75	424	1294.06	11.2	-227	0.61947	0.00123	0.62193
cvcrsk3cc_4_9_3	15246	14900	1840	7.38	12619	8842	7.50	848	1294.06	11.2	-227	0.62178	0.00112	0.62402
cvcrsk3cc_4_9_4	15246	14900	1840	7.38	12619	8842	11.25	1272	1294.06	11.2	-227	0.62009	0.00108	0.62225

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_4_9_5	15246	14900	1840	7.38	12619	8842	15.00	1696	1294.06	11.2	-227	0.61950	0.00114	0.62178
cvcrsk3cc_4_9_6	15246	14900	1840	7.38	12619	8842	18.75	2120	1294.06	11.2	-227	0.62035	0.00102	0.62240
cvcrsk3cc_4_9_7	15246	14900	1840	7.38	12619	8842	22.50	2545	1294.06	11.2	-227	0.61820	0.00111	0.62042
cvcrsk3cc_4_9_8	15246	14900	1840	7.38	12619	8842	26.25	2969	1294.06	11.2	-227	0.62037	0.00127	0.62290
cvcrsk3cc_4_9_9	15246	14900	1840	7.38	12619	8842	30.00	3393	1294.06	11.2	-227	0.62084	0.00111	0.62306
cvcrsk3cc_4_9_10	15246	14900	1840	7.38	12619	8842	33.75	3817	1294.06	11.2	-227	0.61977	0.00114	0.62205
cvcrsk3cc_4_9_11	15246	14900	1840	7.38	12619	8842	37.50	4241	1294.06	11.2	-227	0.61997	0.00123	0.62243
cvcrsk3cc_4_9_12	15246	14900	1840	7.38	12619	8842	41.25	4665	1294.06	11.2	-227	0.62097	0.00112	0.62320
cvcrsk3cc_4_9_13	15246	14900	1840	7.38	12619	8842	45.00	5089	1294.06	11.2	-227	0.62013	0.00126	0.62266
cvcrsk3cc_4_9_14	15246	14900	1840	7.38	12619	8842	48.75	5513	1294.06	11.2	-227	0.62028	0.00109	0.62245
cvcrsk3cc_4_9_15	15246	14900	1840	7.38	12619	8842	52.50	5937	1294.06	11.2	-227	0.62003	0.00107	0.62216
cvcrsk3cc_4_9_16	15246	14900	1840	7.38	12619	8842	56.25	6362	1294.06	11.2	-227	0.62193	0.00107	0.62408
cvcrsk3cc_4_9_17	15246	14900	1840	7.38	12619	8842	60.00	6786	1294.06	11.2	-227	0.62122	0.00117	0.62356
cvcrsk3cc_4_10_1	15246	14900	2300	8.73	12619	8842	0.00	0	1617.57	13.51	-227	0.65504	0.00131	0.65766
cvcrsk3cc_4_10_2	15246	14900	2300	8.73	12619	8842	3.75	424	1617.57	13.51	-227	0.65421	0.00099	0.65618
cvcrsk3cc_4_10_3	15246	14900	2300	8.73	12619	8842	7.50	848	1617.57	13.51	-227	0.65445	0.00123	0.65692
cvcrsk3cc_4_10_4	15246	14900	2300	8.73	12619	8842	11.25	1272	1617.57	13.51	-227	0.65392	0.00127	0.65646
cvcrsk3cc_4_10_5	15246	14900	2300	8.73	12619	8842	15.00	1696	1617.57	13.51	-227	0.65599	0.00134	0.65868
cvcrsk3cc_4_10_6	15246	14900	2300	8.73	12619	8842	18.75	2120	1617.57	13.51	-227	0.65239	0.00107	0.65454
cvcrsk3cc_4_10_7	15246	14900	2300	8.73	12619	8842	22.50	2545	1617.57	13.51	-227	0.65356	0.00101	0.65558
cvcrsk3cc_4_10_8	15246	14900	2300	8.73	12619	8842	26.25	2969	1617.57	13.51	-227	0.65451	0.00134	0.65719
cvcrsk3cc_4_10_9	15246	14900	2300	8.73	12619	8842	30.00	3393	1617.57	13.51	-227	0.65576	0.00140	0.65855
cvcrsk3cc_4_10_10	15246	14900	2300	8.73	12619	8842	33.75	3817	1617.57	13.51	-227	0.65386	0.00121	0.65629
cvcrsk3cc_4_10_11	15246	14900	2300	8.73	12619	8842	37.50	4241	1617.57	13.51	-227	0.65645	0.00113	0.65871
cvcrsk3cc_4_10_12	15246	14900	2300	8.73	12619	8842	41.25	4665	1617.57	13.51	-227	0.65406	0.00130	0.65666

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{off}	σ	k _{off} +2σ
cvcrsk3cc_4_10_13	15246	14900	2300	8.73	12619	8842	45.00	5089	1617.57	13.51	-227	0.65406	0.00120	0.65646
cvcrsk3cc_4_10_14	15246	14900	2300	8.73	12619	8842	48.75	5513	1617.57	13.51	-227	0.65484	0.00126	0.65736
cvcrsk3cc_4_10_15	15246	14900	2300	8.73	12619	8842	52.50	5937	1617.57	13.51	-227	0.65420	0.00128	0.65675
cvcrsk3cc_4_10_16	15246	14900	2300	8.73	12619	8842	56.25	6362	1617.57	13.51	-227	0.65433	0.00123	0.65679
cvcrsk3cc_4_10_17	15246	14900	2300	8.73	12619	8842	60.00	6786	1617.57	13.51	-227	0.65399	0.00123	0.65646
cvcrsk3cc_4_11_1	15246	14900	2760	10.09	12619	8842	0.00	0	1941.09	15.82	-227	0.68728	0.00114	0.68956
cvcrsk3cc_4_11_2	15246	14900	2760	10.09	12619	8842	3.75	424	1941.09	15.82	-227	0.68899	0.00121	0.69141
cvcrsk3cc_4_11_3	15246	14900	2760	10.09	12619	8842	7.50	848	1941.09	15.82	-227	0.68815	0.00113	0.69041
cvcrsk3cc_4_11_4	15246	14900	2760	10.09	12619	8842	11.25	1272	1941.09	15.82	-227	0.68967	0.00117	0.69200
cvcrsk3cc_4_11_5	15246	14900	2760	10.09	12619	8842	15.00	1696	1941.09	15.82	-227	0.68936	0.00133	0.69201
cvcrsk3cc_4_11_6	15246	14900	2760	10.09	12619	8842	18.75	2120	1941.09	15.82	-227	0.68713	0.00127	0.68966
cvcrsk3cc_4_11_7	15246	14900	2760	10.09	12619	8842	22.50	2545	1941.09	15.82	-227	0.68933	0.00141	0.69216
cvcrsk3cc_4_11_8	15246	14900	2760	10.09	12619	8842	26.25	2969	1941.09	15.82	-227	0.68808	0.00130	0.69068
cvcrsk3cc_4_11_9	15246	14900	2760	10.09	12619	8842	30.00	3393	1941.09	15.82	-227	0.69012	0.00114	0.69239
cvcrsk3cc_4_11_10	15246	14900	2760	10.09	12619	8842	33.75	3817	1941.09	15.82	-227	0.68913	0.00148	0.69208
cvcrsk3cc_4_11_11	15246	14900	2760	10.09	12619	8842	37.50	4241	1941.09	15.82	-227	0.68961	0.00139	0.69239
cvcrsk3cc_4_11_12	15246	14900	2760	10.09	12619	8842	41.25	4665	1941.09	15.82	-227	0.68779	0.00113	0.69005
cvcrsk3cc_4_11_13	15246	14900	2760	10.09	12619	8842	45.00	5089	1941.09	15.82	-227	0.69197	0.00114	0.69425
cvcrsk3cc_4_11_14	15246	14900	2760	10.09	12619	8842	48.75	5513	1941.09	15.82	-227	0.68861	0.00114	0.69090
cvcrsk3cc_4_11_15	15246	14900	2760	10.09	12619	8842	52.50	5937	1941.09	15.82	-227	0.68815	0.00127	0.69069
cvcrsk3cc_4_11_16	15246	14900	2760	10.09	12619	8842	56.25	6362	1941.09	15.82	-227	0.69041	0.00131	0.69303
cvcrsk3cc_4_11_17	15246	14900	2760	10.09	12619	8842	60.00	6786	1941.09	15.82	-227	0.68744	0.00129	0.69003
cvcrsk3cc_4_12_1	15246	14900	3220	11.45	12619	8842	0.00	0	2264.6	18.13	-227	0.72168	0.00119	0.72405
cvcrsk3cc_4_12_2	15246	14900	3220	11.45	12619	8842	3.75	424	2264.6	18.13	-227	0.72398	0.00131	0.72660

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{off}	σ	k _{off} +2σ
cvcrsk3cc_4_12_3	15246	14900	3220	11.45	12619	8842	7.50	848	2264.6	18.13	-227	0.72501	0.00142	0.72786
cvcrsk3cc_4_12_4	15246	14900	3220	11.45	12619	8842	11.25	1272	2264.6	18.13	-227	0.72327	0.00132	0.72592
cvcrsk3cc_4_12_5	15246	14900	3220	11.45	12619	8842	15.00	1696	2264.6	18.13	-227	0.72278	0.00124	0.72526
cvcrsk3cc_4_12_6	15246	14900	3220	11.45	12619	8842	18.75	2120	2264.6	18.13	-227	0.72081	0.00142	0.72364
cvcrsk3cc_4_12_7	15246	14900	3220	11.45	12619	8842	22.50	2545	2264.6	18.13	-227	0.72286	0.00141	0.72568
cvcrsk3cc_4_12_8	15246	14900	3220	11.45	12619	8842	26.25	2969	2264.6	18.13	-227	0.72457	0.00118	0.72693
cvcrsk3cc_4_12_9	15246	14900	3220	11.45	12619	8842	30.00	3393	2264.6	18.13	-227	0.72295	0.00126	0.72547
cvcrsk3cc_4_12_10	15246	14900	3220	11.45	12619	8842	33.75	3817	2264.6	18.13	-227	0.71959	0.00131	0.72221
cvcrsk3cc_4_12_11	15246	14900	3220	11.45	12619	8842	37.50	4241	2264.6	18.13	-227	0.72351	0.00106	0.72563
cvcrsk3cc_4_12_12	15246	14900	3220	11.45	12619	8842	41.25	4665	2264.6	18.13	-227	0.72291	0.00139	0.72570
cvcrsk3cc_4_12_13	15246	14900	3220	11.45	12619	8842	45.00	5089	2264.6	18.13	-227	0.72324	0.00125	0.72574
cvcrsk3cc_4_12_14	15246	14900	3220	11.45	12619	8842	48.75	5513	2264.6	18.13	-227	0.72395	0.00143	0.72680
cvcrsk3cc_4_12_15	15246	14900	3220	11.45	12619	8842	52.50	5937	2264.6	18.13	-227	0.72591	0.00111	0.72814
cvcrsk3cc_4_12_16	15246	14900	3220	11.45	12619	8842	56.25	6362	2264.6	18.13	-227	0.72242	0.00146	0.72535
cvcrsk3cc_4_12_17	15246	14900	3220	11.45	12619	8842	60.00	6786	2264.6	18.13	-227	0.72398	0.00117	0.72631
cvcrsk3cc_4_13_1	15246	14900	3679	12.81	12619	8842	0.00	0	2588.12	20.45	-227	0.75630	0.00133	0.75896
cvcrsk3cc_4_13_2	15246	14900	3679	12.81	12619	8842	3.75	424	2588.12	20.45	-227	0.75574	0.00132	0.75838
cvcrsk3cc_4_13_3	15246	14900	3679	12.81	12619	8842	7.50	848	2588.12	20.45	-227	0.75761	0.00136	0.76032
cvcrsk3cc_4_13_4	15246	14900	3679	12.81	12619	8842	11.25	1272	2588.12	20.45	-227	0.75747	0.00147	0.76042
cvcrsk3cc_4_13_5	15246	14900	3679	12.81	12619	8842	15.00	1696	2588.12	20.45	-227	0.75674	0.00120	0.75914
cvcrsk3cc_4_13_6	15246	14900	3679	12.81	12619	8842	18.75	2120	2588.12	20.45	-227	0.75883	0.00137	0.76157
cvcrsk3cc_4_13_7	15246	14900	3679	12.81	12619	8842	22.50	2545	2588.12	20.45	-227	0.75912	0.00125	0.76162
cvcrsk3cc_4_13_8	15246	14900	3679	12.81	12619	8842	26.25	2969	2588.12	20.45	-227	0.75690	0.00131	0.75952
cvcrsk3cc_4_13_9	15246	14900	3679	12.81	12619	8842	30.00	3393	2588.12	20.45	-227	0.75692	0.00123	0.75938
cvcrsk3cc_4_13_10	15246	14900	3679	12.81	12619	8842	33.75	3817	2588.12	20.45	-227	0.75676	0.00123	0.75923

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_4_13_11	15246	14900	3679	12.81	12619	8842	37.50	4241	2588.12	20.45	-227	0.75541	0.00134	0.75808
cvcrsk3cc_4_13_12	15246	14900	3679	12.81	12619	8842	41.25	4665	2588.12	20.45	-227	0.75894	0.00141	0.76176
cvcrsk3cc_4_13_13	15246	14900	3679	12.81	12619	8842	45.00	5089	2588.12	20.45	-227	0.75688	0.00137	0.75963
cvcrsk3cc_4_13_14	15246	14900	3679	12.81	12619	8842	48.75	5513	2588.12	20.45	-227	0.75618	0.00140	0.75898
cvcrsk3cc_4_13_15	15246	14900	3679	12.81	12619	8842	52.50	5937	2588.12	20.45	-227	0.75806	0.00143	0.76092
cvcrsk3cc_4_13_16	15246	14900	3679	12.81	12619	8842	56.25	6362	2588.12	20.45	-227	0.75838	0.00131	0.76100
cvcrsk3cc_4_13_17	15246	14900	3679	12.81	12619	8842	60.00	6786	2588.12	20.45	-227	0.75890	0.00130	0.76150
cvcrsk3cc_4_14_1	15246	14900	4139	14.16	12619	8842	0.00	0	2911.63	22.76	-227	0.78934	0.00142	0.79219
cvcrsk3cc_4_14_2	15246	14900	4139	14.16	12619	8842	3.75	424	2911.63	22.76	-227	0.79102	0.00153	0.79408
cvcrsk3cc_4_14_3	15246	14900	4139	14.16	12619	8842	7.50	848	2911.63	22.76	-227	0.78792	0.00140	0.79073
cvcrsk3cc_4_14_4	15246	14900	4139	14.16	12619	8842	11.25	1272	2911.63	22.76	-227	0.78817	0.00122	0.79061
cvcrsk3cc_4_14_5	15246	14900	4139	14.16	12619	8842	15.00	1696	2911.63	22.76	-227	0.79185	0.00133	0.79451
cvcrsk3cc_4_14_6	15246	14900	4139	14.16	12619	8842	18.75	2120	2911.63	22.76	-227	0.78935	0.00155	0.79244
cvcrsk3cc_4_14_7	15246	14900	4139	14.16	12619	8842	22.50	2545	2911.63	22.76	-227	0.79031	0.00139	0.79310
cvcrsk3cc_4_14_8	15246	14900	4139	14.16	12619	8842	26.25	2969	2911.63	22.76	-227	0.79032	0.00119	0.79269
cvcrsk3cc_4_14_9	15246	14900	4139	14.16	12619	8842	30.00	3393	2911.63	22.76	-227	0.79075	0.00125	0.79326
cvcrsk3cc_4_14_10	15246	14900	4139	14.16	12619	8842	33.75	3817	2911.63	22.76	-227	0.78950	0.00127	0.79203
cvcrsk3cc_4_14_11	15246	14900	4139	14.16	12619	8842	37.50	4241	2911.63	22.76	-227	0.79226	0.00132	0.79490
cvcrsk3cc_4_14_12	15246	14900	4139	14.16	12619	8842	41.25	4665	2911.63	22.76	-227	0.79141	0.00129	0.79400
cvcrsk3cc_4_14_13	15246	14900	4139	14.16	12619	8842	45.00	5089	2911.63	22.76	-227	0.79226	0.00131	0.79488
cvcrsk3cc_4_14_14	15246	14900	4139	14.16	12619	8842	48.75	5513	2911.63	22.76	-227	0.79139	0.00140	0.79418
cvcrsk3cc_4_14_15	15246	14900	4139	14.16	12619	8842	52.50	5937	2911.63	22.76	-227	0.79157	0.00136	0.79429
cvcrsk3cc_4_14_16	15246	14900	4139	14.16	12619	8842	56.25	6362	2911.63	22.76	-227	0.78883	0.00118	0.79119
cvcrsk3cc_4_14_17	15246	14900	4139	14.16	12619	8842	60.00	6786	2911.63	22.76	-227	0.79251	0.00163	0.79576

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_4_15_1	15246	14900	4599	15.52	12619	8842	0.00	0	3235.15	25.07	-227	0.82370	0.00143	0.82655
cvcrsk3cc_4_15_2	15246	14900	4599	15.52	12619	8842	3.75	424	3235.15	25.07	-227	0.82249	0.00121	0.82491
cvcrsk3cc_4_15_3	15246	14900	4599	15.52	12619	8842	7.50	848	3235.15	25.07	-227	0.82289	0.00125	0.82539
cvcrsk3cc_4_15_4	15246	14900	4599	15.52	12619	8842	11.25	1272	3235.15	25.07	-227	0.82409	0.00117	0.82643
cvcrsk3cc_4_15_5	15246	14900	4599	15.52	12619	8842	15.00	1696	3235.15	25.07	-227	0.82541	0.00127	0.82794
cvcrsk3cc_4_15_6	15246	14900	4599	15.52	12619	8842	18.75	2120	3235.15	25.07	-227	0.82424	0.00123	0.82669
cvcrsk3cc_4_15_7	15246	14900	4599	15.52	12619	8842	22.50	2545	3235.15	25.07	-227	0.82476	0.00182	0.82841
cvcrsk3cc_4_15_8	15246	14900	4599	15.52	12619	8842	26.25	2969	3235.15	25.07	-227	0.82419	0.00142	0.82702
cvcrsk3cc_4_15_9	15246	14900	4599	15.52	12619	8842	30.00	3393	3235.15	25.07	-227	0.82530	0.00145	0.82820
cvcrsk3cc_4_15_10	15246	14900	4599	15.52	12619	8842	33.75	3817	3235.15	25.07	-227	0.82433	0.00155	0.82742
cvcrsk3cc_4_15_11	15246	14900	4599	15.52	12619	8842	37.50	4241	3235.15	25.07	-227	0.82379	0.00142	0.82663
cvcrsk3cc_4_15_12	15246	14900	4599	15.52	12619	8842	41.25	4665	3235.15	25.07	-227	0.82450	0.00146	0.82742
cvcrsk3cc_4_15_13	15246	14900	4599	15.52	12619	8842	45.00	5089	3235.15	25.07	-227	0.82666	0.00109	0.82883
cvcrsk3cc_4_15_14	15246	14900	4599	15.52	12619	8842	48.75	5513	3235.15	25.07	-227	0.82521	0.00125	0.82772
cvcrsk3cc_4_15_15	15246	14900	4599	15.52	12619	8842	52.50	5937	3235.15	25.07	-227	0.82544	0.00120	0.82784
cvcrsk3cc_4_15_16	15246	14900	4599	15.52	12619	8842	56.25	6362	3235.15	25.07	-227	0.82578	0.00133	0.82844
cvcrsk3cc_4_15_17	15246	14900	4599	15.52	12619	8842	60.00	6786	3235.15	25.07	-227	0.82622	0.00154	0.82930
cvcrsk3cc_6_1_17	15111	12933	0	4.17	10960	4122	921	223432	0	4.17	744	0.44158	0.00098	0.44355
cvcrsk3cc_6_6_17	15111	12933	377	6.56	10960	4122	921	223432	410	9.16	744	0.46812	0.00103	0.47018
cvcrsk3cc_6_7_17	15111	12933	753	8.94	10960	4122	921	223432	821	14.14	744	0.49580	0.00108	0.49797
cvcrsk3cc_6_8_17	15111	12933	1130	11.33	10960	4122	921	223432	1231	19.12	744	0.52824	0.00111	0.53046
cvcrsk3cc_6_9_17	15111	12933	1506	13.71	10960	4122	921	223432	1642	24.11	744	0.55880	0.00129	0.56139
cvcrsk3cc_6_10_17	15111	12933	1883	16.09	10960	4122	921	223432	2052	29.09	744	0.58946	0.00103	0.59153
cvcrsk3cc_6_11_17	15111	12933	2259	18.48	10960	4122	921	223432	2463	34.07	744	0.62334	0.00130	0.62593
cvcrsk3cc_6_12_17	15111	12933	2636	20.86	10960	4122	921	223432	2873	39.06	744	0.65813	0.00115	0.66044

Table 6.9.6-17. Results for skull oxide (SO) content in CV calculation model

case name	SO (g)	UO ₃ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
cvcrsk3cc_6_13_17	15111	12933	3012	23.25	10960	4122	921	223432	3284	44.04	744	0.69032	0.00104	0.69240
cvcrsk3cc_6_14_17	15111	12933	3389	25.63	10960	4122	921	223432	3694	49.02	744	0.72104	0.00142	0.72388
cvcrsk3cc_6_15_17	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.75711	0.00110	0.75932

Table 6.9.6-18a. NCT results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
content in flooded CV, NCT single package, reflected														
513 g polyethylene, no can spacers														
ncsrsk_1_15	11589	8063	4468	28.09	6828	4765	417	87518	4105	50.58	2596	0.71933	0.00154	0.72241
ncsrsk_2_15	14934	11665	4015	17.79	9879	6858	504	73492	4105	33.41	2252	0.70319	0.00144	0.70606
ncsrsk_3_15	13821	11876	4893	20.62	10058	7028	372	52930	3233	32.62	1060	0.71916	0.00128	0.72172
ncsrsk_4_15	15246	14900	4599	15.52	12619	8842	60	6786	3235	25.07	-227	0.71123	0.00145	0.71413
ncsrsk_5_15	21216	21036	3869	9.49	17815	12455	27	2168	3235	16.27	-360	0.69577	0.00139	0.69855
ncsrsk_6_15	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.63803	0.00171	0.64146
ncsrsk_7_15	13155	11666	3989	32.68	9886	3712	609	164054	4106	61.55	367	0.65018	0.00127	0.65271
ncsrsk_8_15	13650	11689	4068	33.01	9906	3737	261	69834	4106	61.69	1187	0.65349	0.00128	0.65604
ncsrsk_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.73837	0.00130	0.74096
ncsrsk_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.74201	0.00149	0.74499
ncsrsk_9_1	21300	19865	0	1.10	16816	15673	921	58764	0	1.10	1	0.40142	0.00078	0.40297
ncsrsk_9_6	21300	19865	380	1.73	16816	15673	921	58764	324	2.27	1	0.43142	0.00096	0.43334
ncsrsk_9_7	21300	19865	760	2.36	16816	15673	921	58764	647	3.44	1	0.46578	0.00099	0.46776
ncsrsk_9_8	21300	19865	1140	3.00	16816	15673	921	58764	971	4.61	1	0.49839	0.00107	0.50053
ncsrsk_9_9	21300	19865	1521	3.63	16816	15673	921	58764	1294	5.79	1	0.53148	0.00124	0.53397

Table 6.9.6-18a. NCT results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/ g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
ncsrsk_9_10	21300	19865	1901	4.26	16816	15673	921	58764	1618	6.96	1	0.56633	0.00122	0.56877
ncsrsk_9_11	21300	19865	2281	4.90	16816	15673	921	58764	1941	8.13	1	0.60204	0.00118	0.60441
ncsrsk_9_12	21300	19865	2661	5.53	16816	15673	921	58764	2265	9.30	1	0.63600	0.00119	0.63839
ncsrsk_9_13	21300	19865	3041	6.16	16816	15673	921	58764	2588	10.47	1	0.67128	0.00130	0.67389
ncsrsk_9_14	21300	19865	3421	6.80	16816	15673	921	58764	2912	11.64	1	0.70363	0.00130	0.70623
ncsrsk_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.73837	0.00130	0.74096
ncsrsk_10_1	21300	20786	0	1.05	17596	16399	0	0	0	1.05	1	0.40278	0.00079	0.40436
ncsrsk_10_6	21300	20786	391	1.67	17596	16399	0	0	324	2.19	1	0.43497	0.00093	0.43683
ncsrsk_10_7	21300	20786	781	2.29	17596	16399	0	0	647	3.32	1	0.46764	0.00104	0.46971
ncsrsk_10_8	21300	20786	1172	2.91	17596	16399	0	0	971	4.46	1	0.50067	0.00103	0.50274
ncsrsk_10_9	21300	20786	1562	3.54	17596	16399	0	0	1294	5.60	1	0.53570	0.00129	0.53828
ncsrsk_10_10	21300	20786	1953	4.16	17596	16399	0	0	1618	6.73	1	0.57116	0.00119	0.57355
ncsrsk_10_11	21300	20786	2343	4.78	17596	16399	0	0	1941	7.87	1	0.60642	0.00131	0.60904
ncsrsk_10_12	21300	20786	2734	5.40	17596	16399	0	0	2265	9.00	1	0.63938	0.00118	0.64175
ncsrsk_10_13	21300	20786	3124	6.02	17596	16399	0	0	2588	10.14	1	0.67610	0.00123	0.67856
ncsrsk_10_14	21300	20786	3515	6.64	17596	16399	0	0	2912	11.28	1	0.70857	0.00115	0.71087
ncsrsk_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.74201	0.00149	0.74499
content in flooded containment vessel, NCT array packaging calculation model for CSI=0.0														
513 g polyethylene, no can spacers														
nciask_1_15	11589	8063	4468	28.09	6828	4765	417	87518	4105	50.58	2596	0.73555	0.00130	0.73814
nciask_2_15	14934	11665	4015	17.79	9879	6858	504	73492	4105	33.41	2252	0.72258	0.00122	0.72503
nciask_3_15	13821	11876	4893	20.62	10058	7028	372	52930	3233	32.62	1060	0.73483	0.00120	0.73724
nciask_4_15	15246	14900	4599	15.52	12619	8842	60	6786	3235	25.07	-227	0.72783	0.00122	0.73027
nciask_5_15	21216	21036	3869	9.49	17815	12455	27	2168	3235	16.27	-360	0.71163	0.00123	0.71409
nciask_6_15	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.65333	0.00109	0.65551

Table 6.9.6-18a. NCT results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
nciask_7_15	13155	11666	3989	32.68	9886	3712	609	164054	4106	61.55	367	0.66124	0.00107	0.66339
nciask_8_15	13650	11689	4068	33.01	9906	3737	261	69834	4106	61.69	1187	0.66664	0.00124	0.66912
nciask_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.75365	0.00127	0.75620
nciask_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.76141	0.00140	0.76422
nciask_6_1	15111	12933	0	4.17	10960	4122	921	223432	0	4.17	744	0.26223	0.00069	0.26361
nciask_6_6	15111	12933	377	6.56	10960	4122	921	223432	410	9.16	744	0.29333	0.00078	0.29489
nciask_6_7	15111	12933	753	8.94	10960	4122	921	223432	821	14.14	744	0.32968	0.00084	0.33136
nciask_6_8	15111	12933	1130	11.33	10960	4122	921	223432	1231	19.12	744	0.36777	0.00088	0.36953
nciask_6_9	15111	12933	1506	13.71	10960	4122	921	223432	1642	24.11	744	0.40621	0.00127	0.40874
nciask_6_10	15111	12933	1883	16.09	10960	4122	921	223432	2052	29.09	744	0.44807	0.00116	0.45039
nciask_6_11	15111	12933	2259	18.48	10960	4122	921	223432	2463	34.07	744	0.49212	0.00111	0.49435
nciask_6_12	15111	12933	2636	20.86	10960	4122	921	223432	2873	39.06	744	0.53233	0.00122	0.53477
nciask_6_13	15111	12933	3012	23.25	10960	4122	921	223432	3284	44.04	744	0.57192	0.00123	0.57439
nciask_6_14	15111	12933	3389	25.63	10960	4122	921	223432	3694	49.02	744	0.61188	0.00136	0.61460
nciask_6_15	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.65333	0.00109	0.65551
nciask_9_1	21300	19865	0	1.1	16816	15673	921	58764	0	1.10	1	0.41949	0.00093	0.42134
nciask_9_6	21300	19865	380	1.73	16816	15673	921	58764	324	2.27	1	0.45272	0.00092	0.45456
nciask_9_7	21300	19865	760	2.36	16816	15673	921	58764	647	3.44	1	0.48472	0.00116	0.48704
nciask_9_8	21300	19865	1140	3	16816	15673	921	58764	971	4.61	1	0.51805	0.00111	0.52027
nciask_9_9	21300	19865	1521	3.63	16816	15673	921	58764	1294	5.79	1	0.55105	0.00116	0.55336
nciask_9_10	21300	19865	1901	4.26	16816	15673	921	58764	1618	6.96	1	0.58571	0.00105	0.58780
nciask_9_11	21300	19865	2281	4.9	16816	15673	921	58764	1941	8.13	1	0.62158	0.00114	0.62386
nciask_9_12	21300	19865	2661	5.53	16816	15673	921	58764	2265	9.30	1	0.65700	0.00141	0.65983
nciask_9_13	21300	19865	3041	6.16	16816	15673	921	58764	2588	10.47	1	0.68964	0.00125	0.69214

