

boundaries	mev	initial	0.1 y	1.1 y
0.0000000001	0.000000003	0.00000004289	0.00000004289	0.00000004289
0.000000003	0.0000000075	0.00000003649	0.00000003649	0.00000003649
0.0000000075	0.000000001	0.00000001174	0.00000001174	0.00000001174
0.000000001	0.0000000253	0.00000002579	0.00000002579	0.00000002579
0.0000000253	0.000000003	0.00000002154	0.00000002154	0.00000002154
0.000000003	0.000000004	0.0000001796	0.0000001796	0.0000001796
0.000000004	0.000000005	0.0000007533	0.0000007533	0.0000007532
0.000000005	0.000000007	0.0000001673	0.0000001673	0.0000001672
0.000000007	0.000000001	0.000000287	0.000000287	0.0000002869
0.000000001	0.000000015	0.0000005638	0.0000005638	0.0000005638
0.000000015	0.000000002	0.0000001128	0.0000001138	0.0000001138
0.000000002	0.0000000225	0.0000007496	0.0000007551	0.0000007551
0.0000000225	0.000000025	0.0000001093	0.0000001098	0.0000001098
0.000000025	0.0000000275	0.0000008083	0.0000008137	0.0000008137
0.0000000275	0.0000000325	0.0000003182	0.0000002917	0.0000001538
0.0000000325	0.000000035	0.0000001502	0.0000001359	0.00000006283
0.000000035	0.0000000375	0.0000002856	0.0000002527	0.00000008607
0.0000000375	0.000000004	0.0000001789	0.0000001617	0.00000007349
0.000000004	0.0000000625	0.0000001562	0.0000001409	0.00000006241
0.0000000625	0.000000001	0.0000003644	0.0000003283	0.0000001439
0.000000001	0.000000177	0.0000001009	0.00000009085	0.00000003963
0.000000177	0.000000003	0.0000002021	0.0000001819	0.00000007856
0.000000003	0.000000475	0.0000003663	0.0000003299	0.0000001435
0.000000475	0.000000006	0.0000003092	0.0000002786	0.0000001022
0.000000006	0.000000081	0.0000005901	0.0000005313	0.0000002031
0.000000081	0.000000001	0.0000005968	0.0000005376	0.00000020349
0.000000001	0.000000003	0.0000009406	0.0000008465	0.0000003659
0.000000003	0.000000001	0.0000006087	0.0000005474	0.000000235
0.000000001	0.000000055	0.0000008642	0.0000007773	0.0000003339
0.000000055	0.000000003	0.0000001091	0.0000009818	0.000000423.1
0.000000003	0.000000017	0.00000014830	0.00000013340	0.0000005742
0.000000017	0.000000025	0.00000012550	0.00000011280	0.0000004853
0.000000025	0.00000001	0.000000195500	0.000000175900	0.00000075540
0.000000001	0.00000004	0.0000001411000	0.0000001269000	0.000000544400
0.000000004	0.00000009	0.0000003075000	0.0000002765000	0.0000001184000
0.000000009	0.00000014	0.0000003124000	0.0000002808000	0.0000001197000
0.000000014	0.000000185	0.0000002609000	0.0000002343000	0.000000990500
0.0000000185	0.000000235	0.0000002630000	0.0000002361000	0.000000988500
0.0000000235	0.000000248	0.000000597300	0.000000535800	0.000000222800
0.0000000248	0.0000003	0.0000002216000	0.0000001986000	0.000000814100
0.000000003	0.00000048	0.0000003976000	0.0000003555000	0.0000001416000
0.000000048	0.000000643	0.000000879300	0.000000790700	0.000000338300
0.0000000643	0.000000819	0.000000270400	0.000000243300	0.000000105000
0.0000000819	0.00000020	0.00000091170	0.00000082080	0.00000035560
0.000000020		0.00000021100000	0.00000018940000	0.0000007922000
0.000000000				

1.2 y	1.2 y	1.3 y	1.4 y	1.5 y
0.00000004289	0.00000004289	0.00000004289	0.00000004289	0.00000004289
0.00000003649	0.00000003649	0.00000003649	0.00000003649	0.00000003649
0.0000001174	0.0000001174	0.0000001174	0.0000001174	0.0000001174
0.00000002579	0.00000002579	0.00000002579	0.00000002579	0.00000002579
0.0000002154	0.0000002154	0.0000002154	0.0000002154	0.0000002154
0.000001796	0.000001796	0.000001796	0.000001796	0.000001796
0.0000007532	0.0000007532	0.0000007532	0.0000007532	0.0000007532
0.000001672	0.000001672	0.000001672	0.000001672	0.000001672
0.000002869	0.000002869	0.000002869	0.000002869	0.000002869
0.000005638	0.000005638	0.000005637	0.000005637	0.000005637
0.00001138	0.00001138	0.00001138	0.00001138	0.00001138
0.00000755	0.00000755	0.00000755	0.00000755	0.00000755
0.00001098	0.00001098	0.00001098	0.00001098	0.00001098
0.000008137	0.000008137	0.000008137	0.000008137	0.000008137
0.000149	0.0001447	0.0001411	0.0001376	0.0001346
0.0000603	0.00005808	0.00005618	0.00005436	0.00005281
0.00008038	0.0000754	0.00007116	0.00006711	0.00006369
0.00007044	0.00006777	0.00006549	0.0000633	0.00006145
0.000597	0.0005732	0.0005529	0.0005335	0.000517
0.001376	0.00132	0.001272	0.001226	0.001188
0.003786	0.00363	0.003498	0.003371	0.003263
0.007499	0.007186	0.006919	0.006663	0.006446
0.0137	0.01314	0.01265	0.01219	0.0118
0.01166	0.01118	0.01077	0.01039	0.01006
0.02206	0.02115	0.02037	0.01963	0.01899
0.02245	0.02153	0.02074	0.01999	0.01936
0.3493	0.3347	0.3223	0.3103	0.3002
2.242	2.148	2.067	1.99	1.925
31.86	30.52	29.38	28.28	27.35
403.9	387	372.5	358.7	347
5480	5250	5054	4867	4707
4631	4437	4271	4112	3977
72080	69050	66460	63980	61880
519300	497400	478700	460800	445600
1129000	1082000	1041000	1002000	968500
1141000	1092000	1051000	1011000	977300
944000	903300	868500	835300	807200
941500	900400	865400	831900	803600
212100	202700	194800	187200	180800
774100	739200	709500	681100	657200
1342000	1278000	1224000	1172000	1128000
322700	309000	297300	286000	276500
100300	96060	92470	89030	86110
33940	32530	31320	30160	29180
7543000	7212000	6929000	6659000	6430000

Eight Assemblies

=8*N5
=8*N6
=8*N7
=8*N8
=8*N9
=8*N10
=8*N11
=8*N12
=8*N13
=8*N14
=8*N15
=8*N16
=8*N17
=8*N18
=8*N19
=8*N20
=8*N21
=8*N22
=8*N23
=8*N24
=8*N25
=8*N26
=8*N27
=8*N28
=8*N29
=8*N30
=8*N31
=8*N32
=8*N33
=8*N34
=8*N35
=8*N36
=8*N37
=8*N38
=8*N39
=8*N40
=8*N41
=8*N42
=8*N43
=8*N44
=8*N45
=8*N46
=8*N47
=8*N48
=8*N49

Neutron ENDF5 Group

grp

ORIGEN ENDF5 44 Group

	Max Energy		
45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.000000001	0.01	3
41	0.0000000253	0.0253	4
40	0.000000003	0.03	5
39	0.000000004	0.04	6
38	0.000000005	0.05	7
37	0.000000007	0.07	8
36	0.00000001	0.1	9
35	0.000000015	0.15	10
34	0.00000002	0.2	11
33	0.0000000225	0.225	12
32	0.000000025	0.25	13
31	0.0000000275	0.275	14
30	0.0000000325	0.325	15
29	0.000000035	0.35	16
28	0.0000000375	0.375	17
27	0.00000004	0.4	18
26	0.0000000625	0.625	19
25	0.0000001	1	20
24	0.000000177	1.77	21
23	0.0000003	3	22
22	0.000000475	4.75	23
21	0.0000006	6	24
20	0.00000081	8.1	25
19	0.000001	10	26
18	0.000003	30	27
17	0.00001	100	28
16	0.000055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

boundaries	mev	initial	0.1 y
0.0000000001	0.000000003	0.0000001018	0.0000001018
0.000000003	0.0000000075	0.00000008436	0.00000008436
0.0000000075	0.00000001	0.0000002421	0.0000002422
0.00000001	0.0000000253	0.00000007832	0.00000007832
0.0000000253	0.00000003	0.0000003208	0.0000003208
0.00000003	0.00000004	0.000002451	0.000002451
0.00000004	0.00000005	0.000001082	0.000001082
0.00000005	0.00000007	0.000002399	0.000002399
0.00000007	0.0000001	0.000004111	0.000004111
0.0000001	0.00000015	0.000008069	0.000008069
0.00000015	0.0000002	0.00001359	0.0000137
0.0000002	0.000000225	0.000009194	0.000009254
0.000000225	0.00000025	0.00001372	0.00001378
0.00000025	0.000000275	0.000009994	0.00001005
0.000000275	0.000000325	0.0008159	0.0007573
0.000000325	0.00000035	0.0003665	0.0003351
0.00000035	0.000000375	0.0006663	0.0005938
0.000000375	0.0000004	0.0004288	0.0003908
0.0000004	0.000000625	0.003771	0.003432
0.000000625	0.000001	0.008856	0.008061
0.000001	0.00000177	0.02462	0.02241
0.00000177	0.000003	0.04928	0.04482
0.000003	0.00000475	0.08964	0.0816
0.00000475	0.000006	0.07593	0.06918
0.000006	0.0000081	0.1447	0.1317
0.0000081	0.00001	0.1466	0.1336
0.00001	0.00003	2.308	2.101
0.00003	0.0001	14.89	13.54
0.0001	0.00055	211.5	192.4
0.00055	0.003	2673	2432
0.003	0.017	36290	33010
0.017	0.025	30680	27900
0.025	0.1	478200	434900
0.1	0.4	3452000	3139000
0.4	0.9	7526000	6843000
0.9	1.4	7628000	6932000
1.4	1.85	6329000	5743000
1.85	2.35	6314000	5720000
2.35	2.48	1424000	1288000
2.48	3	5263000	4754000
3	4.8	9511000	8583000
4.8	6.43	2175000	1979000
6.43	8.19	672300	612700
8.19	20	227600	207600
totals		51070000	46300000

1.1 y	1.2 y	1.2 y	1.3 y	1.4 y
0.0000001018	0.0000001018	0.0000001018	0.0000001018	0.0000001018
0.00000008436	0.00000008436	0.00000008436	0.00000008436	0.00000008436
0.0000002422	0.0000002422	0.0000002422	0.0000002422	0.0000002422
0.00000007831	0.00000007831	0.00000007831	0.00000007831	0.00000007831
0.0000003208	0.0000003208	0.0000003208	0.0000003208	0.0000003208
0.000002451	0.000002451	0.000002451	0.000002451	0.000002451
0.000001082	0.000001082	0.000001082	0.000001082	0.000001082
0.000002399	0.000002399	0.000002399	0.000002399	0.000002399
0.000004111	0.000004111	0.000004111	0.000004111	0.000004111
0.000008069	0.000008069	0.000008069	0.000008069	0.000008069
0.0000137	0.0000137	0.0000137	0.0000137	0.0000137
0.000009254	0.000009254	0.000009254	0.000009254	0.000009254
0.00001378	0.00001378	0.00001378	0.00001378	0.00001378
0.00001005	0.00001005	0.00001005	0.00001005	0.00001005
0.0004523	0.0004413	0.0004317	0.0004233	0.0004152
0.0001743	0.0001686	0.0001637	0.0001594	0.0001553
0.0002295	0.0002169	0.0002059	0.0001966	0.0001876
0.000197	0.0001902	0.0001842	0.0001791	0.0001742
0.001708	0.001647	0.001594	0.001549	0.001505
0.00401	0.003868	0.003743	0.003636	0.003533
0.01115	0.01076	0.01041	0.01011	0.009826
0.02212	0.02132	0.02063	0.02003	0.01945
0.04063	0.0392	0.03793	0.03685	0.03581
0.03475	0.03354	0.03248	0.03157	0.03069
0.06573	0.06341	0.06138	0.05963	0.05795
0.06703	0.06469	0.06264	0.06088	0.05918
1.045	1.008	0.9751	0.9472	0.9203
6.675	6.435	6.224	6.043	5.87
94.93	91.51	88.52	85.95	83.48
1204	1161	1123	1091	1060
16310	15720	15210	14770	14350
13760	13270	12830	12460	12100
214400	206600	199900	194000	188500
1546000	1491000	1442000	1400000	1359000
3369000	3247000	3140000	3049000	2961000
3392000	3268000	3159000	3066000	2977000
2772000	2668000	2577000	2499000	2424000
2705000	2600000	2508000	2430000	2355000
600600	576700	555900	538000	520900
2181000	2092000	2014000	1948000	1884000
3887000	3724000	3582000	3460000	3343000
985000	950000	919400	893100	867800
308600	297900	288500	280400	272700
105300	101600	98480	95760	93150
22100000	21250000	20510000	19880000	19270000

1.5 y

24 Assemblies

0.0000001018	=N5*24
0.00000008436	=N6*24
0.0000002422	=N7*24
0.00000007831	=N8*24
0.0000003208	=N9*24
0.000002451	=N10*24
0.000001082	=N11*24
0.000002399	=N12*24
0.000004111	=N13*24
0.000008069	=N14*24
0.00001369	=N15*24
0.000009254	=N16*24
0.00001378	=N17*24
0.00001005	=N18*24
0.0004083	=N19*24
0.0001518	=N20*24
0.00018	=N21*24
0.00017	=N22*24
0.001468	=N23*24
0.003446	=N24*24
0.009583	=N25*24
0.01896	=N26*24
0.03492	=N27*24
0.02995	=N28*24
0.05652	=N29*24
0.05774	=N30*24
0.8975	=N31*24
5.722	=N32*24
81.38	=N33*24
1033	=N34*24
13990	=N35*24
11800	=N36*24
183700	=N37*24
1325000	=N38*24
2886000	=N39*24
2900000	=N40*24
2361000	=N41*24
2291000	=N42*24
506400	=N43*24
1830000	=N44*24
3244000	=N45*24
846200	=N46*24
266000	=N47*24
90920	=N48*24
18760000	=N49*24

Energy Output Group	Assembly Sub Batch Co		
	DD1	DD2	DD3
1	=DD1!P5	=DD2!P5	=DD3!Q5
2	=DD1!P6	=DD2!P6	=DD3!Q6
3	=DD1!P7	=DD2!P7	=DD3!Q7
4	=DD1!P8	=DD2!P8	=DD3!Q8
5	=DD1!P9	=DD2!P9	=DD3!Q9
6	=DD1!P10	=DD2!P10	=DD3!Q10
7	=DD1!P11	=DD2!P11	=DD3!Q11
8	=DD1!P12	=DD2!P12	=DD3!Q12
9	=DD1!P13	=DD2!P13	=DD3!Q13
10	=DD1!P14	=DD2!P14	=DD3!Q14
11	=DD1!P15	=DD2!P15	=DD3!Q15
12	=DD1!P16	=DD2!P16	=DD3!Q16
13	=DD1!P17	=DD2!P17	=DD3!Q17
14	=DD1!P18	=DD2!P18	=DD3!Q18
15	=DD1!P19	=DD2!P19	=DD3!Q19
16	=DD1!P20	=DD2!P20	=DD3!Q20
17	=DD1!P21	=DD2!P21	=DD3!Q21
18	=DD1!P22	=DD2!P22	=DD3!Q22
19	=DD1!P23	=DD2!P23	=DD3!Q23
20	=DD1!P24	=DD2!P24	=DD3!Q24
21	=DD1!P25	=DD2!P25	=DD3!Q25
22	=DD1!P26	=DD2!P26	=DD3!Q26
23	=DD1!P27	=DD2!P27	=DD3!Q27
24	=DD1!P28	=DD2!P28	=DD3!Q28
25	=DD1!P29	=DD2!P29	=DD3!Q29
26	=DD1!P30	=DD2!P30	=DD3!Q30
27	=DD1!P31	=DD2!P31	=DD3!Q31
28	=DD1!P32	=DD2!P32	=DD3!Q32
29	=DD1!P33	=DD2!P33	=DD3!Q33
30	=DD1!P34	=DD2!P34	=DD3!Q34
31	=DD1!P35	=DD2!P35	=DD3!Q35
32	=DD1!P36	=DD2!P36	=DD3!Q36
33	=DD1!P37	=DD2!P37	=DD3!Q37
34	=DD1!P38	=DD2!P38	=DD3!Q38
35	=DD1!P39	=DD2!P39	=DD3!Q39
36	=DD1!P40	=DD2!P40	=DD3!Q40
37	=DD1!P41	=DD2!P41	=DD3!Q41
38	=DD1!P42	=DD2!P42	=DD3!Q42
39	=DD1!P43	=DD2!P43	=DD3!Q43
40	=DD1!P44	=DD2!P44	=DD3!Q44
41	=DD1!P45	=DD2!P45	=DD3!Q45
42	=DD1!P46	=DD2!P46	=DD3!Q46
43	=DD1!P47	=DD2!P47	=DD3!Q47
44	=DD1!P48	=DD2!P48	=DD3!Q48
Totals	=DD1!P49	=DD2!P49	=DD3!Q49