Table 6.9.6-18a. NCT results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
nciask_9_14	21300	19865	3421	6.8	16816	15673	921	58764	2912	11.64	1	0.72169	0.00141	0.72451
nciask_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.75365	0.00127	0.75620
nciask_10_1	21300	20786	0	1.05	17596	16399	0	0	0	1.05	1	0.42530	0.00082	0.42693
nciask_10_6	21300	20786	391	1.67	17596	16399	0	0	324	2.19	1	0.45517	0.00080	0.45677
nciask_10_7	21300	20786	781	2.29	17596	16399	0	0	647	3.32	1	0.48754	0.00099	0.48952
nciask_10_8	21300	20786	1172	2.91	17596	16399	0	0	971	4.46	1	0.52247	0.00101	0.52448
nciask_10_9	21300	20786	1562	3.54	17596	16399	0	0	1294	5.60	1	0.55799	0.00107	0.56013
nciask_10_10	21300	20786	1953	4.16	17596	16399	0	0	1618	6.73	1	0.59209	0.00104	0.59416
nciask_10_11	21300	20786	2343	4.78	17596	16399	0	0	1941	7.87	1	0.62721	0.00107	0.62935
nciask_10_12	21300	20786	2734	5.4	17596	16399	0	0	2265	9.00	1	0.65769	0.00115	0.65999
nciask_10_13	21300	20786	3124	6.02	17596	16399	0	0	2588	10.14	1	0.69394	0.00131	0.69655
nciask_10_14	21300	20786	3515	6.64	17596	16399	0	0	2912	11.28	1	0.72808	0.00150	0.73109
nciask_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.76141	0.00140	0.76422

Table 6.9.6-18b. HAC results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
content in flooded CV, HAC single package, reflected														
513 g polyethylene, no can spacers														
hcsrsk_1_15	11589	8063	4468	28.09	6828	4765	417	87518	4105	50.58	2596	0.72049	0.00145	0.72339
hcsrsk_2_15	14934	11665	4015	17.79	9879	6858	504	73492	4105	33.41	2252	0.70717	0.00140	0.70997
hcsrsk_3_15	13821	11876	4893	20.62	10058	7028	372	52930	3233	32.62	1060	0.72081	0.00136	0.72353
hcsrsk_4_15	15246	14900	4599	15.52	12619	8842	60	6786	3235	25.07	-227	0.71449	0.00128	0.71706
hcsrsk_5_15	21216	21036	3869	9.49	17815	12455	27	2168	3235	16.27	-360	0.69845	0.00134	0.70113

Table 6.9.6-18b. HAC results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
hcsrsk_6_15	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.63787	0.00140	0.64066
hcsrsk_7_15	13155	11666	3989	32.68	9886	3712	609	164054	4106	61.55	367	0.64910	0.00150	0.65210
hcsrsk_8_15	13650	11689	4068	33.01	9906	3737	261	69834	4106	61.69	1187	0.65332	0.00140	0.65613
hcsrsk_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.73855	0.00121	0.74096
hcsrsk_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.74359	0.00118	0.74595
hcsrsk_9_1	21300	19865	0	1.10	16816	15673	921	58764	0	1.10	1	0.40344	0.00080	0.40505
hcsrsk_9_6	21300	19865	380	1.73	16816	15673	921	58764	324	2.27	1	0.43432	0.00091	0.43614
hcsrsk_9_7	21300	19865	760	2.36	16816	15673	921	58764	647	3.44	1	0.46617	0.00090	0.46796
hcsrsk_9_8	21300	19865	1140	3.00	16816	15673	921	58764	971	4.61	1	0.49951	0.00104	0.50160
hcsrsk_9_9	21300	19865	1521	3.63	16816	15673	921	58764	1294	5.79	1	0.53428	0.00114	0.53656
hcsrsk_9_10	21300	19865	1901	4.26	16816	15673	921	58764	1618	6.96	1	0.57081	0.00102	0.57286
hcsrsk_9_11	21300	19865	2281	4.90	16816	15673	921	58764	1941	8.13	1	0.60569	0.00111	0.60792
hcsrsk_9_12	21300	19865	2661	5.53	16816	15673	921	58764	2265	9.30	1	0.63704	0.00125	0.63955
hcsrsk_9_13	21300	19865	3041	6.16	16816	15673	921	58764	2588	10.47	1	0.67153	0.00139	0.67431
hcsrsk_9_14	21300	19865	3421	6.80	16816	15673	921	58764	2912	11.64	1	0.70545	0.00113	0.70770
hcsrsk_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.73855	0.00121	0.74096
hcsrsk_10_1	21300	20786	0	1.05	17596	16399	0	0	0	1.05	1	0.40569	0.00088	0.40745
hcsrsk_10_6	21300	20786	391	1.67	17596	16399	0	0	324	2.19	1	0.43659	0.00086	0.43832
hcsrsk_10_7	21300	20786	781	2.29	17596	16399	0	0	647	3.32	1	0.47008	0.00095	0.47198
hcsrsk_10_8	21300	20786	1172	2.91	17596	16399	0	0	971	4.46	1	0.50524	0.00097	0.50717
hcsrsk_10_9	21300	20786	1562	3.54	17596	16399	0	0	1294	5.60	1	0.53928	0.00102	0.54133
hcsrsk_10_10	21300	20786	1953	4.16	17596	16399	0	0	1618	6.73	1	0.57494	0.00115	0.57724
hcsrsk_10_11	21300	20786	2343	4.78	17596	16399	0	0	1941	7.87	1	0.60702	0.00111	0.60924
hcsrsk_10_12	21300	20786	2734	5.40	17596	16399	0	0	2265	9.00	1	0.64205	0.00132	0.64469
hcsrsk_10_13	21300	20786	3124	6.02	17596	16399	0	0	2588	10.14	1	0.67634	0.00138	0.67911
hcsrsk_10_14	21300	20786	3515	6.64	17596	16399	0	0	2912	11.28	1	0.71259	0.00144	0.71547

Table 6.9.6-18b. HAC results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
hcsrsk_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.74359	0.00118	0.74595
content in flooded containment vessel, HAC array packaging calculation model for CSI=0.0														
513 g polyethylene, no can spacers														
hciask_1_15	11589	8063	4468	28.09	6828	4765	417	87518	4105	50.58	2596	0.73896	0.00132	0.74159
hciask_2_15	14934	11665	4015	17.79	9879	6858	504	73492	4105	33.41	2252	0.72435	0.00127	0.72689
hciask_3_15	13821	11876	4893	20.62	10058	7028	372	52930	3233	32.62	1060	0.73900	0.00130	0.74160
hciask_4_15	15246	14900	4599	15.52	12619	8842	60	6786	3235	25.07	-227	0.73199	0.00123	0.73445
hciask_5_15	21216	21036	3869	9.49	17815	12455	27	2168	3235	16.27	-360	0.71601	0.00117	0.71835
hciask_6_15	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.65587	0.00125	0.65837
hciask_7_15	13155	11666	3989	32.68	9886	3712	609	164054	4106	61.55	367	0.66608	0.00159	0.66925
hciask_8_15	13650	11689	4068	33.01	9906	3737	261	69834	4106	61.69	1187	0.66948	0.00153	0.67255
hciask_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.75757	0.00116	0.75989
hciask_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.76462	0.00131	0.76725
hciask_6_1	15111	12933	0	4.17	10960	4122	921	223432	0	4.17	744	0.26620	0.00075	0.26769
hciask_6_6	15111	12933	377	6.56	10960	4122	921	223432	411	9.16	744	0.29787	0.00085	0.29957
hciask_6_7	15111	12933	753	8.94	10960	4122	921	223432	821	14.14	744	0.33370	0.00085	0.33539
hciask_6_8	15111	12933	1130	11.33	10960	4122	921	223432	1231	19.12	744	0.37226	0.00098	0.37422
hciask_6_9	15111	12933	1506	13.71	10960	4122	921	223432	1642	24.11	744	0.41300	0.00083	0.41465
hciask_6_10	15111	12933	1883	16.09	10960	4122	921	223432	2052	29.09	744	0.45192	0.00106	0.45403
hciask_6_11	15111	12933	2259	18.48	10960	4122	921	223432	2463	34.07	744	0.49341	0.00113	0.49566
hciask_6_12	15111	12933	2636	20.86	10960	4122	921	223432	2873	39.06	744	0.53469	0.00111	0.53691
hciask_6_13	15111	12933	3012	23.25	10960	4122	921	223432	3284	44.04	744	0.57324	0.00123	0.57571
hciask_6_14	15111	12933	3389	25.63	10960	4122	921	223432	3694	49.02	744	0.61596	0.00125	0.61847
hciask_6_15	15111	12933	3765	28.02	10960	4122	921	223432	4105	54.01	744	0.65587	0.00125	0.65837
hciask_9_1	21300	19865	0	1.10	16816	15673	921	58764	0	1.10	1	0.42753	0.00091	0.42935
hciask_9_6	21300	19865	380	1.73	16816	15673	921	58764	324	2.27	1	0.45603	0.00103	0.45808

Table 6.9.6-18b. HAC results for skull oxide (SO) content in packaging calculation model

case name	SO (g)	U ₃ O ₈ (g)	Sat. H ₂ O (g)	SO h/x	U (g)	²³⁵ U (g)	C (g)	mg C/g ²³⁵ U	CV H ₂ O (g)	CV h/x	Unident. (g)	k _{eff}	σ	k _{eff} +2σ
hciask_9_7	21300	19865	760	2.36	16816	15673	921	58764	647	3.44	1	0.48912	0.00101	0.49114
hciask_9_8	21300	19865	1140	3.00	16816	15673	921	58764	971	4.61	1	0.52104	0.00109	0.52322
hciask_9_9	21300	19865	1521	3.63	16816	15673	921	58764	1294	5.79	1	0.55643	0.00104	0.55851
hciask_9_10	21300	19865	1901	4.26	16816	15673	921	58764	1618	6.96	1	0.59193	0.00105	0.59403
hciask_9_11	21300	19865	2281	4.90	16816	15673	921	58764	1941	8.13	1	0.62726	0.00109	0.62945
hciask_9_12	21300	19865	2661	5.53	16816	15673	921	58764	2265	9.30	1	0.65952	0.00106	0.66163
hciask_9_13	21300	19865	3041	6.16	16816	15673	921	58764	2588	10.47	1	0.69094	0.00127	0.69348
hciask_9_14	21300	19865	3421	6.80	16816	15673	921	58764	2912	11.64	1	0.72863	0.00116	0.73095
hciask_9_15	21300	19865	3801	7.43	16816	15673	921	58764	3235	12.82	1	0.75757	0.00116	0.75989
hciask_10_1	21300	20786	0	1.05	17596	16399	0	0	0	1.05	1	0.43087	0.00111	0.43308
hciask_10_6	21300	20786	391	1.67	17596	16399	0	0	324	2.19	1	0.46066	0.00092	0.46250
hciask_10_7	21300	20786	781	2.29	17596	16399	0	0	647	3.32	1	0.49381	0.00097	0.49574
hciask_10_8	21300	20786	1172	2.91	17596	16399	0	0	971	4.46	1	0.52679	0.00113	0.52906
hciask_10_9	21300	20786	1562	3.54	17596	16399	0	0	1294	5.60	1	0.56200	0.00121	0.56442
hciask_10_10	21300	20786	1953	4.16	17596	16399	0	0	1618	6.73	1	0.59673	0.00118	0.59908
hciask_10_11	21300	20786	2343	4.78	17596	16399	0	0	1941	7.87	1	0.63042	0.00109	0.63260
hciask_10_12	21300	20786	2734	5.40	17596	16399	0	0	2265	9.00	1	0.66502	0.00116	0.66735
hciask_10_13	21300	20786	3124	6.02	17596	16399	0	0	2588	10.14	1	0.69780	0.00108	0.69997
hciask_10_14	21300	20786	3515	6.64	17596	16399	0	0	2912	11.28	1	0.73223	0.00123	0.73470
hciask_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.76462	0.00131	0.76725
hciask_10_14	21300	20786	3515	6.64	17596	16399	0	0	2912	11.28	1	0.72808	0.00150	0.73109
hciask_10_15	21300	20786	3905	7.27	17596	16399	0	0	3235	12.41	1	0.76141	0.00140	0.76422

Table 6.9.6-19a. Results for UZrH_x content in CV calculation model

case name	np	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr	k _{eff}	σ	k _{eff} +2σ				
TRIGA (UZrH_x) fuel content at 19.7 wt % ²³⁵U, 500 g CH₂, containment vessel, reflected													
no can spacers (np thickness = 0.0 in.)													
cvcrtiga_1_1	0.0	10,400	921	0	0.00	1.0e-20	0.34219	0.00107	0.34432				
cvcrtiga_1_6	0.0	10,400	921	900	25.50	1.0e-01	0.34704	0.00101	0.34905				
cvcrtiga_1_7	0.0	10,400	921	1,800	51.00	2.0e-01	0.35869	0.00094	0.36057				
cvcrtiga_1_8	0.0	10,400	921	2,700	76.50	3.0e-01	0.37291	0.00103	0.37496				
cvcrtiga_1_9	0.0	10,400	921	3,599	102.00	4.0e-01	0.38978	0.00115	0.39209				
cvcrtiga_1_10	0.0	10,400	921	4,499	127.50	5.0e-01	0.41521	0.00099	0.41719				
cvcrtiga_1_11	0.0	10,400	921	5,399	153.00	6.0e-01	0.43399	0.00108	0.43616				
cvcrtiga_1_12	0.0	10,400	921	6,299	178.50	7.0e-01	0.45681	0.00116	0.45914				
cvcrtiga_1_13	0.0	10,400	921	7,199	204.00	8.0e-01	0.48121	0.00136	0.48393				
cvcrtiga_1_14	0.0	10,400	921	8,098	229.51	9.0e-01	0.50284	0.00114	0.50511				
cvcrtiga_1_15	0.0	10,400	921	8,998	255.01	1.0e+00	0.52494	0.00120	0.52735				
can spacers (np thickness = 1.4 in.)													
cvcrtiga_2_15	1.4	10,400	921	8,385	237.62	1.0e+00	0.42157	0.00099	0.42354				
TRIGA (UZrH_x) fuel content at 70.1 wt % ²³⁵U, 500 g CH₂, containment vessel, reflected													
no can spacers (np thickness = 0.0 in.)													
cvcrtiga_70_1_1	0.0	6,847	408	0	0.00	1.0e+00	0.29196	0.00097	0.29391				
cvcrtiga_70_1_6	0.0	6,847	408	900	57.56	1.0e+00	0.30096	0.00102	0.30300				
cvcrtiga_70_1_7	0.0	6,847	408	1,800	115.13	1.0e+00	0.31496	0.00089	0.31674				
cvcrtiga_70_1_8	0.0	6,847	408	2,700	172.69	1.0e+00	0.33376	0.00106	0.33588				
cvcrtiga_70_1_9	0.0	6,847	408	3,599	230.26	1.0e+00	0.35363	0.00100	0.35564				
cvcrtiga_70_1_10	0.0	6,847	408	4,499	287.82	1.0e+00	0.37761	0.00098	0.37956				
cvcrtiga_70_1_11	0.0	6,847	408	5,399	345.38	1.0e+00	0.40017	0.00120	0.40257				
cvcrtiga_70_1_12	0.0	6,847	408	6,299	402.95	1.0e+00	0.42263	0.00109	0.42481				
cvcrtiga_70_1_13	0.0	6,847	408	7,199	460.51	1.0e+00	0.44607	0.00120	0.44848				
cvcrtiga_70_1_14	0.0	6,847	408	8,098	518.07	1.0e+00	0.46618	0.00104	0.46827				

Table 6.9.6-19a. Results for UZrH_x content in CV calculation model

case name	np	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr	k _{eff}	σ	k _{eff} +2σ
cvtriga_70_1_15	0.0	6,847	408	8,998	575.64	1.0e+00	0.48847	0.00130	0.49107
can spacers (np thickness = 1.4 in.)									
cvtriga_70_2_15	1.4	6,847	408	8,385	536.39	1.0e+00	0.38372	0.00112	0.38596

Table 6.9.6-19b. Results for UZrH_x content spacing in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	pitch (cm)	pitch (in)	k _{eff}	σ	k _{eff} +2σ
TRIGA (UZrH _x) fuel content at 19.7 wt % ²³⁵ U, triangular pitch spacing from touching sections to sections touching convenience can 500 g CH ₂ in cc, no can spacers (np thickness = 0.0 in.), containment vessel, reflected									
mocfr=1.0									
cvT20ptch_1_15_1	10,400	921	8,998	255.01	2.11201	1.440	0.48176	0.00106	0.48387
cvT20ptch_1_15_2	10,400	921	8,998	255.01	2.25466	1.537	0.49373	0.00119	0.49612
cvT20ptch_1_15_3	10,400	921	8,998	255.01	2.39731	1.635	0.50012	0.00131	0.50274
cvT20ptch_1_15_4	10,400	921	8,998	255.01	2.53996	1.732	0.50823	0.00110	0.51044
cvT20ptch_1_15_5	10,400	921	8,998	255.01	2.68261	1.829	0.51676	0.00126	0.51928
cvT20ptch_1_15_6	10,400	921	8,998	255.01	2.82526	1.927	0.52300	0.00115	0.52530
cvT20ptch_1_15_7	10,400	921	8,998	255.01	2.96791	2.024	0.52511	0.00127	0.52766
cvT20ptch_1_15_8	10,400	921	8,998	255.01	3.11056	2.121	0.52789	0.00116	0.53022
cvT20ptch_1_15_9	10,400	921	8,998	255.01	3.25321	2.218	0.52959	0.00109	0.53177
cvT20ptch_1_15_10	10,400	921	8,998	255.01	3.39586	2.316	0.52841	0.00115	0.53072
cvT20ptch_1_15_11	10,400	921	8,998	255.01	3.53851	2.413	0.52767	0.00109	0.52985
mocfr=0.9									
cvT20ptch_1_14_1	10,400	921	8,098	229.51	2.11201	1.440	0.46727	0.00112	0.46951
cvT20ptch_1_14_6	10,400	921	8,098	229.51	2.82526	1.927	0.50042	0.00110	0.50263
cvT20ptch_1_14_11	10,400	921	8,098	229.51	3.53851	2.413	0.51015	0.00114	0.51244
mocfr=0.8									

Table 6.9.6-19b. Results for UZrH_x content spacing in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	pitch (cm)	pitch (in)	k _{eff}	σ	k _{eff} +2σ
cvT20ptch_1_13_1	10,400	921	7,199	204.00	2.11201	1.440	0.44680	0.00107	0.44894
cvT20ptch_1_13_6	10,400	921	7,199	204.00	2.82526	1.927	0.47920	0.00102	0.48124
cvT20ptch_1_13_11	10,400	921	7,199	204.00	3.53851	2.413	0.49183	0.00115	0.49413
mocfr=0.7									
cvT20ptch_1_12_1	10,400	921	6,299	178.50	2.11201	1.440	0.43179	0.00117	0.43413
cvT20ptch_1_12_6	10,400	921	6,299	178.50	2.82526	1.927	0.45630	0.00123	0.45875
cvT20ptch_1_12_11	10,400	921	6,299	178.50	3.53851	2.413	0.46790	0.00112	0.47014
mocfr=0.6									
cvT20ptch_1_11_1	10,400	921	5,399	153.00	2.11201	1.440	0.41313	0.00109	0.41531
cvT20ptch_1_11_6	10,400	921	5,399	153.00	2.82526	1.927	0.43561	0.00115	0.43792
cvT20ptch_1_11_11	10,400	921	5,399	153.00	3.53851	2.413	0.44764	0.00100	0.44964
mocfr=0.5									
cvT20ptch_1_10_1	10,400	921	4,499	127.50	2.11201	1.440	0.39451	0.00106	0.39664
cvT20ptch_1_10_6	10,400	921	4,499	127.50	2.82526	1.927	0.41120	0.00128	0.41376
cvT20ptch_1_10_11	10,400	921	4,499	127.50	3.53851	2.413	0.42438	0.00120	0.42678
mocfr=0.4									
cvT20ptch_1_9_1	10,400	921	3,599	102.00	2.11201	1.440	0.38008	0.00097	0.38203
cvT20ptch_1_9_6	10,400	921	3,599	102.00	2.82526	1.927	0.39106	0.00098	0.39303
cvT20ptch_1_9_11	10,400	921	3,599	102.00	3.53851	2.413	0.40267	0.00126	0.40519
mocfr=0.3									
cvT20ptch_1_8_1	10,400	921	2,700	76.50	2.11201	1.440	0.36348	0.00091	0.36531
cvT20ptch_1_8_6	10,400	921	2,700	76.50	2.82526	1.927	0.37106	0.00102	0.37309
cvT20ptch_1_8_11	10,400	921	2,700	76.50	3.53851	2.413	0.38210	0.00098	0.38406
mocfr=0.2									
cvT20ptch_1_7_1	10,400	921	1,800	51.00	2.11201	1.440	0.35255	0.00094	0.35443
cvT20ptch_1_7_6	10,400	921	1,800	51.00	2.82526	1.927	0.35542	0.00089	0.35721
cvT20ptch_1_7_11	10,400	921	1,800	51.00	3.53851	2.413	0.36444	0.00091	0.36627

Table 6.9.6-19b. Results for UZrH_x content spacing in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	pitch (cm)	pitch (in)	k _{eff}	σ	k _{eff} +2σ
mocfr=0.1									
cvT20ptch_1_6_1	10,400	921	900	25.50	2.11201	1.440	0.34383	0.00115	0.34612
cvT20ptch_1_6_6	10,400	921	900	25.50	2.82526	1.927	0.34516	0.00093	0.34703
cvT20ptch_1_6_11	10,400	921	900	25.50	3.53851	2.413	0.35189	0.00102	0.35394
mocfr=1.0e-20									
cvT20ptch_1_1_1	10,400	921	0	0.00	2.11201	1.440	0.34314	0.00084	0.34482
cvT20ptch_1_1_6	10,400	921	0	0.00	2.82526	1.927	0.34273	0.00089	0.34452
cvT20ptch_1_1_11	10,400	921	0	0.00	3.53851	2.413	0.34291	0.00087	0.34466

Table 6.9.6-19c. Results for UZrH_x content uranium weight fraction in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr	k _{eff}	σ	k _{eff} +2σ
TRIGA (UZrH _x) fuel content at 19.7 wt % ²³⁵ U, variation of uranium weight fraction in content 500 g CH ₂ in cc, no can spacers (np thickness = 0.0 in.), containment vessel, reflected								
45 Wt.% U								
cvTE20U45_1_15	10,400	921	8,998	255.01	1.0e+00	0.52494	0.00120	0.52735
cvTE20U45_1_14	10,400	921	8,098	229.51	9.0e-01	0.50284	0.00114	0.50511
cvTE20U45_1_13	10,400	921	7,199	204.00	8.0e-01	0.48121	0.00136	0.48393
cvTE20U45_1_12	10,400	921	6,299	178.50	7.0e-01	0.45681	0.00116	0.45914
cvTE20U45_1_11	10,400	921	5,399	153.00	6.0e-01	0.43399	0.00108	0.43616
cvTE20U45_1_10	10,400	921	4,499	127.50	5.0e-01	0.41521	0.00099	0.41719
cvTE20U45_1_9	10,400	921	3,599	102.00	4.0e-01	0.38978	0.00115	0.39209
cvTE20U45_1_8	10,400	921	2,700	76.50	3.0e-01	0.37291	0.00103	0.37496
cvTE20U45_1_7	10,400	921	1,800	51.00	2.0e-01	0.35869	0.00094	0.36057
cvTE20U45_1_6	10,400	921	900	25.50	1.0e-01	0.34704	0.00101	0.34905

Table 6.9.6-19c. Results for UZrH_x content uranium weight fraction in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr	k _{eff}	σ	k _{eff} +2σ
cvTE20U45_1_1	10,400	921	0	0.00	1.0e-20	0.34219	0.00107	0.34432
30 Wt.% U								
cvTE20U30_1_15	8,250	489	8,998	480.29	1.0e+00	0.47671	0.00135	0.47942
cvTE20U30_1_14	8,250	489	8,098	432.26	9.0e-01	0.45562	0.00105	0.45772
cvTE20U30_1_13	8,250	489	7,199	384.23	8.0e-01	0.43218	0.00113	0.43445
cvTE20U30_1_12	8,250	489	6,299	336.20	7.0e-01	0.41165	0.00096	0.41356
cvTE20U30_1_11	8,250	489	5,399	288.17	6.0e-01	0.38706	0.00099	0.38903
cvTE20U30_1_10	8,250	489	4,499	240.14	5.0e-01	0.36759	0.00092	0.36944
cvTE20U30_1_9	8,250	489	3,599	192.11	4.0e-01	0.34766	0.00094	0.34954
cvTE20U30_1_8	8,250	489	2,700	144.09	3.0e-01	0.33073	0.00086	0.33245
cvTE20U30_1_7	8,250	489	1,800	96.06	2.0e-01	0.31555	0.00082	0.31720
cvTE20U30_1_6	8,250	489	900	48.03	1.0e-01	0.31018	0.00092	0.31202
cvTE20U30_1_01	8,250	489	0	0.00	1.0e-20	0.30488	0.00083	0.30654
20 Wt.% U								
cvTE20U20_1_15	7,545	297	8,998	790.78	1.0e+00	0.46046	0.00121	0.46289
cvTE20U20_1_14	7,545	297	8,098	711.70	9.0e-01	0.43928	0.00114	0.44156
cvTE20U20_1_13	7,545	297	7,199	632.62	8.0e-01	0.41486	0.00108	0.41702
cvTE20U20_1_12	7,545	297	6,299	553.54	7.0e-01	0.39584	0.00113	0.39809
cvTE20U20_1_11	7,545	297	5,399	474.47	6.0e-01	0.37399	0.00106	0.37612
cvTE20U20_1_10	7,545	297	4,499	395.39	5.0e-01	0.35345	0.00100	0.35545
cvTE20U20_1_9	7,545	297	3,599	316.31	4.0e-01	0.33290	0.00098	0.33486
cvTE20U20_1_8	7,545	297	2,700	237.23	3.0e-01	0.31513	0.00103	0.31719
cvTE20U20_1_7	7,545	297	1,800	158.16	2.0e-01	0.30148	0.00101	0.30350
cvTE20U20_1_6	7,545	297	900	79.08	1.0e-01	0.29354	0.00089	0.29532
cvTE20U20_1_1	7,545	297	0	0.00	1.0e-20	0.29227	0.00083	0.29392
12 Wt.% U								
cvTE20U12_1_15	7,125	168	8,998	1397.90	1.0e+00	0.44948	0.00108	0.45163

Table 6.9.6-19c. Results for UZrH_x content uranium weight fraction in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr	k _{eff}	σ	k _{eff} +2σ
cvTE20U12_1_14	7,125	168	8,098	1258.10	9.0e-01	0.43067	0.00106	0.43280
cvTE20U12_1_13	7,125	168	7,199	1118.30	8.0e-01	0.40699	0.00098	0.40894
cvTE20U12_1_12	7,125	168	6,299	978.59	7.0e-01	0.38549	0.00098	0.38744
cvTE20U12_1_11	7,125	168	5,399	838.79	6.0e-01	0.36416	0.00089	0.36595
cvTE20U12_1_10	7,125	168	4,499	698.99	5.0e-01	0.34375	0.00106	0.34586
cvTE20U12_1_9	7,125	168	3,599	559.19	4.0e-01	0.32505	0.00108	0.32721
cvTE20U12_1_8	7,125	168	2,700	419.40	3.0e-01	0.30767	0.00087	0.30940
cvTE20U12_1_7	7,125	168	1,800	279.60	2.0e-01	0.29545	0.00076	0.29698
cvTE20U12_1_6	7,125	168	900	139.80	1.0e-01	0.28602	0.00086	0.28774
cvTE20U12_1_1	7,125	168	0	0.00	1.0e-20	0.28442	0.00079	0.28601
8.5 Wt.% U								
cvTE20U8p5_1_15	6,953	117	8,998	2007.30	1.0e+00	0.44412	0.00115	0.44643
cvTE20U8p5_1_14	6,953	117	8,098	1806.60	9.0e-01	0.42328	0.00110	0.42549
cvTE20U8p5_1_13	6,953	117	7,199	1605.80	8.0e-01	0.40452	0.00100	0.40652
cvTE20U8p5_1_12	6,953	117	6,299	1405.10	7.0e-01	0.38253	0.00122	0.38496
cvTE20U8p5_1_11	6,953	117	5,399	1204.40	6.0e-01	0.35988	0.00111	0.36209
cvTE20U8p5_1_10	6,953	117	4,499	1003.60	5.0e-01	0.33974	0.00099	0.34173
cvTE20U8p5_1_9	6,953	117	3,599	802.94	4.0e-01	0.31938	0.00090	0.32118
cvTE20U8p5_1_8	6,953	117	2,700	602.20	3.0e-01	0.30560	0.00084	0.30729
cvTE20U8p5_1_7	6,953	117	1,800	401.47	2.0e-01	0.29237	0.00085	0.29407
cvTE20U8p5_1_6	6,953	117	900	200.73	1.0e-01	0.28287	0.00104	0.28495
cvTE20U8p5_1_1	6,953	117	0	0.00	1.0e-20	0.28060	0.00080	0.28219
500 g CH₂ in cc, can spacers (np thickness = 1.4 in.), containment vessel, reflected								
cvTE20U45_02_15	10,400	921	8,385	237.62	1.0e+00	0.42157	0.00099	0.42354
cvTE20U30_02_15	8,250	489	8,385	447.54	1.0e+00	0.37862	0.00092	0.38046
cvTE20U20_02_15	7,545	297	8,385	736.86	1.0e+00	0.36052	0.00089	0.36229
cvTE20U12_02_15	7,125	168	8,385	1302.60	1.0e+00	0.35193	0.00100	0.35392

Table 6.9.6-19c. Results for UZrH_x content uranium weight fraction in CV calculation model

case name	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr	k _{eff}	σ	k _{eff} +2σ
cvTE20U8p5_02_15	6,953	117	8,385	1870.40	1.0e+00	0.34847	0.00108	0.35064

Table 6.9.6-20a. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
content in flooded containment vessel, single package reflected													
NCT										HAC			
no can spacers (np thickness = 0.0 in.)													
mocfr													
ncsrtriga_1_1_15	0.0	10,400	921	0	0.00	1.0e-20	0.19699	0.00072	0.19844	hcsrtriga_1_1_15	0.19912	0.00071	0.20055
ncsrtriga_1_6_15	0.0	10,400	921	900	25.50	1.0e-01	0.22100	0.00077	0.22253	hcsrtriga_1_6_15	0.22405	0.00077	0.22559
ncsrtriga_1_7_15	0.0	10,400	921	1,800	51.00	2.0e-02	0.25006	0.00081	0.25167	hcsrtriga_1_7_15	0.25119	0.00075	0.25268
ncsrtriga_1_8_15	0.0	10,400	921	2,700	76.50	3.0e-01	0.27901	0.00083	0.28067	hcsrtriga_1_8_15	0.28071	0.00086	0.28243
ncsrtriga_1_9_15	0.0	10,400	921	3,599	102.00	4.0e-01	0.31206	0.00097	0.31399	hcsrtriga_1_9_15	0.31333	0.00093	0.31520
ncsrtriga_1_10_15	0.0	10,400	921	4,499	127.50	5.0e-01	0.34408	0.00096	0.34601	hcsrtriga_1_10_15	0.34576	0.00103	0.34781
ncsrtriga_1_11_15	0.0	10,400	921	5,399	153.00	6.0e-01	0.37488	0.00093	0.37674	hcsrtriga_1_11_15	0.37800	0.00111	0.38023
ncsrtriga_1_12_15	0.0	10,400	921	6,299	178.50	7.0e-01	0.40792	0.00107	0.41006	hcsrtriga_1_12_15	0.40683	0.00105	0.40893
ncsrtriga_1_13_15	0.0	10,400	921	7,199	204.00	8.0e-01	0.43782	0.00116	0.44013	hcsrtriga_1_13_15	0.43867	0.00123	0.44113
ncsrtriga_1_14_15	0.0	10,400	921	8,098	229.51	9.0e-01	0.46460	0.00106	0.46672	hcsrtriga_1_14_15	0.46627	0.00120	0.46867
ncsrtriga_1_15_15	0.0	10,400	921	8,998	255.01	1.0e+00	0.49295	0.00104	0.49503	hcsrtriga_1_15_15	0.49247	0.00103	0.49454
moifr													
ncsrtriga_1_15_1	0.0	10,400	921	8,998	255.01	1.0e-20	0.44499	0.00100	0.44700	hcsrtriga_1_15_1	0.44706	0.00104	0.44914
ncsrtriga_1_15_2	0.0	10,400	921	8,998	255.01	1.0e-05	0.44282	0.00109	0.44500	hcsrtriga_1_15_2	0.44626	0.00100	0.44825

Table 6.9.6-20a. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrtriga_1_15_3	0.0	10,400	921	8,998	255.01	1.0e-04	0.44454	0.00120	0.44693	hcsrtriga_1_15_3	0.44469	0.00125	0.44719
ncsrtriga_1_15_4	0.0	10,400	921	8,998	255.01	1.0e-03	0.44553	0.00111	0.44774	hcsrtriga_1_15_4	0.44692	0.00113	0.44918
ncsrtriga_1_15_5	0.0	10,400	921	8,998	255.01	1.0e-02	0.44389	0.00121	0.44631	hcsrtriga_1_15_5	0.44565	0.00104	0.44773
ncsrtriga_1_15_6	0.0	10,400	921	8,998	255.01	1.0e-01	0.44801	0.00104	0.45008	hcsrtriga_1_15_6	0.45115	0.00120	0.45356
ncsrtriga_1_15_8	0.0	10,400	921	8,998	255.01	3.0e-01	0.45921	0.00143	0.46207	hcsrtriga_1_15_8	0.46090	0.00112	0.46314
ncsrtriga_1_15_15	0.0	10,400	921	8,998	255.01	1.0e+00	0.49295	0.00104	0.49503	hcsrtriga_1_15_15	0.49247	0.00103	0.49454
with can spacers (np thickness = 1.4 in.)													
mocfr													
ncsrtriga_2_1_15	1.4	10,400	921	0	0.00	1.0e-20	0.16519	0.00060	0.16640	hcsrtriga_2_1_15	0.16449	0.00062	0.16573
ncsrtriga_2_6_15	1.4	10,400	921	839	23.76	1.0e-01	0.18078	0.00063	0.18204	hcsrtriga_2_6_15	0.18163	0.00061	0.18284
ncsrtriga_2_7_15	1.4	10,400	921	1,677	47.52	2.0e-01	0.20001	0.00066	0.20133	hcsrtriga_2_7_15	0.20112	0.00072	0.20256
ncsrtriga_2_8_15	1.4	10,400	921	2,515	71.29	3.0e-01	0.22235	0.00085	0.22405	hcsrtriga_2_8_15	0.22446	0.00079	0.22603
ncsrtriga_2_9_15	1.4	10,400	921	3,354	95.05	4.0e-01	0.24785	0.00076	0.24936	hcsrtriga_2_9_15	0.24932	0.00079	0.25090
ncsrtriga_2_10_15	1.4	10,400	921	4,192	118.81	5.0e-01	0.27336	0.00091	0.27517	hcsrtriga_2_10_15	0.27427	0.00084	0.27595
ncsrtriga_2_11_15	1.4	10,400	921	5,031	142.57	6.0e-01	0.29864	0.00105	0.30075	hcsrtriga_2_11_15	0.30007	0.00090	0.30188
ncsrtriga_2_12_15	1.4	10,400	921	5,869	166.33	7.0e-01	0.32492	0.00094	0.32680	hcsrtriga_2_12_15	0.32594	0.00113	0.32820
ncsrtriga_2_13_15	1.4	10,400	921	6,708	190.09	8.0e-01	0.35137	0.00101	0.35339	hcsrtriga_2_13_15	0.35174	0.00101	0.35375
ncsrtriga_2_14_15	1.4	10,400	921	7,546	213.86	9.0e-01	0.37602	0.00105	0.37812	hcsrtriga_2_14_15	0.37666	0.00093	0.37852
ncsrtriga_2_15_15	1.4	10,400	921	8,385	237.62	1.0e+00	0.40040	0.00106	0.40252	hcsrtriga_2_15_15	0.40020	0.00112	0.40244
moifr													
ncsrtriga_2_15_1	1.4	10,400	921	8,385	237.62	1.0e-20	0.36082	0.00102	0.36286	hcsrtriga_2_15_1	0.36370	0.00103	0.36576
ncsrtriga_2_15_2	1.4	10,400	921	8,385	237.62	1.0e-05	0.36163	0.00105	0.36373	hcsrtriga_2_15_2	0.36457	0.00097	0.36651
ncsrtriga_2_15_3	1.4	10,400	921	8,385	237.62	1.0e-04	0.36349	0.00115	0.36579	hcsrtriga_2_15_3	0.36369	0.00107	0.36584
ncsrtriga_2_15_4	1.4	10,400	921	8,385	237.62	1.0e-03	0.36368	0.00093	0.36554	hcsrtriga_2_15_4	0.36290	0.00107	0.36503
ncsrtriga_2_15_5	1.4	10,400	921	8,385	237.62	1.0e-02	0.36298	0.00111	0.36520	hcsrtriga_2_15_5	0.36275	0.00112	0.36498
ncsrtriga_2_15_6	1.4	10,400	921	8,385	237.62	1.0e-01	0.36587	0.00090	0.36766	hcsrtriga_2_15_6	0.37015	0.00095	0.37205

Table 6.9.6-20a. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrtriga_2_15_8	1.4	10,400	921	8,385	237.62	3.0e-01	0.37454	0.00104	0.37662	hcsrtriga_2_15_8	0.37482	0.00099	0.37680
ncsrtriga_2_15_15	1.4	10,400	921	8,385	237.62	1.0e+00	0.40040	0.00106	0.40252	hcsrtriga_2_15_15	0.40020	0.00112	0.40244
content in flooded containment vessel, array packaging model for CSI=0.0													
NCT							HAC						
no can spacers (np thickness = 0.0 in.)													
moifr													
nciatriga_1_1_3	0.0	10,400	921	0	0.00	1.0e-04	0.21653	0.00055	0.21763	hciatriga_1_1_3	0.21640	0.00062	0.21763
nciatriga_1_6_3	0.0	10,400	921	900	25.50	1.0e-04	0.24325	0.00064	0.24453	hciatriga_1_6_3	0.24355	0.00069	0.24493
nciatriga_1_7_3	0.0	10,400	921	1,800	51.00	1.0e-04	0.27402	0.00079	0.27561	hciatriga_1_7_3	0.27398	0.00073	0.27544
nciatriga_1_8_3	0.0	10,400	921	2,700	76.50	1.0e-04	0.30790	0.00105	0.30999	hciatriga_1_8_3	0.30795	0.00081	0.30958
nciatriga_1_9_3	0.0	10,400	921	3,599	102.00	1.0e-04	0.34171	0.00109	0.34390	hciatriga_1_9_3	0.34285	0.00108	0.34500
nciatriga_1_10_3	0.0	10,400	921	4,499	127.50	1.0e-04	0.37614	0.00108	0.37830	hciatriga_1_10_3	0.37487	0.00101	0.37689
nciatriga_1_11_3	0.0	10,400	921	5,399	153.00	1.0e-04	0.40944	0.00101	0.41146	hciatriga_1_11_3	0.40922	0.00099	0.41120
nciatriga_1_12_3	0.0	10,400	921	6,299	178.50	1.0e-04	0.44034	0.00116	0.44267	hciatriga_1_12_3	0.44217	0.00104	0.44426
nciatriga_1_13_3	0.0	10,400	921	7,199	204.00	1.0e-04	0.46949	0.00102	0.47153	hciatriga_1_13_3	0.46841	0.00104	0.47049
nciatriga_1_14_3	0.0	10,400	921	8,098	229.51	1.0e-04	0.49678	0.00102	0.49881	hciatriga_1_14_3	0.49952	0.00113	0.50179
nciatriga_1_15_3	0.0	10,400	921	8,998	255.01	1.0e-04	0.52325	0.00109	0.52543	hciatriga_1_15_3	0.52373	0.00117	0.52606
with can spacers (np thickness = 1.4 in.)													
nciatriga_2_1_3	1.4	10,400	921	0	0.00	1.0e-04	0.19663	0.00056	0.19775	hciatriga_2_1_3	0.19533	0.00058	0.19648
nciatriga_2_6_3	1.4	10,400	921	839	23.76	1.0e-04	0.21458	0.00063	0.21583	hciatriga_2_6_3	0.21404	0.00062	0.21528
nciatriga_2_7_3	1.4	10,400	921	1,677	47.52	1.0e-04	0.23878	0.00069	0.24017	hciatriga_2_7_3	0.23939	0.00065	0.24068
nciatriga_2_8_3	1.4	10,400	921	2,515	71.29	1.0e-04	0.26268	0.00095	0.26458	hciatriga_2_8_3	0.26265	0.00073	0.26410
nciatriga_2_9_3	1.4	10,400	921	3,354	95.05	1.0e-04	0.28930	0.00075	0.29081	hciatriga_2_9_3	0.29016	0.00077	0.29169
nciatriga_2_10_3	1.4	10,400	921	4,192	118.81	1.0e-04	0.31695	0.00092	0.31879	hciatriga_2_10_3	0.31775	0.00088	0.31951
nciatriga_2_11_3	1.4	10,400	921	5,031	142.57	1.0e-04	0.34183	0.00090	0.34364	hciatriga_2_11_3	0.34164	0.00096	0.34355
nciatriga_2_12_3	1.4	10,400	921	5,869	166.33	1.0e-04	0.36766	0.00092	0.36949	hciatriga_2_12_3	0.36733	0.00102	0.36937

Table 6.9.6-20a. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
nciatriga_2_13_3	1.4	10,400	921	6,708	190.09	1.0e-04	0.39176	0.00122	0.39420	hciatriga_2_13_3	0.39342	0.00103	0.39547
nciatriga_2_14_3	1.4	10,400	921	7,546	213.86	1.0e-04	0.41783	0.00101	0.41986	hciatriga_2_14_3	0.41760	0.00108	0.41976
nciatriga_2_15_3	1.4	10,400	921	8,385	237.62	1.0e-04	0.43993	0.00109	0.44211	hciatriga_2_15_3	0.44034	0.00119	0.44271

Table 6.9.6-20b. Results for UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
content in flooded containment vessel, single package reflected													
NCT										HAC			
no can spacers (np thickness = 0.0 in.)													
moifr													
ncsrtriga70_1_1_15	0.0	6,847	408	0	0.00	1.0e+00	0.15814	0.00073	0.15960	hcsrtriga70_1_1_15	0.15823	0.00062	0.15947
ncsrtriga70_1_6_15	0.0	6,847	408	900	57.56	1.0e+00	0.18268	0.00068	0.18403	hcsrtriga70_1_6_15	0.18526	0.00075	0.18676
ncsrtriga70_1_7_15	0.0	6,847	408	1,800	115.13	1.0e+00	0.21248	0.00074	0.21396	hcsrtriga70_1_7_15	0.21376	0.00082	0.21540
ncsrtriga70_1_8_15	0.0	6,847	408	2,700	172.69	1.0e+00	0.24596	0.00086	0.24769	hcsrtriga70_1_8_15	0.24666	0.00081	0.24829
ncsrtriga70_1_9_15	0.0	6,847	408	3,599	230.26	1.0e+00	0.27756	0.00103	0.27963	hcsrtriga70_1_9_15	0.27837	0.00085	0.28007
ncsrtriga70_1_10_15	0.0	6,847	408	4,499	287.82	1.0e+00	0.30903	0.00102	0.31107	hcsrtriga70_1_10_15	0.31172	0.00101	0.31374
ncsrtriga70_1_11_15	0.0	6,847	408	5,399	345.38	1.0e+00	0.34331	0.00121	0.34573	hcsrtriga70_1_11_15	0.34406	0.00110	0.34626
ncsrtriga70_1_12_15	0.0	6,847	408	6,299	402.95	1.0e+00	0.37320	0.00129	0.37578	hcsrtriga70_1_12_15	0.37419	0.00109	0.37637
ncsrtriga70_1_13_15	0.0	6,847	408	7,199	460.51	1.0e+00	0.40369	0.00106	0.40581	hcsrtriga70_1_13_15	0.40592	0.00110	0.40811
ncsrtriga70_1_14_15	0.0	6,847	408	8,098	518.07	1.0e+00	0.43096	0.00129	0.43353	hcsrtriga70_1_14_15	0.42993	0.00109	0.43212

Table 6.9.6-20b. Results for UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrtriga70_1_15_15	0.0	6,847	408	8,998	575.64	1.0e+00	0.45846	0.00117	0.46080	hcsrtriga70_1_15_15	0.45656	0.00108	0.45872
moifr													
ncsrtriga70_1_15_1	0.0	6,847	408	8,998	575.64	1.0e-20	0.40894	0.00119	0.41131	hcsrtriga70_1_15_1	0.41076	0.00122	0.41320
ncsrtriga70_1_15_2	0.0	6,847	408	8,998	575.64	1.0e-05	0.40806	0.00115	0.41036	hcsrtriga70_1_15_2	0.41073	0.00130	0.41332
ncsrtriga70_1_15_3	0.0	6,847	408	8,998	575.64	1.0e-04	0.40992	0.00118	0.41228	hcsrtriga70_1_15_3	0.41080	0.00120	0.41319
ncsrtriga70_1_15_4	0.0	6,847	408	8,998	575.64	1.0e-03	0.41084	0.00110	0.41304	hcsrtriga70_1_15_4	0.41181	0.00115	0.41412
ncsrtriga70_1_15_5	0.0	6,847	408	8,998	575.64	1.0e-02	0.41069	0.00116	0.41300	hcsrtriga70_1_15_5	0.41159	0.00124	0.41407
ncsrtriga70_1_15_6	0.0	6,847	408	8,998	575.64	1.0e-01	0.41431	0.00107	0.41644	hcsrtriga70_1_15_6	0.41621	0.00123	0.41868
ncsrtriga70_1_15_8	0.0	6,847	408	8,998	575.64	3.0e-01	0.42523	0.00129	0.42780	hcsrtriga70_1_15_8	0.42893	0.00120	0.43133
ncsrtriga70_1_15_15	0.0	6,847	408	8,998	575.64	1.0e+00	0.45846	0.00117	0.46080	hcsrtriga70_1_15_15	0.45656	0.00108	0.45872
with can spacers (np thickness = 1.4 in.)													
moifr													
ncsrtriga70_2_1_15	1.4	6,847	408	0	0.00	1.0e+00	0.12174	0.00059	0.12291	hcsrtriga70_2_1_15	0.12413	0.00057	0.12528
ncsrtriga70_2_6_15	1.4	6,847	408	839	53.64	1.0e+00	0.14017	0.00063	0.14143	hcsrtriga70_2_6_15	0.14097	0.00061	0.14220
ncsrtriga70_2_7_15	1.4	6,847	408	1,677	107.28	1.0e+00	0.16109	0.00066	0.16241	hcsrtriga70_2_7_15	0.16260	0.00068	0.16396
ncsrtriga70_2_8_15	1.4	6,847	408	2,515	160.92	1.0e+00	0.18174	0.00080	0.18335	hcsrtriga70_2_8_15	0.18552	0.00067	0.18686
ncsrtriga70_2_9_15	1.4	6,847	408	3,354	214.55	1.0e+00	0.20707	0.00076	0.20859	hcsrtriga70_2_9_15	0.20911	0.00077	0.21064
ncsrtriga70_2_10_15	1.4	6,847	408	4,192	268.19	1.0e+00	0.23324	0.00089	0.23503	hcsrtriga70_2_10_15	0.23447	0.00074	0.23595
ncsrtriga70_2_11_15	1.4	6,847	408	5,031	321.83	1.0e+00	0.26093	0.00080	0.26254	hcsrtriga70_2_11_15	0.26039	0.00085	0.26209
ncsrtriga70_2_12_15	1.4	6,847	408	5,869	375.47	1.0e+00	0.28710	0.00084	0.28878	hcsrtriga70_2_12_15	0.28784	0.00093	0.28970
ncsrtriga70_2_13_15	1.4	6,847	408	6,708	429.11	1.0e+00	0.30929	0.00098	0.31124	hcsrtriga70_2_13_15	0.31105	0.00093	0.31291
ncsrtriga70_2_14_15	1.4	6,847	408	7,546	482.75	1.0e+00	0.33473	0.00114	0.33702	hcsrtriga70_2_14_15	0.33634	0.00094	0.33822
ncsrtriga70_2_15_15	1.4	6,847	408	8,385	536.39	1.0e+00	0.35776	0.00116	0.36008	hcsrtriga70_2_15_15	0.35922	0.00110	0.36142
moifr													
ncsrtriga70_2_15_1	1.4	6,847	408	8,385	536.39	1.0e-20	0.32321	0.00094	0.32508	hcsrtriga70_2_15_1	0.32561	0.00106	0.32774
ncsrtriga70_2_15_2	1.4	6,847	408	8,385	536.39	1.0e-05	0.32283	0.00092	0.32467	hcsrtriga70_2_15_2	0.32441	0.00099	0.32639
ncsrtriga70_2_15_3	1.4	6,847	408	8,385	536.39	1.0e-04	0.32432	0.00088	0.32608	hcsrtriga70_2_15_3	0.32423	0.00102	0.32628

Table 6.9.6-20b. Results for UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrtriga70_2_15_4	1.4	6,847	408	8,385	536.39	1.0e-03	0.32279	0.00104	0.32488	hcsrtriga70_2_15_4	0.32600	0.00111	0.32822
ncsrtriga70_2_15_5	1.4	6,847	408	8,385	536.39	1.0e-02	0.32448	0.00105	0.32658	hcsrtriga70_2_15_5	0.32622	0.00093	0.32808
ncsrtriga70_2_15_6	1.4	6,847	408	8,385	536.39	1.0e-01	0.32871	0.00097	0.33065	hcsrtriga70_2_15_6	0.32929	0.00110	0.33150
ncsrtriga70_2_15_8	1.4	6,847	408	8,385	536.39	3.0e-01	0.33627	0.00091	0.33809	hcsrtriga70_2_15_8	0.33709	0.00106	0.33920
ncsrtriga70_2_15_15	1.4	6,847	408	8,385	536.39	1.0e+00	0.35776	0.00116	0.36008	hcsrtriga70_2_15_15	0.35922	0.00110	0.36142
content in flooded containment vessel, array packaging model for CSI=0.0													
NCT										HAC			
no can spacers (np thickness = 0.0 in.)													
moifr													
nciatriga70_1_1_3	0.0	6,847	408	0	0.00	1.0e-04	0.16525	0.00063	0.16651	hciatriga70_1_1_3	0.16514	0.00067	0.16648
nciatriga70_1_6_3	0.0	6,847	408	900	57.56	1.0e-04	0.19360	0.00070	0.19500	hciatriga70_1_6_3	0.19280	0.00066	0.19411
nciatriga70_1_7_3	0.0	6,847	408	1,800	115.13	1.0e-04	0.22946	0.00076	0.23099	hciatriga70_1_7_3	0.23027	0.00076	0.23179
nciatriga70_1_8_3	0.0	6,847	408	2,700	172.69	1.0e-04	0.26461	0.00087	0.26635	hciatriga70_1_8_3	0.26463	0.00074	0.26612
nciatriga70_1_9_3	0.0	6,847	408	3,599	230.26	1.0e-04	0.30186	0.00095	0.30375	hciatriga70_1_9_3	0.30020	0.00084	0.30187
nciatriga70_1_10_3	0.0	6,847	408	4,499	287.82	1.0e-04	0.33608	0.00095	0.33798	hciatriga70_1_10_3	0.33776	0.00089	0.33954
nciatriga70_1_11_3	0.0	6,847	408	5,399	345.38	1.0e-04	0.37069	0.00105	0.37279	hciatriga70_1_11_3	0.37191	0.00104	0.37400
nciatriga70_1_12_3	0.0	6,847	408	6,299	402.95	1.0e-04	0.40431	0.00110	0.40651	hciatriga70_1_12_3	0.40368	0.00099	0.40567
nciatriga70_1_13_3	0.0	6,847	408	7,199	460.51	1.0e-04	0.43185	0.00143	0.43472	hciatriga70_1_13_3	0.43386	0.00141	0.43668
nciatriga70_1_14_3	0.0	6,847	408	8,098	518.07	1.0e-04	0.46029	0.00122	0.46272	hciatriga70_1_14_3	0.46036	0.00120	0.46277
nciatriga70_1_15_3	0.0	6,847	408	8,998	575.64	1.0e-04	0.48628	0.00123	0.48875	hciatriga70_1_15_3	0.48653	0.00107	0.48868
with can spacers (np thickness = 1.4 in.)													
nciatriga70_2_1_3	1.4	6,847	408	0	0.00	1.0e-04	0.14342	0.00054	0.14450	hciatriga70_2_1_3	0.14299	0.00055	0.14410
nciatriga70_2_6_3	1.4	6,847	408	839	53.64	1.0e-04	0.16333	0.00057	0.16446	hciatriga70_2_6_3	0.16444	0.00071	0.16586
nciatriga70_2_7_3	1.4	6,847	408	1,677	107.28	1.0e-04	0.18886	0.00069	0.19024	hciatriga70_2_7_3	0.18870	0.00075	0.19020
nciatriga70_2_8_3	1.4	6,847	408	2,515	160.92	1.0e-04	0.21548	0.00077	0.21703	hciatriga70_2_8_3	0.21709	0.00079	0.21867
nciatriga70_2_9_3	1.4	6,847	408	3,354	214.55	1.0e-04	0.24403	0.00092	0.24587	hciatriga70_2_9_3	0.24443	0.00082	0.24606
nciatriga70_2_10_3	1.4	6,847	408	4,192	268.19	1.0e-04	0.27230	0.00090	0.27410	hciatriga70_2_10_3	0.27167	0.00077	0.27321

Table 6.9.6-20b. Results for UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
nciatriga70_2_11_3	1.4	6,847	408	5,031	321.83	1.0e-04	0.29818	0.00092	0.30003	hciatriga70_2_11_3	0.29902	0.00096	0.30093
nciatriga70_2_12_3	1.4	6,847	408	5,869	375.47	1.0e-04	0.32583	0.00081	0.32745	hciatriga70_2_12_3	0.32607	0.00087	0.32781
nciatriga70_2_13_3	1.4	6,847	408	6,708	429.11	1.0e-04	0.35008	0.00102	0.35212	hciatriga70_2_13_3	0.34964	0.00088	0.35140
nciatriga70_2_14_3	1.4	6,847	408	7,546	482.75	1.0e-04	0.37201	0.00116	0.37434	hciatriga70_2_14_3	0.37167	0.00099	0.37364
nciatriga70_2_15_3	1.4	6,847	408	8,385	536.39	1.0e-04	0.39529	0.00120	0.39769	hciatriga70_2_15_3	0.39403	0.00109	0.39622

Table 6.9.6-20c. Results for 1.31 in. smaller diameter UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
1.31 in. diameter content in flooded containment vessel, single package reflected													
NCT													
no can spacers (np thickness = 0.0 in.)													
mocfr													
ncsrT70_131_1_1_15	0.0	5,667	338	0	0.00	1.0e+00	0.12864	0.00055	0.12974				
ncsrT70_131_1_6_15	0.0	5,667	338	920	71.15	1.0e+00	0.15144	0.00066	0.15276				
ncsrT70_131_1_7_15	0.0	5,667	338	1,841	142.31	1.0e+00	0.18245	0.00065	0.18375				
ncsrT70_131_1_8_15	0.0	5,667	338	2,762	213.46	1.0e+00	0.21360	0.00085	0.21530				
ncsrT70_131_1_9_15	0.0	5,667	338	3,682	284.61	1.0e+00	0.24688	0.00096	0.24880				
ncsrT70_131_1_10_15	0.0	5,667	338	4,602	355.77	1.0e+00	0.28138	0.00101	0.28340				
ncsrT70_131_1_11_15	0.0	5,667	338	5,523	426.92	1.0e+00	0.31377	0.00098	0.31574				
ncsrT70_131_1_12_15	0.0	5,667	338	6,443	498.07	1.0e+00	0.34582	0.00107	0.34797				
ncsrT70_131_1_13_15	0.0	5,667	338	7,364	569.23	1.0e+00	0.37661	0.00103	0.37867				

Table 6.9.6-20c. Results for 1.31 in. smaller diameter UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrT70_131_1_14_15	0.0	5,667	338	8,284	640.38	1.0e+00	0.40376	0.00110	0.40597				
ncsrT70_131_1_15_15	0.0	5,667	338	9,205	711.53	1.0e+00	0.43000	0.00103	0.43206				
moifr													
ncsrT70_131_1_15_1	0.0	5,667	338	9,205	711.53	1.0e-20	0.38521	0.00136	0.38793				
ncsrT70_131_1_15_2	0.0	5,667	338	9,205	711.53	1.0e-05	0.38339	0.00098	0.38536				
ncsrT70_131_1_15_3	0.0	5,667	338	9,205	711.53	1.0e-04	0.38633	0.00100	0.38834				
ncsrT70_131_1_15_4	0.0	5,667	338	9,205	711.53	1.0e-03	0.38417	0.00096	0.38610				
ncsrT70_131_1_15_5	0.0	5,667	338	9,205	711.53	1.0e-02	0.38613	0.00108	0.38829				
ncsrT70_131_1_15_6	0.0	5,667	338	9,205	711.53	1.0e-01	0.39026	0.00098	0.39222				
ncsrT70_131_1_15_8	0.0	5,667	338	9,205	711.53	3.0e-01	0.40187	0.00122	0.40430				
ncsrT70_131_1_15_15	0.0	5,667	338	9,205	711.53	1.0e+00	0.43000	0.00103	0.43206				
1.31 in. diameter content content in flooded containment vessel, array packaging model for CSI=0.0													
NCT													
no can spacers (np thickness = 0.0 in.)													
moifr													
nciaT70_131_1_1_3	0.0	5,667	338	0	0.00	1.0e-04	0.12954	0.00047	0.13048				
nciaT70_131_1_6_3	0.0	5,667	338	920	71.15	1.0e-04	0.15804	0.00057	0.15918				
nciaT70_131_1_7_3	0.0	5,667	338	1,841	142.31	1.0e-04	0.19290	0.00064	0.19417				
nciaT70_131_1_8_3	0.0	5,667	338	2,762	213.46	1.0e-04	0.22844	0.00085	0.23015				
nciaT70_131_1_9_3	0.0	5,667	338	3,682	284.61	1.0e-04	0.26752	0.00081	0.26914				
nciaT70_131_1_10_3	0.0	5,667	338	4,602	355.77	1.0e-04	0.30500	0.00096	0.30692				
nciaT70_131_1_11_3	0.0	5,667	338	5,523	426.92	1.0e-04	0.33850	0.00107	0.34064				
nciaT70_131_1_12_3	0.0	5,667	338	6,443	498.07	1.0e-04	0.37139	0.00102	0.37342				
nciaT70_131_1_13_3	0.0	5,667	338	7,364	569.23	1.0e-04	0.40245	0.00098	0.40441				

Table 6.9.6-20c. Results for 1.31 in. smaller diameter UZrH_x content at 70.1 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
nciaT70_131_1_14_3	0.0	5,667	338	8,284	640.38	1.0e-04	0.43010	0.00115	0.43241				
nciaT70_131_1_15_3	0.0	5,667	338	9,205	711.53	1.0e-04	0.45804	0.00122	0.46047				

Table 6.9.6-20d. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
homogenized content in flooded containment vessel, single package reflected [10 CFR 71.55(d)(2)]													
NCT													
no can spacers (np thickness = 0.0 in.)													
mocfr													
ncsrt55d2_1_1_15	0.0	10,400	921	0	0.00	1.0e+00	0.11370	0.00054	0.11477				
ncsrt55d2_1_6_15	0.0	10,400	921	900	25.50	1.0e+00	0.15074	0.00061	0.15196				
ncsrt55d2_1_7_15	0.0	10,400	921	1,800	51.00	1.0e+00	0.19298	0.00070	0.19439				
ncsrt55d2_1_8_15	0.0	10,400	921	2,700	76.50	1.0e+00	0.24182	0.00082	0.24346				
ncsrt55d2_1_9_15	0.0	10,400	921	3,599	102.00	1.0e+00	0.29424	0.00084	0.29591				
ncsrt55d2_1_10_15	0.0	10,400	921	4,499	127.50	1.0e+00	0.34858	0.00100	0.35059				
ncsrt55d2_1_11_15	0.0	10,400	921	5,399	153.00	1.0e+00	0.40341	0.00119	0.40579				
ncsrt55d2_1_12_15	0.0	10,400	921	6,299	178.50	1.0e+00	0.45802	0.00109	0.46020				
ncsrt55d2_1_13_15	0.0	10,400	921	7,199	204.00	1.0e+00	0.51163	0.00121	0.51404				
ncsrt55d2_1_14_15	0.0	10,400	921	8,098	229.51	1.0e+00	0.56264	0.00129	0.56521				
ncsrt55d2_1_15_15	0.0	10,400	921	8,998	255.01	1.0e+00	0.60824	0.00136	0.61095				
moifr													
ncsrt55d2_1_15_15	0.0	10,400	921	8,998	255.01	1.0e+00	0.60824	0.00136	0.61095				
ncsrt55d2_1_15_8	0.0	10,400	921	8,998	255.01	3.0e-01	0.55284	0.00122	0.55528				