EE1	EE2	EE3	FF1	FF2
=EE1!Q5	=EE2!M5	=EE3!Q5	=FF1!Q5	=FF2!P5
=EE1!Q6	=EE2!M6	=EE3!Q6	=FF1!Q6	=FF2!P6
=EE1!Q7	=EE2!M7	=EE3!Q7	=FF1!Q7	=FF2!P7
=EE1!Q8	=EE2!M8	=EE3!Q8	=FF1!Q8	=FF2!P8
=EE1!Q9	=EE2!M9	=EE3!Q9	=FF1!Q9	=FF2!P9
=EE1!Q10	=EE2!M10	=EE3!Q10	=FF1!Q10	=FF2!P10
=EE1!Q11	=EE2!M11	=EE3!Q11	=FF1!Q11	=FF2!P11
=EE1!Q12	=EE2!M12	=EE3!Q12	=FF1!Q12	=FF2!P12
=EE1!Q13	=EE2!M13	=EE3!Q13	=FF1!Q13	=FF2!P13
=EE1!Q14	=EE2!M14	=EE3!Q14	=FF1!Q14	=FF2!P14
=EE1!Q15	=EE2!M15	=EE3!Q15	=FF1!Q15	=FF2!P15
=EE1!Q16	=EE2!M16	=EE3!Q16	=FF1!Q16	=FF2!P16
=EE1!Q17	=EE2!M17	=EE3!Q17	=FF1!Q17	=FF2!P17
=EE1!Q18	=EE2!M18	=EE3!Q18	=FF1!Q18	=FF2!P18
=EE1!Q19	=EE2!M19	=EE3!Q19	=FF1!Q19	=FF2!P19
=EE1!Q20	=EE2!M20	=EE3!Q20	=FF1!Q20	=FF2!P20
=EE1!Q21	=EE2!M21	=EE3!Q21	=FF1!Q21	=FF2!P21
=EE1!Q22	=EE2!M22	=EE3!Q22	=FF1!Q22	=FF2!P22
=EE1!Q23	=EE2!M23	=EE3!Q23	=FF1!Q23	=FF2!P23
=EE1!Q24	=EE2!M24	=EE3!Q24	=FF1!Q24	=FF2!P24
=EE1!Q25	=EE2!M25	=EE3!Q25	=FF1!Q25	=FF2!P25
=EE1!Q26	=EE2!M26	=EE3!Q26	=FF1!Q26	=FF2!P26
=EE1!Q27	=EE2!M27	=EE3!Q27	=FF1!Q27	=FF2!P27
=EE1!Q28	=EE2!M28	=EE3!Q28	=FF1!Q28	=FF2!P28
=EE1!Q29	=EE2!M29	=EE3!Q29	=FF1!Q29	=FF2!P29
=EE1!Q30	=EE2!M30	=EE3!Q30	=FF1!Q30	=FF2!P30
=EE1!Q31	=EE2!M31	=EE3!Q31	=FF1!Q31	=FF2!P31
=EE1!Q32	=EE2!M32	=EE3!Q32	=FF1!Q32	=FF2!P32
=EE1!Q33	=EE2!M33	=EE3!Q33	=FF1!Q33	=FF2!P33
=EE1!Q34	=EE2!M34	=EE3!Q34	=FF1!Q34	=FF2!P34
=EE1!Q35	=EE2!M35	=EE3!Q35	=FF1!Q35	=FF2!P35
=EE1!Q36	=EE2!M36	=EE3!Q36	=FF1!Q36	=FF2!P36
=EE1!Q37	=EE2!M37	=EE3!Q37	=FF1!Q37	=FF2!P37
=EE1!Q38	=EE2!M38	=EE3!Q38	=FF1!Q38	=FF2!P38
=EE1!Q39	=EE2!M39	=EE3!Q39	=FF1!Q39	=FF2!P39
=EE1!Q40	=EE2!M40	=EE3!Q40	=FF1!Q40	=FF2!P40
=EE1!Q41	=EE2!M41	=EE3!Q41	=FF1!Q41	=FF2!P41
=EE1!Q42	=EE2!M42	=EE3!Q42	=FF1!Q42	=FF2!P42
=EE1!Q43	=EE2!M43	=EE3!Q43	=FF1!Q43	=FF2!P43
=EE1!Q44	=EE2!M44	=EE3!Q44	=FF1!Q44	=FF2!P44
=EE1!Q45	=EE2!M45	=EE3!Q45	=FF1!Q45	=FF2!P45
=EE1!Q46	=EE2!M46	=EE3!Q46	=FF1!Q46	=FF2!P46
=EE1!Q47	=EE2!M47	=EE3!Q47	=FF1!Q47	=FF2!P47
=EE1!Q48	=EE2!M48	=EE3!Q48	=FF1!Q48	=FF2!P48
=EE1!Q49	=EE2!M49	=EE3!Q49	=FF1!Q49	=FF2!P49

FF3	FF4	GG1	GG2	GG3
=FF3!P5	=FF4!P5	=GG1!R5	=GG2!P5	=GG3!P5
=FF3!P6	=FF4!P6	=GG1!R6	=GG2!P6	=GG3!P6
=FF3!P7	=FF4!P7	=GG1!R7	=GG2!P7	=GG3!P7
=FF3!P8	=FF4!P8	=GG1!R8	=GG2!P8	=GG3!P8
=FF3!P9	=FF4!P9	=GG1!R9	=GG2!P9	=GG3!P9
=FF3!P10	=FF4!P10	=GG1!R10	=GG2!P10	=GG3!P10
=FF3!P11	=FF4!P11	=GG1!R11	=GG2!P11	=GG3!P11
=FF3!P12	=FF4!P12	=GG1!R12	=GG2!P12	=GG3!P12
=FF3!P13	=FF4!P13	=GG1!R13	=GG2!P13	=GG3!P13
=FF3!P14	=FF4!P14	=GG1!R14	=GG2!P14	=GG3!P14
=FF3!P15	=FF4!P15	=GG1!R15	=GG2!P15	=GG3!P15
=FF3!P16	=FF4!P16	=GG1!R16	=GG2!P16	=GG3!P16
=FF3!P17	=FF4!P17	=GG1!R17	=GG2!P17	=GG3!P17
=FF3!P18	=FF4!P18	=GG1!R18	=GG2!P18	=GG3!P18
=FF3!P19	=FF4!P19	=GG1!R19	=GG2!P19	=GG3!P19
=FF3!P20	=FF4!P20	=GG1!R20	=GG2!P20	=GG3!P20
=FF3!P21	=FF4!P21	=GG1!R21	=GG2!P21	=GG3!P21
=FF3!P22	=FF4!P22	=GG1!R22	=GG2!P22	=GG3!P22
=FF3!P23	=FF4!P23	=GG1!R23	=GG2!P23	=GG3!P23
=FF3!P24	=FF4!P24	=GG1!R24	=GG2!P24	=GG3!P24
=FF3!P25	=FF4!P25	=GG1!R25	=GG2!P25	=GG3!P25
=FF3!P26	=FF4!P26	=GG1!R26	=GG2!P26	=GG3!P26
=FF3!P27	=FF4!P27	=GG1!R27	=GG2!P27	=GG3!P27
=FF3!P28	=FF4!P28	=GG1!R28	=GG2!P28	=GG3!P28
=FF3!P29	=FF4!P29	=GG1!R29	=GG2!P29	=GG3!P29
=FF3!P30	=FF4!P30	=GG1!R30	=GG2!P30	=GG3!P30
=FF3!P31	=FF4!P31	=GG1!R31	=GG2!P31	=GG3!P31
=FF3!P32	=FF4!P32	=GG1!R32	=GG2!P32	=GG3!P32
=FF3!P33	=FF4!P33	=GG1!R33	=GG2!P33	=GG3!P33
=FF3!P34	=FF4!P34	=GG1!R34	=GG2!P34	=GG3!P34
=FF3!P35	=FF4!P35	=GG1!R35	=GG2!P35	=GG3!P35
=FF3!P36	=FF4!P36	=GG1!R36	=GG2!P36	=GG3!P36
=FF3!P37	=FF4!P37	=GG1!R37	=GG2!P37	=GG3!P37
=FF3!P38	=FF4!P38	=GG1!R38	=GG2!P38	=GG3!P38
=FF3!P39	=FF4!P39	=GG1!R39	=GG2!P39	=GG3!P39
=FF3!P40	=FF4!P40	=GG1!R40	=GG2!P40	=GG3!P40
=FF3!P41	=FF4!P41	=GG1!R41	=GG2!P41	=GG3!P41
=FF3!P42	=FF4!P42	=GG1!R42	=GG2!P42	=GG3!P42
=FF3!P43	=FF4!P43	=GG1!R43	=GG2!P43	=GG3!P43
=FF3!P44	=FF4!P44	=GG1!R44	=GG2!P44	=GG3!P44
=FF3!P45	=FF4!P45	=GG1!R45	=GG2!P45	=GG3!P45
=FF3!P46	=FF4!P46	=GG1!R46	=GG2!P46	=GG3!P46
=FF3!P47	=FF4!P47	=GG1!R47	=GG2!P47	=GG3!P47
=FF3!P48	=FF4!P48	=GG1!R48	=GG2!P48	=GG3!P48
=FF3!P49	=FF4!P49	=GG1!R49	=GG2!P49	=GG3!P49

Total for Core Offload a

=SUM(B5:N5)
=SUM(B6:N6)
=SUM(B7:N7)
=SUM(B8:N8)
=SUM(B9:N9)
=SUM(B10:N10)
=SUM(B11:N11)
=SUM(B12:N12)
=SUM(B13:N13)
=SUM(B14:N14)
=SUM(B15:N15)
=SUM(B16:N16)
=SUM(B17:N17)
=SUM(B18:N18)
=SUM(B19:N19)
=SUM(B20:N20)
=SUM(B21:N21)
=SUM(B22:N22)
=SUM(B23:N23)
=SUM(B24:N24)
=SUM(B25:N25)
=SUM(B26:N26)
=SUM(B27:N27)
=SUM(B28:N28)
=SUM(B29:N29)
=SUM(B30:N30)
=SUM(B31:N31)
=SUM(B32:N32)
=SUM(B33:N33)
=SUM(B34:N34)
=SUM(B35:N35)
=SUM(B36:N36)
=SUM(B37:N37)
=SUM(B38:N38)
=SUM(B39:N39)
=SUM(B40:N40)
=SUM(B41:N41)
=SUM(B42:N42)
=SUM(B43:N43)
=SUM(B44:N44)
=SUM(B45:N45)
=SUM(B46:N46)
=SUM(B47:N47)
=SUM(B48:N48)
=SUM(B49:N49)

Neutron ENDF5 Group			grp	boundaries	mev	initial	1E-03 y	3E-03 y
ORIGEN ENDF5 4+ Max Energy								
45	1.00E-09	1.00E-05						
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	7.01E-06	7.01E-06	7.01E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	5.01E-06	5.01E-06	5.01E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	3.49E-06	3.49E-06	3.49E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	1.20E-05	1.20E-05	1.20E-05
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	4.41E-06	4.41E-06	4.41E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	1.34E-05	1.34E-05	1.34E-05
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	1.06E-05	1.06E-05	1.06E-05
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	2.36E-05	2.36E-05	2.35E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	3.88E-05	3.88E-05	3.88E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	7.36E-05	7.36E-05	7.36E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	8.45E-05	8.45E-05	8.45E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	4.96E-05	4.96E-05	4.96E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	6.11E-05	6.11E-05	6.11E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	5.44E-05	5.44E-05	5.44E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	1.75E-02	1.75E-02	1.75E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	6.55E-03	6.56E-03	6.56E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	8.64E-03	8.64E-03	8.64E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	7.22E-03	7.22E-03	7.22E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	6.38E-02	6.38E-02	6.38E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	1.51E-01	1.52E-01	1.52E-01
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	4.24E-01	4.24E-01	4.24E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	8.41E-01	8.41E-01	8.41E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	1.55E+00	1.55E+00	1.55E+00
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	1.33E+00	1.33E+00	1.33E+00
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	2.51E+00	2.51E+00	2.51E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	2.56E+00	2.57E+00	2.57E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	4.00E+01	4.00E+01	4.00E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	2.54E+02	2.55E+02	2.55E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	3.62E+03	3.62E+03	3.62E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	4.59E+04	4.59E+04	4.59E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	6.21E+05	6.21E+05	6.21E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	5.23E+05	5.24E+05	5.24E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	8.16E+06	8.16E+06	8.16E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	5.89E+07	5.89E+07	5.89E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	1.29E+08	1.29E+08	1.29E+08
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	1.29E+08	1.29E+08	1.29E+08
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	1.04E+08	1.05E+08	1.05E+08
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	1.00E+08	1.00E+08	1.00E+08
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	2.20E+07	2.20E+07	2.20E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	7.94E+07	7.94E+07	7.94E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	1.45E+08	1.45E+08	1.45E+08
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	3.83E+07	3.83E+07	3.83E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	1.21E+07	1.21E+07	1.21E+07
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	4.14E+06	4.14E+06	4.14E+06
totals						8.31E+08	8.32E+08	8.32E+08

1E-02 y	3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y	3.2 y	49 Assemblies
7.01E-06	7.01E-06	7.01E-06	7.01E-06	7.01E-06	7.01E-06	7.01E-06	3.43E-04
5.01E-06	5.01E-06	5.01E-06	5.01E-06	5.01E-06	5.01E-06	5.01E-06	2.45E-04
3.49E-06	3.49E-06	3.49E-06	3.49E-06	3.49E-06	3.49E-06	3.49E-06	1.71E-04
1.20E-05	1.20E-05	1.20E-05	1.20E-05	1.20E-05	1.20E-05	1.20E-05	5.86E-04
4.41E-06	4.41E-06	4.41E-06	4.41E-06	4.41E-06	4.41E-06	4.41E-06	2.16E-04
1.34E-05	1.34E-05	1.34E-05	1.34E-05	1.34E-05	1.34E-05	1.34E-05	6.58E-04
1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	5.20E-04
2.35E-05	2.35E-05	2.33E-05	2.30E-05	2.28E-05	2.28E-05	2.28E-05	1.11E-03
3.88E-05	3.87E-05	3.84E-05	3.79E-05	3.75E-05	3.75E-05	3.75E-05	1.84E-03
7.35E-05	7.33E-05	7.27E-05	7.18E-05	7.11E-05	7.10E-05	7.10E-05	3.48E-03
8.45E-05	8.43E-05	8.37E-05	8.26E-05	8.18E-05	8.17E-05	8.17E-05	4.00E-03
4.96E-05	4.95E-05	4.91E-05	4.86E-05	4.81E-05	4.81E-05	4.81E-05	2.36E-03
6.11E-05	6.10E-05	6.06E-05	6.00E-05	5.96E-05	5.96E-05	5.96E-05	2.92E-03
5.44E-05	5.43E-05	5.39E-05	5.32E-05	5.28E-05	5.27E-05	5.27E-05	2.58E-03
1.75E-02	1.74E-02	1.71E-02	1.63E-02	1.48E-02	1.32E-02	1.31E-02	6.40E-01
6.54E-03	6.49E-03	6.33E-03	5.95E-03	5.19E-03	4.53E-03	4.50E-03	2.20E-01
8.61E-03	8.50E-03	8.15E-03	7.32E-03	5.74E-03	4.67E-03	4.64E-03	2.27E-01
7.20E-03	7.14E-03	6.95E-03	6.49E-03	5.60E-03	4.85E-03	4.81E-03	2.36E-01
6.37E-02	6.31E-02	6.14E-02	5.74E-02	4.94E-02	4.27E-02	4.24E-02	2.08E+00
1.51E-01	1.50E-01	1.46E-01	1.36E-01	1.18E-01	1.02E-01	1.01E-01	4.95E+00
4.23E-01	4.20E-01	4.08E-01	3.82E-01	3.29E-01	2.85E-01	2.83E-01	1.39E+01
8.39E-01	8.33E-01	8.10E-01	7.56E-01	6.51E-01	5.64E-01	5.59E-01	2.74E+01
1.55E+00	1.53E+00	1.49E+00	1.40E+00	1.21E+00	1.05E+00	1.04E+00	5.09E+01
1.33E+00	1.32E+00	1.28E+00	1.20E+00	1.04E+00	9.03E-01	8.96E-01	4.39E+01
2.51E+00	2.49E+00	2.42E+00	2.27E+00	1.96E+00	1.70E+00	1.69E+00	8.26E+01
2.56E+00	2.54E+00	2.47E+00	2.32E+00	2.01E+00	1.74E+00	1.73E+00	8.47E+01
3.99E+01	3.96E+01	3.86E+01	3.61E+01	3.12E+01	2.70E+01	2.68E+01	1.31E+03
2.54E+02	2.52E+02	2.45E+02	2.29E+02	1.97E+02	1.70E+02	1.69E+02	8.29E+03
3.61E+03	3.58E+03	3.48E+03	3.25E+03	2.80E+03	2.43E+03	2.41E+03	1.18E+05
4.58E+04	4.54E+04	4.42E+04	4.13E+04	3.56E+04	3.08E+04	3.06E+04	1.50E+06
6.20E+05	6.14E+05	5.98E+05	5.58E+05	4.81E+05	4.16E+05	4.13E+05	2.03E+07
5.22E+05	5.18E+05	5.04E+05	4.71E+05	4.05E+05	3.51E+05	3.48E+05	1.71E+07
8.14E+06	8.07E+06	7.85E+06	7.33E+06	6.31E+06	5.46E+06	5.42E+06	2.66E+08
5.88E+07	5.83E+07	5.67E+07	5.30E+07	4.56E+07	3.95E+07	3.92E+07	1.92E+09
1.28E+08	1.27E+08	1.24E+08	1.16E+08	9.95E+07	8.61E+07	8.55E+07	4.19E+09
1.29E+08	1.28E+08	1.24E+08	1.16E+08	9.95E+07	8.60E+07	8.54E+07	4.18E+09
1.04E+08	1.03E+08	1.00E+08	9.34E+07	7.98E+07	6.87E+07	6.82E+07	3.34E+09
9.99E+07	9.90E+07	9.60E+07	8.90E+07	7.53E+07	6.45E+07	6.40E+07	3.14E+09
2.19E+07	2.17E+07	2.10E+07	1.94E+07	1.63E+07	1.39E+07	1.38E+07	6.77E+08
7.92E+07	7.84E+07	7.59E+07	6.99E+07	5.84E+07	4.96E+07	4.92E+07	2.41E+09
1.45E+08	1.43E+08	1.39E+08	1.28E+08	1.07E+08	9.06E+07	8.99E+07	4.41E+09
3.82E+07	3.79E+07	3.69E+07	3.46E+07	2.99E+07	2.60E+07	2.58E+07	1.26E+09
1.20E+07	1.20E+07	1.16E+07	1.09E+07	9.49E+06	8.26E+06	8.20E+06	4.02E+08
4.13E+06	4.10E+06	4.00E+06	3.76E+06	3.27E+06	2.85E+06	2.83E+06	1.39E+08
8.30E+08	8.22E+08	7.98E+08	7.41E+08	6.31E+08	5.42E+08	5.38E+08	2.64E+10

Neutron ENDF5 Group			grp	boundaries	mev	initial	1E-03 y	3E-03 y
grp								
ORIGEN ENDF5 44 Max Energy								
45	1.00E-09	1.00E-05						
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	5.59E-06	5.59E-06	5.59E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	4.00E-06	4.00E-06	4.00E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	2.92E-06	2.92E-06	2.92E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	9.47E-06	9.47E-06	9.47E-06
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	3.62E-06	3.62E-06	3.62E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	1.15E-05	1.15E-05	1.15E-05
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	8.82E-06	8.82E-06	8.82E-06
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	1.95E-05	1.94E-05	1.94E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	3.21E-05	3.21E-05	3.21E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	6.10E-05	6.10E-05	6.10E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	7.05E-05	7.05E-05	7.05E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	4.19E-05	4.19E-05	4.19E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	5.26E-05	5.26E-05	5.26E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	4.59E-05	4.59E-05	4.59E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	1.51E-02	1.51E-02	1.51E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	5.70E-03	5.70E-03	5.70E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	7.62E-03	7.63E-03	7.62E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	6.29E-03	6.29E-03	6.29E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	5.56E-02	5.56E-02	5.56E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	1.32E-01	1.32E-01	1.32E-01
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	3.69E-01	3.69E-01	3.69E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	7.33E-01	7.33E-01	7.33E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	1.35E+00	1.35E+00	1.35E+00
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	1.16E+00	1.16E+00	1.16E+00
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	2.19E+00	2.19E+00	2.19E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	2.23E+00	2.23E+00	2.23E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	3.48E+01	3.49E+01	3.49E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	2.22E+02	2.22E+02	2.22E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	3.15E+03	3.15E+03	3.15E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	4.00E+04	4.00E+04	4.00E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	5.41E+05	5.41E+05	5.41E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	4.56E+05	4.56E+05	4.56E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	7.11E+06	7.11E+06	7.11E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	5.13E+07	5.14E+07	5.14E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	1.12E+08	1.12E+08	1.12E+08
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	1.13E+08	1.13E+08	1.13E+08
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	9.11E+07	9.12E+07	9.12E+07
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	8.75E+07	8.75E+07	8.75E+07
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	1.92E+07	1.92E+07	1.92E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	6.95E+07	6.96E+07	6.96E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	1.27E+08	1.27E+08	1.27E+08
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	3.33E+07	3.33E+07	3.33E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	1.05E+07	1.05E+07	1.05E+07
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	3.60E+06	3.60E+06	3.60E+06
totals						7.26E+08	7.26E+08	7.26E+08

1E-02 y	3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y	7.1 y	52 Assemblies
5.59E-06	5.59E-06	5.59E-06	5.59E-06	5.59E-06	5.59E-06	5.59E-06	2.91E-04
4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.00E-06	4.00E-06	2.08E-04
2.92E-06	2.92E-06	2.92E-06	2.92E-06	2.92E-06	2.92E-06	2.92E-06	1.52E-04
9.47E-06	9.47E-06	9.47E-06	9.47E-06	9.47E-06	9.47E-06	9.46E-06	4.92E-04
3.62E-06	3.62E-06	3.62E-06	3.62E-06	3.62E-06	3.62E-06	3.62E-06	1.88E-04
1.15E-05	1.15E-05	1.15E-05	1.15E-05	1.15E-05	1.15E-05	1.15E-05	6.00E-04
8.82E-06	8.82E-06	8.82E-06	8.82E-06	8.82E-06	8.82E-06	8.83E-06	4.59E-04
1.94E-05	1.94E-05	1.93E-05	1.91E-05	1.90E-05	1.89E-05	1.89E-05	9.84E-04
3.21E-05	3.20E-05	3.18E-05	3.15E-05	3.13E-05	3.13E-05	3.12E-05	1.62E-03
6.09E-05	6.08E-05	6.04E-05	5.98E-05	5.94E-05	5.93E-05	5.93E-05	3.08E-03
7.05E-05	7.04E-05	7.00E-05	6.93E-05	6.88E-05	6.87E-05	6.87E-05	3.57E-03
4.19E-05	4.18E-05	4.16E-05	4.12E-05	4.09E-05	4.09E-05	4.09E-05	2.13E-03
5.26E-05	5.25E-05	5.23E-05	5.19E-05	5.16E-05	5.16E-05	5.16E-05	2.68E-03
4.59E-05	4.59E-05	4.56E-05	4.52E-05	4.49E-05	4.49E-05	4.49E-05	2.33E-03
1.51E-02	1.50E-02	1.47E-02	1.41E-02	1.26E-02	1.12E-02	9.58E-03	4.98E-01
5.69E-03	5.64E-03	5.49E-03	5.14E-03	4.45E-03	3.86E-03	3.30E-03	1.71E-01
7.59E-03	7.49E-03	7.17E-03	6.40E-03	4.95E-03	3.99E-03	3.39E-03	1.76E-01
6.28E-03	6.22E-03	6.04E-03	5.62E-03	4.80E-03	4.13E-03	3.53E-03	1.84E-01
5.55E-02	5.50E-02	5.34E-02	4.96E-02	4.23E-02	3.64E-02	3.11E-02	1.62E+00
1.32E-01	1.31E-01	1.27E-01	1.18E-01	1.01E-01	8.68E-02	7.41E-02	3.85E+00
3.68E-01	3.65E-01	3.55E-01	3.30E-01	2.83E-01	2.44E-01	2.08E-01	1.08E+01
7.31E-01	7.25E-01	7.04E-01	6.55E-01	5.59E-01	4.81E-01	4.10E-01	2.13E+01
1.35E+00	1.34E+00	1.30E+00	1.21E+00	1.03E+00	8.91E-01	7.61E-01	3.95E+01
1.15E+00	1.15E+00	1.11E+00	1.04E+00	8.91E-01	7.70E-01	6.57E-01	3.42E+01
2.18E+00	2.16E+00	2.10E+00	1.96E+00	1.68E+00	1.45E+00	1.24E+00	6.43E+01
2.23E+00	2.21E+00	2.15E+00	2.00E+00	1.72E+00	1.49E+00	1.27E+00	6.59E+01
3.48E+01	3.45E+01	3.35E+01	3.12E+01	2.67E+01	2.30E+01	1.97E+01	1.02E+03
2.21E+02	2.19E+02	2.13E+02	1.98E+02	1.69E+02	1.45E+02	1.24E+02	6.45E+03
3.15E+03	3.12E+03	3.03E+03	2.82E+03	2.40E+03	2.07E+03	1.77E+03	9.18E+04
3.99E+04	3.96E+04	3.84E+04	3.58E+04	3.05E+04	2.63E+04	2.25E+04	1.17E+06
5.40E+05	5.35E+05	5.20E+05	4.83E+05	4.13E+05	3.55E+05	3.03E+05	1.58E+07
4.55E+05	4.51E+05	4.38E+05	4.07E+05	3.48E+05	2.99E+05	2.55E+05	1.33E+07
7.09E+06	7.03E+06	6.83E+06	6.35E+06	5.42E+06	4.66E+06	3.98E+06	2.07E+08
5.12E+07	5.08E+07	4.93E+07	4.59E+07	3.91E+07	3.37E+07	2.87E+07	1.49E+09
1.12E+08	1.11E+08	1.08E+08	1.00E+08	8.53E+07	7.34E+07	6.27E+07	3.26E+09
1.12E+08	1.11E+08	1.08E+08	1.00E+08	8.54E+07	7.34E+07	6.26E+07	3.26E+09
9.09E+07	9.01E+07	8.74E+07	8.10E+07	6.85E+07	5.86E+07	5.00E+07	2.60E+09
8.73E+07	8.65E+07	8.37E+07	7.72E+07	6.47E+07	5.50E+07	4.70E+07	2.44E+09
1.92E+07	1.90E+07	1.84E+07	1.69E+07	1.40E+07	1.19E+07	1.02E+07	5.28E+08
6.94E+07	6.86E+07	6.63E+07	6.08E+07	5.02E+07	4.23E+07	3.62E+07	1.88E+09
1.27E+08	1.25E+08	1.21E+08	1.11E+08	9.17E+07	7.73E+07	6.60E+07	3.43E+09
3.32E+07	3.30E+07	3.20E+07	2.99E+07	2.56E+07	2.21E+07	1.89E+07	9.81E+08
1.05E+07	1.04E+07	1.01E+07	9.44E+06	8.14E+06	7.04E+06	6.00E+06	3.12E+08
3.59E+06	3.56E+06	3.47E+06	3.24E+06	2.80E+06	2.43E+06	2.07E+06	1.08E+08
7.24E+08	7.17E+08	6.95E+08	6.43E+08	5.42E+08	4.63E+08	3.95E+08	2.05E+10

Neutron ENDF5 Group	grp	boundaries	mev	initial	1E-03 y	3E-03 y
ORIGEN ENDF5 4 ⁺ Max Energy						
45	1.00E-09	1.00E-05				
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	1.17E-05 1.17E-05 1.17E-05
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	8.33E-06 8.33E-06 8.33E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	5.21E-06 5.21E-06 5.21E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	2.03E-05 2.03E-05 2.03E-05
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	6.93E-06 6.93E-06 6.93E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	1.89E-05 1.89E-05 1.89E-05
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	1.62E-05 1.62E-05 1.62E-05
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	3.74E-05 3.74E-05 3.74E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	6.13E-05 6.13E-05 6.13E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	1.16E-04 1.16E-04 1.16E-04
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	1.32E-04 1.32E-04 1.32E-04
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	7.51E-05 7.51E-05 7.50E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	8.80E-05 8.80E-05 8.79E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	8.22E-05 8.22E-05 8.22E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	2.35E-02 2.35E-02 2.35E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	8.66E-03 8.67E-03 8.67E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	1.10E-02 1.10E-02 1.10E-02
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	9.49E-03 9.49E-03 9.49E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	8.39E-02 8.39E-02 8.40E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	1.99E-01 1.99E-01 1.99E-01
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	5.58E-01 5.58E-01 5.58E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	1.11E+00 1.11E+00 1.11E+00
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	2.04E+00 2.04E+00 2.04E+00
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	1.75E+00 1.75E+00 1.75E+00
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	3.31E+00 3.31E+00 3.31E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	3.38E+00 3.38E+00 3.38E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	5.27E+01 5.27E+01 5.27E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	3.34E+02 3.35E+02 3.35E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	4.76E+03 4.76E+03 4.76E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	6.03E+04 6.04E+04 6.04E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	8.16E+05 8.16E+05 8.17E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	6.88E+05 6.88E+05 6.88E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	1.07E+07 1.07E+07 1.07E+07
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	7.74E+07 7.75E+07 7.75E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	1.69E+08 1.69E+08 1.69E+08
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	1.69E+08 1.70E+08 1.70E+08
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	1.37E+08 1.37E+08 1.37E+08
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	1.31E+08 1.31E+08 1.31E+08
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	2.86E+07 2.86E+07 2.86E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	1.03E+08 1.03E+08 1.03E+08
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	1.88E+08 1.88E+08 1.88E+08
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	5.05E+07 5.05E+07 5.05E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	1.59E+07 1.60E+07 1.60E+07
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	5.48E+06 5.49E+06 5.49E+06
totals					1.09E+09	1.09E+09 1.09E+09