Table 6.9.6-20d. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrt55d2_1_15_6	0.0	10,400	921	8,998	255.01	1.0e-01	0.53397	0.00114	0.53626				
ncsrt55d2_1_15_5	0.0	10,400	921	8,998	255.01	1.0e-02	0.52373	0.00115	0.52604				
ncsrt55d2_1_15_4	0.0	10,400	921	8,998	255.01	1.0e-03	0.52361	0.00124	0.52609				
ncsrt55d2_1_15_3	0.0	10,400	921	8,998	255.01	1.0e-04	0.52050	0.00116	0.52283				
ncsrt55d2_1_15_2	0.0	10,400	921	8,998	255.01	1.0e-05	0.52366	0.00123	0.52611				
ncsrt55d2_1_15_1	0.0	10,400	921	8,998	255.01	1.0e-20	0.52390	0.00120	0.52631				
with can spacers (np thickness = 1.4 in.)													
mocfr													
ncsrt55d2_2_1_15	1.4	10,400	921	0	0.00	1.0e+00	0.10877	0.00048	0.10972				
ncsrt55d2_2_6_15	1.4	10,400	921	839	23.76	1.0e+00	0.14519	0.00062	0.14643				
ncsrt55d2_2_7_15	1.4	10,400	921	1,677	47.52	1.0e+00	0.18564	0.00082	0.18729				
ncsrt55d2_2_8_15	1.4	10,400	921	2,515	71.29	1.0e+00	0.23269	0.00095	0.23459				
ncsrt55d2_2_9_15	1.4	10,400	921	3,354	95.05	1.0e+00	0.28305	0.00082	0.28469				
ncsrt55d2_2_10_15	1.4	10,400	921	4,192	118.81	1.0e+00	0.33734	0.00105	0.33944				
ncsrt55d2_2_11_15	1.4	10,400	921	5,031	142.57	1.0e+00	0.39111	0.00128	0.39367				
ncsrt55d2_2_12_15	1.4	10,400	921	5,869	166.33	1.0e+00	0.44324	0.00114	0.44553				
ncsrt55d2_2_13_15	1.4	10,400	921	6,708	190.09	1.0e+00	0.49696	0.00128	0.49951				
ncsrt55d2_2_14_15	1.4	10,400	921	7,546	213.86	1.0e+00	0.54756	0.00093	0.54942				
ncsrt55d2_2_15_15	1.4	10,400	921	8,385	237.62	1.0e+00	0.59538	0.00144	0.59825				
moifr													
ncsrt55d2_2_15_15	1.4	10,400	921	8,385	237.62	1.0e+00	0.59538	0.00144	0.59825				
ncsrt55d2_2_15_8	1.4	10,400	921	8,385	237.62	3.0e-01	0.53671	0.00112	0.53895				
ncsrt55d2_2_15_6	1.4	10,400	921	8,385	237.62	1.0e-01	0.52002	0.00107	0.52217				
ncsrt55d2_2_15_5	1.4	10,400	921	8,385	237.62	1.0e-02	0.50958	0.00123	0.51204				
ncsrt55d2_2_15_4	1.4	10,400	921	8,385	237.62	1.0e-03	0.50803	0.00111	0.51024				
ncsrt55d2_2_15_3	1.4	10,400	921	8,385	237.62	1.0e-04	0.50785	0.00116	0.51018				
ncsrt55d2_2_15_2	1.4	10,400	921	8,385	237.62	1.0e-05	0.50851	0.00117	0.51086				

Table 6.9.6-20d. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
ncsrt55d2_2_15_1	1.4	10,400	921	8,385	237.62	1.0e-20	0.50763	0.00113	0.50989				
homogenized content in flooded containment vessel, array packaging model for CSI=0.0 [10 CFR 71.55(d)(2)]													
NCT													
no can spacers (np thickness = 0.0 in.)													
moifr													
nciat55d2_1_1_3	0.0	10400	921	0	0.00	1.0e-04	0.13090	0.00039	0.13168				
nciat55d2_1_6_3	0.0	10400	921	900	25.50	1.0e-04	0.18600	0.00056	0.18713				
nciat55d2_1_7_3	0.0	10400	921	1,800	51.00	1.0e-04	0.24841	0.00078	0.24997				
nciat55d2_1_8_3	0.0	10400	921	2,700	76.50	1.0e-04	0.31679	0.00074	0.31826				
nciat55d2_1_9_3	0.0	10400	921	3,599	102.00	1.0e-04	0.38338	0.00097	0.38531				
nciat55d2_1_10_3	0.0	10400	921	4,499	127.50	1.0e-04	0.44808	0.00093	0.44993				
nciat55d2_1_11_3	0.0	10400	921	5,399	153.00	1.0e-04	0.51062	0.00096	0.51254				
nciat55d2_1_12_3	0.0	10400	921	6,299	178.50	1.0e-04	0.56869	0.00104	0.57076				
nciat55d2_1_13_3	0.0	10400	921	7,198	204.00	1.0e-04	0.62259	0.00112	0.62484				
nciat55d2_1_14_3	0.0	10400	921	8,098	229.51	1.0e-04	0.67077	0.00100	0.67276				
nciat55d2_1_15_3	0.0	10400	921	8,998	255.01	1.0e-04	0.71379	0.00131	0.71641				
with can spacers (np thickness = 1.4 in.)													
nciat55d2_02_1_3	1.4	10400	921	0	0.00	1.0e-04	0.12620	0.00039	0.12697				
nciat55d2_02_6_3	1.4	10400	921	838	23.76	1.0e-04	0.17224	0.00043	0.17310				
nciat55d2_02_7_3	1.4	10400	921	1,677	47.52	1.0e-04	0.22779	0.00057	0.22894				
nciat55d2_02_8_3	1.4	10400	921	2,515	71.29	1.0e-04	0.28723	0.00081	0.28884				
nciat55d2_02_9_3	1.4	10400	921	3,354	95.05	1.0e-04	0.34934	0.00079	0.35091				
nciat55d2_02_10_3	1.4	10400	921	4,192	118.81	1.0e-04	0.40899	0.00097	0.41094				
nciat55d2_02_11_3	1.4	10400	921	5,031	142.57	1.0e-04	0.46775	0.00101	0.46977				
nciat55d2_02_12_3	1.4	10400	921	5,869	166.33	1.0e-04	0.52454	0.00105	0.52664				
nciat55d2_02_13_3	1.4	10400	921	6,708	190.09	1.0e-04	0.57561	0.00105	0.57771				

Table 6.9.6-20d. Results for UZrH_x content at 19.7 wt % ²³⁵U in packaging calculation model

case name	np (in)	UZrH _x (g)	²³⁵ U (g)	H ₂ O (g)	h/x	mocfr/ moifr	k _{eff}	σ	k _{eff} +2σ	case name	k _{eff}	σ	k _{eff} +2σ
nciat55d2_02_14_3	1.4	10400	921	7,546	213.86	1.0e-04	0.62437	0.00100	0.62637				
nciat55d2_02_15_3	1.4	10400	921	8,385	237.62	1.0e-04	0.66968	0.00118	0.67203				

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
compromised package, HEU in spherical configuration, 20.0 cm water reflector														
10,000g HEU														
atdmr_10_8	10,000	513	na	na	1.72	6.3828	na	na	na	na	0.0699	0.84749	0.00166	0.85080
atdmr_10_7	9,500	513	na	na	1.81	6.3821	na	na	na	na	0.0700	0.83119	0.00116	0.83352
atdmr_10_6	9,000	513	na	na	1.91	6.3814	na	na	na	na	0.0704	0.81788	0.00124	0.82037
atdmr_10_5	8,000	513	na	na	2.15	6.3801	na	na	na	na	0.0703	0.79457	0.00108	0.79673
atdmr_10_4	7,000	513	na	na	2.46	6.3788	na	na	na	na	0.0708	0.76800	0.00105	0.77010
atdmr_10_3	6,000	513	na	na	2.87	6.3775	na	na	na	na	0.0708	0.73829	0.00119	0.74067
atdmr_10_2	4,000	513	na	na	4.30	6.3749	na	na	na	na	0.0707	0.67494	0.00115	0.67723
atdmr_10_1	1,900	513	na	na	9.06	6.3721	na	na	na	na	0.0714	0.58800	0.00115	0.59030
9,000g HEU														
atdmr_9_8	9,000	513	na	na	1.91	6.2772	na	na	na	na	0.0709	0.82760	0.00126	0.83012
atdmr_9_7	8,550	513	na	na	2.01	6.2766	na	na	na	na	0.0706	0.81397	0.00109	0.81615
atdmr_9_6	8,100	513	na	na	2.12	6.2760	na	na	na	na	0.0709	0.80283	0.00125	0.80533
atdmr_9_5	7,200	513	na	na	2.39	6.2747	na	na	na	na	0.0713	0.77712	0.00131	0.77973
atdmr_9_4	6,300	513	na	na	2.73	6.2735	na	na	na	na	0.0713	0.75186	0.00109	0.75403
atdmr_9_3	5,400	513	na	na	3.19	6.2723	na	na	na	na	0.0717	0.72734	0.00146	0.73025
atdmr_9_2	3,600	513	na	na	4.78	6.2698	na	na	na	na	0.0716	0.66431	0.00106	0.66642

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmr_9_1	1,710	513	na	na	10.06	6.2673	na	na	na	na	0.0722	0.58032	0.00113	0.58259
8,000g HEU														
atdmr_8_7	7,600	513	na	na	2.26	6.1674	na	na	na	na	0.0715	0.79619	0.00117	0.79853
atdmr_8_6	7,200	513	na	na	2.39	6.1668	na	na	na	na	0.0727	0.78301	0.00116	0.78533
atdmr_8_5	6,400	513	na	na	2.69	6.1657	na	na	na	na	0.0719	0.75965	0.00114	0.76193
atdmr_8_4	5,600	513	na	na	3.07	6.1646	na	na	na	na	0.0716	0.73554	0.00108	0.73771
atdmr_8_3	4,800	513	na	na	3.58	6.1634	na	na	na	na	0.0726	0.70989	0.00097	0.71182
atdmr_8_2	3,200	513	na	na	5.38	6.1612	na	na	na	na	0.0728	0.65175	0.00102	0.65379
atdmr_8_1	1,520	513	na	na	11.32	6.1588	na	na	na	na	0.0733	0.57379	0.00106	0.57592
7,000g HEU														
atdmr_7_8	7,000	513	na	na	2.46	6.0547	na	na	na	na	0.0727	0.78948	0.00115	0.79178
atdmr_7_7	6,650	513	na	na	2.59	6.0541	na	na	na	na	0.0729	0.77766	0.00132	0.78030
atdmr_7_6	6,300	513	na	na	2.73	6.0536	na	na	na	na	0.0730	0.76315	0.00123	0.76560
atdmr_7_5	5,600	513	na	na	3.07	6.0526	na	na	na	na	0.0732	0.74249	0.00125	0.74499
atdmr_7_4	4,900	513	na	na	3.51	6.0516	na	na	na	na	0.0727	0.72132	0.00116	0.72365
atdmr_7_3	4,200	513	na	na	4.10	6.0506	na	na	na	na	0.0741	0.69486	0.00105	0.69696
atdmr_7_2	2,800	513	na	na	6.15	6.0485	na	na	na	na	0.0735	0.64123	0.00116	0.64355
atdmr_7_1	1,330	513	na	na	12.94	6.0464	na	na	na	na	0.0737	0.56794	0.00130	0.57053
compromised package, HEU in spherical configuration, Kaolite shell, 20.0 cm water reflector														
7,000g HEU 100% enrichment														
atdmsr_7_8_11	7,000	513	na	na	2.46	6.0547	na	na	66,133.1	13.0264	0.0300	0.76978	0.00129	0.77236
atdmsr_7_8_10	7,000	513	na	na	2.46	6.0547	na	na	59,519.8	12.6235	0.0314	0.76732	0.00118	0.76967
atdmsr_7_8_9	7,000	513	na	na	2.46	6.0547	na	na	52,906.5	12.1930	0.0330	0.76002	0.00125	0.76252
atdmsr_7_8_8	7,000	513	na	na	2.46	6.0547	na	na	46,293.2	11.7298	0.0345	0.75671	0.00121	0.75913
atdmsr_7_8_7	7,000	513	na	na	2.46	6.0547	na	na	39,679.9	11.2268	0.0374	0.75221	0.00109	0.75438
atdmsr_7_8_6	7,000	513	na	na	2.46	6.0547	na	na	33,066.6	10.6742	0.0395	0.75004	0.00120	0.75245

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmsr_7_8_5	7,000	513	na	na	2.46	6.0547	na	na	26,453.3	10.0575	0.0423	0.74240	0.00101	0.74442
atdmsr_7_8_4	7,000	513	na	na	2.46	6.0547	na	na	19,839.9	9.3542	0.0466	0.73769	0.00151	0.74072
atdmsr_7_8_3	7,000	513	na	na	2.46	6.0547	na	na	13,226.6	8.5255	0.0516	0.73211	0.00120	0.73452
atdmsr_7_8_2	7,000	513	na	na	2.46	6.0547	na	na	6,613.3	7.4937	0.0589	0.73646	0.00124	0.73894
atdmsr_7_8_1	7,000	513	na	na	2.46	6.0547	na	na	0.0	6.0548	0.0728	0.79093	0.00117	0.79327
7,000g HEU 95% enrichment														
atdmsr_7_7_11	6,650	513	na	na	2.59	6.0541	na	na	66,133.1	13.0263	0.0295	0.75467	0.00115	0.75698
atdmsr_7_7_10	6,650	513	na	na	2.59	6.0541	na	na	59,519.8	12.6234	0.0312	0.75071	0.00123	0.75317
atdmsr_7_7_9	6,650	513	na	na	2.59	6.0541	na	na	52,906.5	12.1929	0.0328	0.74594	0.00128	0.74850
atdmsr_7_7_8	6,650	513	na	na	2.59	6.0541	na	na	46,293.2	11.7297	0.0348	0.74333	0.00108	0.74549
atdmsr_7_7_7	6,650	513	na	na	2.59	6.0541	na	na	39,679.9	11.2267	0.0368	0.73698	0.00117	0.73932
atdmsr_7_7_6	6,650	513	na	na	2.59	6.0541	na	na	33,066.6	10.6740	0.0397	0.73239	0.00125	0.73489
atdmsr_7_7_5	6,650	513	na	na	2.59	6.0541	na	na	26,453.3	10.0573	0.0428	0.72809	0.00142	0.73093
atdmsr_7_7_4	6,650	513	na	na	2.59	6.0541	na	na	19,839.9	9.3540	0.0461	0.72160	0.00110	0.72381
atdmsr_7_7_3	6,650	513	na	na	2.59	6.0541	na	na	13,226.6	8.5252	0.0514	0.71946	0.00121	0.72189
atdmsr_7_7_2	6,650	513	na	na	2.59	6.0541	na	na	6,613.3	7.4934	0.0596	0.72377	0.00105	0.72587
atdmsr_7_7_1	6,650	513	na	na	2.59	6.0541	na	na	0.0	6.0542	0.0727	0.77941	0.00138	0.78218
7,000g HEU 90% enrichment														
atdmsr_7_6_11	6,300	513	na	na	2.73	6.0536	na	na	66,133.1	13.0262	0.0298	0.74002	0.00123	0.74248
atdmsr_7_6_10	6,300	513	na	na	2.73	6.0536	na	na	59,519.8	12.6233	0.0309	0.73640	0.00130	0.73899
atdmsr_7_6_9	6,300	513	na	na	2.73	6.0536	na	na	52,906.5	12.1928	0.0326	0.73341	0.00130	0.73601
atdmsr_7_6_8	6,300	513	na	na	2.73	6.0536	na	na	46,293.2	11.7296	0.0350	0.72745	0.00117	0.72978
atdmsr_7_6_7	6,300	513	na	na	2.73	6.0536	na	na	39,679.9	11.2265	0.0371	0.72397	0.00125	0.72647
atdmsr_7_6_6	6,300	513	na	na	2.73	6.0536	na	na	33,066.6	10.6739	0.0396	0.71997	0.00111	0.72219
atdmsr_7_6_5	6,300	513	na	na	2.73	6.0536	na	na	26,453.3	10.0572	0.0422	0.71532	0.00112	0.71755
atdmsr_7_6_4	6,300	513	na	na	2.73	6.0536	na	na	19,839.9	9.3538	0.0466	0.70916	0.00125	0.71166

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmsr_7_6_3	6,300	513	na	na	2.73	6.0536	na	na	13,226.6	8.5250	0.0518	0.70456	0.00108	0.70672
atdmsr_7_6_2	6,300	513	na	na	2.73	6.0536	na	na	6,613.3	7.4931	0.0590	0.71101	0.00110	0.71322
atdmsr_7_6_1	6,300	513	na	na	2.73	6.0536	na	na	0.0	6.0537	0.0735	0.76667	0.00126	0.76920
7,000g HEU 80% enrichment														
atdmsr_7_5_11	5,600	513	na	na	3.07	6.0526	na	na	66,133.1	13.0260	0.0297	0.71137	0.00112	0.71362
atdmsr_7_5_10	5,600	513	na	na	3.07	6.0526	na	na	59,519.8	12.6230	0.0314	0.70938	0.00141	0.71220
atdmsr_7_5_9	5,600	513	na	na	3.07	6.0526	na	na	52,906.5	12.1925	0.0329	0.70515	0.00096	0.70706
atdmsr_7_5_8	5,600	513	na	na	3.07	6.0526	na	na	46,293.2	11.7293	0.0346	0.70045	0.00120	0.70285
atdmsr_7_5_7	5,600	513	na	na	3.07	6.0526	na	na	39,679.9	11.2262	0.0366	0.69582	0.00122	0.69826
atdmsr_7_5_6	5,600	513	na	na	3.07	6.0526	na	na	33,066.6	10.6736	0.0396	0.69115	0.00124	0.69363
atdmsr_7_5_5	5,600	513	na	na	3.07	6.0526	na	na	26,453.3	10.0568	0.0428	0.68561	0.00118	0.68797
atdmsr_7_5_4	5,600	513	na	na	3.07	6.0526	na	na	19,839.9	9.3534	0.0463	0.68277	0.00124	0.68525
atdmsr_7_5_3	5,600	513	na	na	3.07	6.0526	na	na	13,226.6	8.5244	0.0515	0.67737	0.00102	0.67940
atdmsr_7_5_2	5,600	513	na	na	3.07	6.0526	na	na	6,613.3	7.4924	0.0593	0.68540	0.00103	0.68746
atdmsr_7_5_1	5,600	513	na	na	3.07	6.0526	na	na	0.0	6.0527	0.0729	0.74261	0.00120	0.74501
7,000g HEU70% enrichment														
atdmsr_7_4_11	4,900	513	na	na	3.51	6.0516	na	na	66,133.1	13.0258	0.0300	0.68306	0.00121	0.68547
atdmsr_7_4_10	4,900	513	na	na	3.51	6.0516	na	na	59,519.8	12.6228	0.0312	0.67927	0.00127	0.68181
atdmsr_7_4_9	4,900	513	na	na	3.51	6.0516	na	na	52,906.5	12.1923	0.0328	0.67583	0.00137	0.67857
atdmsr_7_4_8	4,900	513	na	na	3.51	6.0516	na	na	46,293.2	11.7290	0.0349	0.67138	0.00121	0.67380
atdmsr_7_4_7	4,900	513	na	na	3.51	6.0516	na	na	39,679.9	11.2259	0.0369	0.66709	0.00108	0.66925
atdmsr_7_4_6	4,900	513	na	na	3.51	6.0516	na	na	33,066.6	10.6732	0.0399	0.66244	0.00101	0.66446
atdmsr_7_4_5	4,900	513	na	na	3.51	6.0516	na	na	26,453.3	10.0564	0.0431	0.65826	0.00111	0.66048
atdmsr_7_4_4	4,900	513	na	na	3.51	6.0516	na	na	19,839.9	9.3530	0.0465	0.65222	0.00119	0.65460
atdmsr_7_4_3	4,900	513	na	na	3.51	6.0516	na	na	13,226.6	8.5239	0.0518	0.65245	0.00126	0.65497
atdmsr_7_4_2	4,900	513	na	na	3.51	6.0516	na	na	6,613.3	7.4917	0.0599	0.65772	0.00118	0.66008

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmsr_7_4_1	4,900	513	na	na	3.51	6.0516	na	na	0.0	6.0517	0.0733	0.72043	0.00123	0.72290
7,000g HEU 60% enrichment														
atdmsr_7_3_11	4,200	513	na	na	4.10	6.0506	na	na	66,133.1	13.0256	0.0299	0.65025	0.00135	0.65295
atdmsr_7_3_10	4,200	513	na	na	4.10	6.0506	na	na	59,519.8	12.6226	0.0314	0.64822	0.00112	0.65045
atdmsr_7_3_9	4,200	513	na	na	4.10	6.0506	na	na	52,906.5	12.1920	0.0330	0.64480	0.00112	0.64705
atdmsr_7_3_8	4,200	513	na	na	4.10	6.0506	na	na	46,293.2	11.7288	0.0351	0.63950	0.00103	0.64156
atdmsr_7_3_7	4,200	513	na	na	4.10	6.0506	na	na	39,679.9	11.2257	0.0371	0.63712	0.00119	0.63950
atdmsr_7_3_6	4,200	513	na	na	4.10	6.0506	na	na	33,066.6	10.6729	0.0397	0.63245	0.00093	0.63431
atdmsr_7_3_5	4,200	513	na	na	4.10	6.0506	na	na	26,453.3	10.0561	0.0428	0.62613	0.00113	0.62838
atdmsr_7_3_4	4,200	513	na	na	4.10	6.0506	na	na	19,839.9	9.3525	0.0468	0.62494	0.00105	0.62705
atdmsr_7_3_3	4,200	513	na	na	4.10	6.0506	na	na	13,226.6	8.5234	0.0517	0.61900	0.00116	0.62132
atdmsr_7_3_2	4,200	513	na	na	4.10	6.0506	na	na	6,613.3	7.4911	0.0595	0.63166	0.00116	0.63399
atdmsr_7_3_1	4,200	513	na	na	4.10	6.0506	na	na	0.0	6.0507	0.0734	0.69589	0.00112	0.69813
7,000g HEU 40% enrichment														
atdmsr_7_2_11	2,800	513	na	na	6.15	6.0485	na	na	66,133.1	13.0251	0.0303	0.57913	0.00106	0.58126
atdmsr_7_2_10	2,800	513	na	na	6.15	6.0485	na	na	59,519.8	12.6221	0.0311	0.57855	0.00114	0.58083
atdmsr_7_2_9	2,800	513	na	na	6.15	6.0485	na	na	52,906.5	12.1915	0.0332	0.57213	0.00121	0.57455
atdmsr_7_2_8	2,800	513	na	na	6.15	6.0485	na	na	46,293.2	11.7282	0.0350	0.56971	0.00124	0.57219
atdmsr_7_2_7	2,800	513	na	na	6.15	6.0485	na	na	39,679.9	11.2251	0.0372	0.56672	0.00109	0.56890
atdmsr_7_2_6	2,800	513	na	na	6.15	6.0485	na	na	33,066.6	10.6722	0.0391	0.56156	0.00107	0.56371
atdmsr_7_2_5	2,800	513	na	na	6.15	6.0485	na	na	26,453.3	10.0553	0.0424	0.55753	0.00109	0.55972
atdmsr_7_2_4	2,800	513	na	na	6.15	6.0485	na	na	19,839.9	9.3517	0.0467	0.55519	0.00116	0.55752
atdmsr_7_2_3	2,800	513	na	na	6.15	6.0485	na	na	13,226.6	8.5224	0.0521	0.55309	0.00103	0.55515
atdmsr_7_2_2	2,800	513	na	na	6.15	6.0485	na	na	6,613.3	7.4897	0.0592	0.56497	0.00103	0.56704
atdmsr_7_2_1	2,800	513	na	na	6.15	6.0485	na	na	0.0	6.0486	0.0738	0.64051	0.00108	0.64267
7,000g HEU 20% enrichment														

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmsr_7_1_11	1,330	513	na	na	12.94	6.0464	na	na	66,133.1	13.0247	0.0300	0.47937	0.00107	0.48151
atdmsr_7_1_10	1,330	513	na	na	12.94	6.0464	na	na	59,519.8	12.6216	0.0315	0.47895	0.00120	0.48136
atdmsr_7_1_9	1,330	513	na	na	12.94	6.0464	na	na	52,906.5	12.1910	0.0330	0.47468	0.00117	0.47702
atdmsr_7_1_8	1,330	513	na	na	12.94	6.0464	na	na	46,293.2	11.7276	0.0349	0.47179	0.00102	0.47383
atdmsr_7_1_7	1,330	513	na	na	12.94	6.0464	na	na	39,679.9	11.2244	0.0372	0.46614	0.00113	0.46841
atdmsr_7_1_6	1,330	513	na	na	12.94	6.0464	na	na	33,066.6	10.6715	0.0393	0.46445	0.00093	0.46632
atdmsr_7_1_5	1,330	513	na	na	12.94	6.0464	na	na	26,453.3	10.0545	0.0430	0.46287	0.00096	0.46480
atdmsr_7_1_4	1,330	513	na	na	12.94	6.0464	na	na	19,839.9	9.3508	0.0469	0.45842	0.00094	0.46031
atdmsr_7_1_3	1,330	513	na	na	12.94	6.0464	na	na	13,226.6	8.5213	0.0525	0.45781	0.00095	0.45971
atdmsr_7_1_2	1,330	513	na	na	12.94	6.0464	na	na	6,613.3	7.4883	0.0602	0.47487	0.00114	0.47715
atdmsr_7_1_1	1,330	513	na	na	12.94	6.0464	na	na	0.0	6.0465	0.0733	0.56625	0.00104	0.56833
compromised package, HEU in spherical configuration, none-to-water saturated Kaolite shell, 20.0 cm water reflector														
7,000g HEU 100% enrichment														
atdmkr_7_8_11	7,000	513	na	na	2.46	6.0547	76,819.4	51,214.9	128,034.0	31.0814	0.0057	0.74873	0.00152	0.75178
atdmkr_7_8_10	7,000	513	na	na	2.46	6.0547	69,137.2	46,093.4	115,230.6	30.0170	0.0065	0.74821	0.00123	0.75067
atdmkr_7_8_9	7,000	513	na	na	2.46	6.0547	61,455.3	40,971.9	102,427.2	28.8712	0.0074	0.74665	0.00112	0.74889
atdmkr_7_8_8	7,000	513	na	na	2.46	6.0547	53,773.4	35,850.4	89,623.8	27.6264	0.0083	0.74610	0.00123	0.74856
atdmkr_7_8_7	7,000	513	na	na	2.46	6.0547	46,091.5	30,728.9	76,820.4	26.2581	0.0094	0.74918	0.00119	0.75155
atdmkr_7_8_6	7,000	513	na	na	2.46	6.0547	38,409.6	25,607.5	64,017.0	24.7300	0.0110	0.74664	0.00118	0.74901
atdmkr_7_8_5	7,000	513	na	na	2.46	6.0547	30,727.6	20,486.0	51,213.6	22.9853	0.0128	0.74760	0.00134	0.75027
atdmkr_7_8_4	7,000	513	na	na	2.46	6.0547	23,045.7	15,364.5	38,410.2	20.9259	0.0161	0.74585	0.00118	0.74821
atdmkr_7_8_3	7,000	513	na	na	2.46	6.0547	15,363.8	10,243.0	25,606.8	18.3540	0.0206	0.74498	0.00117	0.74733
atdmkr_7_8_2	7,000	513	na	na	2.46	6.0547	7,681.9	5,121.5	12,803.4	14.7399	0.0296	0.74816	0.00123	0.75063
atdmkr_7_8_1	7,000	513	na	na	2.46	6.0547	0.0	0.0	0.0	6.0548	0.0730	0.78994	0.00131	0.79257
7,000g HEU 95% enrichment														
atdmkr_7_7_11	6,650	513	na	na	2.59	6.0541	76,819.4	51,214.9	128,034.0	31.0814	0.0058	0.73331	0.00141	0.73613