1E-02 y	3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y	8.5 y	57 Assemblies
1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	1.17E-05	6.67E-04
8.33E-06	8.33E-06	8.33E-06	8.33E-06	8.33E-06	8.32E-06	8.32E-06	4.74E-04
5.21E-06	5.21E-06	5.21E-06	5.21E-06	5.21E-06	5.21E-06	5.21E-06	2.97E-04
2.03E-05	2.03E-05	2.03E-05	2.03E-05	2.03E-05	2.03E-05	2.03E-05	1.15E-03
6.93E-06	6.93E-06	6.93E-06	6.93E-06	6.93E-06	6.93E-06	6.93E-06	3.95E-04
1.89E-05	1.89E-05	1.89E-05	1.89E-05	1.89E-05	1.89E-05	1.90E-05	1.08E-03
1.62E-05	1.62E-05	1.62E-05	1.62E-05	1.62E-05	1.62E-05	1.62E-05	9.23E-04
3.73E-05	3.71E-05	3.65E-05	3.55E-05	3.47E-05	3.47E-05	3.46E-05	1.97E-03
6.12E-05	6.08E-05	5.98E-05	5.81E-05	5.69E-05	5.68E-05	5.67E-05	3.23E-03
1.16E-04	1.15E-04	1.13E-04	1.10E-04	1.07E-04	1.07E-04	1.07E-04	6.09E-03
1.31E-04	1.31E-04	1.29E-04	1.25E-04	1.22E-04	1.22E-04	1.22E-04	6.93E-03
7.49E-05	7.45E-05	7.33E-05	7.13E-05	6.99E-05	6.97E-05	6.96E-05	3.97E-03
8.78E-05	8.74E-05	8.61E-05	8.40E-05	8.25E-05	8.24E-05	8.24E-05	4.69E-03
8.20E-05	8.16E-05	8.03E-05	7.81E-05	7.65E-05	7.63E-05	7.62E-05	4.34E-03
2.35E-02	2.34E-02	2.30E-02	2.22E-02	2.03E-02	1.83E-02	1.48E-02	8.41E-01
8.65E-03	8.60E-03	8.42E-03	7.99E-03	7.12E-03	6.28E-03	5.08E-03	2.90E-01
1.10E-02	1.08E-02	1.04E-02	9.52E-03	7.76E-03	6.48E-03	5.22E-03	2.98E-01
9.47E-03	9.41E-03	9.19E-03	8.68E-03	7.65E-03	6.72E-03	5.43E-03	3.10E-01
8.38E-02	8.32E-02	8.13E-02	7.67E-02	6.76E-02	5.93E-02	4.79E-02	2.73E+00
1.99E-01	1.98E-01	1.93E-01	1.82E-01	1.61E-01	1.41E-01	1.14E-01	6.51E+00
5.57E-01	5.53E-01	5.40E-01	5.11E-01	4.51E-01	3.96E-01	3.20E-01	1.82E+01
1.10E+00	1.10E+00	1.07E+00	1.01E+00	8.91E-01	7.82E-01	6.32E-01	3.60E+01
2.04E+00	2.02E+00	1.98E+00	1.87E+00	1.65E+00	1.45E+00	1.17E+00	6.68E+01
1.75E+00	1.74E+00	1.70E+00	1.61E+00	1.42E+00	1.25E+00	1.01E+00	5.77E+01
3.30E+00	3.28E+00	3.21E+00	3.03E+00	2.68E+00	2.36E+00	1.91E+00	1.09E+02
3.38E+00	3.35E+00	3.28E+00	3.10E+00	2.75E+00	2.42E+00	1.95E+00	1.11E+02
5.26E+01	5.23E+01	5.11E+01	4.83E+01	4.27E+01	3.75E+01	3.03E+01	1.73E+03
3.34E+02	3.32E+02	3.24E+02	3.06E+02	2.70E+02	2.36E+02	1.91E+02	1.09E+04
4.75E+03	4.72E+03	4.61E+03	4.35E+03	3.83E+03	3.36E+03	2.72E+03	1.55E+05
6.03E+04	5.99E+04	5.85E+04	5.52E+04	4.87E+04	4.28E+04	3.46E+04	1.97E+06
8.15E+05	8.09E+05	7.91E+05	7.46E+05	6.58E+05	5.77E+05	4.67E+05	2.66E+07
6.87E+05	6.82E+05	6.66E+05	6.29E+05	5.54E+05	4.86E+05	3.93E+05	2.24E+07
1.07E+07	1.06E+07	1.04E+07	9.80E+06	8.64E+06	7.58E+06	6.13E+06	3.49E+08
7.73E+07	7.68E+07	7.50E+07	7.08E+07	6.24E+07	5.47E+07	4.43E+07	2.52E+09
1.69E+08	1.68E+08	1.64E+08	1.54E+08	1.36E+08	1.19E+08	9.65E+07	5.50E+09
1.69E+08	1.68E+08	1.64E+08	1.55E+08	1.36E+08	1.19E+08	9.64E+07	5.50E+09
1.37E+08	1.36E+08	1.32E+08	1.25E+08	1.09E+08	9.52E+07	7.70E+07	4.39E+09
1.30E+08	1.29E+08	1.26E+08	1.18E+08	1.03E+08	8.93E+07	7.23E+07	4.12E+09
2.85E+07	2.83E+07	2.75E+07	2.57E+07	2.22E+07	1.93E+07	1.56E+07	8.89E+08
1.03E+08	1.02E+08	9.91E+07	9.25E+07	7.94E+07	6.86E+07	5.56E+07	3.17E+09
1.88E+08	1.86E+08	1.81E+08	1.69E+08	1.45E+08	1.26E+08	1.02E+08	5.79E+09
5.04E+07	5.01E+07	4.90E+07	4.63E+07	4.10E+07	3.60E+07	2.91E+07	1.66E+09
1.59E+07	1.58E+07	1.55E+07	1.47E+07	1.30E+07	1.15E+07	9.25E+06	5.27E+08
5.48E+06	5.44E+06	5.33E+06	5.05E+06	4.50E+06	3.96E+06	3.19E+06	1.82E+08
1.09E+09	1.08E+09	1.05E+09	9.87E+08	8.62E+08	7.51E+08	6.08E+08	3.46E+10

Neutron ENDF5 Group	grp	boundaries	mev	initial	1E-02 y	3E-02 y
grp						
ORIGEN ENDF5 4 ^u Max Energy						
45	1.00E-09	1.00E-05				
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	6.59E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	4.71E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	3.30E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	1.12E-05
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	4.16E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	1.27E-05
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	1.00E-05
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	2.22E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	3.66E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	6.95E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	8.00E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	4.70E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	5.81E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	5.16E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	1.67E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	6.27E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	8.29E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	6.90E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	6.10E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	1.45E-01
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	4.05E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	8.04E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	1.48E+00
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	1.27E+00
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	2.40E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	2.45E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	3.83E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	2.43E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	3.46E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	4.39E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	5.94E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	5.01E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	7.80E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	5.64E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	1.23E+08
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	1.24E+08
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	9.99E+07
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	9.59E+07
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	2.10E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	7.61E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	1.39E+08
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	3.66E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	1.15E+07
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	3.96E+06
totals					7.96E+08	7.94E+08
						7.87E+08

0.1 y	0.3 y	1.0 y	3.0 y	10.0 y	10.1 y	37 Assemblies
6.59E-06	6.59E-06	6.59E-06	6.58E-06	6.58E-06	6.58E-06	2.43E-04
4.71E-06	4.71E-06	4.71E-06	4.70E-06	4.70E-06	4.70E-06	1.74E-04
3.30E-06	3.30E-06	3.30E-06	3.30E-06	3.29E-06	3.29E-06	1.22E-04
1.12E-05	1.12E-05	1.12E-05	1.12E-05	1.12E-05	1.12E-05	4.15E-04
4.16E-06	4.16E-06	4.16E-06	4.16E-06	4.16E-06	4.16E-06	1.54E-04
1.27E-05	1.27E-05	1.27E-05	1.27E-05	1.28E-05	1.28E-05	4.72E-04
1.00E-05	1.00E-05	1.00E-05	1.00E-05	1.00E-05	1.00E-05	3.71E-04
2.20E-05	2.17E-05	2.15E-05	2.15E-05	2.15E-05	2.15E-05	7.94E-04
3.62E-05	3.58E-05	3.54E-05	3.54E-05	3.54E-05	3.54E-05	1.31E-03
6.87E-05	6.78E-05	6.72E-05	6.71E-05	6.71E-05	6.71E-05	2.48E-03
7.92E-05	7.82E-05	7.75E-05	7.74E-05	7.73E-05	7.73E-05	2.86E-03
4.66E-05	4.61E-05	4.57E-05	4.57E-05	4.56E-05	4.56E-05	1.69E-03
5.77E-05	5.71E-05	5.67E-05	5.67E-05	5.67E-05	5.67E-05	2.10E-03
5.11E-05	5.05E-05	5.01E-05	5.00E-05	5.00E-05	5.00E-05	1.85E-03
1.63E-02	1.56E-02	1.41E-02	1.25E-02	9.56E-03	9.53E-03	3.53E-01
6.05E-03	5.68E-03	4.95E-03	4.31E-03	3.29E-03	3.28E-03	1.22E-01
7.81E-03	7.01E-03	5.48E-03	4.45E-03	3.38E-03	3.37E-03	1.25E-01
6.65E-03	6.20E-03	5.33E-03	4.61E-03	3.53E-03	3.51E-03	1.30E-01
5.87E-02	5.48E-02	4.70E-02	4.06E-02	3.11E-02	3.10E-02	1.15E+00
1.40E-01	1.30E-01	1.12E-01	9.69E-02	7.40E-02	7.38E-02	2.73E+00
3.90E-01	3.65E-01	3.14E-01	2.72E-01	2.08E-01	2.07E-01	7.65E+00
7.74E-01	7.22E-01	6.20E-01	5.36E-01	4.10E-01	4.08E-01	1.51E+01
1.43E+00	1.33E+00	1.15E+00	9.94E-01	7.60E-01	7.57E-01	2.80E+01
1.23E+00	1.15E+00	9.90E-01	8.59E-01	6.56E-01	6.54E-01	2.42E+01
2.32E+00	2.16E+00	1.87E+00	1.62E+00	1.24E+00	1.23E+00	4.55E+01
2.36E+00	2.21E+00	1.91E+00	1.66E+00	1.27E+00	1.26E+00	4.67E+01
3.69E+01	3.44E+01	2.97E+01	2.57E+01	1.96E+01	1.96E+01	7.24E+02
2.34E+02	2.19E+02	1.88E+02	1.62E+02	1.24E+02	1.24E+02	4.57E+03
3.33E+03	3.11E+03	2.67E+03	2.31E+03	1.76E+03	1.76E+03	6.51E+04
4.23E+04	3.94E+04	3.39E+04	2.93E+04	2.24E+04	2.24E+04	8.27E+05
5.72E+05	5.33E+05	4.58E+05	3.96E+05	3.03E+05	3.02E+05	1.12E+07
4.82E+05	4.50E+05	3.86E+05	3.34E+05	2.55E+05	2.54E+05	9.41E+06
7.51E+06	7.01E+06	6.02E+06	5.20E+06	3.97E+06	3.96E+06	1.47E+08
5.42E+07	5.06E+07	4.35E+07	3.75E+07	2.87E+07	2.86E+07	1.06E+09
1.18E+08	1.10E+08	9.48E+07	8.19E+07	6.26E+07	6.24E+07	2.31E+09
1.19E+08	1.11E+08	9.48E+07	8.18E+07	6.26E+07	6.24E+07	2.31E+09
9.60E+07	8.92E+07	7.60E+07	6.54E+07	5.00E+07	4.99E+07	1.84E+09
9.19E+07	8.50E+07	7.17E+07	6.14E+07	4.70E+07	4.69E+07	1.73E+09
2.01E+07	1.86E+07	1.56E+07	1.32E+07	1.02E+07	1.01E+07	3.75E+08
7.27E+07	6.69E+07	5.56E+07	4.72E+07	3.62E+07	3.61E+07	1.34E+09
1.33E+08	1.22E+08	1.02E+08	8.62E+07	6.60E+07	6.58E+07	2.43E+09
3.53E+07	3.30E+07	2.85E+07	2.47E+07	1.88E+07	1.88E+07	6.95E+08
1.11E+07	1.04E+07	9.04E+06	7.86E+06	5.99E+06	5.97E+06	2.21E+08
3.82E+06	3.58E+06	3.12E+06	2.71E+06	2.07E+06	2.06E+06	7.62E+07
7.64E+08	7.09E+08	6.01E+08	5.16E+08	3.95E+08	3.93E+08	1.46E+10

Neutron ENDF5 Group	grp	boundaries	mev	initial	1E-02 y	3E-02 y
grp						
ORIGEN ENDF5 44 Max Energy						
45	1.00E-09	1.00E-05				
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	3.43E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	2.47E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	2.05E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	5.68E-06
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	2.43E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	8.74E-06
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	6.14E-06
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	1.34E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	2.23E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	4.25E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	5.00E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	3.06E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	4.03E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	3.36E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	1.12E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	4.29E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	5.93E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	4.75E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	4.20E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	9.97E-02
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	2.79E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	5.54E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	1.02E+00
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	8.72E-01
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	1.65E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	1.68E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	2.63E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	1.68E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	2.38E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	3.02E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	4.09E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	3.45E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	5.37E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	3.88E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	8.47E+07
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	8.51E+07
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	6.91E+07
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	6.66E+07
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	1.47E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	5.32E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	9.71E+07
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	2.51E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	7.89E+06
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	2.70E+06
totals					5.51E+08	5.50E+08
						5.44E+08

0.1 y	0.3 y	1.0 y	3.0 y	10.0 y	11.7 y	26 Assemblies
3.43E-06	3.43E-06	3.43E-06	3.43E-06	3.43E-06	3.43E-06	8.91E-05
2.47E-06	2.47E-06	2.47E-06	2.47E-06	2.47E-06	2.47E-06	6.42E-05
2.05E-06	2.05E-06	2.05E-06	2.05E-06	2.05E-06	2.05E-06	5.33E-05
5.68E-06	5.68E-06	5.68E-06	5.68E-06	5.67E-06	5.67E-06	1.47E-04
2.43E-06	2.43E-06	2.43E-06	2.43E-06	2.43E-06	2.43E-06	6.32E-05
8.74E-06	8.74E-06	8.75E-06	8.75E-06	8.78E-06	8.78E-06	2.28E-04
6.14E-06	6.14E-06	6.14E-06	6.14E-06	6.15E-06	6.15E-06	1.60E-04
1.34E-05	1.33E-05	1.32E-05	1.32E-05	1.32E-05	1.32E-05	3.44E-04
2.22E-05	2.21E-05	2.20E-05	2.20E-05	2.20E-05	2.20E-05	5.71E-04
4.23E-05	4.21E-05	4.20E-05	4.19E-05	4.20E-05	4.20E-05	1.09E-03
4.99E-05	4.97E-05	4.95E-05	4.95E-05	4.94E-05	4.94E-05	1.28E-03
3.06E-05	3.05E-05	3.04E-05	3.04E-05	3.04E-05	3.04E-05	7.89E-04
4.03E-05	4.01E-05	4.01E-05	4.01E-05	4.01E-05	4.01E-05	1.04E-03
3.36E-05	3.34E-05	3.33E-05	3.33E-05	3.33E-05	3.33E-05	8.67E-04
1.09E-02	1.03E-02	9.13E-03	8.04E-03	6.15E-03	5.77E-03	1.50E-01
4.11E-03	3.81E-03	3.23E-03	2.77E-03	2.12E-03	1.99E-03	5.17E-02
5.54E-03	4.88E-03	3.64E-03	2.86E-03	2.17E-03	2.04E-03	5.30E-02
4.55E-03	4.19E-03	3.49E-03	2.97E-03	2.27E-03	2.13E-03	5.54E-02
4.02E-02	3.70E-02	3.08E-02	2.61E-02	2.00E-02	1.88E-02	4.88E-01
9.53E-02	8.78E-02	7.33E-02	6.23E-02	4.76E-02	4.47E-02	1.16E+00
2.67E-01	2.46E-01	2.05E-01	1.75E-01	1.33E-01	1.25E-01	3.26E+00
5.29E-01	4.87E-01	4.06E-01	3.45E-01	2.63E-01	2.47E-01	6.43E+00
9.74E-01	8.99E-01	7.52E-01	6.39E-01	4.88E-01	4.58E-01	1.19E+01
8.35E-01	7.71E-01	6.48E-01	5.52E-01	4.22E-01	3.96E-01	1.03E+01
1.58E+00	1.46E+00	1.22E+00	1.04E+00	7.93E-01	7.45E-01	1.94E+01
1.61E+00	1.49E+00	1.25E+00	1.07E+00	8.13E-01	7.64E-01	1.99E+01
2.52E+01	2.32E+01	1.94E+01	1.65E+01	1.26E+01	1.18E+01	3.08E+02
1.60E+02	1.47E+02	1.23E+02	1.04E+02	7.97E+01	7.49E+01	1.95E+03
2.28E+03	2.10E+03	1.75E+03	1.48E+03	1.13E+03	1.07E+03	2.77E+04
2.89E+04	2.66E+04	2.22E+04	1.89E+04	1.44E+04	1.36E+04	3.52E+05
3.91E+05	3.60E+05	3.00E+05	2.55E+05	1.95E+05	1.83E+05	4.76E+06
3.30E+05	3.03E+05	2.53E+05	2.15E+05	1.64E+05	1.54E+05	4.01E+06
5.14E+06	4.73E+06	3.94E+06	3.34E+06	2.56E+06	2.40E+06	6.24E+07
3.71E+07	3.42E+07	2.85E+07	2.41E+07	1.85E+07	1.73E+07	4.51E+08
8.09E+07	7.45E+07	6.21E+07	5.26E+07	4.02E+07	3.78E+07	9.83E+08
8.13E+07	7.48E+07	6.21E+07	5.26E+07	4.02E+07	3.78E+07	9.82E+08
6.59E+07	6.04E+07	4.99E+07	4.21E+07	3.22E+07	3.02E+07	7.86E+08
6.34E+07	5.78E+07	4.72E+07	3.95E+07	3.03E+07	2.85E+07	7.40E+08
1.39E+07	1.27E+07	1.03E+07	8.54E+06	6.56E+06	6.17E+06	1.60E+08
5.04E+07	4.57E+07	3.67E+07	3.04E+07	2.34E+07	2.20E+07	5.72E+08
9.20E+07	8.34E+07	6.70E+07	5.55E+07	4.25E+07	3.99E+07	1.04E+09
2.40E+07	2.22E+07	1.86E+07	1.59E+07	1.21E+07	1.14E+07	2.95E+08
7.57E+06	7.00E+06	5.90E+06	5.04E+06	3.85E+06	3.61E+06	9.39E+07
2.59E+06	2.40E+06	2.03E+06	1.74E+06	1.33E+06	1.25E+06	3.24E+07
5.25E+08	4.80E+08	3.95E+08	3.32E+08	2.54E+08	2.39E+08	6.21E+09

Neutron ENDF5 Group	grp	boundaries	mev	initial	1E-02 y	3E-02 y
grp						
ORIGEN ENDF5 44 Max Energy						
45	1.00E-09	1.00E-05				
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	3.10E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	2.24E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	1.91E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	5.10E-06
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	2.24E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	8.31E-06
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	5.72E-06
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	1.25E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	2.07E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	3.97E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	4.69E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	2.89E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	3.85E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	3.18E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	1.06E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	4.05E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	5.66E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	4.50E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	3.98E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	9.44E-02
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	2.64E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	5.24E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	9.64E-01
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	8.26E-01
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	1.56E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	1.59E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	2.49E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	1.59E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	2.26E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	2.86E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	3.87E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	3.27E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	5.09E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	3.68E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	8.02E+07
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	8.06E+07
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	6.55E+07
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	6.32E+07
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	1.39E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	5.05E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	9.22E+07
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	2.38E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	7.47E+06
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	2.56E+06
totals					5.23E+08	5.21E+08
						5.16E+08

0.1 y	0.3 y	1.0 y	3.0 y	10.0 y	13.2 y	31 Assemblies
3.10E-06	3.10E-06	3.10E-06	3.10E-06	3.09E-06	3.09E-06	9.59E-05
2.24E-06	2.24E-06	2.23E-06	2.23E-06	2.23E-06	2.23E-06	6.92E-05
1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	1.91E-06	5.91E-05
5.10E-06	5.10E-06	5.10E-06	5.10E-06	5.09E-06	5.09E-06	1.58E-04
2.24E-06	2.24E-06	2.24E-06	2.24E-06	2.25E-06	2.25E-06	6.96E-05
8.31E-06	8.31E-06	8.31E-06	8.32E-06	8.34E-06	8.35E-06	2.59E-04
5.72E-06	5.72E-06	5.72E-06	5.72E-06	5.73E-06	5.73E-06	1.78E-04
1.24E-05	1.24E-05	1.24E-05	1.23E-05	1.24E-05	1.24E-05	3.83E-04
2.07E-05	2.06E-05	2.05E-05	2.05E-05	2.05E-05	2.05E-05	6.36E-04
3.95E-05	3.93E-05	3.92E-05	3.92E-05	3.92E-05	3.92E-05	1.22E-03
4.69E-05	4.67E-05	4.66E-05	4.65E-05	4.65E-05	4.65E-05	1.44E-03
2.89E-05	2.88E-05	2.88E-05	2.87E-05	2.88E-05	2.88E-05	8.91E-04
3.85E-05	3.84E-05	3.83E-05	3.83E-05	3.84E-05	3.84E-05	1.19E-03
3.18E-05	3.16E-05	3.16E-05	3.16E-05	3.16E-05	3.16E-05	9.79E-04
1.02E-02	9.68E-03	8.54E-03	7.50E-03	5.74E-03	5.09E-03	1.58E-01
3.89E-03	3.59E-03	3.03E-03	2.59E-03	1.98E-03	1.76E-03	5.44E-02
5.28E-03	4.63E-03	3.43E-03	2.67E-03	2.03E-03	1.80E-03	5.57E-02
4.30E-03	3.95E-03	3.28E-03	2.77E-03	2.12E-03	1.88E-03	5.83E-02
3.80E-02	3.49E-02	2.89E-02	2.44E-02	1.86E-02	1.66E-02	5.13E-01
9.01E-02	8.28E-02	6.87E-02	5.81E-02	4.44E-02	3.94E-02	1.22E+00
2.52E-01	2.32E-01	1.93E-01	1.63E-01	1.25E-01	1.11E-01	3.43E+00
5.01E-01	4.60E-01	3.81E-01	3.22E-01	2.46E-01	2.18E-01	6.76E+00
9.21E-01	8.47E-01	7.04E-01	5.97E-01	4.56E-01	4.05E-01	1.25E+01
7.90E-01	7.27E-01	6.07E-01	5.15E-01	3.94E-01	3.49E-01	1.08E+01
1.49E+00	1.37E+00	1.14E+00	9.69E-01	7.40E-01	6.57E-01	2.04E+01
1.52E+00	1.40E+00	1.17E+00	9.94E-01	7.59E-01	6.74E-01	2.09E+01
2.38E+01	2.19E+01	1.82E+01	1.54E+01	1.18E+01	1.05E+01	3.24E+02
1.52E+02	1.39E+02	1.15E+02	9.73E+01	7.44E+01	6.61E+01	2.05E+03
2.15E+03	1.98E+03	1.64E+03	1.39E+03	1.06E+03	9.41E+02	2.92E+04
2.73E+04	2.51E+04	2.08E+04	1.76E+04	1.35E+04	1.20E+04	3.71E+05
3.70E+05	3.39E+05	2.81E+05	2.38E+05	1.82E+05	1.62E+05	5.01E+06
3.12E+05	2.86E+05	2.37E+05	2.00E+05	1.53E+05	1.36E+05	4.22E+06
4.86E+06	4.46E+06	3.69E+06	3.12E+06	2.39E+06	2.12E+06	6.57E+07
3.51E+07	3.22E+07	2.67E+07	2.25E+07	1.72E+07	1.53E+07	4.74E+08
7.65E+07	7.03E+07	5.82E+07	4.92E+07	3.76E+07	3.34E+07	1.03E+09
7.69E+07	7.05E+07	5.82E+07	4.91E+07	3.76E+07	3.34E+07	1.03E+09
6.24E+07	5.70E+07	4.68E+07	3.93E+07	3.01E+07	2.67E+07	8.28E+08
6.00E+07	5.46E+07	4.43E+07	3.69E+07	2.83E+07	2.52E+07	7.81E+08
1.32E+07	1.20E+07	9.62E+06	7.97E+06	6.13E+06	5.46E+06	1.69E+08
4.78E+07	4.32E+07	3.45E+07	2.84E+07	2.18E+07	1.95E+07	6.03E+08
8.73E+07	7.89E+07	6.29E+07	5.18E+07	3.97E+07	3.53E+07	1.09E+09
2.27E+07	2.09E+07	1.74E+07	1.48E+07	1.13E+07	1.00E+07	3.11E+08
7.15E+06	6.60E+06	5.53E+06	4.71E+06	3.59E+06	3.19E+06	9.87E+07
2.45E+06	2.26E+06	1.90E+06	1.62E+06	1.24E+06	1.10E+06	3.40E+07
4.97E+08	4.54E+08	3.70E+08	3.10E+08	2.37E+08	2.11E+08	6.53E+09

Neutron ENDF5 Group	grp	boundaries	mev	initial	1E-02 y	3E-02 y
grp						
ORIGEN ENDF5 44 Max Energy						
45	1.00E-09	1.00E-05				
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	4.31E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	3.09E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	2.41E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	7.22E-06
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	2.92E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	9.89E-06
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	7.24E-06
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	1.59E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	2.62E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	5.00E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	5.84E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	3.52E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	4.54E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	3.87E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	1.30E-02
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	4.92E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	6.72E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	5.45E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	4.82E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	1.14E-01
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	3.20E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	6.35E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	1.17E+00
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	1.00E+00
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	1.89E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	1.93E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	3.02E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	1.92E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	2.73E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	3.46E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	4.69E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	3.95E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	6.16E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	4.45E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	9.70E+07
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	9.75E+07
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	7.91E+07
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	7.62E+07
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	1.68E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	6.07E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	1.11E+08
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	2.88E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	9.07E+06
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	3.11E+06
totals					6.31E+08	6.29E+08
						6.23E+08

0.1 y	0.3 y	1.0 y	3.0 y	10.0 y	14.7 y	41 Assemblies
4.31E-06	4.31E-06	4.31E-06	4.31E-06	4.30E-06	4.30E-06	1.76E-04
3.09E-06	3.09E-06	3.09E-06	3.09E-06	3.09E-06	3.09E-06	1.27E-04
2.41E-06	2.41E-06	2.41E-06	2.41E-06	2.41E-06	2.40E-06	9.86E-05
7.22E-06	7.22E-06	7.22E-06	7.21E-06	7.21E-06	7.20E-06	2.95E-04
2.92E-06	2.92E-06	2.92E-06	2.92E-06	2.92E-06	2.92E-06	1.20E-04
9.89E-06	9.89E-06	9.90E-06	9.90E-06	9.93E-06	9.94E-06	4.08E-04
7.24E-06	7.24E-06	7.24E-06	7.24E-06	7.25E-06	7.25E-06	2.97E-04
1.58E-05	1.57E-05	1.56E-05	1.56E-05	1.56E-05	1.56E-05	6.38E-04
2.61E-05	2.59E-05	2.58E-05	2.58E-05	2.58E-05	2.58E-05	1.06E-03
4.97E-05	4.93E-05	4.91E-05	4.91E-05	4.91E-05	4.91E-05	2.01E-03
5.82E-05	5.78E-05	5.75E-05	5.75E-05	5.74E-05	5.74E-05	2.35E-03
3.51E-05	3.49E-05	3.48E-05	3.48E-05	3.48E-05	3.48E-05	1.42E-03
4.53E-05	4.51E-05	4.49E-05	4.49E-05	4.50E-05	4.50E-05	1.84E-03
3.85E-05	3.83E-05	3.82E-05	3.81E-05	3.81E-05	3.81E-05	1.56E-03
1.26E-02	1.20E-02	1.07E-02	9.42E-03	7.20E-03	6.04E-03	2.47E-01
4.73E-03	4.41E-03	3.77E-03	3.25E-03	2.48E-03	2.08E-03	8.54E-02
6.30E-03	5.58E-03	4.22E-03	3.35E-03	2.55E-03	2.14E-03	8.75E-02
5.22E-03	4.83E-03	4.07E-03	3.48E-03	2.66E-03	2.23E-03	9.15E-02
4.61E-02	4.26E-02	3.59E-02	3.06E-02	2.34E-02	1.97E-02	8.06E-01
1.10E-01	1.01E-01	8.54E-02	7.30E-02	5.58E-02	4.68E-02	1.92E+00
3.06E-01	2.84E-01	2.39E-01	2.05E-01	1.56E-01	1.31E-01	5.38E+00
6.08E-01	5.62E-01	4.73E-01	4.04E-01	3.09E-01	2.59E-01	1.06E+01
1.12E+00	1.04E+00	8.76E-01	7.49E-01	5.72E-01	4.80E-01	1.97E+01
9.60E-01	8.91E-01	7.55E-01	6.47E-01	4.94E-01	4.15E-01	1.70E+01
1.82E+00	1.68E+00	1.42E+00	1.22E+00	9.30E-01	7.80E-01	3.20E+01
1.85E+00	1.72E+00	1.46E+00	1.25E+00	9.53E-01	8.00E-01	3.28E+01
2.89E+01	2.68E+01	2.26E+01	1.94E+01	1.48E+01	1.24E+01	5.08E+02
1.84E+02	1.70E+02	1.43E+02	1.22E+02	9.34E+01	7.84E+01	3.22E+03
2.62E+03	2.42E+03	2.04E+03	1.74E+03	1.33E+03	1.12E+03	4.58E+04
3.32E+04	3.07E+04	2.59E+04	2.21E+04	1.69E+04	1.42E+04	5.82E+05
4.49E+05	4.15E+05	3.50E+05	2.99E+05	2.28E+05	1.92E+05	7.86E+06
3.79E+05	3.50E+05	2.95E+05	2.51E+05	1.92E+05	1.61E+05	6.62E+06
5.90E+06	5.45E+06	4.59E+06	3.92E+06	3.00E+06	2.51E+06	1.03E+08
4.26E+07	3.94E+07	3.31E+07	2.83E+07	2.16E+07	1.82E+07	7.44E+08
9.30E+07	8.59E+07	7.23E+07	6.17E+07	4.72E+07	3.96E+07	1.62E+09
9.34E+07	8.62E+07	7.24E+07	6.17E+07	4.71E+07	3.96E+07	1.62E+09
7.56E+07	6.96E+07	5.81E+07	4.93E+07	3.77E+07	3.17E+07	1.30E+09
7.26E+07	6.65E+07	5.49E+07	4.63E+07	3.55E+07	2.99E+07	1.22E+09
1.59E+07	1.46E+07	1.19E+07	1.00E+07	7.67E+06	6.47E+06	2.65E+08
5.77E+07	5.25E+07	4.27E+07	3.56E+07	2.74E+07	2.31E+07	9.46E+08
1.05E+08	9.59E+07	7.79E+07	6.50E+07	4.98E+07	4.19E+07	1.72E+09
2.76E+07	2.56E+07	2.17E+07	1.86E+07	1.42E+07	1.19E+07	4.87E+08
8.71E+06	8.09E+06	6.88E+06	5.91E+06	4.51E+06	3.78E+06	1.55E+08
2.99E+06	2.78E+06	2.37E+06	2.04E+06	1.56E+06	1.30E+06	5.34E+07
6.02E+08	5.53E+08	4.59E+08	3.89E+08	2.98E+08	2.50E+08	1.03E+10

Neutron ENDF5 Group	grp	boundaries	mev	initial	1E-02 y	3E-02 y
grp						
ORIGEN ENDF5 4+ Max Energy						
45	1.00E-09	1.00E-05				
44	3.00E-09	3.00E-03	1	1.00E-11	3.00E-09	2.45E-06
43	7.50E-09	7.50E-03	2	3.00E-09	7.50E-09	1.77E-06
42	1.00E-08	1.00E-02	3	7.50E-09	1.00E-08	1.63E-06
41	2.53E-08	2.53E-02	4	1.00E-08	2.53E-08	3.97E-06
40	3.00E-08	3.00E-02	5	2.53E-08	3.00E-08	1.88E-06
39	4.00E-08	4.00E-02	6	3.00E-08	4.00E-08	7.44E-06
38	5.00E-08	5.00E-02	7	4.00E-08	5.00E-08	4.89E-06
37	7.00E-08	7.00E-02	8	5.00E-08	7.00E-08	1.07E-05
36	1.00E-07	1.00E-01	9	7.00E-08	1.00E-07	1.78E-05
35	1.50E-07	1.50E-01	10	1.00E-07	1.50E-07	3.41E-05
34	2.00E-07	2.00E-01	11	1.50E-07	2.00E-07	4.09E-05
33	2.25E-07	2.25E-01	12	2.00E-07	2.25E-07	2.56E-05
32	2.50E-07	2.50E-01	13	2.25E-07	2.50E-07	3.48E-05
31	2.75E-07	2.75E-01	14	2.50E-07	2.75E-07	2.82E-05
30	3.25E-07	3.25E-01	15	2.75E-07	3.25E-07	9.20E-03
29	3.50E-07	3.50E-01	16	3.25E-07	3.50E-07	3.56E-03
28	3.75E-07	3.75E-01	17	3.50E-07	3.75E-07	5.08E-03
27	4.00E-07	4.00E-01	18	3.75E-07	4.00E-07	3.97E-03
26	6.25E-07	6.25E-01	19	4.00E-07	6.25E-07	3.51E-02
25	1.00E-06	1.00E+00	20	6.25E-07	1.00E-06	8.32E-02
24	1.77E-06	1.77E+00	21	1.00E-06	1.77E-06	2.33E-01
23	3.00E-06	3.00E+00	22	1.77E-06	3.00E-06	4.62E-01
22	4.75E-06	4.75E+00	23	3.00E-06	4.75E-06	8.49E-01
21	6.00E-06	6.00E+00	24	4.75E-06	6.00E-06	7.27E-01
20	8.10E-06	8.10E+00	25	6.00E-06	8.10E-06	1.38E+00
19	1.00E-05	1.00E+01	26	8.10E-06	1.00E-05	1.40E+00
18	3.00E-05	3.00E+01	27	1.00E-05	3.00E-05	2.19E+01
17	1.00E-04	1.00E+02	28	3.00E-05	1.00E-04	1.40E+02
16	5.50E-04	5.50E+02	29	1.00E-04	5.50E-04	1.99E+03
15	3.00E-03	3.00E+03	30	5.50E-04	3.00E-03	2.52E+04
14	1.70E-02	1.70E+04	31	3.00E-03	1.70E-02	3.41E+05
13	2.50E-02	2.50E+04	32	1.70E-02	2.50E-02	2.88E+05
12	1.00E-01	1.00E+05	33	2.50E-02	1.00E-01	4.49E+06
11	4.00E-01	4.00E+05	34	1.00E-01	4.00E-01	3.24E+07
10	9.00E-01	9.00E+05	35	4.00E-01	9.00E-01	7.07E+07
9	1.40E+00	1.40E+06	36	9.00E-01	1.40E+00	7.11E+07
8	1.85E+00	1.85E+06	37	1.40E+00	1.85E+00	5.79E+07
7	2.35E+00	2.35E+06	38	1.85E+00	2.35E+00	5.60E+07
6	2.48E+00	2.48E+06	39	2.35E+00	2.48E+00	1.24E+07
5	3.00E+00	3.00E+06	40	2.48E+00	3.00E+00	4.49E+07
4	4.80E+00	4.80E+06	41	3.00E+00	4.80E+00	8.18E+07
3	6.43E+00	6.43E+06	42	4.80E+00	6.43E+00	2.09E+07
2	8.19E+00	8.19E+06	43	6.43E+00	8.19E+00	6.57E+06
1	2.00E+01	2.00E+07	44	8.19E+00	2.00E+01	2.25E+06
totals					4.62E+08	4.61E+08
						4.55E+08