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmkr_7_7_10	6,650	513	na	na	2.59	6.0541	69,137.2	46,093.4	115,230.6	30.0170	0.0064	0.73430	0.00130	0.73690
atdmkr_7_7_9	6,650	513	na	na	2.59	6.0541	61,455.3	40,971.9	102,427.2	28.8712	0.0073	0.73397	0.00103	0.73603
atdmkr_7_7_8	6,650	513	na	na	2.59	6.0541	53,773.4	35,850.4	89,623.8	27.6264	0.0081	0.73295	0.00123	0.73541
atdmkr_7_7_7	6,650	513	na	na	2.59	6.0541	46,091.5	30,728.9	76,820.4	26.2581	0.0094	0.73168	0.00112	0.73392
atdmkr_7_7_6	6,650	513	na	na	2.59	6.0541	38,409.6	25,607.5	64,017.0	24.7300	0.0110	0.73221	0.00132	0.73484
atdmkr_7_7_5	6,650	513	na	na	2.59	6.0541	30,727.6	20,486.0	51,213.6	22.9853	0.0130	0.73422	0.00121	0.73664
atdmkr_7_7_4	6,650	513	na	na	2.59	6.0541	23,045.7	15,364.5	38,410.2	20.9259	0.0159	0.73389	0.00107	0.73604
atdmkr_7_7_3	6,650	513	na	na	2.59	6.0541	15,363.8	10,243.0	25,606.8	18.3539	0.0208	0.73441	0.00117	0.73675
atdmkr_7_7_2	6,650	513	na	na	2.59	6.0541	7,681.9	5,121.5	12,803.4	14.7398	0.0298	0.73565	0.00118	0.73801
atdmkr_7_7_1	6,650	513	na	na	2.59	6.0541	0.0	0.0	0.0	6.0542	0.0729	0.77722	0.00126	0.77975
7,000g HEU 90% enrichment														
atdmkr_7_6_11	6,300	513	na	na	2.73	6.0536	76,819.4	51,214.9	128,034.0	31.0814	0.0059	0.72011	0.00123	0.72257
atdmkr_7_6_10	6,300	513	na	na	2.73	6.0536	69,137.2	46,093.4	115,230.6	30.0169	0.0066	0.72046	0.00133	0.72312
atdmkr_7_6_9	6,300	513	na	na	2.73	6.0536	61,455.3	40,971.9	102,427.2	28.8711	0.0074	0.72075	0.00115	0.72306
atdmkr_7_6_8	6,300	513	na	na	2.73	6.0536	53,773.4	35,850.4	89,623.8	27.6264	0.0081	0.72144	0.00139	0.72422
atdmkr_7_6_7	6,300	513	na	na	2.73	6.0536	46,091.5	30,728.9	76,820.4	26.2580	0.0095	0.72118	0.00124	0.72366
atdmkr_7_6_6	6,300	513	na	na	2.73	6.0536	38,409.6	25,607.5	64,017.0	24.7299	0.0109	0.71958	0.00123	0.72204
atdmkr_7_6_5	6,300	513	na	na	2.73	6.0536	30,727.6	20,486.0	51,213.6	22.9853	0.0130	0.72335	0.00122	0.72580
atdmkr_7_6_4	6,300	513	na	na	2.73	6.0536	23,045.7	15,364.5	38,410.2	20.9258	0.0159	0.72261	0.00128	0.72517
atdmkr_7_6_3	6,300	513	na	na	2.73	6.0536	15,363.8	10,243.0	25,606.8	18.3539	0.0211	0.71961	0.00116	0.72192
atdmkr_7_6_2	6,300	513	na	na	2.73	6.0536	7,681.9	5,121.5	12,803.4	14.7397	0.0300	0.72437	0.00112	0.72661
atdmkr_7_6_1	6,300	513	na	na	2.73	6.0536	0.0	0.0	0.0	6.0537	0.0727	0.76352	0.00123	0.76598
7,000g HEU 80% enrichment														
atdmkr_7_5_11	5,600	513	na	na	3.07	6.0526	76,819.4	51,214.9	128,034.0	31.0813	0.0060	0.69823	0.00124	0.70071
atdmkr_7_5_10	5,600	513	na	na	3.07	6.0526	69,137.2	46,093.4	115,230.6	30.0169	0.0065	0.69888	0.00124	0.70137
atdmkr_7_5_9	5,600	513	na	na	3.07	6.0526	61,455.3	40,971.9	102,427.2	28.8711	0.0073	0.69842	0.00148	0.70138
atdmkr_7_5_8	5,600	513	na	na	3.07	6.0526	53,773.4	35,850.4	89,623.8	27.6263	0.0081	0.70030	0.00109	0.70248

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmkr_7_5_7	5,600	513	na	na	3.07	6.0526	46,091.5	30,728.9	76,820.4	26.2580	0.0092	0.70044	0.00126	0.70297
atdmkr_7_5_6	5,600	513	na	na	3.07	6.0526	38,409.6	25,607.5	64,017.0	24.7299	0.0108	0.69703	0.00110	0.69924
atdmkr_7_5_5	5,600	513	na	na	3.07	6.0526	30,727.6	20,486.0	51,213.6	22.9852	0.0127	0.69957	0.00122	0.70202
atdmkr_7_5_4	5,600	513	na	na	3.07	6.0526	23,045.7	15,364.5	38,410.2	20.9257	0.0159	0.69622	0.00108	0.69838
atdmkr_7_5_3	5,600	513	na	na	3.07	6.0526	15,363.8	10,243.0	25,606.8	18.3538	0.0203	0.69848	0.00117	0.70081
atdmkr_7_5_2	5,600	513	na	na	3.07	6.0526	7,681.9	5,121.5	12,803.4	14.7395	0.0297	0.69932	0.00130	0.70193
atdmkr_7_5_1	5,600	513	na	na	3.07	6.0526	0.0	0.0	0.0	6.0527	0.0732	0.74467	0.00118	0.74704
7,000g HEU 70% enrichment														
atdmkr_7_4_11	4,900	513	na	na	3.51	6.0516	76,819.4	51,214.9	128,034.0	31.0813	0.0060	0.67338	0.00112	0.67561
atdmkr_7_4_10	4,900	513	na	na	3.51	6.0516	69,137.2	46,093.4	115,230.6	30.0169	0.0066	0.67336	0.00119	0.67574
atdmkr_7_4_9	4,900	513	na	na	3.51	6.0516	61,455.3	40,971.9	102,427.2	28.8711	0.0073	0.67359	0.00118	0.67595
atdmkr_7_4_8	4,900	513	na	na	3.51	6.0516	53,773.4	35,850.4	89,623.8	27.6263	0.0082	0.67522	0.00122	0.67767
atdmkr_7_4_7	4,900	513	na	na	3.51	6.0516	46,091.5	30,728.9	76,820.4	26.2579	0.0095	0.67169	0.00110	0.67389
atdmkr_7_4_6	4,900	513	na	na	3.51	6.0516	38,409.6	25,607.5	64,017.0	24.7298	0.0110	0.67452	0.00113	0.67679
atdmkr_7_4_5	4,900	513	na	na	3.51	6.0516	30,727.6	20,486.0	51,213.6	22.9851	0.0129	0.67401	0.00133	0.67667
atdmkr_7_4_4	4,900	513	na	na	3.51	6.0516	23,045.7	15,364.5	38,410.2	20.9256	0.0159	0.67488	0.00118	0.67725
atdmkr_7_4_3	4,900	513	na	na	3.51	6.0516	15,363.8	10,243.0	25,606.8	18.3536	0.0207	0.67501	0.00120	0.67742
atdmkr_7_4_2	4,900	513	na	na	3.51	6.0516	7,681.9	5,121.5	12,803.4	14.7393	0.0299	0.67480	0.00129	0.67737
atdmkr_7_4_1	4,900	513	na	na	3.51	6.0516	0.0	0.0	0.0	6.0517	0.0725	0.72119	0.00137	0.72393
7,000g HEU 60% enrichment														
atdmkr_7_3_11	4,200	513	na	na	4.10	6.0506	76,819.4	51,214.9	128,034.0	31.0813	0.0058	0.64845	0.00127	0.65099
atdmkr_7_3_10	4,200	513	na	na	4.10	6.0506	69,137.2	46,093.4	115,230.6	30.0168	0.0064	0.64981	0.00121	0.65224
atdmkr_7_3_9	4,200	513	na	na	4.10	6.0506	61,455.3	40,971.9	102,427.2	28.8710	0.0073	0.64800	0.00123	0.65045
atdmkr_7_3_8	4,200	513	na	na	4.10	6.0506	53,773.4	35,850.4	89,623.8	27.6262	0.0084	0.64931	0.00113	0.65157
atdmkr_7_3_7	4,200	513	na	na	4.10	6.0506	46,091.5	30,728.9	76,820.4	26.2579	0.0094	0.65002	0.00105	0.65213
atdmkr_7_3_6	4,200	513	na	na	4.10	6.0506	38,409.6	25,607.5	64,017.0	24.7297	0.0109	0.64947	0.00105	0.65157

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmkr_7_3_5	4,200	513	na	na	4.10	6.0506	30,727.6	20,486.0	51,213.6	22.9851	0.0131	0.64780	0.00128	0.65036
atdmkr_7_3_4	4,200	513	na	na	4.10	6.0506	23,045.7	15,364.5	38,410.2	20.9256	0.0161	0.64888	0.00112	0.65112
atdmkr_7_3_3	4,200	513	na	na	4.10	6.0506	15,363.8	10,243.0	25,606.8	18.3535	0.0207	0.65026	0.00104	0.65233
atdmkr_7_3_2	4,200	513	na	na	4.10	6.0506	7,681.9	5,121.5	12,803.4	14.7392	0.0298	0.64866	0.00107	0.65081
atdmkr_7_3_1	4,200	513	na	na	4.10	6.0506	0.0	0.0	0.0	6.0507	0.0733	0.69563	0.00132	0.69828
7,000g HEU 40% enrichment														
atdmkr_7_2_11	2,800	513	na	na	6.15	6.0485	76,819.4	51,214.9	128,034.0	31.0812	0.0059	0.59232	0.00100	0.59432
atdmkr_7_2_10	2,800	513	na	na	6.15	6.0485	69,137.2	46,093.4	115,230.6	30.0167	0.0064	0.59431	0.00098	0.59626
atdmkr_7_2_9	2,800	513	na	na	6.15	6.0485	61,455.3	40,971.9	102,427.2	28.8709	0.0072	0.59123	0.00117	0.59357
atdmkr_7_2_8	2,800	513	na	na	6.15	6.0485	53,773.4	35,850.4	89,623.8	27.6261	0.0082	0.59177	0.00110	0.59398
atdmkr_7_2_7	2,800	513	na	na	6.15	6.0485	46,091.5	30,728.9	76,820.4	26.2578	0.0096	0.59056	0.00120	0.59296
atdmkr_7_2_6	2,800	513	na	na	6.15	6.0485	38,409.6	25,607.5	64,017.0	24.7296	0.0110	0.59052	0.00121	0.59294
atdmkr_7_2_5	2,800	513	na	na	6.15	6.0485	30,727.6	20,486.0	51,213.6	22.9849	0.0133	0.59140	0.00116	0.59372
atdmkr_7_2_4	2,800	513	na	na	6.15	6.0485	23,045.7	15,364.5	38,410.2	20.9254	0.0160	0.58984	0.00115	0.59215
atdmkr_7_2_3	2,800	513	na	na	6.15	6.0485	15,363.8	10,243.0	25,606.8	18.3533	0.0207	0.59072	0.00102	0.59275
atdmkr_7_2_2	2,800	513	na	na	6.15	6.0485	7,681.9	5,121.5	12,803.4	14.7388	0.0304	0.59025	0.00114	0.59254
atdmkr_7_2_1	2,800	513	na	na	6.15	6.0485	0.0	0.0	0.0	6.0486	0.0732	0.64138	0.00114	0.64366
7,000g HEU 20% enrichment														
atdmkr_7_1_11	1,330	513	na	na	12.94	6.0464	76,819.4	51,214.9	128,034.0	31.0811	0.0058	0.51279	0.00108	0.51495
atdmkr_7_1_10	1,330	513	na	na	12.94	6.0464	69,137.2	46,093.4	115,230.6	30.0167	0.0066	0.51316	0.00104	0.51523
atdmkr_7_1_9	1,330	513	na	na	12.94	6.0464	61,455.3	40,971.9	102,427.2	28.8708	0.0074	0.51271	0.00095	0.51460
atdmkr_7_1_8	1,330	513	na	na	12.94	6.0464	53,773.4	35,850.4	89,623.8	27.6260	0.0080	0.51226	0.00101	0.51429
atdmkr_7_1_7	1,330	513	na	na	12.94	6.0464	46,091.5	30,728.9	76,820.4	26.2576	0.0094	0.51273	0.00107	0.51487
atdmkr_7_1_6	1,330	513	na	na	12.94	6.0464	38,409.6	25,607.5	64,017.0	24.7295	0.0108	0.51071	0.00095	0.51262
atdmkr_7_1_5	1,330	513	na	na	12.94	6.0464	30,727.6	20,486.0	51,213.6	22.9848	0.0132	0.51334	0.00090	0.51514
atdmkr_7_1_4	1,330	513	na	na	12.94	6.0464	23,045.7	15,364.5	38,410.2	20.9252	0.0160	0.51289	0.00114	0.51517
atdmkr_7_1_3	1,330	513	na	na	12.94	6.0464	15,363.8	10,243.0	25,606.8	18.3531	0.0209	0.51438	0.00127	0.51692

Table 6.9.6-21. Results for solid HEU metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdmkr_7_1_2	1,330	513	na	na	12.94	6.0464	7,681.9	5,121.5	12,803.4	14.7385	0.0304	0.51402	0.00103	0.51608
atdmkr_7_1_1	1,330	513	na	na	12.94	6.0464	0.0	0.0	0.0	6.0465	0.0739	0.56475	0.00101	0.56677
compromised package, HEU in spherical configuration, none-to-dry Kaolite shell, 20.0 cm water reflector														
7,000g HEU 100% enrichment														
atdmkr_7_8_11	7,000	513	na	na	2.46	6.0547	2,204.7	51,214.9	53,419.1	31.0814	0.0487	0.59229	0.00094	0.59417
atdmkr_7_8_10	7,000	513	na	na	2.46	6.0547	1,984.2	46,093.4	48,077.2	30.0170	0.0500	0.59518	0.00088	0.59695
atdmkr_7_8_9	7,000	513	na	na	2.46	6.0547	1,763.8	40,971.9	42,735.3	28.8712	0.0506	0.59249	0.00102	0.59453
atdmkr_7_8_8	7,000	513	na	na	2.46	6.0547	1,543.3	35,850.4	37,393.3	27.6264	0.0516	0.59743	0.00105	0.59953
atdmkr_7_8_7	7,000	513	na	na	2.46	6.0547	1,322.8	30,728.9	32,051.4	26.2581	0.0529	0.59965	0.00135	0.60235
atdmkr_7_8_6	7,000	513	na	na	2.46	6.0547	1,102.4	25,607.4	26,709.5	24.7300	0.0541	0.60453	0.00113	0.60679
atdmkr_7_8_5	7,000	513	na	na	2.46	6.0547	881.9	20,486.0	21,367.6	22.9853	0.0557	0.60794	0.00108	0.61010
atdmkr_7_8_4	7,000	513	na	na	2.46	6.0547	661.4	15,364.5	16,025.7	20.9259	0.0574	0.61664	0.00108	0.61879
atdmkr_7_8_3	7,000	513	na	na	2.46	6.0547	440.9	10,243.0	10,683.8	18.3540	0.0603	0.62837	0.00115	0.63068
atdmkr_7_8_2	7,000	513	na	na	2.46	6.0547	220.5	5,121.5	5,341.9	14.7399	0.0653	0.65279	0.00107	0.65492
atdmkr_7_8_1	7,000	513	na	na	2.46	6.0547	0.0	0.0	0.0	6.0548	0.0727	0.78877	0.00123	0.79123

Table 6.9.6-22a. Results for TRIGA (UZrH_x) fuel element content at 19.7 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
compromised package, 10,400 g UZrH_x in spherical configuration, 20.0 cm water reflector														
atdzt	921	500	na	na	43.37	7.4677	na	na	na	na	0.0617	0.67633	0.00116	0.67906
compromised package, 10,400 g UZrH_x in spherical configuration, steel shell, 20.0 cm water reflector														
atdzsr_11	921	500	na	na	43.37	7.4677	na	na	66,133.0	13.3978	0.0271	0.61692	0.00121	0.61933

Table 6.9.6-22a. Results for TRIGA (UZrH_x) fuel element content at 19.7 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdzsr_10	921	500	na	na	43.37	7.4677	na	na	59,520.0	13.0179	0.0285	0.61377	0.00109	0.61595
atdzsr_9	921	500	na	na	43.37	7.4677	na	na	52,907.0	12.6144	0.0301	0.60931	0.00156	0.61243
atdzsr_8	921	500	na	na	43.37	7.4677	na	na	46,293.0	12.1833	0.0315	0.60602	0.00132	0.60867
atdzsr_7	921	500	na	na	43.37	7.4677	na	na	39,680.0	11.7193	0.0332	0.60256	0.00138	0.60533
atdzsr_6	921	500	na	na	43.37	7.4677	na	na	33,067.0	11.2153	0.0356	0.59752	0.00129	0.60010
atdzsr_5	921	500	na	na	43.37	7.4677	na	na	26,453.0	10.6615	0.0379	0.59162	0.00109	0.59381
atdzsr_4	921	500	na	na	43.37	7.4677	na	na	19,840.0	10.0432	0.0407	0.59012	0.00116	0.59243
atdzsr_3	921	500	na	na	43.37	7.4677	na	na	13,227.0	9.3377	0.0458	0.58978	0.00116	0.59210
atdzsr_2	921	500	na	na	43.37	7.4677	na	na	6,613.0	8.5055	0.0515	0.60131	0.00135	0.60401
atdzsr_1	921	500	na	na	43.37	7.4677	na	na	0.0	7.4677	0.0614	0.67521	0.00128	0.67777
compromised package, 10,400 g UZrH_x in spherical configuration, Kaolite shell, 20.0 cm water reflector														
atdzkr_11	921	500	na	na	43.37	7.4677	76,819.4	51,214.9	128,034.0	31.1484	0.0057	0.62901	0.00121	0.63143
atdzkr_10	921	500	na	na	43.37	7.4677	69,137.4	46,093.4	115,230.8	30.0888	0.0062	0.63269	0.00123	0.63515
atdzkr_9	921	500	na	na	43.37	7.4677	61,455.5	40,971.9	102,427.4	28.9488	0.0070	0.62940	0.00134	0.63207
atdzkr_8	921	500	na	na	43.37	7.4677	53,773.5	35,850.4	89,624.0	27.7111	0.0078	0.63130	0.00124	0.63379
atdzkr_7	921	500	na	na	43.37	7.4677	46,091.6	30,728.9	76,820.5	26.3518	0.0086	0.62935	0.00117	0.63168
atdzkr_6	921	500	na	na	43.37	7.4677	38,409.7	25,607.4	64,017.1	24.8355	0.0106	0.63103	0.00126	0.63355
atdzkr_5	921	500	na	na	43.37	7.4677	30,727.7	20,486.0	51,213.7	23.1074	0.0124	0.63018	0.00125	0.63267
atdzkr_4	921	500	na	na	43.37	7.4677	23,045.8	15,364.5	38,410.3	21.0729	0.0150	0.63155	0.00144	0.63442
atdzkr_3	921	500	na	na	43.37	7.4677	15,363.9	10,243.0	25,606.8	18.5444	0.0196	0.63021	0.00146	0.63312
atdzkr_2	921	500	na	na	43.37	7.4677	7,681.9	5,121.5	12,803.4	15.0324	0.0277	0.63366	0.00133	0.63631
atdzkr_1	921	500	na	na	43.37	7.4677	0.0	0.0	0.0	7.4678	0.0607	0.67680	0.00134	0.67948
compromised package, homogenous core of UZrH_x, polyethylene, and Kaolite in spherical configuration, 20.0 cm water reflector														
athzpr_11	921	500	76,819.0	51,214.9	2,220.00	39.1541	na	na	na	na	0.0289	0.46690	0.00060	0.46810
athzpr_10	921	500	69,357.0	51,214.9	2,008.00	38.5142	na	na	na	na	0.0308	0.46634	0.00070	0.46774
athzpr_9	921	500	61,896.0	51,214.9	1,797.00	37.8524	na	na	na	na	0.0325	0.46794	0.00072	0.46938
athzpr_8	921	500	54,435.0	51,214.9	1,586.00	37.1666	na	na	na	na	0.0345	0.46711	0.00071	0.46854

Table 6.9.6-22a. Results for TRIGA (UZrH₃) fuel element content at 19.7 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athzpk _r _7	921	500	46,973.0	51,214.9	1,374.00	36.4545	na	na	na	na	0.0372	0.45900	0.00080	0.46060
athzpk _r _6	921	500	39,512.0	51,214.9	1,163.00	35.7134	na	na	na	na	0.0397	0.45205	0.00087	0.45379
athzpk _r _5	921	500	32,050.0	51,214.9	951.60	34.9402	na	na	na	na	0.0430	0.43464	0.00080	0.43623
athzpk _r _4	921	500	24,589.0	51,214.9	740.20	34.1312	na	na	na	na	0.0465	0.41318	0.00082	0.41482
athzpk _r _3	921	500	17,127.0	51,214.9	528.70	33.2819	na	na	na	na	0.0519	0.38374	0.00080	0.38535
athzpk _r _2	921	500	9,666.2	51,214.9	317.30	32.3869	na	na	na	na	0.0585	0.34609	0.00090	0.34789
athzpk _r _1	921	500	2,204.7	51,214.9	105.80	31.4395	na	na	na	na	0.0672	0.30481	0.00079	0.30639
compromised package, homogenous core (UZrH₃, polyethylene, and water from Kaolite shell), 20.0 cm water reflector														
9 fuel segments (10,400 g UZrH₃)														
athzpwsk _r _9_11	921	500	74,614.0	na	2157.00	26.3337	2,204.7	51,214.9	53,419.6	36.3591	0.0137	0.73042	0.00074	0.73191
athzpwsk _r _9_10	921	500	67,153.0	na	1946.00	25.4464	9,666.2	51,214.9	60,881.0	35.9034	0.0129	0.76078	0.00082	0.76243
athzpwsk _r _9_9	921	500	59,691.0	na	1735.00	24.4924	17,127.6	51,214.9	68,342.5	35.4359	0.0126	0.79105	0.00088	0.79281
athzpwsk _r _9_8	921	500	52,230.0	na	1523.00	23.4577	24,589.1	51,214.9	75,803.9	34.9557	0.0117	0.82427	0.00113	0.82653
athzpwsk _r _9_7	921	500	44,768.0	na	1312.00	22.3227	32,050.6	51,214.9	83,265.4	34.4620	0.0110	0.85846	0.00090	0.86026
athzpwsk _r _9_6	921	500	37,307.0	na	1100.00	21.0588	39,512.0	51,214.9	90,726.9	33.9536	0.0107	0.89274	0.00105	0.89485
athzpwsk _r _9_5	921	500	29,845.0	na	889.10	19.6216	46,973.5	51,214.9	98,188.3	33.4296	0.0097	0.92524	0.00117	0.92758
athzpwsk _r _9_4	921	500	22,384.0	na	677.70	17.9360	54,435.0	51,214.9	105,649.0	32.8886	0.0091	0.94825	0.00123	0.95071
athzpwsk _r _9_3	921	500	14,922.0	na	466.20	15.8548	61,896.4	51,214.9	113,111.0	32.3292	0.0080	0.95910	0.00127	0.96164
athzpwsk _r _9_2	921	500	7,461.5	na	254.80	13.0078	69,357.9	51,214.9	120,572.0	31.7498	0.0069	0.92258	0.00137	0.92531
athzpwsk _r _9_1	921	500	0.0	na	43.37	7.4677	76,819.4	51,214.9	128,034.0	31.1484	0.0056	0.63068	0.00143	0.63354
8 fuel segments (9,244 g UZrH₃)														
athzpwsk _r _8_11	819	500	74,614.0		2424.00	26.3184	2,204.7	51,214.9	53,419.6	36.3510	0.0137	0.68550	0.00068	0.68685
athzpwsk _r _8_10	819	500	67,153.0		2186.00	25.4300	9,666.2	51,214.9	60,881.0	35.8952	0.0132	0.71544	0.00084	0.71712
athzpwsk _r _8_9	819	500	59,691.0		1948.00	24.4747	17,127.6	51,214.9	68,342.5	35.4274	0.0127	0.74694	0.00091	0.74875
athzpwsk _r _8_8	819	500	52,230.0		1710.00	23.4384	24,589.1	51,214.9	75,803.9	34.9470	0.0118	0.78124	0.00105	0.78334
athzpwsk _r _8_7	819	500	44,768.0		1472.00	22.3014	32,050.6	51,214.9	83,265.4	34.4530	0.0112	0.81614	0.00081	0.81776
athzpwsk _r _8_6	819	500	37,307.0		1235.00	21.0348	39,512.0	51,214.9	90,726.9	33.9444	0.0102	0.85317	0.00091	0.85499

Table 6.9.6-22a. Results for TRIGA (UZrH_x) fuel element content at 19.7 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athzpwskr_8_5	819	500	29,845.0		997.20	19.5940	46,973.5	51,214.9	98,188.3	33.4201	0.0095	0.88863	0.00106	0.89075
athzpwskr_8_4	819	500	22,384.0		759.30	17.9029	54,435.0	51,214.9	105,649.0	32.8788	0.0089	0.92262	0.00120	0.92503
athzpwskr_8_3	819	500	14,922.0		521.40	15.8124	61,896.4	51,214.9	113,111.0	32.3191	0.0080	0.93749	0.00145	0.94039
athzpwskr_8_2	819	500	7,461.5		283.50	12.9447	69,357.9	51,214.9	120,572.0	31.7393	0.0071	0.90663	0.00114	0.90892
athzpwskr_8_1	819	500	0.0		45.65	7.2723	76,819.4	51,214.9	128,034.0	31.1374	0.0054	0.61678	0.00122	0.61922
7 fuel segments (8,089g UZrH_x)														
athzpwskr_7_11	716	500	74,614.0		2767.00	26.3031	2,204.7	51,214.9	53,419.6	36.3430	0.0139	0.63543	0.00076	0.63695
athzpwskr_7_10	716	500	67,153.0		2495.00	25.4135	9,666.2	51,214.9	60,881.0	35.8869	0.0131	0.66621	0.00060	0.66742
athzpwskr_7_9	716	500	59,691.0		2223.00	24.4570	17,127.6	51,214.9	68,342.5	35.4190	0.0125	0.69724	0.00074	0.69872
athzpwskr_7_8	716	500	52,230.0		1951.00	23.4191	24,589.1	51,214.9	75,803.9	34.9383	0.0118	0.73306	0.00095	0.73496
athzpwskr_7_7	716	500	44,768.0		1679.00	22.2800	32,050.6	51,214.9	83,265.4	34.4441	0.0111	0.76887	0.00095	0.77077
athzpwskr_7_6	716	500	37,307.0		1407.00	21.0108	39,512.0	51,214.9	90,726.9	33.9352	0.0106	0.80872	0.00103	0.81078
athzpwskr_7_5	716	500	29,845.0		1136.00	19.5663	46,973.5	51,214.9	98,188.3	33.4106	0.0096	0.84859	0.00119	0.85097
athzpwskr_7_4	716	500	22,384.0		864.10	17.8697	54,435.0	51,214.9	105,649.0	32.8690	0.0089	0.88532	0.00101	0.88735
athzpwskr_7_3	716	500	14,922.0		592.30	15.7698	61,896.4	51,214.9	113,111.0	32.3089	0.0081	0.90821	0.00168	0.91157
athzpwskr_7_2	716	500	7,461.5		320.40	12.8811	69,357.9	51,214.9	120,572.0	31.7287	0.0071	0.88554	0.00160	0.88875
athzpwskr_7_1	716	500	0.0		48.57	7.0657	76,819.4	51,214.9	128,034.0	31.1265	0.0057	0.59808	0.00127	0.60062
6 fuel segments (6,933 g UZrH_x)														
athzpwskr_6_11	614	500	74,614.0		3224.00	26.2877	2,204.7	51,214.9	53,419.6	36.3349	0.0138	0.58035	0.00069	0.58174
athzpwskr_6_10	614	500	67,153.0		2907.00	25.3971	9,666.2	51,214.9	60,881.0	35.8787	0.0134	0.60885	0.00077	0.61039
athzpwskr_6_9	614	500	59,691.0		2589.00	24.4392	17,127.6	51,214.9	68,342.5	35.4105	0.0124	0.64015	0.00062	0.64140
athzpwskr_6_8	614	500	52,230.0		2272.00	23.3997	24,589.1	51,214.9	75,803.9	34.9296	0.0120	0.67689	0.00071	0.67830
athzpwskr_6_7	614	500	44,768.0		1955.00	22.2586	32,050.6	51,214.9	83,265.4	34.4351	0.0108	0.71368	0.00081	0.71530
athzpwskr_6_6	614	500	37,307.0		1638.00	20.9867	39,512.0	51,214.9	90,726.9	33.9260	0.0103	0.75489	0.00118	0.75725
athzpwskr_6_5	614	500	29,845.0		1321.00	19.5385	46,973.5	51,214.9	98,188.3	33.4011	0.0096	0.79977	0.00091	0.80159
athzpwskr_6_4	614	500	22,384.0		1004.00	17.8364	54,435.0	51,214.9	105,649.0	32.8592	0.0089	0.83986	0.00099	0.84184
athzpwskr_6_3	614	500	14,922.0		686.80	15.7270	61,896.4	51,214.9	113,111.0	32.2987	0.0079	0.87249	0.00118	0.87484

Table 6.9.6-22a. Results for TRIGA (UZrH_x) fuel element content at 19.7 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athzpwskr_6_2	614	500	7,461.5		369.60	12.8167	69,357.9	51,214.9	120,572.0	31.7182	0.0070	0.86601	0.00123	0.86846
athzpwskr_6_1	614	500	0.0		52.47	6.8462	76,819.4	51,214.9	128,034.0	31.1155	0.0054	0.58104	0.00119	0.58341

Table 6.9.6-22b. Results for TRIGA (UZrH_x) fuel element content at 70.1 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
compromised package, 6847g UZrH_x in spherical configuration, 20.0 cm water reflector														
atdzt_70	408	500	na	na	103.30	7.4677	na	na	na	na	0.0624	0.67908	0.00139	0.68187
compromised package, 6,847 g UZrH_x in spherical configuration, steel shell, 20.0 cm water reflector														
atdzsr_70_11	408	500	na	na	103.30	7.4677	na	na	66,133.1	13.3978	0.0280	0.62618	0.00125	0.62868
atdzsr_70_10	408	500	na	na	103.30	7.4677	na	na	59,519.8	13.0179	0.0296	0.62153	0.00132	0.62417
atdzsr_70_9	408	500	na	na	103.30	7.4677	na	na	52,906.5	12.6144	0.0306	0.61874	0.00131	0.62135
atdzsr_70_8	408	500	na	na	103.30	7.4677	na	na	46,293.2	12.1833	0.0323	0.61302	0.00159	0.61619
atdzsr_70_7	408	500	na	na	103.30	7.4677	na	na	39,679.9	11.7193	0.0343	0.60579	0.00123	0.60825
atdzsr_70_6	408	500	na	na	103.30	7.4677	na	na	33,066.6	11.2153	0.0368	0.60315	0.00128	0.60571
atdzsr_70_5	408	500	na	na	103.30	7.4677	na	na	26,453.3	10.6615	0.0392	0.59802	0.00120	0.60043
atdzsr_70_4	408	500	na	na	103.30	7.4677	na	na	19,839.9	10.0432	0.0427	0.58654	0.00123	0.58900
atdzsr_70_3	408	500	na	na	103.30	7.4677	na	na	13,226.6	9.3377	0.0470	0.58790	0.00125	0.59040
atdzsr_70_2	408	500	na	na	103.30	7.4677	na	na	6,613.3	8.5055	0.0529	0.59739	0.00132	0.60003
atdzsr_70_1	408	500	na	na	103.30	7.4677	na	na	0.0	7.4677	0.0627	0.67646	0.00125	0.67896
compromised package, 6,847 g UZrH_x in spherical configuration, Kaolite shell, 20.0 cm water reflector														
atdzkr_70_11	408	500	na	na	103.30	7.4677	76,819.1	51,214.9	128,034.0	31.1484	0.0059	0.62875	0.00163	0.63201
atdzkr_70_10	408	500	na	na	103.30	7.4677	69,137.2	46,093.4	115,230.6	30.0888	0.0065	0.63092	0.00145	0.63382
atdzkr_70_9	408	500	na	na	103.30	7.4677	61,455.3	40,971.9	102,427.2	28.9488	0.0071	0.62976	0.00120	0.63217