0.1 y	0.3 y	1.0 y	3.0 y	10.0 y	16.0 y	518 Assemblies
2.45E-06	2.45E-06	2.45E-06	2.45E-06	2.44E-06	2.44E-06	1.26E-03
1.77E-06	1.77E-06	1.77E-06	1.77E-06	1.77E-06	1.77E-06	9.16E-04
1.63E-06	1.63E-06	1.63E-06	1.63E-06	1.63E-06	1.63E-06	8.42E-04
3.97E-06	3.97E-06	3.97E-06	3.96E-06	3.96E-06	3.96E-06	2.05E-03
1.88E-06	1.88E-06	1.88E-06	1.88E-06	1.88E-06	1.88E-06	9.73E-04
7.44E-06	7.44E-06	7.44E-06	7.45E-06	7.47E-06	7.48E-06	3.87E-03
4.89E-06	4.89E-06	4.89E-06	4.90E-06	4.90E-06	4.90E-06	2.54E-03
1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	5.49E-03
1.77E-05	1.77E-05	1.77E-05	1.77E-05	1.77E-05	1.77E-05	9.15E-03
3.40E-05	3.39E-05	3.38E-05	3.38E-05	3.39E-05	3.39E-05	1.75E-02
4.10E-05	4.09E-05	4.08E-05	4.08E-05	4.08E-05	4.07E-05	2.11E-02
2.57E-05	2.56E-05	2.56E-05	2.56E-05	2.56E-05	2.56E-05	1.32E-02
3.48E-05	3.48E-05	3.48E-05	3.48E-05	3.48E-05	3.48E-05	1.80E-02
2.82E-05	2.81E-05	2.81E-05	2.81E-05	2.81E-05	2.81E-05	1.45E-02
8.90E-03	8.37E-03	7.32E-03	6.39E-03	4.89E-03	3.89E-03	2.02E+00
3.40E-03	3.13E-03	2.60E-03	2.20E-03	1.68E-03	1.35E-03	6.97E-01
4.72E-03	4.11E-03	2.97E-03	2.27E-03	1.73E-03	1.38E-03	7.13E-01
3.78E-03	3.45E-03	2.82E-03	2.36E-03	1.81E-03	1.45E-03	7.49E-01
3.34E-02	3.04E-02	2.48E-02	2.08E-02	1.59E-02	1.27E-02	6.57E+00
7.92E-02	7.23E-02	5.91E-02	4.95E-02	3.78E-02	3.02E-02	1.56E+01
2.21E-01	2.02E-01	1.66E-01	1.39E-01	1.06E-01	8.46E-02	4.38E+01
4.40E-01	4.01E-01	3.28E-01	2.74E-01	2.09E-01	1.67E-01	8.65E+01
8.09E-01	7.39E-01	6.06E-01	5.08E-01	3.88E-01	3.10E-01	1.60E+02
6.93E-01	6.34E-01	5.22E-01	4.39E-01	3.35E-01	2.68E-01	1.39E+02
1.31E+00	1.20E+00	9.83E-01	8.26E-01	6.31E-01	5.03E-01	2.61E+02
1.34E+00	1.22E+00	1.01E+00	8.46E-01	6.46E-01	5.16E-01	2.67E+02
2.09E+01	1.91E+01	1.57E+01	1.31E+01	1.00E+01	8.00E+00	4.14E+03
1.33E+02	1.21E+02	9.91E+01	8.29E+01	6.34E+01	5.07E+01	2.63E+04
1.89E+03	1.73E+03	1.41E+03	1.18E+03	9.02E+02	7.21E+02	3.73E+05
2.40E+04	2.19E+04	1.79E+04	1.50E+04	1.15E+04	9.16E+03	4.75E+06
3.25E+05	2.96E+05	2.42E+05	2.03E+05	1.55E+05	1.24E+05	6.41E+07
2.74E+05	2.50E+05	2.04E+05	1.71E+05	1.31E+05	1.04E+05	5.40E+07
4.27E+06	3.89E+06	3.18E+06	2.66E+06	2.03E+06	1.62E+06	8.41E+08
3.08E+07	2.81E+07	2.29E+07	1.92E+07	1.47E+07	1.17E+07	6.07E+09
6.72E+07	6.13E+07	5.00E+07	4.19E+07	3.20E+07	2.56E+07	1.32E+10
6.76E+07	6.16E+07	5.01E+07	4.19E+07	3.20E+07	2.56E+07	1.32E+10
5.49E+07	4.99E+07	4.03E+07	3.35E+07	2.56E+07	2.05E+07	1.06E+10
5.30E+07	4.79E+07	3.82E+07	3.15E+07	2.42E+07	1.94E+07	1.00E+10
1.17E+07	1.05E+07	8.30E+06	6.81E+06	5.23E+06	4.21E+06	2.18E+09
4.23E+07	3.80E+07	2.98E+07	2.43E+07	1.87E+07	1.50E+07	7.79E+09
7.72E+07	6.93E+07	5.43E+07	4.42E+07	3.38E+07	2.71E+07	1.41E+10
1.99E+07	1.82E+07	1.50E+07	1.26E+07	9.61E+06	7.67E+06	3.97E+09
6.27E+06	5.75E+06	4.75E+06	4.01E+06	3.06E+06	2.44E+06	1.26E+09
2.15E+06	1.97E+06	1.63E+06	1.38E+06	1.05E+06	8.39E+05	4.35E+08
4.38E+08	3.97E+08	3.19E+08	2.64E+08	2.02E+08	1.62E+08	8.39E+10

Energy Output Group	Spent Fuel Cooled Batches							
	3.167	7.083	8.5	10.083	11.67	13.167	14.67	16
1	3.43E-04	2.91E-04	6.67E-04	2.43E-04	8.91E-05	9.59E-05	1.76E-04	1.26E-03
2	2.45E-04	2.08E-04	4.74E-04	1.74E-04	6.42E-05	6.92E-05	1.27E-04	9.16E-04
3	1.71E-04	1.52E-04	2.97E-04	1.22E-04	5.33E-05	5.91E-05	9.86E-05	8.42E-04
4	5.86E-04	4.92E-04	1.15E-03	4.15E-04	1.47E-04	1.58E-04	2.95E-04	2.05E-03
5	2.16E-04	1.88E-04	3.95E-04	1.54E-04	6.32E-05	6.96E-05	1.20E-04	9.73E-04
6	6.58E-04	6.00E-04	1.08E-03	4.72E-04	2.28E-04	2.59E-04	4.08E-04	3.87E-03
7	5.20E-04	4.59E-04	9.23E-04	3.71E-04	1.60E-04	1.78E-04	2.97E-04	2.54E-03
8	1.11E-03	9.84E-04	1.97E-03	7.94E-04	3.44E-04	3.83E-04	6.38E-04	5.49E-03
9	1.84E-03	1.62E-03	3.23E-03	1.31E-03	5.71E-04	6.36E-04	1.06E-03	9.15E-03
10	3.48E-03	3.08E-03	6.09E-03	2.48E-03	1.09E-03	1.22E-03	2.01E-03	1.75E-02
11	4.00E-03	3.57E-03	6.93E-03	2.86E-03	1.28E-03	1.44E-03	2.35E-03	2.11E-02
12	2.36E-03	2.13E-03	3.97E-03	1.69E-03	7.89E-04	8.91E-04	1.42E-03	1.32E-02
13	2.92E-03	2.68E-03	4.69E-03	2.10E-03	1.04E-03	1.19E-03	1.84E-03	1.80E-02
14	2.58E-03	2.33E-03	4.34E-03	1.85E-03	8.67E-04	9.79E-04	1.56E-03	1.45E-02
15	6.40E-01	4.98E-01	8.41E-01	3.53E-01	1.50E-01	1.58E-01	2.47E-01	2.02E+00
16	2.20E-01	1.71E-01	2.90E-01	1.22E-01	5.17E-02	5.44E-02	8.54E-02	6.97E-01
17	2.27E-01	1.76E-01	2.98E-01	1.25E-01	5.30E-02	5.57E-02	8.75E-02	7.13E-01
18	2.36E-01	1.84E-01	3.10E-01	1.30E-01	5.54E-02	5.83E-02	9.15E-02	7.49E-01
19	2.08E+00	1.62E+00	2.73E+00	1.15E+00	4.88E-01	5.13E-01	8.06E-01	6.57E+00
20	4.95E+00	3.85E+00	6.51E+00	2.73E+00	1.16E+00	1.22E+00	1.92E+00	1.56E+01
21	1.39E+01	1.08E+01	1.82E+01	7.65E+00	3.26E+00	3.43E+00	5.38E+00	4.38E+01
22	2.74E+01	2.13E+01	3.60E+01	1.51E+01	6.43E+00	6.76E+00	1.06E+01	8.65E+01
23	5.09E+01	3.95E+01	6.68E+01	2.80E+01	1.19E+01	1.25E+01	1.97E+01	1.60E+02
24	4.39E+01	3.42E+01	5.77E+01	2.42E+01	1.03E+01	1.08E+01	1.70E+01	1.39E+02
25	8.26E+01	6.43E+01	1.09E+02	4.55E+01	1.94E+01	2.04E+01	3.20E+01	2.61E+02
26	8.47E+01	6.59E+01	1.11E+02	4.67E+01	1.99E+01	2.09E+01	3.28E+01	2.67E+02
27	1.31E+03	1.02E+03	1.73E+03	7.24E+02	3.08E+02	3.24E+02	5.08E+02	4.14E+03
28	8.29E+03	6.45E+03	1.09E+04	4.57E+03	1.95E+03	2.05E+03	3.22E+03	2.63E+04
29	1.18E+05	9.18E+04	1.55E+05	6.51E+04	2.77E+04	2.92E+04	4.58E+04	3.73E+05
30	1.50E+06	1.17E+06	1.97E+06	8.27E+05	3.52E+05	3.71E+05	5.82E+05	4.75E+06
31	2.03E+07	1.58E+07	2.66E+07	1.12E+07	4.76E+06	5.01E+06	7.86E+06	6.41E+07
32	1.71E+07	1.33E+07	2.24E+07	9.41E+06	4.01E+06	4.22E+06	6.62E+06	5.40E+07
33	2.66E+08	2.07E+08	3.49E+08	1.47E+08	6.24E+07	6.57E+07	1.03E+08	8.41E+08
34	1.92E+09	1.49E+09	2.52E+09	1.06E+09	4.51E+08	4.74E+08	7.44E+08	6.07E+09
35	4.19E+09	3.26E+09	5.50E+09	2.31E+09	9.83E+08	1.03E+09	1.62E+09	1.32E+10
36	4.18E+09	3.26E+09	5.50E+09	2.31E+09	9.82E+08	1.03E+09	1.62E+09	1.32E+10
37	3.34E+09	2.60E+09	4.39E+09	1.84E+09	7.86E+08	8.28E+08	1.30E+09	1.06E+10
38	3.14E+09	2.44E+09	4.12E+09	1.73E+09	7.40E+08	7.81E+08	1.22E+09	1.00E+10
39	6.77E+08	5.28E+08	8.89E+08	3.75E+08	1.60E+08	1.69E+08	2.65E+08	2.18E+09
40	2.41E+09	1.88E+09	3.17E+09	1.34E+09	5.72E+08	6.03E+08	9.46E+08	7.79E+09
41	4.41E+09	3.43E+09	5.79E+09	2.43E+09	1.04E+09	1.09E+09	1.72E+09	1.41E+10
42	1.26E+09	9.81E+08	1.66E+09	6.95E+08	2.95E+08	3.11E+08	4.87E+08	3.97E+09
43	4.02E+08	3.12E+08	5.27E+08	2.21E+08	9.39E+07	9.87E+07	1.55E+08	1.26E+09
44	1.39E+08	1.08E+08	1.82E+08	7.62E+07	3.24E+07	3.40E+07	5.34E+07	4.35E+08
Totals	2.64E+10	2.05E+10	3.46E+10	1.46E+10	6.21E+09	6.54E+09	1.03E+10	8.39E+10

Total for Spent Fuel in Pool

3.17E-03
2.28E-03
1.79E-03
5.30E-03
2.18E-03
7.58E-03
5.45E-03
1.17E-02
1.94E-02
3.70E-02
4.35E-02
2.65E-02
3.45E-02
2.91E-02
4.90E+00
1.69E+00
1.73E+00
1.81E+00
1.60E+01
3.80E+01
1.06E+02
2.10E+02
3.90E+02
3.37E+02
6.33E+02
6.49E+02
1.01E+04
6.37E+04
9.06E+05
1.15E+07
1.56E+08
1.31E+08
2.04E+09
1.47E+10
3.21E+10
3.21E+10
2.57E+10
2.42E+10
5.24E+09
1.87E+10
3.40E+10
9.66E+09
3.07E+09
1.06E+09
2.03E+11

Eighteen Month Decay				14 Month Decay Scaled	
Energy	Old Fuel	Core Offload	Total Neutron Spectrum Core Offload and Old Fuel	Energy	Total Neutron Spectrum Core Offload and Old Fuel
Output Group	811 Assemblies neutrons/s/mev	133 Assemblies neutrons/s/mev	neutrons/s/mev	Output Group	neutrons/s/mev
1	3.17E-03	3.36E-04	3.51E-03	1	3.63E-03
2	2.28E-03	2.42E-04	2.52E-03	2	2.61E-03
3	1.79E-03	1.97E-04	1.99E-03	3	2.06E-03
4	5.30E-03	5.58E-04	5.85E-03	4	6.06E-03
5	2.18E-03	2.42E-04	2.42E-03	5	2.51E-03
6	7.58E-03	9.06E-04	8.48E-03	6	8.78E-03
7	5.45E-03	6.19E-04	6.07E-03	7	6.28E-03
8	1.17E-02	1.34E-03	1.31E-02	8	1.35E-02
9	1.94E-02	2.22E-03	2.16E-02	9	2.24E-02
10	3.70E-02	4.25E-03	4.12E-02	10	4.27E-02
11	4.35E-02	5.24E-03	4.88E-02	11	5.05E-02
12	2.65E-02	3.23E-03	2.97E-02	12	3.08E-02
13	3.45E-02	4.28E-03	3.88E-02	13	4.02E-02
14	2.91E-02	3.54E-03	3.26E-02	14	3.37E-02
15	4.90E+00	7.81E-01	5.68E+00	15	5.88E+00
16	1.69E+00	2.73E-01	1.96E+00	16	2.03E+00
17	1.73E+00	2.94E-01	2.03E+00	17	2.10E+00
18	1.81E+00	2.94E-01	2.11E+00	18	2.18E+00
19	1.60E+01	2.59E+00	1.85E+01	19	1.92E+01
20	3.80E+01	6.16E+00	4.42E+01	20	4.57E+01
21	1.06E+02	1.73E+01	1.24E+02	21	1.28E+02
22	2.10E+02	3.41E+01	2.44E+02	22	2.53E+02
23	3.90E+02	6.32E+01	4.53E+02	23	4.69E+02
24	3.37E+02	5.45E+01	3.91E+02	24	4.05E+02
25	6.33E+02	1.03E+02	7.36E+02	25	7.62E+02
26	6.49E+02	1.05E+02	7.54E+02	26	7.81E+02
27	1.01E+04	1.63E+03	1.17E+04	27	1.21E+04
28	6.37E+04	1.03E+04	7.40E+04	28	7.66E+04
29	9.06E+05	1.47E+05	1.05E+06	29	1.09E+06
30	1.15E+07	1.87E+06	1.34E+07	30	1.39E+07
31	1.56E+08	2.52E+07	1.81E+08	31	1.87E+08
32	1.31E+08	2.12E+07	1.52E+08	32	1.58E+08
33	2.04E+09	3.31E+08	2.37E+09	33	2.45E+09
34	1.47E+10	2.39E+09	1.71E+10	34	1.77E+10
35	3.21E+10	5.21E+09	3.73E+10	35	3.87E+10
36	3.21E+10	5.21E+09	3.73E+10	36	3.86E+10
37	2.57E+10	4.18E+09	2.99E+10	37	3.09E+10
38	2.42E+10	3.94E+09	2.82E+10	38	2.91E+10
39	5.24E+09	8.53E+08	6.10E+09	39	6.31E+09
40	1.87E+10	3.05E+09	2.18E+10	40	2.25E+10
41	3.40E+10	5.56E+09	3.95E+10	41	4.09E+10
42	9.66E+09	1.57E+09	1.12E+10	42	1.16E+10
43	3.07E+09	4.97E+08	3.57E+09	43	3.69E+09
44	1.06E+09	1.71E+08	1.23E+09	44	1.27E+09
Total	2.03E+11	3.30E+10	2.36E+11	Total	2.44E+11

Neutron ENDF5 Group			grp
ORIGEN ENDF5 44 Group	Max Energy		
45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.000000001	0.01	3
41	0.0000000253	0.0253	4
40	0.000000003	0.03	5
39	0.000000004	0.04	6
38	0.000000005	0.05	7
37	0.000000007	0.07	8
36	0.00000001	0.1	9
35	0.000000015	0.15	10
34	0.00000002	0.2	11
33	0.000000225	0.225	12
32	0.00000025	0.25	13
31	0.000000275	0.275	14
30	0.000000325	0.325	15
29	0.00000035	0.35	16
28	0.000000375	0.375	17
27	0.0000004	0.4	18
26	0.000000625	0.625	19
25	0.000001	1	20
24	0.00000177	1.77	21
23	0.000003	3	22
22	0.00000475	4.75	23
21	0.000006	6	24
20	0.0000081	8.1	25
19	0.00001	10	26
18	0.00003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

Formulas

boundaries	mev	initial	1E-03 y
0.0000000001	0.000000003	0.000007013	0.000007013
0.000000003	0.0000000075	0.000005009	0.000005009
0.0000000075	0.00000001	0.000003494	0.000003494
0.00000001	0.0000000253	0.00001196	0.00001196
0.0000000253	0.00000003	0.000004412	0.000004412
0.00000003	0.00000004	0.0000134	0.0000134
0.00000004	0.00000005	0.0000106	0.0000106
0.00000005	0.00000007	0.00002355	0.00002355
0.00000007	0.0000001	0.0000388	0.0000388
0.0000001	0.00000015	0.00007358	0.00007357
0.00000015	0.0000002	0.00008452	0.00008453
0.0000002	0.000000225	0.0000496	0.00004961
0.000000225	0.00000025	0.00006111	0.00006111
0.00000025	0.000000275	0.00005438	0.00005438
0.000000275	0.000000325	0.0175	0.01751
0.000000325	0.00000035	0.006552	0.006556
0.00000035	0.000000375	0.00864	0.008644
0.000000375	0.0000004	0.007215	0.007219
0.0000004	0.000000625	0.06377	0.06381
0.000000625	0.000001	0.1514	0.1515
0.000001	0.00000177	0.4236	0.4239
0.00000177	0.000003	0.8408	0.8413
0.000003	0.00000475	1.549	1.55
0.00000475	0.000006	1.329	1.329
0.000006	0.0000081	2.512	2.513
0.0000081	0.00001	2.564	2.565
0.00001	0.00003	40	40.03
0.00003	0.0001	254.3	254.5
0.0001	0.00055	3617	3619
0.00055	0.003	45880	45900
0.003	0.017	620600	620900
0.017	0.025	523300	523600
0.025	0.1	8155000	8160000
0.1	0.4	58900000	58940000
0.4	0.9	128500000	128600000
0.9	1.4	129000000	129100000
1.4	1.85	104400000	104500000
1.85	2.35	100100000	100200000
2.35	2.48	21960000	21970000
2.48	3	79390000	79430000
3	4.8	145100000	145100000
4.8	6.43	38260000	38280000
6.43	8.19	12060000	12070000
8.19	20	4138000	4141000
totals		831200000	831600000

Formulas

3E-03 y	1E-02 y	3E-02 y	0.1 y	0.3 y
0.000007013	0.000007013	0.000007013	0.000007012	0.000007012
0.000005009	0.000005009	0.000005009	0.000005009	0.000005009
0.000003494	0.000003494	0.000003494	0.000003494	0.000003494
0.00001196	0.00001196	0.00001196	0.00001196	0.00001196
0.000004412	0.000004412	0.000004412	0.000004412	0.000004412
0.0000134	0.0000134	0.0000134	0.0000134	0.0000134
0.0000106	0.0000106	0.0000106	0.0000106	0.0000106
0.00002354	0.00002352	0.00002346	0.00002328	0.00002299
0.00003879	0.00003875	0.00003865	0.00003835	0.00003786
0.00007355	0.00007347	0.00007328	0.00007271	0.00007176
0.00008453	0.0000845	0.00008431	0.00008367	0.00008258
0.00004961	0.00004959	0.00004949	0.00004914	0.00004855
0.00006111	0.00006109	0.00006098	0.00006062	0.00006
0.00005438	0.00005436	0.00005425	0.00005386	0.00005322
0.01752	0.01749	0.01739	0.01708	0.01632
0.006557	0.006543	0.006494	0.006332	0.005949
0.008643	0.008611	0.008503	0.008148	0.007317
0.007219	0.007202	0.007144	0.00695	0.006493
0.06381	0.06366	0.06314	0.06142	0.05735
0.1515	0.1512	0.15	0.1459	0.1363
0.4239	0.4229	0.4195	0.4083	0.3817
0.8414	0.8394	0.8325	0.8098	0.7563
1.55	1.546	1.534	1.493	1.396
1.329	1.326	1.316	1.281	1.2
2.513	2.507	2.487	2.421	2.265
2.566	2.56	2.539	2.473	2.315
40.03	39.94	39.62	38.56	36.06
254.5	253.9	251.8	245	228.7
3619	3610	3581	3483	3253
45910	45800	45430	44200	41300
621000	619500	614400	597800	558300
523600	522400	518100	504000	470600
8160000	8141000	8074000	7854000	7334000
58940000	58800000	58320000	56730000	52970000
128600000	128300000	127200000	123700000	115500000
129100000	128800000	127700000	124200000	115900000
104500000	104200000	103300000	100400000	93400000
100200000	99910000	99000000	96010000	88960000
21970000	21910000	21700000	21020000	19420000
79430000	79210000	78440000	75890000	69910000
145100000	144700000	143300000	138700000	127800000
38280000	38190000	37890000	36900000	34550000
12070000	12040000	11950000	11640000	10920000
4141000	4132000	4101000	3998000	3755000
831700000	829500000	822200000	798200000	741400000

1.0 y	3.0 y	3.2 y	49 Assemblies
0.000007012	0.00000701	0.00000701	=49*P4
0.000005008	0.000005007	0.000005007	=49*P5
0.000003493	0.000003493	0.000003493	=49*P6
0.00001195	0.00001195	0.00001195	=49*P7
0.000004412	0.000004413	0.000004413	=49*P8
0.0000134	0.00001342	0.00001342	=49*P9
0.00001061	0.00001061	0.00001061	=49*P10
0.00002277	0.00002275	0.00002275	=49*P11
0.0000375	0.00003746	0.00003746	=49*P12
0.00007107	0.00007101	0.00007101	=49*P13
0.00008178	0.00008169	0.00008168	=49*P14
0.00004812	0.00004808	0.00004808	=49*P15
0.00005956	0.00005955	0.00005955	=49*P16
0.00005275	0.00005271	0.0000527	=49*P17
0.01477	0.01315	0.01306	=49*P18
0.005191	0.004528	0.004496	=49*P19
0.005741	0.004673	0.004636	=49*P20
0.005595	0.004845	0.00481	=49*P21
0.04936	0.04271	0.0424	=49*P22
0.1176	0.1018	0.1011	=49*P23
0.3294	0.2854	0.2834	=49*P24
0.6512	0.5635	0.5594	=49*P25
1.205	1.045	1.038	=49*P26
1.039	0.9026	0.8962	=49*P27
1.958	1.698	1.686	=49*P28
2.005	1.741	1.729	=49*P29
31.15	27.01	26.82	=49*P30
196.9	170.4	169.2	=49*P31
2802	2425	2408	=49*P32
35600	30830	30610	=49*P33
480900	416300	413400	=49*P34
405100	350600	348100	=49*P35
6313000	5462000	5423000	=49*P36
45600000	39450000	39170000	=49*P37
99460000	86060000	85450000	=49*P38
99510000	85990000	85380000	=49*P39
79760000	68700000	68200000	=49*P40
75260000	64460000	63990000	=49*P41
16310000	13910000	13810000	=49*P42
58350000	49570000	49200000	=49*P43
106700000	90570000	89900000	=49*P44
29900000	25950000	25760000	=49*P45
9493000	8256000	8198000	=49*P46
3272000	2849000	2828000	=49*P47
630800000	542000000	538100000	=49*P48

Neutron ENDF5 Group			grp
grp			
ORIGEN ENDF5 44 Group	Max Energy		
45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.00000001	0.01	3
41	0.0000000253	0.0253	4
40	0.00000003	0.03	5
39	0.00000004	0.04	6
38	0.00000005	0.05	7
37	0.00000007	0.07	8
36	0.0000001	0.1	9
35	0.00000015	0.15	10
34	0.0000002	0.2	11
33	0.000000225	0.225	12
32	0.00000025	0.25	13
31	0.000000275	0.275	14
30	0.000000325	0.325	15
29	0.00000035	0.35	16
28	0.000000375	0.375	17
27	0.0000004	0.4	18
26	0.000000625	0.625	19
25	0.000001	1	20
24	0.00000177	1.77	21
23	0.000003	3	22
22	0.00000475	4.75	23
21	0.000006	6	24
20	0.0000081	8.1	25
19	0.00001	10	26
18	0.00003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

Formulas

boundaries	mev	initial	1E-03 y
0.00000000001	0.000000003	0.000005593	0.000005593
0.000000003	0.0000000075	0.000004003	0.000004003
0.0000000075	0.00000001	0.000002919	0.000002919
0.00000001	0.0000000253	0.00000947	0.00000947
0.0000000253	0.00000003	0.000003621	0.000003621
0.00000003	0.00000004	0.00001151	0.00001151
0.00000004	0.00000005	0.000008815	0.000008815
0.00000005	0.00000007	0.00001945	0.00001944
0.00000007	0.0000001	0.0000321	0.0000321
0.0000001	0.00000015	0.00006098	0.00006097
0.00000015	0.0000002	0.0000705	0.00007051
0.0000002	0.000000225	0.00004186	0.00004187
0.000000225	0.00000025	0.00005256	0.00005256
0.00000025	0.000000275	0.00004591	0.00004592
0.000000275	0.000000325	0.01513	0.01514
0.000000325	0.00000035	0.005697	0.0057
0.00000035	0.000000375	0.007621	0.007625
0.000000375	0.0000004	0.006286	0.006289
0.0000004	0.000000625	0.05556	0.05559
0.000000625	0.000001	0.1319	0.132
0.000001	0.00000177	0.3689	0.3691
0.00000177	0.000003	0.7325	0.7329
0.000003	0.00000475	1.349	1.349
0.00000475	0.000006	1.156	1.157
0.000006	0.0000081	2.187	2.188
0.0000081	0.00001	2.232	2.233
0.00001	0.00003	34.83	34.85
0.00003	0.0001	221.6	221.7
0.0001	0.00055	3151	3153
0.00055	0.003	39960	39980
0.003	0.017	540600	541000
0.017	0.025	455900	456200
0.025	0.1	7106000	7110000
0.1	0.4	51320000	51350000
0.4	0.9	111900000	112000000
0.9	1.4	112500000	112500000
1.4	1.85	91110000	91160000
1.85	2.35	87490000	87530000
2.35	2.48	19210000	19220000
2.48	3	69520000	69560000
3	4.8	127000000	127000000
4.8	6.43	33290000	33310000
6.43	8.19	10490000	10490000
8.19	20	3596000	3598000
totals		725500000	726000000

3E-03 y	1E-02 y	3E-02 y	0.1 y	0.3 y
0.000005593	0.000005593	0.000005593	0.000005593	0.000005593
0.000004003	0.000004003	0.000004003	0.000004003	0.000004003
0.000002919	0.000002919	0.000002919	0.000002919	0.000002918
0.00000947	0.00000947	0.00000947	0.00000947	0.00000947
0.000003621	0.000003621	0.000003621	0.000003621	0.000003621
0.00001151	0.00001151	0.00001151	0.00001151	0.00001151
0.000008815	0.000008815	0.000008815	0.000008815	0.000008816
0.00001944	0.00001943	0.00001939	0.00001927	0.00001908
0.00003209	0.00003207	0.000032	0.00003181	0.0000315
0.00006096	0.00006091	0.00006079	0.00006042	0.00005981
0.00007051	0.00007051	0.00007041	0.00007	0.0000693
0.00004187	0.00004187	0.00004182	0.00004159	0.00004121
0.00005257	0.00005256	0.0000525	0.00005227	0.00005188
0.00004592	0.00004592	0.00004585	0.00004561	0.00004519
0.01514	0.01512	0.01503	0.01474	0.01405
0.005701	0.005688	0.005643	0.005494	0.005142
0.007624	0.007594	0.007494	0.007167	0.006399
0.00629	0.006275	0.00622	0.006042	0.005621
0.05559	0.05546	0.05497	0.05339	0.04964
0.132	0.1317	0.1305	0.1268	0.118
0.3692	0.3683	0.3651	0.3548	0.3303
0.733	0.7312	0.7248	0.7039	0.6547
1.349	1.346	1.335	1.297	1.208
1.157	1.154	1.145	1.113	1.038
2.188	2.183	2.164	2.104	1.96
2.233	2.228	2.209	2.148	2.003
34.86	34.77	34.48	33.5	31.21
221.7	221.2	219.3	212.9	198
3153	3145	3118	3028	2817
39990	39890	39550	38420	35750
541000	539700	535000	519600	483400
456200	455100	451100	438100	407400
7110000	7093000	7031000	6828000	6349000
51360000	51230000	50780000	49320000	45860000
112000000	111700000	110800000	107600000	100000000
112500000	112300000	111300000	108000000	100300000
91170000	90930000	90100000	87370000	80950000
87540000	87300000	86460000	83700000	77210000
19220000	19170000	18980000	18350000	16870000
69560000	69350000	68640000	66300000	60780000
127000000	126700000	125400000	121100000	111000000
33320000	33240000	32960000	32040000	29880000
10490000	10470000	10380000	10100000	9440000
3599000	3591000	3562000	3467000	3244000
726000000	724100000	717300000	695200000	642900000

Formulas

1.0 y	3.0 y	7.1 y	52 Assemblies
0.000005592	0.000005591	0.000005588	=52*P5
0.000004002	0.000004001	0.000003999	=52*P6
0.000002918	0.000002918	0.000002917	=52*P7
0.000009469	0.000009466	0.000009461	=52*P8
0.000003621	0.000003622	0.000003622	=52*P9
0.00001151	0.00001152	0.00001154	=52*P10
0.000008817	0.00000882	0.000008825	=52*P11
0.00001895	0.00001893	0.00001893	=52*P12
0.00003126	0.00003125	0.00003123	=52*P13
0.00005937	0.00005934	0.00005931	=52*P14
0.00006879	0.00006872	0.00006866	=52*P15
0.00004094	0.00004092	0.0000409	=52*P16
0.0000516	0.0000516	0.00005162	=52*P17
0.00004489	0.00004487	0.00004486	=52*P18
0.01263	0.01122	0.009577	=52*P19
0.004449	0.003863	0.003297	=52*P20
0.004949	0.003986	0.003387	=52*P21
0.0048	0.004134	0.003529	=52*P22
0.04234	0.03643	0.03109	=52*P23
0.1008	0.08684	0.07409	=52*P24
0.2825	0.2435	0.2077	=52*P25
0.5585	0.4806	0.41	=52*P26
1.034	0.8914	0.7605	=52*P27
0.8912	0.7699	0.6569	=52*P28
1.679	1.449	1.236	=52*P29
1.719	1.485	1.267	=52*P30
26.71	23.04	19.65	=52*P31
168.9	145.4	124.1	=52*P32
2403	2069	1766	=52*P33
30540	26300	22450	=52*P34
412500	355200	303100	=52*P35
347500	299100	255300	=52*P36
5415000	4660000	3977000	=52*P37
39110000	33660000	28720000	=52*P38
85320000	73420000	62650000	=52*P39
85380000	73370000	62610000	=52*P40
68460000	58620000	50040000	=52*P41
64650000	55020000	47000000	=52*P42
14020000	11880000	10150000	=52*P43
50170000	42330000	36180000	=52*P44
91670000	77300000	65970000	=52*P45
25630000	22130000	18870000	=52*P46
8135000	7040000	6001000	=52*P47
2802000	2428000	2069000	=52*P48
541600000	462500000	394800000	=52*P49