Table 6.9.6-22b. Results for TRIGA (UZrH_x) fuel element content at 70.1 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
atdskr_70_8	408	500	na	na	103.30	7.4677	53,773.4	35,850.4	89,623.8	27.7111	0.0081	0.62727	0.00127	0.62981
atdskr_70_7	408	500	na	na	103.30	7.4677	46,091.5	30,728.9	76,820.4	26.3518	0.0091	0.63196	0.00132	0.63460
atdskr_70_6	408	500	na	na	103.30	7.4677	38,409.6	25,607.4	64,017.0	24.8355	0.0105	0.63124	0.00126	0.63376
atdskr_70_5	408	500	na	na	103.30	7.4677	30,727.6	20,486.0	51,213.6	23.1074	0.0128	0.62913	0.00120	0.63153
atdskr_70_4	408	500	na	na	103.30	7.4677	23,045.7	15,364.5	38,410.2	21.0729	0.0155	0.62943	0.00124	0.63192
atdskr_70_3	408	500	na	na	103.30	7.4677	15,363.8	10,243.0	25,606.8	18.5444	0.0198	0.62910	0.00118	0.63146
atdskr_70_2	408	500	na	na	103.30	7.4677	7,681.9	5,121.5	12,803.4	15.0324	0.0288	0.62962	0.00139	0.63240
atdskr_70_1	408	500	na	na	103.30	7.4677	0.0	0.0	0.0	7.4677	0.0629	0.67511	0.00143	0.67798
compromised package, homogenous core of 6,847 g UZrH_x, polyethylene, and Kaolite in spherical configuration, 20.0 cm water reflector														
athzskr_70_11	408	500	76,819.0	51,214.9	5017.00	39.1541	na	na	na	na	0.0290	0.26748	0.00033	0.26814
athzskr_70_10	408	500	69,357.0	51,214.9	4540.00	38.5142	na	na	na	na	0.0307	0.27025	0.00042	0.27108
athzskr_70_9	408	500	61,896.0	51,214.9	4063.00	37.8524	na	na	na	na	0.0325	0.27525	0.00044	0.27612
athzskr_70_8	408	500	54,435.0	51,214.9	3585.00	37.1666	na	na	na	na	0.0347	0.27839	0.00046	0.27931
athzskr_70_7	408	500	46,973.0	51,214.9	3108.00	36.4545	na	na	na	na	0.0369	0.27822	0.00049	0.27920
athzskr_70_6	408	500	39,512.0	51,214.9	2631.00	35.7134	na	na	na	na	0.0398	0.27705	0.00056	0.27818
athzskr_70_5	408	500	32,050.0	51,214.9	2153.00	34.9402	na	na	na	na	0.0427	0.27191	0.00049	0.27289
athzskr_70_4	408	500	24,589.0	51,214.9	1676.00	34.1312	na	na	na	na	0.0473	0.26332	0.00052	0.26437
athzskr_70_3	408	500	17,127.0	51,214.9	1199.00	33.2819	na	na	na	na	0.0519	0.25025	0.00056	0.25138
athzskr_70_2	408	500	9,666.2	51,214.9	721.60	32.3869	na	na	na	na	0.0591	0.22951	0.00053	0.23057
athzskr_70_1	408	500	2,204.7	51,214.9	244.30	31.4395	na	na	na	na	0.0679	0.20646	0.00055	0.20755
compromised package, homogenous core (6,847 g UZrH_x, polyethylene, and water from Kaolite shell), 20.0 cm water reflector														
athzpskr_70_11	408	500	74,614.0	na	4876.00	26.3337	2,204.7	51,214.9	53,419.6	36.3591	0.0134	0.44499	0.00044	0.44586
athzpskr_70_10	408	500	67,153.0	na	4399.00	25.4464	9,666.2	51,214.9	60,881.0	35.9034	0.0130	0.47137	0.00054	0.47245
athzpskr_70_9	408	500	59,691.0	na	3921.00	24.4924	17,127.6	51,214.9	68,342.5	35.4359	0.0123	0.50131	0.00054	0.50240
athzpskr_70_8	408	500	52,230.0	na	3444.00	23.4577	24,589.1	51,214.9	75,803.9	34.9557	0.0118	0.53602	0.00064	0.53731
athzpskr_70_7	408	500	44,768.0	na	2967.00	22.3227	32,050.6	51,214.9	83,265.4	34.4620	0.0111	0.57515	0.00057	0.57630
athzpskr_70_6	408	500	37,307.0	na	2489.00	21.0588	39,512.0	51,214.9	90,726.9	33.9536	0.0104	0.62110	0.00071	0.62252

Table 6.9.6-22b. Results for TRIGA (UZrH_x) fuel element content at 70.1 wt % ²³⁵U for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athzpwskr_70_5	408	500	29,845.0	na	2012.00	19.6216	46,973.5	51,214.9	98,188.3	33.4296	0.0096	0.67041	0.00078	0.67197
athzpwskr_70_4	408	500	22,384.0	na	1535.00	17.9360	54,435.0	51,214.9	105,649.0	32.8886	0.0087	0.72604	0.00103	0.72811
athzpwskr_70_3	408	500	14,922.0	na	1057.00	15.8548	61,896.4	51,214.9	113,111.0	32.3292	0.0078	0.78713	0.00124	0.78961
athzpwskr_70_2	408	500	7,461.5	na	580.60	13.0078	69,357.9	51,214.9	120,572.0	31.7498	0.0069	0.82138	0.00139	0.82415
athzpwskr_70_1	408	500	0.0	na	103.30	7.4677	76,819.4	51,214.9	128,034.0	31.1484	0.0057	0.62877	0.00145	0.63168

Table 6.9.6-22c. Results for research reactor fuel (U₃O₈-Al) content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
compromised package, homogenous core (fuel, polyethylene, and water from Kaolite shell), 20.0 cm water reflector														
TRIGA content, 8,089g UZrH_x at 19.7 wt % ²³⁵U (Reference Table 6.9.6-22a)														
athzpwskr_7_11	716	500	74,614.0		2767.00	26.3031	2,204.7	51,214.9	53,419.6	36.3430	0.0139	0.63543	0.00076	0.63695
athzpwskr_7_10	716	500	67,153.0		2495.00	25.4135	9,666.2	51,214.9	60,881.0	35.8869	0.0131	0.66621	0.00060	0.66742
athzpwskr_7_9	716	500	59,691.0		2223.00	24.4570	17,127.6	51,214.9	68,342.5	35.4190	0.0125	0.69724	0.00074	0.69872
athzpwskr_7_8	716	500	52,230.0		1951.00	23.4191	24,589.1	51,214.9	75,803.9	34.9383	0.0118	0.73306	0.00095	0.73496
athzpwskr_7_7	716	500	44,768.0		1679.00	22.2800	32,050.6	51,214.9	83,265.4	34.4441	0.0111	0.76887	0.00095	0.77077
athzpwskr_7_6	716	500	37,307.0		1407.00	21.0108	39,512.0	51,214.9	90,726.9	33.9352	0.0106	0.80872	0.00103	0.81078
athzpwskr_7_5	716	500	29,845.0		1136.00	19.5663	46,973.5	51,214.9	98,188.3	33.4106	0.0096	0.84859	0.00119	0.85097
athzpwskr_7_4	716	500	22,384.0		864.10	17.8697	54,435.0	51,214.9	105,649.0	32.8690	0.0089	0.88532	0.00101	0.88735
athzpwskr_7_3	716	500	14,922.0		592.30	15.7698	61,896.4	51,214.9	113,111.0	32.3089	0.0081	0.90821	0.00168	0.91157
athzpwskr_7_2	716	500	7,461.5		320.40	12.8811	69,357.9	51,214.9	120,572.0	31.7287	0.0071	0.88554	0.00160	0.88875
athzpwskr_7_1	716	500	0.0		48.57	7.0657	76,819.4	51,214.9	128,034.0	31.1265	0.0057	0.59808	0.00127	0.60062

Table 6.9.6-22c. Results for research reactor fuel (U₃O₈-Al) content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
TRIGA content, 6,847g UZrH_x at 70.1 wt % ²³⁵U (Reference Table 6.9.6-22b)														
athzpwskr_70_11	408	500	74,614.0		4876.00	26.3337	2,204.7	51,214.9	53,419.6	36.3591	0.0134	0.44499	0.00044	0.44586
athzpwskr_70_10	408	500	67,153.0		4399.00	25.4464	9,666.2	51,214.9	60,881.0	35.9034	0.0130	0.47137	0.00054	0.47245
athzpwskr_70_9	408	500	59,691.0		3921.00	24.4924	17,127.6	51,214.9	68,342.5	35.4359	0.0123	0.50131	0.00054	0.50240
athzpwskr_70_8	408	500	52,230.0		3444.00	23.4577	24,589.1	51,214.9	75,803.9	34.9557	0.0118	0.53602	0.00064	0.53731
athzpwskr_70_7	408	500	44,768.0		2967.00	22.3227	32,050.6	51,214.9	83,265.4	34.4620	0.0111	0.57515	0.00057	0.57630
athzpwskr_70_6	408	500	37,307.0		2489.00	21.0588	39,512.0	51,214.9	90,726.9	33.9536	0.0104	0.62110	0.00071	0.62252
athzpwskr_70_5	408	500	29,845.0		2012.00	19.6216	46,973.5	51,214.9	98,188.3	33.4296	0.0096	0.67041	0.00078	0.67197
athzpwskr_70_4	408	500	22,384.0		1535.00	17.9360	54,435.0	51,214.9	105,649.0	32.8886	0.0087	0.72604	0.00103	0.72811
athzpwskr_70_3	408	500	14,922.0		1057.00	15.8548	61,896.4	51,214.9	113,111.0	32.3292	0.0078	0.78713	0.00124	0.78961
athzpwskr_70_2	408	500	7,461.5		580.60	13.0078	69,357.9	51,214.9	120,572.0	31.7498	0.0069	0.82138	0.00139	0.82415
athzpwskr_70_1	408	500	0.0		103.30	7.4677	76,819.4	51,214.9	128,034.0	31.1484	0.0057	0.62877	0.00145	0.63168
THAR content, 12,254g U₃O₈-Al at 20 wt % ²³⁵U														
athopwskr20_11	716	500	74,614.0		2743.00	26.5928	2,204.7	51,214.9	53,419.6	36.4958	0.0140	0.62708	0.00064	0.62837
athopwskr20_10	716	500	67,153.0		2471.00	25.7236	9,666.2	51,214.9	60,881.0	36.0436	0.0132	0.65561	0.00074	0.65710
athopwskr20_9	716	500	59,691.0		2199.00	24.7913	17,127.6	51,214.9	68,342.5	35.5798	0.0128	0.68602	0.00078	0.68758
athopwskr20_8	716	500	52,230.0		1927.00	23.7830	24,589.1	51,214.9	75,803.9	35.1036	0.0122	0.71719	0.00092	0.71904
athopwskr20_7	716	500	44,768.0		1655.00	22.6811	32,050.6	51,214.9	83,265.4	34.6141	0.0116	0.75151	0.00091	0.75334
athopwskr20_6	716	500	37,307.0		1383.00	21.4603	39,512.0	51,214.9	90,726.9	34.1103	0.0108	0.78428	0.00107	0.78643
athopwskr20_5	716	500	29,845.0		1111.00	20.0821	46,973.5	51,214.9	98,188.3	33.5912	0.0104	0.81430	0.00097	0.81623
athopwskr20_4	716	500	22,384.0		839.40	18.4832	54,435.0	51,214.9	105,649.0	33.0555	0.0095	0.84183	0.00119	0.84422
athopwskr20_3	716	500	14,922.0		567.40	16.5461	61,896.4	51,214.9	113,111.0	32.5019	0.0089	0.84332	0.00118	0.84567
athopwskr20_2	716	500	7,461.5		295.40	14.0023	69,357.9	51,214.9	120,572.0	31.9288	0.0085	0.76710	0.00132	0.76974
athopwskr20_1	716	500	0.0		23.42	9.8677	76,819.4	51,214.9	128,034.0	31.3343	0.0086	0.35265	0.00104	0.35473
THAR content, 1,996g U₃O₈-Al at 70 wt % ²³⁵U														
athopwskr70_11	408	500	74,614.0		4814.00	26.2608	2,204.7	51,214.9	53,419.6	36.3208	0.0139	0.44689	0.00048	0.44786

Table 6.9.6-22c. Results for research reactor fuel (U_3O_8 -Al) content for air transportation

case name	^{235}U (g)	CH_2 (g)	H_2O (g)	Kaolite (g)	htox	Rc (cm)	H_2O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k_{eff}	σ	$k_{eff} + 2\sigma$
athopwskr70_10	408	500	67,153.0		4337.00	25.3682	9,666.2	51,214.9	60,881.0	35.8642	0.0132	0.47395	0.00058	0.47510
athopwskr70_9	408	500	59,691.0		3859.00	24.4080	17,127.6	51,214.9	68,342.5	35.3957	0.0125	0.50461	0.00059	0.50579
athopwskr70_8	408	500	52,230.0		3382.00	23.3657	24,589.1	51,214.9	75,803.9	34.9144	0.0119	0.54070	0.00059	0.54187
athopwskr70_7	408	500	44,768.0		2905.00	22.2210	32,050.6	51,214.9	83,265.4	34.4194	0.0113	0.57859	0.00067	0.57993
athopwskr70_6	408	500	37,307.0		2427.00	20.9444	39,512.0	51,214.9	90,726.9	33.9098	0.0105	0.62446	0.00081	0.62608
athopwskr70_5	408	500	29,845.0		1950.00	19.4897	46,973.5	51,214.9	98,188.3	33.3844	0.0097	0.67485	0.00080	0.67645
athopwskr70_4	408	500	22,384.0		1473.00	17.7777	54,435.0	51,214.9	105,649.0	32.8419	0.0090	0.72914	0.00077	0.73069
athopwskr70_3	408	500	14,922.0		995.70	15.6514	61,896.4	51,214.9	113,111.0	32.2809	0.0080	0.78225	0.00113	0.78451
athopwskr70_2	408	500	7,461.5		518.40	12.7025	69,357.9	51,214.9	120,572.0	31.6996	0.0074	0.79940	0.00137	0.80214
athopwskr70_1	408	500	0.0		41.10	6.4237	76,819.4	51,214.9	128,034.0	31.0963	0.0070	0.39595	0.00111	0.39817
THAR content, 1,505g U_3O_8-Al at 93.2 wt % ^{235}U														
athopwskr93_11	408	500	74,614.0		4814.00	26.2447	2,204.7	51,214.9	53,419.6	36.3124	0.0137	0.45010	0.00043	0.45096
athopwskr93_10	408	500	67,153.0		4337.00	25.3510	9,666.2	51,214.9	60,881.0	35.8556	0.0132	0.47756	0.00052	0.47860
athopwskr93_9	408	500	59,691.0		3859.00	24.3894	17,127.6	51,214.9	68,342.5	35.3868	0.0125	0.50735	0.00055	0.50845
athopwskr93_8	408	500	52,230.0		3382.00	23.3453	24,589.1	51,214.9	75,803.9	34.9053	0.0122	0.54291	0.00068	0.54426
athopwskr93_7	408	500	44,768.0		2905.00	22.1985	32,050.6	51,214.9	83,265.4	34.4100	0.0114	0.58300	0.00073	0.58446
athopwskr93_6	408	500	37,307.0		2427.00	20.9190	39,512.0	51,214.9	90,726.9	33.9002	0.0108	0.62808	0.00082	0.62973
athopwskr93_5	408	500	29,845.0		1950.00	19.4604	46,973.5	51,214.9	98,188.3	33.3744	0.0098	0.67909	0.00088	0.68084
athopwskr93_4	408	500	22,384.0		1473.00	17.7425	54,435.0	51,214.9	105,649.0	32.8316	0.0092	0.73548	0.00087	0.73722
athopwskr93_3	408	500	14,922.0		995.70	15.6060	61,896.4	51,214.9	113,111.0	32.2702	0.0082	0.79078	0.00101	0.79281
athopwskr93_2	408	500	7,461.5		518.40	12.6333	69,357.9	51,214.9	120,572.0	31.6886	0.0072	0.81316	0.00149	0.81613
athopwskr93_1	408	500	0.0		41.10	6.1427	76,819.4	51,214.9	128,034.0	31.0848	0.0068	0.41672	0.00110	0.41892

Table 6.9.6-22d. Results for research reactor fuel (UO₂-Mg) content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
compromised package, homogenous core (fuel, polyethylene, and water from Kaolite shell), 20.0 cm water reflector														
TRIGA content, 8,089g UZrH_x at 19.7 wt % ²³⁵U (Reference Table 6.9.6-22a)														
athzpwskr_7_3	716	500	14,922.0		592.30	15.7698	61,896.4	51,214.9	113,111.0	32.3089	0.0081	0.90821	0.00168	0.91157
TRIGA content, 6,847g UZrH_x at 70.1 wt % ²³⁵U (Reference Table 6.9.6-22b)														
athzpwskr_70_2	408	500	7,461.5		580.60	13.0078	69,357.9	51,214.9	120,572.0	31.7498	0.0069	0.82138	0.00139	0.82415
EK10 content, 15,231g UO₂-Mg Al clad at 9.89 wt % ²³⁵U														
athopwskr20_11	716	500	74,614.0		2743.00	26.5928	2,204.7	51,214.9	53,419.6	36.4958	0.0140	0.62708	0.00064	0.62837
athupwskr09_11	716.8	500	74,614.0		2740.00	26.6339	2,204.7	51,214.9	53,419.6	36.5176	0.0143	0.61652	0.00065	0.61782
athupwskr09_10	716.8	500	67,153.0		2468.00	25.7674	9,666.2	51,214.9	60,881.0	36.0660	0.0136	0.64292	0.00083	0.64458
athupwskr09_9	716.8	500	59,691.0		2196.00	24.8385	17,127.6	51,214.9	68,342.5	35.6028	0.0128	0.67100	0.00076	0.67253
athupwskr09_8	716.8	500	52,230.0		1925.00	23.8342	24,589.1	51,214.9	75,803.9	35.1272	0.0125	0.70245	0.00087	0.70419
athupwskr09_7	716.8	500	44,768.0		1653.00	22.7374	32,050.6	51,214.9	83,265.4	34.6383	0.0117	0.73248	0.00093	0.73435
athupwskr09_6	716.8	500	37,307.0		1381.00	21.5232	39,512.0	51,214.9	90,726.9	34.1353	0.0110	0.76468	0.00081	0.76630
athupwskr09_5	716.8	500	29,845.0		1110.00	20.1538	46,973.5	51,214.9	98,188.3	33.6169	0.0104	0.79485	0.00102	0.79690
athupwskr09_4	716.8	500	22,384.0		838.40	18.5678	54,435.0	51,214.9	105,649.0	33.0821	0.0098	0.81569	0.00120	0.81810
athupwskr09_3	716.8	500	14,922.0		566.70	16.6515	61,896.4	51,214.9	113,111.0	32.5294	0.0091	0.81463	0.00119	0.81701
athupwskr09_2	716.8	500	7,461.5		295.00	14.1489	69,357.9	51,214.9	120,572.0	31.9573	0.0086	0.73860	0.00111	0.74081
athupwskr09_1	716.8	500	0.0		23.40	10.1575	76,819.4	51,214.9	128,034.0	31.3639	0.0087	0.35077	0.00091	0.35258
EK10 content, 7,524g UO₂-Mg Al clad at 20 wt % ²³⁵U														
athupwskr20_11	716.0	500	74,614.0		2743.00	26.4137	2,204.7	51,214.9	53,419.6	36.4011	0.0139	0.63462	0.00074	0.63240
athupwskr20_10	716.0	500	67,153.0		2471.00	25.5320	9,666.2	51,214.9	60,881.0	35.9465	0.0133	0.66269	0.00069	0.66062
athupwskr20_9	716.0	500	59,691.0		2199.00	24.5848	17,127.6	51,214.9	68,342.5	35.4801	0.0125	0.69422	0.00073	0.69203
athupwskr20_8	716.0	500	52,230.0		1927.00	23.5584	24,589.1	51,214.9	75,803.9	35.0012	0.0121	0.72784	0.00100	0.72484
athupwskr20_7	716.0	500	44,768.0		1655.00	22.4338	32,050.6	51,214.9	83,265.4	34.5087	0.0114	0.76261	0.00088	0.75998
athupwskr20_6	716.0	500	37,307.0		1383.00	21.1834	39,512.0	51,214.9	90,726.9	34.0018	0.0107	0.80034	0.00104	0.79721
athupwskr20_5	716.0	500	29,845.0		1111.00	19.7650	46,973.5	51,214.9	98,188.3	33.4793	0.0097	0.83623	0.00108	0.83298

Table 6.9.6-22d. Results for research reactor fuel (UO₂-Mg) content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kaolite (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athupwskr20_4	716.0	500	22,384.0		839.40	18.1072	54,435.0	51,214.9	105,649.0	32.9400	0.0093	0.86278	0.00103	0.85968
athupwskr20_3	716.0	500	14,922.0		567.40	16.0730	61,896.4	51,214.9	113,111.0	32.3824	0.0085	0.87598	0.00118	0.87244
athupwskr20_2	716.0	500	7,461.5		295.40	13.3285	69,357.9	51,214.9	120,572.0	31.8049	0.0080	0.81662	0.00130	0.81271
athupwskr20_1	716.0	500	0.0		23.42	8.3553	76,819.4	51,214.9	128,034.0	31.2056	0.0077	0.37022	0.00093	0.36743
EK10 content, 921g UO₂-Mg Al clad at 93.2 wt % ²³⁵U														
athupwskr93_11	408.0	500	74,614.0		4814.00	26.2221	2,204.7	51,214.9	53,419.6	36.3006	0.0139	0.44791	0.00045	0.44880
athupwskr93_10	408.0	500	67,153.0		4337.00	25.3268	9,666.2	51,214.9	60,881.0	35.8435	0.0132	0.47638	0.00049	0.47735
athupwskr93_9	408.0	500	59,691.0		3859.00	24.3633	17,127.6	51,214.9	68,342.5	35.3744	0.0123	0.50781	0.00055	0.50891
athupwskr93_8	408.0	500	52,230.0		3382.00	23.3168	24,589.1	51,214.9	75,803.9	34.8925	0.0120	0.54107	0.00078	0.54264
athupwskr93_7	408.0	500	44,768.0		2905.00	22.1669	32,050.6	51,214.9	83,265.4	34.3969	0.0112	0.58270	0.00076	0.58423
athupwskr93_6	408.0	500	37,307.0		2427.00	20.8835	39,512.0	51,214.9	90,726.9	33.8866	0.0106	0.62792	0.00081	0.62954
athupwskr93_5	408.0	500	29,845.0		1950.00	19.4193	46,973.5	51,214.9	98,188.3	33.3605	0.0097	0.68078	0.00096	0.68271
athupwskr93_4	408.0	500	22,384.0		1473.00	17.6931	54,435.0	51,214.9	105,649.0	32.8172	0.0090	0.73806	0.00107	0.74021
athupwskr93_3	408.0	500	14,922.0		995.70	15.5420	61,896.4	51,214.9	113,111.0	32.2553	0.0083	0.79499	0.00107	0.79714
athupwskr93_2	408.0	500	7,461.5		518.40	12.5353	69,357.9	51,214.9	120,572.0	31.6731	0.0072	0.82276	0.00133	0.82542
athupwskr93_1	408.0	500	0.0		41.10	5.7001	76,819.4	51,214.9	128,034.0	31.0687	0.0065	0.45087	0.00114	0.45316

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
compromised package, HEU in spherical configuration, 20.0 cm water reflector (See Table 6.9.6-21)														
compromised package, HEU in spherical configuration, Kaolite shell, 20.0 cm water reflector (See Table 6.9.6-21)														
compromised package, HEU in spherical configuration, Kaolite shell, 20.0 cm water reflector (See Table 6.9.6-21)														
compromised package, homogenous core of HEU broken metal, polyethylene, and Kaolite in spherical configuration, 20.0 cm water reflector														
7,000g HEU 100% enrichment														
athmpkr_12_8_11	7,000	513	76,819.0	51,214.9	288.80	39.11173	na	na	na	na	0.0303	1.02117	0.00126	1.02369

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{off}	σ	k _{off} + 2σ
athmpkr_12_8_10	7,000	513	69,357.0	51,214.9	261.00	38.47048	na	na	na	na	0.0316	1.00126	0.00127	1.00381
athmpkr_12_8_9	7,000	513	61,896.0	51,214.9	233.20	37.80710	na	na	na	na	0.0329	0.97483	0.00132	0.97746
athmpkr_12_8_8	7,000	513	54,435.0	51,214.9	205.40	37.11959	na	na	na	na	0.0351	0.94449	0.00130	0.94709
athmpkr_12_8_7	7,000	513	46,973.0	51,214.9	177.60	36.40562	na	na	na	na	0.0373	0.90773	0.00123	0.91019
athmpkr_12_8_6	7,000	513	39,512.0	51,214.9	149.70	35.66249	na	na	na	na	0.0405	0.86356	0.00129	0.86614
athmpkr_12_8_5	7,000	513	32,050.0	51,214.9	121.90	34.88702	na	na	na	na	0.0438	0.80722	0.00131	0.80984
athmpkr_12_8_4	7,000	513	24,589.0	51,214.9	94.14	34.07546	na	na	na	na	0.0473	0.74163	0.00124	0.74411
athmpkr_12_8_3	7,000	513	17,127.0	51,214.9	66.32	33.22329	na	na	na	na	0.0522	0.66883	0.00119	0.67121
athmpkr_12_8_2	7,000	513	9,666.2	51,214.9	38.50	32.32500	na	na	na	na	0.0579	0.58476	0.00116	0.58707
athmpkr_12_8_1	7,000	513	2,204.7	51,214.9	10.68	31.37380	na	na	na	na	0.0660	0.49910	0.00115	0.50141
6,000g HEU 100% enrichment														
athmpkr_11_8_11	6,000	513	76,819.0	51,214.9	337.00	39.10897	na	na	na	na	0.0296	0.99414	0.00136	0.99686
athmpkr_11_8_10	6,000	513	69,357.0	51,214.9	304.50	38.46762	na	na	na	na	0.0317	0.97423	0.00134	0.97691
athmpkr_11_8_9	6,000	513	61,896.0	51,214.9	272.10	37.80414	na	na	na	na	0.0333	0.94998	0.00135	0.95269
athmpkr_11_8_8	6,000	513	54,435.0	51,214.9	239.60	37.11651	na	na	na	na	0.0351	0.92270	0.00139	0.92549
athmpkr_11_8_7	6,000	513	46,973.0	51,214.9	207.20	36.40242	na	na	na	na	0.0378	0.88445	0.00148	0.88741
athmpkr_11_8_6	6,000	513	39,512.0	51,214.9	174.70	35.65916	na	na	na	na	0.0408	0.84157	0.00122	0.84401
athmpkr_11_8_5	6,000	513	32,050.0	51,214.9	142.20	34.88355	na	na	na	na	0.0435	0.79067	0.00131	0.79329
athmpkr_11_8_4	6,000	513	24,589.0	51,214.9	109.80	34.07182	na	na	na	na	0.0472	0.72721	0.00132	0.72984
athmpkr_11_8_3	6,000	513	17,127.0	51,214.9	77.38	33.21946	na	na	na	na	0.0521	0.65397	0.00117	0.65630
athmpkr_11_8_2	6,000	513	9,666.2	51,214.9	44.92	32.32095	na	na	na	na	0.0576	0.57446	0.00112	0.57670
athmpkr_11_8_1	6,000	513	2,204.7	51,214.9	12.46	31.36950	na	na	na	na	0.0668	0.48779	0.00112	0.49002
5,000g HEU 100% enrichment														
athmpkr_10_8_11	5,000	513	76,819.0	51,214.9	404.40	39.10620	na	na	na	na	0.0294	0.95646	0.00121	0.95888
athmpkr_10_8_10	5,000	513	69,357.0	51,214.9	365.50	38.46476	na	na	na	na	0.0314	0.94048	0.00114	0.94276
athmpkr_10_8_9	5,000	513	61,896.0	51,214.9	326.50	37.80118	na	na	na	na	0.0330	0.91763	0.00150	0.92063
athmpkr_10_8_8	5,000	513	54,435.0	51,214.9	287.60	37.11344	na	na	na	na	0.0354	0.89037	0.00129	0.89296

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpkr_10_8_7	5,000	513	46,973.0	51,214.9	248.60	36.39923	na	na	na	na	0.0373	0.85732	0.00122	0.85977
athmpkr_10_8_6	5,000	513	39,512.0	51,214.9	209.70	35.65583	na	na	na	na	0.0401	0.81566	0.00126	0.81819
athmpkr_10_8_5	5,000	513	32,050.0	51,214.9	170.70	34.88007	na	na	na	na	0.0434	0.76481	0.00134	0.76750
athmpkr_10_8_4	5,000	513	24,589.0	51,214.9	131.80	34.06818	na	na	na	na	0.0473	0.70780	0.00130	0.71040
athmpkr_10_8_3	5,000	513	17,127.0	51,214.9	92.85	33.21562	na	na	na	na	0.0522	0.63560	0.00122	0.63804
athmpkr_10_8_2	5,000	513	9,666.2	51,214.9	53.90	32.31690	na	na	na	na	0.0586	0.55806	0.00122	0.56051
athmpkr_10_8_1	5,000	513	2,204.7	51,214.9	14.95	31.36520	na	na	na	na	0.0670	0.47312	0.00116	0.47544
4,500g HEU 100% enrichment														
athmpkr_9_8_11	4,500	513	76,819.0	51,214.9	449.30	39.10482	na	na	na	na	0.0298	0.93346	0.00133	0.93612
athmpkr_9_8_10	4,500	513	69,357.0	51,214.9	406.10	38.46333	na	na	na	na	0.0313	0.91551	0.00143	0.91836
athmpkr_9_8_9	4,500	513	61,896.0	51,214.9	362.80	37.79970	na	na	na	na	0.0335	0.89522	0.00152	0.89826
athmpkr_9_8_8	4,500	513	54,435.0	51,214.9	319.50	37.11191	na	na	na	na	0.0353	0.87213	0.00126	0.87465
athmpkr_9_8_7	4,500	513	46,973.0	51,214.9	276.20	36.39763	na	na	na	na	0.0377	0.84048	0.00133	0.84313
athmpkr_9_8_6	4,500	513	39,512.0	51,214.9	233.00	35.65417	na	na	na	na	0.0404	0.80226	0.00125	0.80476
athmpkr_9_8_5	4,500	513	32,050.0	51,214.9	189.70	34.87833	na	na	na	na	0.0437	0.75194	0.00122	0.75439
athmpkr_9_8_4	4,500	513	24,589.0	51,214.9	146.40	34.06635	na	na	na	na	0.0476	0.69314	0.00112	0.69538
athmpkr_9_8_3	4,500	513	17,127.0	51,214.9	103.10	33.21370	na	na	na	na	0.0524	0.62629	0.00119	0.62867
athmpkr_9_8_2	4,500	513	9,666.2	51,214.9	59.89	32.31488	na	na	na	na	0.0584	0.54872	0.00115	0.55101
athmpkr_9_8_1	4,500	513	2,204.7	51,214.9	16.61	31.36305	na	na	na	na	0.0669	0.46796	0.00115	0.47026
4,000g HEU 100% enrichment														
athmpkr_8_8_11	4,000	513	76,819.0	51,214.9	505.50	39.10344	na	na	na	na	0.0298	0.90432	0.00121	0.90674
athmpkr_8_8_10	4,000	513	69,357.0	51,214.9	456.80	38.46190	na	na	na	na	0.0319	0.88942	0.00129	0.89199
athmpkr_8_8_9	4,000	513	61,896.0	51,214.9	408.10	37.79822	na	na	na	na	0.0334	0.87153	0.00115	0.87382
athmpkr_8_8_8	4,000	513	54,435.0	51,214.9	359.50	37.11037	na	na	na	na	0.0350	0.84664	0.00127	0.84918
athmpkr_8_8_7	4,000	513	46,973.0	51,214.9	310.80	36.39604	na	na	na	na	0.0370	0.82052	0.00118	0.82288
athmpkr_8_8_6	4,000	513	39,512.0	51,214.9	262.10	35.65250	na	na	na	na	0.0405	0.77971	0.00116	0.78203
athmpkr_8_8_5	4,000	513	32,050.0	51,214.9	213.40	34.87659	na	na	na	na	0.0435	0.73454	0.00143	0.73739
athmpkr_8_8_4	4,000	513	24,589.0	51,214.9	164.70	34.06453	na	na	na	na	0.0481	0.67953	0.00135	0.68224

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpkr_8_8_3	4,000	513	17,127.0	51,214.9	116.00	33.21179	na	na	na	na	0.0526	0.61370	0.00125	0.61620
athmpkr_8_8_2	4,000	513	9,666.2	51,214.9	67.38	32.31285	na	na	na	na	0.0589	0.53800	0.00112	0.54024
athmpkr_8_8_1	4,000	513	2,204.7	51,214.9	18.69	31.36090	na	na	na	na	0.0672	0.45619	0.00091	0.45801
35,000g HEU 20% enrichment														
athmpkr_12_1_11	7,000	513	76,819.0	51,214.9	57.78	39.18804	na	na	na	na	0.0301	0.96192	0.00133	0.96459
athmpkr_12_1_10	7,000	513	69,357.0	51,214.9	52.21	38.54934	na	na	na	na	0.0314	0.94161	0.00143	0.94448
athmpkr_12_1_9	7,000	513	61,896.0	51,214.9	46.65	37.88874	na	na	na	na	0.0329	0.91690	0.00128	0.91946
athmpkr_12_1_8	7,000	513	54,435.0	51,214.9	41.09	37.20427	na	na	na	na	0.0348	0.88747	0.00124	0.88995
athmpkr_12_1_7	7,000	513	46,973.0	51,214.9	35.52	36.49364	na	na	na	na	0.0374	0.85152	0.00140	0.85433
athmpkr_12_1_6	7,000	513	39,512.0	51,214.9	29.96	35.75421	na	na	na	na	0.0399	0.80727	0.00130	0.80988
athmpkr_12_1_5	7,000	513	32,050.0	51,214.9	24.39	34.98285	na	na	na	na	0.0428	0.75729	0.00132	0.75994
athmpkr_12_1_4	7,000	513	24,589.0	51,214.9	18.83	34.17589	na	na	na	na	0.0463	0.70008	0.00133	0.70274
athmpkr_12_1_3	7,000	513	17,127.0	51,214.9	13.26	33.32891	na	na	na	na	0.0504	0.63481	0.00122	0.63725
athmpkr_12_1_2	7,000	513	9,666.2	51,214.9	7.70	32.43654	na	na	na	na	0.0564	0.56213	0.00123	0.56458
athmpkr_12_1_1	7,000	513	2,204.7	51,214.9	2.14	31.49217	na	na	na	na	0.0641	0.48853	0.00108	0.49068
30,000g HEU 20% enrichment														
athmpkr_11_1_11	6,000	513	76,819.0	51,214.9	67.41	39.17440	na	na	na	na	0.0295	0.93897	0.00126	0.94150
athmpkr_11_1_10	6,000	513	69,357.0	51,214.9	60.92	38.53524	na	na	na	na	0.0308	0.91990	0.00112	0.92213
athmpkr_11_1_9	6,000	513	61,896.0	51,214.9	54.43	37.87415	na	na	na	na	0.0328	0.89565	0.00141	0.89848
athmpkr_11_1_8	6,000	513	54,435.0	51,214.9	47.93	37.18914	na	na	na	na	0.0350	0.86704	0.00129	0.86961
athmpkr_11_1_7	6,000	513	46,973.0	51,214.9	41.44	36.47792	na	na	na	na	0.0373	0.83339	0.00110	0.83560
athmpkr_11_1_6	6,000	513	39,512.0	51,214.9	34.95	35.73782	na	na	na	na	0.0395	0.79255	0.00152	0.79560
athmpkr_11_1_5	6,000	513	32,050.0	51,214.9	28.46	34.96573	na	na	na	na	0.0426	0.74225	0.00124	0.74473
athmpkr_11_1_4	6,000	513	24,589.0	51,214.9	21.97	34.15796	na	na	na	na	0.0467	0.68601	0.00131	0.68863
athmpkr_11_1_3	6,000	513	17,127.0	51,214.9	15.48	33.31005	na	na	na	na	0.0513	0.62146	0.00116	0.62378
athmpkr_11_1_2	6,000	513	9,666.2	51,214.9	8.98	32.41663	na	na	na	na	0.0569	0.55015	0.00105	0.55225
athmpkr_11_1_1	6,000	513	2,204.7	51,214.9	2.49	31.47105	na	na	na	na	0.0648	0.47666	0.00112	0.47889
25,000g HEU 20% enrichment														

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpkr_10_1_11	5,000	513	76,819.0	51,214.9	80.89	39.16075	na	na	na	na	0.0298	0.90855	0.00127	0.91109
athmpkr_10_1_10	5,000	513	69,357.0	51,214.9	73.10	38.52114	na	na	na	na	0.0313	0.88989	0.00113	0.89214
athmpkr_10_1_9	5,000	513	61,896.0	51,214.9	65.31	37.85955	na	na	na	na	0.0333	0.86764	0.00140	0.87044
athmpkr_10_1_8	5,000	513	54,435.0	51,214.9	57.52	37.17399	na	na	na	na	0.0349	0.84114	0.00150	0.84413
athmpkr_10_1_7	5,000	513	46,973.0	51,214.9	49.73	36.46217	na	na	na	na	0.0375	0.81229	0.00117	0.81463
athmpkr_10_1_6	5,000	513	39,512.0	51,214.9	41.94	35.72142	na	na	na	na	0.0399	0.77026	0.00129	0.77285
athmpkr_10_1_5	5,000	513	32,050.0	51,214.9	34.15	34.94860	na	na	na	na	0.0428	0.72521	0.00110	0.72741
athmpkr_10_1_4	5,000	513	24,589.0	51,214.9	26.36	34.14000	na	na	na	na	0.0464	0.66966	0.00118	0.67201
athmpkr_10_1_3	5,000	513	17,127.0	51,214.9	18.57	33.29117	na	na	na	na	0.0513	0.60484	0.00106	0.60696
athmpkr_10_1_2	5,000	513	9,666.2	51,214.9	10.78	32.39669	na	na	na	na	0.0569	0.53554	0.00110	0.53774
athmpkr_10_1_1	5,000	513	2,204.7	51,214.9	2.99	31.44989	na	na	na	na	0.0657	0.46235	0.00101	0.46436
compromised package, homogenous core (HEU broken metal, polyethylene, and water from Kaolite shell), 20.0 cm water reflector														
7,000g HEU 100% enrichment														
athmpwskr_12_8_11	7,000	513	74,614.0	na	280.60	26.23990	2,204.7	51,214.9	53,419.6	36.3100	0.0147	1.40566	0.00163	1.40891
athmpwskr_12_8_10	7,000	513	67,153.0	na	252.80	25.34586	9,666.2	51,214.9	60,881.0	35.8530	0.0143	1.40534	0.00159	1.40851
athmpwskr_12_8_9	7,000	513	59,691.0	na	225.00	24.38387	17,127.6	51,214.9	68,342.5	35.3842	0.0132	1.40155	0.00136	1.40427
athmpwskr_12_8_8	7,000	513	52,230.0	na	197.20	23.33933	24,589.1	51,214.9	75,803.9	34.9026	0.0127	1.39948	0.00148	1.40243
athmpwskr_12_8_7	7,000	513	44,768.0	na	169.30	22.19184	32,050.6	51,214.9	83,265.4	34.4073	0.0120	1.38745	0.00140	1.39024
athmpwskr_12_8_6	7,000	513	37,307.0	na	141.50	20.91156	39,512.0	51,214.9	90,726.9	33.8973	0.0112	1.37472	0.00171	1.37815
athmpwskr_12_8_5	7,000	513	29,845.0	na	113.70	19.45176	46,973.5	51,214.9	98,188.3	33.3715	0.0101	1.34516	0.00143	1.34802
athmpwskr_12_8_4	7,000	513	22,384.0	na	85.92	17.73212	54,435.0	51,214.9	105,649.0	32.8286	0.0092	1.30120	0.00174	1.30468
athmpwskr_12_8_3	7,000	513	14,922.0	na	58.10	15.59253	61,896.4	51,214.9	113,111.0	32.2671	0.0082	1.23073	0.00150	1.23372
athmpwskr_12_8_2	7,000	513	7,461.5	na	30.28	12.61277	69,357.9	51,214.9	120,572.0	31.6853	0.0074	1.09181	0.00180	1.09541
athmpwskr_12_8_1	7,000	513	0.0	na	2.46	6.05465	76,819.4	51,214.9	128,034.0	31.0814	0.0059	0.74568	0.00119	0.74806
6,000g HEU 100% enrichment														
athmpwskr_11_8_11	6,000	513	74,614.0	na	327.40	26.23375	2,204.7	51,214.9	53,419.6	36.3067	0.0146	1.37327	0.00128	1.37583
athmpwskr_11_8_10	6,000	513	67,153.0	na	294.90	25.33928	9,666.2	51,214.9	60,881.0	35.8498	0.0141	1.37801	0.00135	1.38071
athmpwskr_11_8_9	6,000	513	59,691.0	na	262.50	24.37676	17,127.6	51,214.9	68,342.5	35.3808	0.0133	1.37898	0.00144	1.38186

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpwskr_11_8_8	6,000	513	52,230.0	na	230.00	23.33156	24,589.1	51,214.9	75,803.9	34.8991	0.0127	1.37963	0.00145	1.38253
athmpwskr_11_8_7	6,000	513	44,768.0	na	197.60	22.18325	32,050.6	51,214.9	83,265.4	34.4037	0.0115	1.37069	0.00134	1.37337
athmpwskr_11_8_6	6,000	513	37,307.0	na	165.10	20.90188	39,512.0	51,214.9	90,726.9	33.8936	0.0113	1.35827	0.00151	1.36128
athmpwskr_11_8_5	6,000	513	29,845.0	na	132.70	19.44057	46,973.5	51,214.9	98,188.3	33.3677	0.0102	1.33346	0.00169	1.33684
athmpwskr_11_8_4	6,000	513	22,384.0	na	100.20	17.71865	54,435.0	51,214.9	105,649.0	32.8247	0.0092	1.29338	0.00156	1.29649
athmpwskr_11_8_3	6,000	513	14,922.0	na	67.78	15.57511	61,896.4	51,214.9	113,111.0	32.2630	0.0083	1.22486	0.00149	1.22783
athmpwskr_11_8_2	6,000	513	7,461.5	na	35.33	12.58612	69,357.9	51,214.9	120,572.0	31.6811	0.0072	1.08845	0.00153	1.09150
athmpwskr_11_8_1	6,000	513	0.0	na	2.87	5.93698	76,819.4	51,214.9	128,034.0	31.0770	0.0059	0.72381	0.00141	0.72662
5,000g HEU 100% enrichment														
athmpwskr_10_8_11	5,000	513	74,614.0	na	392.90	26.22760	2,204.7	51,214.9	53,419.6	36.3035	0.0146	1.33984	0.00131	1.34246
athmpwskr_10_8_10	5,000	513	67,153.0	na	353.90	25.33269	9,666.2	51,214.9	60,881.0	35.8465	0.0138	1.34369	0.00132	1.34633
athmpwskr_10_8_9	5,000	513	59,691.0	na	315.00	24.36964	17,127.6	51,214.9	68,342.5	35.3774	0.0132	1.34600	0.00155	1.34910
athmpwskr_10_8_8	5,000	513	52,230.0	na	276.00	23.32378	24,589.1	51,214.9	75,803.9	34.8956	0.0123	1.35066	0.00167	1.35399
athmpwskr_10_8_7	5,000	513	44,768.0	na	237.10	22.17465	32,050.6	51,214.9	83,265.4	34.4001	0.0118	1.34411	0.00181	1.34774
athmpwskr_10_8_6	5,000	513	37,307.0	na	198.10	20.89219	39,512.0	51,214.9	90,726.9	33.8899	0.0109	1.33905	0.00153	1.34211
athmpwskr_10_8_5	5,000	513	29,845.0	na	159.20	19.42937	46,973.5	51,214.9	98,188.3	33.3639	0.0102	1.32129	0.00137	1.32402
athmpwskr_10_8_4	5,000	513	22,384.0	na	120.20	17.70517	54,435.0	51,214.9	105,649.0	32.8207	0.0093	1.28519	0.00134	1.28787
athmpwskr_10_8_3	5,000	513	14,922.0	na	81.34	15.55766	61,896.4	51,214.9	113,111.0	32.2590	0.0084	1.21735	0.00195	1.22124
athmpwskr_10_8_2	5,000	513	7,461.5	na	42.39	12.55935	69,357.9	51,214.9	120,572.0	31.6769	0.0074	1.08329	0.00161	1.08651
athmpwskr_10_8_1	5,000	513	0.0	na	3.44	5.81446	76,819.4	51,214.9	128,034.0	31.0727	0.0059	0.69818	0.00115	0.70048
4,000g HEU 100% enrichment														
athmpwskr_8_8_11	4,000	513	74,614.0	na	491.10	26.22145	2,204.7	51,214.9	53,419.6	36.3003	0.0144	1.28173	0.00151	1.28476
athmpwskr_8_8_10	4,000	513	67,153.0	na	442.40	25.32609	9,666.2	51,214.9	60,881.0	35.8432	0.0139	1.29257	0.00121	1.29500
athmpwskr_8_8_9	4,000	513	59,691.0	na	393.80	24.36251	17,127.6	51,214.9	68,342.5	35.3741	0.0133	1.30185	0.00134	1.30454
athmpwskr_8_8_8	4,000	513	52,230.0	na	345.10	23.31600	24,589.1	51,214.9	75,803.9	34.8922	0.0126	1.30836	0.00146	1.31127
athmpwskr_8_8_7	4,000	513	44,768.0	na	296.40	22.16604	32,050.6	51,214.9	83,265.4	34.3966	0.0117	1.31084	0.00173	1.31430
athmpwskr_8_8_6	4,000	513	37,307.0	na	247.70	20.88250	39,512.0	51,214.9	90,726.9	33.8863	0.0110	1.30781	0.00164	1.31109
athmpwskr_8_8_5	4,000	513	29,845.0	na	199.00	19.41816	46,973.5	51,214.9	98,188.3	33.3601	0.0100	1.29559	0.00152	1.29863

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpwskr_8_8_4	4,000	513	22,384.0	na	150.30	17.69166	54,435.0	51,214.9	105,649.0	32.8168	0.0093	1.26284	0.00131	1.26545
athmpwskr_8_8_3	4,000	513	14,922.0	na	101.60	15.54016	61,896.4	51,214.9	113,111.0	32.2549	0.0083	1.20481	0.00156	1.20793
athmpwskr_8_8_2	4,000	513	7,461.5	na	52.99	12.53248	69,357.9	51,214.9	120,572.0	31.6727	0.0075	1.08009	0.00169	1.08346
athmpwskr_8_8_1	4,000	513	0.0	na	4.30	5.68653	76,819.4	51,214.9	128,034.0	31.0683	0.0059	0.66987	0.00120	0.67228
3,000g HEU 100% enrichment														
athmpwskr_6_8_11	3,000	513	74,614.0	na	654.90	26.21530	2,204.7	51,214.9	53,419.6	36.2971	0.0143	1.19922	0.00120	1.20161
athmpwskr_6_8_10	3,000	513	67,153.0	na	589.90	25.31949	9,666.2	51,214.9	60,881.0	35.8399	0.0137	1.21615	0.00114	1.21844
athmpwskr_6_8_9	3,000	513	59,691.0	na	525.00	24.35538	17,127.6	51,214.9	68,342.5	35.3707	0.0133	1.23018	0.00144	1.23305
athmpwskr_6_8_8	3,000	513	52,230.0	na	460.10	23.30822	24,589.1	51,214.9	75,803.9	34.8887	0.0122	1.24414	0.00166	1.24745
athmpwskr_6_8_7	3,000	513	44,768.0	na	395.20	22.15743	32,050.6	51,214.9	83,265.4	34.3930	0.0114	1.25133	0.00159	1.25450
athmpwskr_6_8_6	3,000	513	37,307.0	na	330.30	20.87279	39,512.0	51,214.9	90,726.9	33.8826	0.0108	1.25789	0.00155	1.26100
athmpwskr_6_8_5	3,000	513	29,845.0	na	265.40	19.40693	46,973.5	51,214.9	98,188.3	33.3563	0.0101	1.25398	0.00171	1.25740
athmpwskr_6_8_4	3,000	513	22,384.0	na	200.40	17.67814	54,435.0	51,214.9	105,649.0	32.8129	0.0091	1.23478	0.00161	1.23799
athmpwskr_6_8_3	3,000	513	14,922.0	na	135.50	15.52262	61,896.4	51,214.9	113,111.0	32.2508	0.0085	1.18809	0.00160	1.19128
athmpwskr_6_8_2	3,000	513	7,461.5	na	70.65	12.50549	69,357.9	51,214.9	120,572.0	31.6685	0.0073	1.06995	0.00163	1.07321
athmpwskr_6_8_1	3,000	513	0.0	na	5.74	5.55258	76,819.4	51,214.9	128,034.0	31.0639	0.0060	0.63966	0.00095	0.64155
2,000g HEU 100% enrichment														
athmpwskr_4_8_11	2,000	513	74,614.0	na	982.30	26.20914	2,204.7	51,214.9	53,419.6	36.2939	0.0140	1.06299	0.00106	1.06511
athmpwskr_4_8_10	2,000	513	67,153.0	na	884.90	25.31289	9,666.2	51,214.9	60,881.0	35.8366	0.0137	1.08184	0.00119	1.08421
athmpwskr_4_8_9	2,000	513	59,691.0	na	787.60	24.34825	17,127.6	51,214.9	68,342.5	35.3673	0.0130	1.10555	0.00127	1.10808
athmpwskr_4_8_8	2,000	513	52,230.0	na	690.20	23.30043	24,589.1	51,214.9	75,803.9	34.8852	0.0122	1.13134	0.00127	1.13387
athmpwskr_4_8_7	2,000	513	44,768.0	na	592.80	22.14881	32,050.6	51,214.9	83,265.4	34.3894	0.0116	1.15079	0.00124	1.15327
athmpwskr_4_8_6	2,000	513	37,307.0	na	495.40	20.86308	39,512.0	51,214.9	90,726.9	33.8789	0.0111	1.16711	0.00141	1.16993
athmpwskr_4_8_5	2,000	513	29,845.0	na	398.10	19.39569	46,973.5	51,214.9	98,188.3	33.3525	0.0098	1.17872	0.00167	1.18207
athmpwskr_4_8_4	2,000	513	22,384.0	na	300.70	17.66459	54,435.0	51,214.9	105,649.0	32.8089	0.0090	1.17375	0.00144	1.17664
athmpwskr_4_8_3	2,000	513	14,922.0	na	203.30	15.50504	61,896.4	51,214.9	113,111.0	32.2468	0.0083	1.14657	0.00155	1.14967
athmpwskr_4_8_2	2,000	513	7,461.5	na	105.90	12.47838	69,357.9	51,214.9	120,572.0	31.6643	0.0074	1.04637	0.00136	1.04909
athmpwskr_4_8_1	2,000	513	0.0	na	8.60	5.41183	76,819.4	51,214.9	128,034.0	31.0595	0.0061	0.60330	0.00119	0.60569

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
1,000g HEU 100% enrichment														
athmpwskr_2_8_11	1,000	513	74,614.0	na	1964.0	26.20298	2,204.7	51,214.9	53,419.6	36.2907	0.0141	0.78675	0.00095	0.78864
athmpwskr_2_8_10	1,000	513	67,153.0	na	1769.0	25.30629	9,666.2	51,214.9	60,881.0	35.8333	0.0133	0.81910	0.00090	0.82091
athmpwskr_2_8_9	1,000	513	59,691.0	na	1575.0	24.34111	17,127.6	51,214.9	68,342.5	35.3639	0.0128	0.84934	0.00112	0.85158
athmpwskr_2_8_8	1,000	513	52,230.0	na	1380.0	23.29264	24,589.1	51,214.9	75,803.9	34.8817	0.0122	0.88411	0.00113	0.88637
athmpwskr_2_8_7	1,000	513	44,768.0	na	1185.0	22.14018	32,050.6	51,214.9	83,265.4	34.3858	0.0114	0.92300	0.00099	0.92498
athmpwskr_2_8_6	1,000	513	37,307.0	na	990.90	20.85335	39,512.0	51,214.9	90,726.9	33.8752	0.0105	0.95883	0.00112	0.96106
athmpwskr_2_8_5	1,000	513	29,845.0	na	796.20	19.38444	46,973.5	51,214.9	98,188.3	33.3487	0.0099	0.99564	0.00140	0.99844
athmpwskr_2_8_4	1,000	513	22,384.0	na	601.40	17.65102	54,435.0	51,214.9	105,649.0	32.8050	0.0093	1.02565	0.00138	1.02840
athmpwskr_2_8_3	1,000	513	14,922.0	na	406.70	15.48743	61,896.4	51,214.9	113,111.0	32.2427	0.0080	1.03421	0.00144	1.03710
athmpwskr_2_8_2	1,000	513	7,461.5	na	211.90	12.45115	69,357.9	51,214.9	120,572.0	31.6600	0.0071	0.98526	0.00145	0.98817
athmpwskr_2_8_1	1,000	513	0.0	na	17.21	5.26336	76,819.4	51,214.9	128,034.0	31.0551	0.0060	0.55815	0.00111	0.56036
35,000g HEU 20% enrichment														
athmpwskr_12_1_11	7,000	513	74,614.0	na	56.13	26.40867	2,204.7	51,214.9	53,419.6	36.3984	0.0146	1.30444	0.00132	1.30708
athmpwskr_12_1_10	7,000	513	67,153.0	na	50.57	25.52662	9,666.2	51,214.9	60,881.0	35.9438	0.0136	1.30153	0.00156	1.30465
athmpwskr_12_1_9	7,000	513	59,691.0	na	45.01	24.57901	17,127.6	51,214.9	68,342.5	35.4774	0.0131	1.29397	0.00141	1.29679
athmpwskr_12_1_8	7,000	513	52,230.0	na	39.44	23.55208	24,589.1	51,214.9	75,803.9	34.9983	0.0122	1.28559	0.00158	1.28875
athmpwskr_12_1_7	7,000	513	44,768.0	na	33.88	22.42682	32,050.6	51,214.9	83,265.4	34.5058	0.0115	1.27331	0.00148	1.27627
athmpwskr_12_1_6	7,000	513	37,307.0	na	28.31	21.17566	39,512.0	51,214.9	90,726.9	33.9988	0.0110	1.24850	0.00147	1.25144
athmpwskr_12_1_5	7,000	513	29,845.0	na	22.75	19.75607	46,973.5	51,214.9	98,188.3	33.4762	0.0100	1.21970	0.00148	1.22267
athmpwskr_12_1_4	7,000	513	22,384.0	na	17.18	18.09653	54,435.0	51,214.9	105,649.0	32.9367	0.0091	1.17002	0.00139	1.17279
athmpwskr_12_1_3	7,000	513	14,922.0	na	11.62	16.05945	61,896.4	51,214.9	113,111.0	32.3790	0.0081	1.09036	0.00129	1.09294
athmpwskr_12_1_2	7,000	513	7,461.5	na	6.06	13.30882	69,357.9	51,214.9	120,572.0	31.8014	0.0072	0.95817	0.00131	0.96080
athmpwskr_12_1_1	7,000	513	0.0	na	0.49	8.30498	76,819.4	51,214.9	128,034.0	31.2020	0.0058	0.65983	0.00100	0.66184
30,000g HEU 20% enrichment														
athmpwskr_11_1_11	6,000	513	74,614.0	na	65.49	26.37861	2,204.7	51,214.9	53,419.6	36.3826	0.0145	1.28729	0.00151	1.29031
athmpwskr_11_1_10	6,000	513	67,153.0	na	59.00	25.49445	9,666.2	51,214.9	60,881.0	35.9276	0.0141	1.28153	0.00149	1.28451
athmpwskr_11_1_9	6,000	513	59,691.0	na	52.51	24.54430	17,127.6	51,214.9	68,342.5	35.4607	0.0128	1.27980	0.00155	1.28290

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpwskr_11_1_8	6,000	513	52,230.0	na	46.02	23.51428	24,589.1	51,214.9	75,803.9	34.9812	0.0123	1.27508	0.00136	1.27780
athmpwskr_11_1_7	6,000	513	44,768.0	na	39.52	22.38512	32,050.6	51,214.9	83,265.4	34.4882	0.0118	1.26109	0.00154	1.26418
athmpwskr_11_1_6	6,000	513	37,307.0	na	33.03	21.12886	39,512.0	51,214.9	90,726.9	33.9807	0.0109	1.24331	0.00126	1.24582
athmpwskr_11_1_5	6,000	513	29,845.0	na	26.54	19.70228	46,973.5	51,214.9	98,188.3	33.4575	0.0102	1.20965	0.00156	1.21277
athmpwskr_11_1_4	6,000	513	22,384.0	na	20.05	18.03237	54,435.0	51,214.9	105,649.0	32.9174	0.0090	1.16727	0.00150	1.17026
athmpwskr_11_1_3	6,000	513	14,922.0	na	13.56	15.97785	61,896.4	51,214.9	113,111.0	32.3590	0.0082	1.09306	0.00155	1.09615
athmpwskr_11_1_2	6,000	513	7,461.5	na	7.07	13.18955	69,357.9	51,214.9	120,572.0	31.7807	0.0072	0.95881	0.00135	0.96150
athmpwskr_11_1_1	6,000	513	0.0	na	0.57	7.98959	76,819.4	51,214.9	128,034.0	31.1805	0.0058	0.64202	0.00097	0.64395
25,000g HEU 20% enrichment														
athmpwskr_10_1_11	5,000	513	74,614.0	na	78.59	26.34849	2,204.7	51,214.9	53,419.6	36.3668	0.0147	1.25666	0.00148	1.25962
athmpwskr_10_1_10	5,000	513	67,153.0	na	70.80	25.46220	9,666.2	51,214.9	60,881.0	35.9114	0.0137	1.25683	0.00146	1.25975
athmpwskr_10_1_9	5,000	513	59,691.0	na	63.01	24.50950	17,127.6	51,214.9	68,342.5	35.4441	0.0129	1.25832	0.00126	1.26084
athmpwskr_10_1_8	5,000	513	52,230.0	na	55.22	23.47635	24,589.1	51,214.9	75,803.9	34.9641	0.0124	1.25363	0.00147	1.25658
athmpwskr_10_1_7	5,000	513	44,768.0	na	47.43	22.34325	32,050.6	51,214.9	83,265.4	34.4706	0.0113	1.24695	0.00140	1.24974
athmpwskr_10_1_6	5,000	513	37,307.0	na	39.64	21.08185	39,512.0	51,214.9	90,726.9	33.9625	0.0106	1.23226	0.00154	1.23533
athmpwskr_10_1_5	5,000	513	29,845.0	na	31.85	19.64819	46,973.5	51,214.9	98,188.3	33.4388	0.0100	1.20506	0.00163	1.20832
athmpwskr_10_1_4	5,000	513	22,384.0	na	24.06	17.96775	54,435.0	51,214.9	105,649.0	32.8981	0.0093	1.16366	0.00132	1.16630
athmpwskr_10_1_3	5,000	513	14,922.0	na	16.27	15.89541	61,896.4	51,214.9	113,111.0	32.3390	0.0082	1.09217	0.00162	1.09540
athmpwskr_10_1_2	5,000	513	7,461.5	na	8.48	13.06807	69,357.9	51,214.9	120,572.0	31.7599	0.0070	0.95867	0.00128	0.96122
athmpwskr_10_1_1	5,000	513	0.0	na	0.69	7.64711	76,819.4	51,214.9	128,034.0	31.1589	0.0061	0.62222	0.00118	0.62457
20,000g HEU 20% enrichment														
athmpwskr_8_1_11	4,000	513	74,614.0	na	98.24	26.31829	2,204.7	51,214.9	53,419.6	36.3510	0.0145	1.21178	0.00126	1.21429
athmpwskr_8_1_10	4,000	513	67,153.0	na	88.50	25.42986	9,666.2	51,214.9	60,881.0	35.8951	0.0138	1.21697	0.00145	1.21987
athmpwskr_8_1_9	4,000	513	59,691.0	na	78.76	24.47459	17,127.6	51,214.9	68,342.5	35.4274	0.0129	1.22166	0.00110	1.22386
athmpwskr_8_1_8	4,000	513	52,230.0	na	69.02	23.43829	24,589.1	51,214.9	75,803.9	34.9470	0.0122	1.22547	0.00134	1.22815
athmpwskr_8_1_7	4,000	513	44,768.0	na	59.29	22.30123	32,050.6	51,214.9	83,265.4	34.4530	0.0118	1.22053	0.00127	1.22307
athmpwskr_8_1_6	4,000	513	37,307.0	na	49.55	21.03464	39,512.0	51,214.9	90,726.9	33.9444	0.0107	1.21326	0.00137	1.21600
athmpwskr_8_1_5	4,000	513	29,845.0	na	39.81	19.59380	46,973.5	51,214.9	98,188.3	33.4200	0.0102	1.19193	0.00131	1.19455

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpwskr_8_1_4	4,000	513	22,384.0	na	30.07	17.90266	54,435.0	51,214.9	105,649.0	32.8787	0.0090	1.15762	0.00164	1.16090
athmpwskr_8_1_3	4,000	513	14,922.0	na	20.34	15.81211	61,896.4	51,214.9	113,111.0	32.3190	0.0082	1.08959	0.00153	1.09264
athmpwskr_8_1_2	4,000	513	7,461.5	na	10.60	12.94430	69,357.9	51,214.9	120,572.0	31.7392	0.0074	0.96034	0.00139	0.96313
athmpwskr_8_1_1	4,000	513	0.0	na	0.86	7.27085	76,819.4	51,214.9	128,034.0	31.1374	0.0058	0.59785	0.00112	0.60008
15,000g HEU 20% enrichment														
athmpwskr_6_1_11	3,000	513	74,614.0	na	130.90	26.28803	2,204.7	51,214.9	53,419.6	36.3351	0.0142	1.14239	0.00134	1.14507
athmpwskr_6_1_10	3,000	513	67,153.0	na	118.00	25.39744	9,666.2	51,214.9	60,881.0	35.8789	0.0137	1.15284	0.00120	1.15523
athmpwskr_6_1_9	3,000	513	59,691.0	na	105.00	24.43959	17,127.6	51,214.9	68,342.5	35.4107	0.0131	1.16521	0.00121	1.16764
athmpwskr_6_1_8	3,000	513	52,230.0	na	92.03	23.40012	24,589.1	51,214.9	75,803.9	34.9298	0.0120	1.17283	0.00145	1.17574
athmpwskr_6_1_7	3,000	513	44,768.0	na	79.05	22.25905	32,050.6	51,214.9	83,265.4	34.4353	0.0113	1.18127	0.00164	1.18456
athmpwskr_6_1_6	3,000	513	37,307.0	na	66.06	20.98721	39,512.0	51,214.9	90,726.9	33.9262	0.0109	1.17504	0.00155	1.17814
athmpwskr_6_1_5	3,000	513	29,845.0	na	53.08	19.53911	46,973.5	51,214.9	98,188.3	33.4013	0.0100	1.16750	0.00146	1.17042
athmpwskr_6_1_4	3,000	513	22,384.0	na	40.10	17.83709	54,435.0	51,214.9	105,649.0	32.8594	0.0091	1.13986	0.00148	1.14283
athmpwskr_6_1_3	3,000	513	14,922.0	na	27.11	15.72792	61,896.4	51,214.9	113,111.0	32.2989	0.0082	1.08027	0.00151	1.08330
athmpwskr_6_1_2	3,000	513	7,461.5	na	14.13	12.81811	69,357.9	51,214.9	120,572.0	31.7184	0.0071	0.95952	0.00150	0.96252
athmpwskr_6_1_1	3,000	513	0.0	na	1.15	6.85101	76,819.4	51,214.9	128,034.0	31.1157	0.0058	0.57184	0.00092	0.57368
6,000g HEU 20% enrichment														
athmpwskr_4_1_11	2,000	513	74,614.0	na	196.40	26.25769	2,204.7	51,214.9	53,419.6	36.3193	0.0142	1.01841	0.00110	1.02061
athmpwskr_4_1_10	2,000	513	67,153.0	na	177.00	25.36494	9,666.2	51,214.9	60,881.0	35.8626	0.0138	1.04003	0.00121	1.04246
athmpwskr_4_1_9	2,000	513	59,691.0	na	157.50	24.40448	17,127.6	51,214.9	68,342.5	35.3940	0.0129	1.05800	0.00096	1.05992
athmpwskr_4_1_8	2,000	513	52,230.0	na	138.00	23.36182	24,589.1	51,214.9	75,803.9	34.9126	0.0121	1.07916	0.00129	1.08174
athmpwskr_4_1_7	2,000	513	44,768.0	na	118.50	22.21671	32,050.6	51,214.9	83,265.4	34.4176	0.0116	1.09162	0.00115	1.09393
athmpwskr_4_1_6	2,000	513	37,307.0	na	99.10	20.93956	39,512.0	51,214.9	90,726.9	33.9080	0.0107	1.10489	0.00122	1.10732
athmpwskr_4_1_5	2,000	513	29,845.0	na	79.62	19.48411	46,973.5	51,214.9	98,188.3	33.3825	0.0101	1.10960	0.00160	1.11281
athmpwskr_4_1_4	2,000	513	22,384.0	na	60.15	17.77103	54,435.0	51,214.9	105,649.0	32.8400	0.0091	1.09428	0.00143	1.09713
athmpwskr_4_1_3	2,000	513	14,922.0	na	40.67	15.64281	61,896.4	51,214.9	113,111.0	32.2789	0.0081	1.05881	0.00155	1.06191
athmpwskr_4_1_2	2,000	513	7,461.5	na	21.20	12.68939	69,357.9	51,214.9	120,572.0	31.6976	0.0072	0.95084	0.00134	0.95353
athmpwskr_4_1_1	2,000	513	0.0	na	1.72	6.37224	76,819.4	51,214.9	128,034.0	31.0941	0.0059	0.54033	0.00105	0.54242

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
5,000g HEU 20% enrichment														
athmpwskr_2_1_11	1,000	513	74,614.0	na	392.90	26.22729	2,204.7	51,214.9	53,419.6	36.3034	0.0139	0.76722	0.00089	0.76900
athmpwskr_2_1_10	1,000	513	67,153.0	na	353.90	25.33235	9,666.2	51,214.9	60,881.0	35.8463	0.0132	0.79602	0.00086	0.79774
athmpwskr_2_1_9	1,000	513	59,691.0	na	315.00	24.36928	17,127.6	51,214.9	68,342.5	35.3773	0.0127	0.82462	0.00105	0.82673
athmpwskr_2_1_8	1,000	513	52,230.0	na	276.00	23.32339	24,589.1	51,214.9	75,803.9	34.8954	0.0120	0.85817	0.00098	0.86014
athmpwskr_2_1_7	1,000	513	44,768.0	na	237.10	22.17421	32,050.6	51,214.9	83,265.4	34.4000	0.0112	0.88947	0.00112	0.89172
athmpwskr_2_1_6	1,000	513	37,307.0	na	198.10	20.89170	39,512.0	51,214.9	90,726.9	33.8898	0.0104	0.92204	0.00129	0.92462
athmpwskr_2_1_5	1,000	513	29,845.0	na	159.20	19.42880	46,973.5	51,214.9	98,188.3	33.3637	0.0098	0.95114	0.00115	0.95345
athmpwskr_2_1_4	1,000	513	22,384.0	na	120.20	17.70449	54,435.0	51,214.9	105,649.0	32.8205	0.0092	0.97244	0.00110	0.97465
athmpwskr_2_1_3	1,000	513	14,922.0	na	81.34	15.55677	61,896.4	51,214.9	113,111.0	32.2588	0.0083	0.97325	0.00168	0.97660
athmpwskr_2_1_2	1,000	513	7,461.5	na	42.39	12.55800	69,357.9	51,214.9	120,572.0	31.6767	0.0073	0.91381	0.00132	0.91644
athmpwskr_2_1_1	1,000	513	0.0	na	3.44	5.80813	76,819.4	51,214.9	128,034.0	31.0724	0.0059	0.50206	0.00118	0.50441
4,500g HEU 20% enrichment														
athm2pwskr_5_1_11	900	513	74,614.0	na	436.60	26.2243	2,204.7	51,214.9	53,419.6	36.3018	0.0138	0.72669	0.00082	0.72832
athm2pwskr_5_1_10	900	513	67,153.0	na	393.30	25.3291	9,666.2	51,214.9	60,881.0	35.8447	0.0131	0.75662	0.00084	0.75830
athm2pwskr_5_1_9	900	513	59,691.0	na	350.00	24.3658	17,127.6	51,214.9	68,342.5	35.3756	0.0127	0.78606	0.00091	0.78788
athm2pwskr_5_1_8	900	513	52,230.0	na	306.70	23.3195	24,589.1	51,214.9	75,803.9	34.8937	0.0120	0.82194	0.00094	0.82382
athm2pwskr_5_1_7	900	513	44,768.0	na	263.40	22.1700	32,050.6	51,214.9	83,265.4	34.3982	0.0112	0.85385	0.00090	0.85565
athm2pwskr_5_1_6	900	513	37,307.0	na	220.20	20.8869	39,512.0	51,214.9	90,726.9	33.8879	0.0109	0.88893	0.00106	0.89105
athm2pwskr_5_1_5	900	513	29,845.0	na	176.90	19.4233	46,973.5	51,214.9	98,188.3	33.3618	0.0098	0.92125	0.00114	0.92352
athm2pwskr_5_1_4	900	513	22,384.0	na	133.60	17.6978	54,435.0	51,214.9	105,649.0	32.8186	0.0088	0.94828	0.00112	0.95052
athm2pwskr_5_1_3	900	513	14,922.0	na	90.38	15.5481	61,896.4	51,214.9	113,111.0	32.2567	0.0081	0.95553	0.00128	0.95810
athm2pwskr_5_1_2	900	513	7,461.5	na	47.10	12.5447	69,357.9	51,214.9	120,572.0	31.6746	0.0072	0.90112	0.00143	0.90398
athm2pwskr_5_1_1	900	513	0.0	na	3.82	5.7454	76,819.4	51,214.9	128,034.0	31.0703	0.0060	0.49483	0.00115	0.49712
4,000g HEU 20% enrichment														
athm2pwskr_4_1_11	800	513	74,614.0	na	491.10	26.2212	2,204.7	51,214.9	53,419.6	36.3002	0.0139	0.68165	0.00072	0.68308
athm2pwskr_4_1_10	800	513	67,153.0	na	442.40	25.3258	9,666.2	51,214.9	60,881.0	35.8430	0.0131	0.71140	0.00080	0.71299

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athm2pwskr_4_1_9	800	513	59,691.0	na	393.80	24.3622	17,127.6	51,214.9	68,342.5	35.3739	0.0124	0.74377	0.00085	0.74547
athm2pwskr_4_1_8	800	513	52,230.0	na	345.10	23.3157	24,589.1	51,214.9	75,803.9	34.8920	0.0120	0.77769	0.00081	0.77931
athm2pwskr_4_1_7	800	513	44,768.0	na	296.40	22.1657	32,050.6	51,214.9	83,265.4	34.3964	0.0116	0.81374	0.00077	0.81528
athm2pwskr_4_1_6	800	513	37,307.0	na	247.70	20.8821	39,512.0	51,214.9	90,726.9	33.8861	0.0106	0.85125	0.00097	0.85319
athm2pwskr_4_1_5	800	513	29,845.0	na	199.00	19.4177	46,973.5	51,214.9	98,188.3	33.3599	0.0098	0.88803	0.00130	0.89063
athm2pwskr_4_1_4	800	513	22,384.0	na	150.30	17.6911	54,435.0	51,214.9	105,649.0	32.8166	0.0089	0.91753	0.00124	0.92001
athm2pwskr_4_1_3	800	513	14,922.0	na	101.60	15.5395	61,896.4	51,214.9	113,111.0	32.2547	0.0081	0.93454	0.00150	0.93755
athm2pwskr_4_1_2	800	513	7,461.5	na	52.99	12.5314	69,357.9	51,214.9	120,572.0	31.6725	0.0071	0.89101	0.00130	0.89362
athm2pwskr_4_1_1	800	513	0.0	na	4.30	5.6812	76,819.4	51,214.9	128,034.0	31.0681	0.0059	0.49028	0.00108	0.49244
3,500g HEU 20% enrichment														
athm2pwskr_3_1_11	700	513	74,614.0	na	561.30	26.2182	2,204.7	51,214.9	53,419.6	36.2986	0.0139	0.63180	0.00067	0.63314
athm2pwskr_3_1_10	700	513	67,153.0	na	505.70	25.3226	9,666.2	51,214.9	60,881.0	35.8414	0.0131	0.66242	0.00078	0.66397
athm2pwskr_3_1_9	700	513	59,691.0	na	450.00	24.3587	17,127.6	51,214.9	68,342.5	35.3722	0.0126	0.69361	0.00081	0.69524
athm2pwskr_3_1_8	700	513	52,230.0	na	394.40	23.3118	24,589.1	51,214.9	75,803.9	34.8903	0.0120	0.72803	0.00083	0.72969
athm2pwskr_3_1_7	700	513	44,768.0	na	338.70	22.1614	32,050.6	51,214.9	83,265.4	34.3946	0.0112	0.76553	0.00089	0.76731
athm2pwskr_3_1_6	700	513	37,307.0	na	283.10	20.8773	39,512.0	51,214.9	90,726.9	33.8843	0.0104	0.80365	0.00089	0.80542
athm2pwskr_3_1_5	700	513	29,845.0	na	227.40	19.4122	46,973.5	51,214.9	98,188.3	33.3581	0.0100	0.84452	0.00099	0.84649
athm2pwskr_3_1_4	700	513	22,384.0	na	171.80	17.6844	54,435.0	51,214.9	105,649.0	32.8147	0.0091	0.88253	0.00104	0.88461
athm2pwskr_3_1_3	700	513	14,922.0	na	116.20	15.5308	61,896.4	51,214.9	113,111.0	32.2527	0.0081	0.90492	0.00126	0.90744
athm2pwskr_3_1_2	700	513	7,461.5	na	60.56	12.5180	69,357.9	51,214.9	120,572.0	31.6704	0.0073	0.87397	0.00159	0.87716
athm2pwskr_3_1_1	700	513	0.0	na	4.92	5.6156	76,819.4	51,214.9	128,034.0	31.0659	0.0059	0.48609	0.00103	0.48815
3,000g HEU 20% enrichment														
athm2pwskr_2_1_11	600	513	74,614.0	na	654.90	26.2151	2,204.7	51,214.9	53,419.6	36.2970	0.0140	0.57444	0.00056	0.57557
athm2pwskr_2_1_10	600	513	67,153.0	na	589.90	25.3193	9,666.2	51,214.9	60,881.0	35.8398	0.0132	0.60498	0.00063	0.60623
athm2pwskr_2_1_9	600	513	59,691.0	na	525.00	24.3552	17,127.6	51,214.9	68,342.5	35.3706	0.0128	0.63499	0.00090	0.63678
athm2pwskr_2_1_8	600	513	52,230.0	na	460.10	23.3080	24,589.1	51,214.9	75,803.9	34.8886	0.0121	0.66999	0.00083	0.67164
athm2pwskr_2_1_7	600	513	44,768.0	na	395.20	22.1572	32,050.6	51,214.9	83,265.4	34.3929	0.0114	0.70932	0.00087	0.71106
athm2pwskr_2_1_6	600	513	37,307.0	na	330.30	20.8725	39,512.0	51,214.9	90,726.9	33.8825	0.0108	0.75066	0.00084	0.75234

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athm2pwskr_2_1_5	600	513	29,845.0	na	265.40	19.4066	46,973.5	51,214.9	98,188.3	33.3562	0.0099	0.79472	0.00098	0.79669
athm2pwskr_2_1_4	600	513	22,384.0	na	200.40	17.6777	54,435.0	51,214.9	105,649.0	32.8128	0.0088	0.83915	0.00127	0.84169
athm2pwskr_2_1_3	600	513	14,922.0	na	135.50	15.5221	61,896.4	51,214.9	113,111.0	32.2507	0.0081	0.86959	0.00135	0.87228
athm2pwskr_2_1_2	600	513	7,461.5	na	70.65	12.5047	69,357.9	51,214.9	120,572.0	31.6684	0.0073	0.85284	0.00128	0.85540
athm2pwskr_2_1_1	600	513	0.0	na	5.74	5.5484	76,819.4	51,214.9	128,034.0	31.0638	0.0060	0.48105	0.00114	0.48333
compromised package, homogenous core (HEU broken metal, polyethylene, and Kaolite), HEU shell, 20.0 cm water reflector														
17,500 g HEU														
athmpkmr_6_1_1_11	3,000	513	76,819.4	51,214.9	134.82	39.13343	na	na	500.0	39.1404	0.0305	0.82671	0.00116	0.82904
athmpkmr_6_1_1_10	3,000	513	69,357.9	51,214.9	121.83	38.49290	na	na	500.0	38.5001	0.0316	0.81988	0.00107	0.82201
athmpkmr_6_1_1_9	3,000	513	61,896.4	51,214.9	108.85	37.83031	na	na	500.0	37.8377	0.0331	0.80737	0.00168	0.81074
athmpkmr_6_1_1_8	3,000	513	54,435.0	51,214.9	95.87	37.14367	na	na	500.0	37.1514	0.0350	0.78879	0.00127	0.79133
athmpkmr_6_1_1_7	3,000	513	46,973.5	51,214.9	82.88	36.43065	na	na	500.0	36.4386	0.0381	0.76393	0.00123	0.76638
athmpkmr_6_1_1_6	3,000	513	39,512.0	51,214.9	69.90	35.68857	na	na	500.0	35.6969	0.0399	0.73508	0.00126	0.73759
athmpkmr_6_1_1_5	3,000	513	32,050.6	51,214.9	56.92	34.91428	na	na	500.0	34.9230	0.0435	0.69610	0.00112	0.69835
athmpkmr_6_1_1_4	3,000	513	24,589.1	51,214.9	43.93	34.10403	na	na	500.0	34.1131	0.0465	0.64833	0.00105	0.65043
athmpkmr_6_1_1_3	3,000	513	17,127.6	51,214.9	30.95	33.25334	na	na	500.0	33.2629	0.0515	0.58834	0.00116	0.59066
athmpkmr_6_1_1_2	3,000	513	9,666.2	51,214.9	17.97	32.35674	na	na	500.0	32.3668	0.0567	0.51967	0.00102	0.52172
athmpkmr_6_1_1_1	3,000	513	2,204.7	51,214.9	4.98	31.40750	na	na	500.0	31.4182	0.0648	0.44668	0.00102	0.44873
17,500 g HEU														
athmpkmr_5_2_1_11	2,500	513	76,819.4	51,214.9	161.78	39.12659	na	na	1,000.0	39.1404	0.0308	0.81054	0.00107	0.81268
athmpkmr_5_2_1_10	2,500	513	69,357.9	51,214.9	146.20	38.48583	na	na	1,000.0	38.5001	0.0321	0.80744	0.00111	0.80966
athmpkmr_5_2_1_9	2,500	513	61,896.4	51,214.9	130.62	37.82300	na	na	1,000.0	37.8377	0.0337	0.79514	0.00117	0.79749
athmpkmr_5_2_1_8	2,500	513	54,435.0	51,214.9	115.04	37.13608	na	na	1,000.0	37.1514	0.0354	0.78193	0.00117	0.78426
athmpkmr_5_2_1_7	2,500	513	46,973.5	51,214.9	99.46	36.42276	na	na	1,000.0	36.4386	0.0380	0.76122	0.00146	0.76414
athmpkmr_5_2_1_6	2,500	513	39,512.0	51,214.9	83.88	35.68035	na	na	1,000.0	35.6969	0.0402	0.73648	0.00125	0.73898
athmpkmr_5_2_1_5	2,500	513	32,050.6	51,214.9	68.30	34.90569	na	na	1,000.0	34.9230	0.0432	0.69977	0.00121	0.70218
athmpkmr_5_2_1_4	2,500	513	24,589.1	51,214.9	52.72	34.09503	na	na	1,000.0	34.1131	0.0465	0.65426	0.00101	0.65627
athmpkmr_5_2_1_3	2,500	513	17,127.6	51,214.9	37.14	33.24387	na	na	1,000.0	33.2629	0.0508	0.59580	0.00122	0.59824

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nif	k _{eff}	σ	k _{eff} + 2σ
athmpkmr_5_2_1_2	2,500	513	9,666.2	51,214.9	21.56	32.34674	na	na	1,000.0	32.3668	0.0557	0.52943	0.00102	0.53147
athmpkmr_5_2_1_1	2,500	513	2,204.7	51,214.9	5.98	31.39688	na	na	1,000.0	31.4182	0.0640	0.45232	0.00099	0.45429
17,500 g HEU														
athmpkmr_4_3_1_11	2,000	513	76,819.4	51,214.9	202.23	39.11975	na	na	1,500.0	39.1404	0.0315	0.78278	0.00117	0.78512
athmpkmr_4_3_1_10	2,000	513	69,357.9	51,214.9	182.75	38.47876	na	na	1,500.0	38.5001	0.0322	0.78073	0.00097	0.78267
athmpkmr_4_3_1_9	2,000	513	61,896.4	51,214.9	163.28	37.81568	na	na	1,500.0	37.8377	0.0341	0.77618	0.00112	0.77842
athmpkmr_4_3_1_8	2,000	513	54,435.0	51,214.9	143.80	37.12848	na	na	1,500.0	37.1514	0.0359	0.76473	0.00117	0.76706
athmpkmr_4_3_1_7	2,000	513	46,973.5	51,214.9	124.33	36.41487	na	na	1,500.0	36.4386	0.0381	0.74931	0.00113	0.75157
athmpkmr_4_3_1_6	2,000	513	39,512.0	51,214.9	104.85	35.67213	na	na	1,500.0	35.6969	0.0401	0.72799	0.00111	0.73021
athmpkmr_4_3_1_5	2,000	513	32,050.6	51,214.9	85.38	34.89710	na	na	1,500.0	34.9230	0.0432	0.69825	0.00112	0.70049
athmpkmr_4_3_1_4	2,000	513	24,589.1	51,214.9	65.90	34.08602	na	na	1,500.0	34.1131	0.0461	0.65621	0.00111	0.65843
athmpkmr_4_3_1_3	2,000	513	17,127.6	51,214.9	46.43	33.23440	na	na	1,500.0	33.2629	0.0506	0.60270	0.00125	0.60519
athmpkmr_4_3_1_2	2,000	513	9,666.2	51,214.9	26.95	32.33673	na	na	1,500.0	32.3668	0.0552	0.53659	0.00100	0.53859
athmpkmr_4_3_1_1	2,000	513	2,204.7	51,214.9	7.48	31.38626	na	na	1,500.0	31.4182	0.0626	0.46023	0.00105	0.46233
17,500 g HEU														
athmpkmr_3_4_1_11	1,500	513	76,819.4	51,214.9	269.63	39.11291	na	na	2,000.0	39.1404	0.0323	0.74454	0.00111	0.74677
athmpkmr_3_4_1_10	1,500	513	69,357.9	51,214.9	243.67	38.47169	na	na	2,000.0	38.5001	0.0332	0.74408	0.00106	0.74619
athmpkmr_3_4_1_9	1,500	513	61,896.4	51,214.9	217.70	37.80835	na	na	2,000.0	37.8377	0.0348	0.74205	0.00101	0.74407
athmpkmr_3_4_1_8	1,500	513	54,435.0	51,214.9	191.73	37.12089	na	na	2,000.0	37.1514	0.0366	0.73801	0.00109	0.74020
athmpkmr_3_4_1_7	1,500	513	46,973.5	51,214.9	165.77	36.40697	na	na	2,000.0	36.4386	0.0381	0.72624	0.00099	0.72823
athmpkmr_3_4_1_6	1,500	513	39,512.0	51,214.9	139.80	35.66390	na	na	2,000.0	35.6969	0.0400	0.71184	0.00109	0.71402
athmpkmr_3_4_1_5	1,500	513	32,050.6	51,214.9	113.83	34.88850	na	na	2,000.0	34.9230	0.0422	0.68601	0.00108	0.68817
athmpkmr_3_4_1_4	1,500	513	24,589.1	51,214.9	87.87	34.07701	na	na	2,000.0	34.1131	0.0460	0.65133	0.00126	0.65385
athmpkmr_3_4_1_3	1,500	513	17,127.6	51,214.9	61.90	33.22491	na	na	2,000.0	33.2629	0.0500	0.60077	0.00107	0.60290
athmpkmr_3_4_1_2	1,500	513	9,666.2	51,214.9	35.93	32.32672	na	na	2,000.0	32.3668	0.0547	0.54059	0.00105	0.54270
athmpkmr_3_4_1_1	1,500	513	2,204.7	51,214.9	9.97	31.37562	na	na	2,000.0	31.4182	0.0615	0.46420	0.00093	0.46605
17,500 g HEU														

Table 6.9.6-23. Results for HEU broken metal content for air transportation

case name	²³⁵ U (g)	CH ₂ (g)	H ₂ O (g)	Kaolite (g)	htox	Rc (cm)	H ₂ O (g)	Kao (g)	Shell (g)	Rs (cm)	nlf	k _{eff}	σ	k _{eff} + 2σ
athmpkmr_2_5_1_11	1,000	513	76,819.4	51,214.9	404.45	39.10606	na	na	2,500.0	39.1404	0.0330	0.68332	0.00087	0.68506
athmpkmr_2_5_1_10	1,000	513	69,357.9	51,214.9	365.50	38.46461	na	na	2,500.0	38.5001	0.0338	0.68976	0.00107	0.69191
athmpkmr_2_5_1_9	1,000	513	61,896.4	51,214.9	326.55	37.80103	na	na	2,500.0	37.8377	0.0350	0.69285	0.00095	0.69475
athmpkmr_2_5_1_8	1,000	513	54,435.0	51,214.9	287.60	37.11329	na	na	2,500.0	37.1514	0.0365	0.69207	0.00120	0.69447
athmpkmr_2_5_1_7	1,000	513	46,973.5	51,214.9	248.65	36.39907	na	na	2,500.0	36.4386	0.0383	0.69082	0.00098	0.69278
athmpkmr_2_5_1_6	1,000	513	39,512.0	51,214.9	209.70	35.65566	na	na	2,500.0	35.6969	0.0399	0.68238	0.00101	0.68440
athmpkmr_2_5_1_5	1,000	513	32,050.6	51,214.9	170.75	34.87989	na	na	2,500.0	34.9230	0.0429	0.66578	0.00110	0.66798
athmpkmr_2_5_1_4	1,000	513	24,589.1	51,214.9	131.80	34.06799	na	na	2,500.0	34.1131	0.0457	0.63892	0.00106	0.64104
athmpkmr_2_5_1_3	1,000	513	17,127.6	51,214.9	92.85	33.21543	na	na	2,500.0	33.2629	0.0491	0.59774	0.00102	0.59979
athmpkmr_2_5_1_2	1,000	513	9,666.2	51,214.9	53.90	32.31670	na	na	2,500.0	32.3668	0.0535	0.54129	0.00121	0.54371
athmpkmr_2_5_1_1	1,000	513	2,204.7	51,214.9	14.95	31.36499	na	na	2,500.0	31.4182	0.0599	0.46802	0.00098	0.46999
17,500 g HEU														
athmpkmr_1_6_1_11	500	513	76,819.4	51,214.9	808.90	39.09921	na	na	3,000.0	39.1404	0.0342	0.59914	0.00103	0.60120
athmpkmr_1_6_1_10	500	513	69,357.9	51,214.9	731.00	38.45754	na	na	3,000.0	38.5001	0.0350	0.60911	0.00091	0.61092
athmpkmr_1_6_1_9	500	513	61,896.4	51,214.9	653.10	37.79370	na	na	3,000.0	37.8377	0.0362	0.61744	0.00087	0.61919
athmpkmr_1_6_1_8	500	513	54,435.0	51,214.9	575.20	37.10569	na	na	3,000.0	37.1514	0.0375	0.62582	0.00099	0.62780
athmpkmr_1_6_1_7	500	513	46,973.5	51,214.9	497.30	36.39117	na	na	3,000.0	36.4386	0.0389	0.63123	0.00105	0.63332
athmpkmr_1_6_1_6	500	513	39,512.0	51,214.9	419.40	35.64743	na	na	3,000.0	35.6969	0.0407	0.63132	0.00115	0.63362
athmpkmr_1_6_1_5	500	513	32,050.6	51,214.9	341.50	34.87129	na	na	3,000.0	34.9230	0.0427	0.62606	0.00126	0.62858
athmpkmr_1_6_1_4	500	513	24,589.1	51,214.9	263.60	34.05897	na	na	3,000.0	34.1131	0.0450	0.61361	0.00122	0.61605
athmpkmr_1_6_1_3	500	513	17,127.6	51,214.9	185.70	33.20594	na	na	3,000.0	33.2629	0.0485	0.58503	0.00102	0.58706
athmpkmr_1_6_1_2	500	513	9,666.2	51,214.9	107.80	32.30667	na	na	3,000.0	32.3668	0.0527	0.53799	0.00104	0.54007
athmpkmr_1_6_1_1	500	513	2,204.7	51,214.9	29.90	31.35434	na	na	3,000.0	31.4182	0.0577	0.47057	0.00099	0.47255