Neutron ENDF5 Group			grp
grp	ORIGEN ENDF5 44 Group		
	Max Energy		
45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.00000001	0.01	3
41	0.0000000253	0.0253	4
40	0.00000003	0.03	5
39	0.00000004	0.04	6
38	0.00000005	0.05	7
37	0.00000007	0.07	8
36	0.0000001	0.1	9
35	0.00000015	0.15	10
34	0.0000002	0.2	11
33	0.000000225	0.225	12
32	0.00000025	0.25	13
31	0.000000275	0.275	14
30	0.000000325	0.325	15
29	0.00000035	0.35	16
28	0.000000375	0.375	17
27	0.0000004	0.4	18
26	0.000000625	0.625	19
25	0.000001	1	20
24	0.00000177	1.77	21
23	0.000003	3	22
22	0.00000475	4.75	23
21	0.000006	6	24
20	0.0000081	8.1	25
19	0.00001	10	26
18	0.00003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

boundaries	mev	initial	1E-03 y	3E-03 y
0.0000000001	0.000000003	0.00001171	0.00001171	0.00001171
0.000000003	0.0000000075	0.000008327	0.000008327	0.000008327
0.0000000075	0.00000001	0.000005213	0.000005213	0.000005213
0.00000001	0.0000000253	0.00002028	0.00002028	0.00002028
0.0000000253	0.00000003	0.000006928	0.000006928	0.000006928
0.00000003	0.00000004	0.0000189	0.0000189	0.0000189
0.00000004	0.00000005	0.00001617	0.00001617	0.00001617
0.00000005	0.00000007	0.00003739	0.00003738	0.00003735
0.00000007	0.0000001	0.00006134	0.00006132	0.00006128
0.0000001	0.00000015	0.0001159	0.0001158	0.0001158
0.00000015	0.0000002	0.0001317	0.0001317	0.0001317
0.0000002	0.000000225	0.00007509	0.00007507	0.00007504
0.000000225	0.00000025	0.00008798	0.00008796	0.00008793
0.00000025	0.000000275	0.00008219	0.00008218	0.00008215
0.000000275	0.000000325	0.0235	0.02352	0.02352
0.000000325	0.00000035	0.008663	0.008668	0.008669
0.00000035	0.000000375	0.01098	0.01099	0.01098
0.000000375	0.0000004	0.009486	0.009491	0.009492
0.0000004	0.000000625	0.0839	0.08394	0.08395
0.000000625	0.000001	0.1993	0.1994	0.1994
0.000001	0.00000177	0.5575	0.5578	0.5579
0.00000177	0.000003	1.106	1.106	1.106
0.000003	0.00000475	2.039	2.04	2.04
0.00000475	0.000006	1.751	1.752	1.752
0.000006	0.0000081	3.308	3.31	3.31
0.0000081	0.00001	3.379	3.381	3.381
0.00001	0.00003	52.67	52.7	52.71
0.00003	0.0001	334.4	334.5	334.6
0.0001	0.00055	4755	4758	4758
0.00055	0.003	60340	60370	60380
0.003	0.017	816000	816400	816500
0.017	0.025	687900	688200	688300
0.025	0.1	10720000	10730000	10730000
0.1	0.4	77430000	77470000	77480000
0.4	0.9	168900000	169000000	169000000
0.9	1.4	169400000	169500000	169500000
1.4	1.85	136800000	136800000	136900000
1.85	2.35	130600000	130600000	130700000
2.35	2.48	28550000	28570000	28570000
2.48	3	103000000	103000000	103000000
3	4.8	188300000	188400000	188400000
4.8	6.43	50460000	50480000	50490000
6.43	8.19	15940000	15950000	15950000
8.19	20	5484000	5487000	5488000
totals		1087000000	1088000000	1088000000

1E-02 y	3E-02 y	0.1 y	0.3 y	1.0 y
0.00001171	0.00001171	0.00001171	0.00001171	0.00001171
0.000008327	0.000008327	0.000008327	0.000008326	0.000008326
0.000005213	0.000005213	0.000005213	0.000005212	0.000005212
0.00002028	0.00002028	0.00002028	0.00002028	0.00002028
0.000006928	0.000006928	0.000006928	0.000006929	0.000006929
0.0000189	0.0000189	0.0000189	0.0000189	0.00001891
0.00001617	0.00001617	0.00001617	0.00001617	0.00001617
0.00003728	0.00003707	0.00003647	0.00003546	0.00003472
0.00006116	0.00006081	0.0000598	0.00005812	0.00005689
0.0001155	0.0001148	0.0001129	0.0001097	0.0001073
0.0001314	0.0001307	0.0001285	0.0001248	0.0001221
0.00007492	0.00007453	0.00007333	0.00007133	0.00006987
0.0000878	0.00008739	0.00008613	0.00008404	0.00008251
0.00008201	0.00008158	0.00008027	0.00007807	0.00007647
0.02349	0.02338	0.02303	0.02216	0.02034
0.008654	0.008599	0.008417	0.007987	0.007117
0.01095	0.01083	0.01044	0.009521	0.007761
0.009473	0.009407	0.009191	0.008678	0.007654
0.08379	0.0832	0.08127	0.07671	0.0676
0.199	0.1976	0.1931	0.1824	0.1609
0.5568	0.553	0.5404	0.5106	0.4509
1.104	1.097	1.071	1.011	0.8914
2.036	2.022	1.977	1.868	1.651
1.749	1.737	1.699	1.607	1.424
3.304	3.281	3.207	3.032	2.681
3.375	3.352	3.278	3.101	2.746
52.6	52.25	51.06	48.26	42.66
333.9	331.6	323.9	305.8	269.5
4749	4716	4607	4349	3834
60260	59850	58470	55220	48730
814900	809200	790600	746400	658100
686900	682100	666300	629000	554300
10710000	10630000	10380000	9802000	8638000
77320000	76780000	75010000	70800000	62400000
168700000	167500000	163600000	154400000	136100000
169200000	168000000	164100000	154700000	136100000
136600000	135600000	132300000	124500000	109000000
130400000	129400000	126000000	118200000	102700000
28500000	28270000	27520000	25730000	22220000
102800000	101900000	99100000	92450000	79400000
188000000	186400000	181300000	169100000	145300000
50390000	50060000	48950000	46310000	41010000
15930000	15820000	15480000	14670000	13030000
5478000	5443000	5328000	5054000	4498000
1085000000	1077000000	1051000000	987300000	861700000

3.0 y	8.5 y	57 Assemblies
0.00001171	0.0000117	=57*P5
0.000008323	0.000008317	=57*P6
0.000005211	0.000005208	=57*P7
0.00002027	0.00002025	=57*P8
0.000006929	0.00000693	=57*P9
0.00001892	0.00001896	=57*P10
0.00001618	0.00001619	=57*P11
0.00003465	0.00003458	=57*P12
0.00005677	0.00005666	=57*P13
0.0001071	0.0001069	=57*P14
0.0001218	0.0001215	=57*P15
0.00006973	0.00006959	=57*P16
0.00008241	0.00008236	=57*P17
0.00007632	0.00007618	=57*P18
0.01825	0.01475	=57*P19
0.006282	0.00508	=57*P20
0.006481	0.005223	=57*P21
0.006716	0.005431	=57*P22
0.05927	0.04792	=57*P23
0.1412	0.1142	=57*P24
0.3959	0.3201	=57*P25
0.7817	0.6319	=57*P26
1.45	1.172	=57*P27
1.252	1.012	=57*P28
2.356	1.905	=57*P29
2.415	1.953	=57*P30
37.47	30.29	=57*P31
236.4	191.2	=57*P32
3364	2720	=57*P33
42760	34580	=57*P34
577400	466900	=57*P35
486200	393200	=57*P36
7576000	6126000	=57*P37
54720000	44250000	=57*P38
119400000	96520000	=57*P39
119300000	96430000	=57*P40
95230000	77030000	=57*P41
89290000	72270000	=57*P42
19260000	15600000	=57*P43
68600000	55560000	=57*P44
125500000	101500000	=57*P45
36030000	29090000	=57*P46
11470000	9254000	=57*P47
3960000	3191000	=57*P48
751400000	607700000	=57*P49

Neutron ENDF5 Group

grp

grp

ORIGEN ENDF5 44 Group

Max Energy

45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.000000001	0.01	3
41	0.0000000253	0.0253	4
40	0.000000003	0.03	5
39	0.000000004	0.04	6
38	0.000000005	0.05	7
37	0.000000007	0.07	8
36	0.00000001	0.1	9
35	0.000000015	0.15	10
34	0.00000002	0.2	11
33	0.0000000225	0.225	12
32	0.000000025	0.25	13
31	0.0000000275	0.275	14
30	0.0000000325	0.325	15
29	0.000000035	0.35	16
28	0.0000000375	0.375	17
27	0.00000004	0.4	18
26	0.0000000625	0.625	19
25	0.0000001	1	20
24	0.000000177	1.77	21
23	0.0000003	3	22
22	0.000000475	4.75	23
21	0.0000006	6	24
20	0.00000081	8.1	25
19	0.000001	10	26
18	0.000003	30	27
17	0.00001	100	28
16	0.000055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

Formulas

boundaries	mev	initial	1E-02 y
0.00000000001	0.000000003	0.000006587	0.000006587
0.000000003	0.0000000075	0.000004706	0.000004706
0.0000000075	0.00000001	0.000003297	0.000003297
0.00000001	0.0000000253	0.00001122	0.00001122
0.0000000253	0.00000003	0.00000416	0.00000416
0.00000003	0.00000004	0.00001272	0.00001272
0.00000004	0.00000005	0.00001002	0.00001002
0.00000005	0.00000007	0.00002223	0.0000222
0.00000007	0.0000001	0.00003663	0.00003658
0.0000001	0.00000015	0.00006947	0.00006938
0.00000015	0.0000002	0.00008001	0.00007999
0.0000002	0.000000225	0.00004703	0.00004702
0.000000225	0.00000025	0.00005809	0.00005808
0.00000025	0.000000275	0.00005155	0.00005154
0.000000275	0.000000325	0.01671	0.0167
0.000000325	0.00000035	0.006265	0.006256
0.00000035	0.000000375	0.008292	0.008264
0.000000375	0.0000004	0.006902	0.00689
0.0000004	0.000000625	0.06101	0.0609
0.000000625	0.000001	0.1449	0.1446
0.000001	0.00000177	0.4052	0.4045
0.00000177	0.000003	0.8044	0.803
0.000003	0.00000475	1.481	1.479
0.00000475	0.000006	1.271	1.269
0.000006	0.0000081	2.402	2.398
0.0000081	0.00001	2.452	2.448
0.00001	0.00003	38.26	38.2
0.00003	0.0001	243.3	242.9
0.0001	0.00055	3460	3454
0.00055	0.003	43890	43810
0.003	0.017	593700	592700
0.017	0.025	500600	499700
0.025	0.1	7802000	7789000
0.1	0.4	56350000	56250000
0.4	0.9	122900000	122700000
0.9	1.4	123500000	123200000
1.4	1.85	99940000	99750000
1.85	2.35	95860000	95660000
2.35	2.48	21030000	20990000
2.48	3	76060000	75890000
3	4.8	138900000	138600000
4.8	6.43	36590000	36530000
6.43	8.19	11530000	11510000
8.19	20	3957000	3951000
totals		795600000	794000000

3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y
0.000006587	0.000006587	0.000006587	0.000006586	0.000006584
0.000004706	0.000004706	0.000004706	0.000004705	0.000004704
0.000003297	0.000003297	0.000003297	0.000003297	0.000003296
0.00001122	0.00001122	0.00001122	0.00001122	0.00001122
0.00000416	0.00000416	0.00000416	0.000004161	0.000004161
0.00001272	0.00001272	0.00001272	0.00001273	0.00001274
0.00001002	0.00001002	0.00001002	0.00001002	0.00001002
0.00002214	0.00002198	0.00002171	0.00002151	0.0000215
0.00003649	0.00003622	0.00003577	0.00003544	0.00003541
0.0000692	0.00006868	0.00006782	0.00006719	0.00006713
0.00007982	0.00007924	0.00007824	0.00007751	0.00007743
0.00004693	0.00004661	0.00004608	0.00004568	0.00004565
0.00005798	0.00005765	0.00005709	0.00005668	0.00005667
0.00005144	0.00005109	0.0000505	0.00005007	0.00005003
0.01661	0.0163	0.01557	0.01406	0.01251
0.006208	0.006051	0.00568	0.004945	0.004308
0.008159	0.007814	0.007007	0.005477	0.004446
0.006833	0.006645	0.006201	0.005331	0.00461
0.06039	0.05872	0.05477	0.04703	0.04064
0.1434	0.1395	0.1302	0.112	0.09687
0.4012	0.3903	0.3645	0.3138	0.2716
0.7963	0.7743	0.7223	0.6204	0.5361
1.467	1.427	1.333	1.149	0.9943
1.258	1.225	1.146	0.9902	0.8588
2.379	2.315	2.163	1.866	1.616
2.428	2.364	2.211	1.91	1.656
37.89	36.86	34.44	29.68	25.7
240.9	234.2	218.5	187.6	162.2
3425	3331	3107	2670	2308
43450	42260	39440	33920	29340
587700	571500	533300	458300	396100
495600	481900	449500	386000	333600
7724000	7510000	7005000	6015000	5198000
55790000	54240000	50590000	43450000	37540000
121700000	118300000	110400000	94780000	81890000
122200000	118800000	110700000	94830000	81830000
98880000	96010000	89240000	76020000	65370000
94780000	91880000	85030000	71740000	61350000
20790000	20120000	18570000	15550000	13240000
75140000	72670000	66850000	55640000	47190000
137300000	132800000	122200000	101700000	86200000
36240000	35270000	32990000	28490000	24690000
11420000	11130000	10430000	9044000	7855000
3921000	3821000	3584000	3116000	2710000
786900000	763600000	708500000	601300000	515800000

10.0 y	10.1 y	37 Assemblies
0.000006578	0.000006578	=37*05
0.000004699	0.000004699	=37*06
0.000003294	0.000003294	=37*07
0.00001121	0.00001121	=37*08
0.000004162	0.000004162	=37*09
0.00001277	0.00001277	=37*010
0.00001003	0.00001003	=37*011
0.00002147	0.00002147	=37*012
0.00003537	0.00003537	=37*013
0.00006707	0.00006707	=37*014
0.00007729	0.00007729	=37*015
0.00004561	0.00004561	=37*016
0.00005671	0.00005671	=37*017
0.00004999	0.00004999	=37*018
0.009562	0.009531	=37*019
0.003294	0.003284	=37*020
0.003383	0.003373	=37*021
0.003525	0.003514	=37*022
0.03107	0.03097	=37*023
0.07402	0.07379	=37*024
0.2075	0.2068	=37*025
0.4096	0.4083	=37*026
0.7597	0.7573	=37*027
0.6562	0.6541	=37*028
1.235	1.231	=37*029
1.266	1.262	=37*030
19.63	19.57	=37*031
124	123.6	=37*032
1764	1759	=37*033
22430	22360	=37*034
302900	302000	=37*035
255100	254300	=37*036
3974000	3962000	=37*037
28700000	28610000	=37*038
62600000	62400000	=37*039
62560000	62360000	=37*040
50010000	49860000	=37*041
47000000	46860000	=37*042
10160000	10130000	=37*043
36200000	36090000	=37*044
65960000	65750000	=37*045
18840000	18780000	=37*046
5993000	5974000	=37*047
2066000	2060000	=37*048
394600000	393400000	=37*049

Neutron ENDF5 Group

grp

grp

ORIGEN ENDF5 44 Group

Max Energy

45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.000000001	0.01	3
41	0.0000000253	0.0253	4
40	0.000000003	0.03	5
39	0.000000004	0.04	6
38	0.000000005	0.05	7
37	0.000000007	0.07	8
36	0.00000001	0.1	9
35	0.000000015	0.15	10
34	0.00000002	0.2	11
33	0.0000000225	0.225	12
32	0.000000025	0.25	13
31	0.0000000275	0.275	14
30	0.0000000325	0.325	15
29	0.000000035	0.35	16
28	0.0000000375	0.375	17
27	0.00000004	0.4	18
26	0.0000000625	0.625	19
25	0.0000001	1	20
24	0.000000177	1.77	21
23	0.0000003	3	22
22	0.000000475	4.75	23
21	0.0000006	6	24
20	0.00000081	8.1	25
19	0.000001	10	26
18	0.000003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

boundaries	mev	initial	1E-02 y
0.0000000001	0.000000003	0.000003431	0.000003431
0.000000003	0.0000000075	0.000002472	0.000002472
0.0000000075	0.00000001	0.000002051	0.000002051
0.00000001	0.0000000253	0.000005679	0.000005679
0.0000000253	0.00000003	0.000002429	0.000002429
0.00000003	0.00000004	0.000008741	0.000008741
0.00000004	0.00000005	0.000006138	0.000006138
0.00000005	0.00000007	0.00001341	0.0000134
0.00000007	0.0000001	0.00002226	0.00002225
0.0000001	0.00000015	0.00004249	0.00004247
0.00000015	0.0000002	0.00004998	0.00005005
0.0000002	0.000000225	0.00003063	0.00003066
0.000000225	0.00000025	0.00004033	0.00004036
0.00000025	0.000000275	0.00003363	0.00003366
0.000000275	0.000000325	0.01121	0.01121
0.000000325	0.00000035	0.004286	0.004279
0.00000035	0.000000375	0.005934	0.00591
0.000000375	0.0000004	0.004754	0.004745
0.0000004	0.000000625	0.04201	0.04192
0.000000625	0.000001	0.09969	0.09949
0.000001	0.00000177	0.2787	0.2782
0.00000177	0.000003	0.5538	0.5527
0.000003	0.00000475	1.018	1.016
0.00000475	0.000006	0.8724	0.8707
0.000006	0.0000081	1.651	1.648
0.0000081	0.00001	1.684	1.68
0.00001	0.00003	26.3	26.25
0.00003	0.0001	167.6	167.2
0.0001	0.00055	2382	2377
0.00055	0.003	30200	30140
0.003	0.017	408800	407900
0.017	0.025	344800	344100
0.025	0.1	5374000	5363000
0.1	0.4	38810000	38730000
0.4	0.9	84660000	84480000
0.9	1.4	85120000	84940000
1.4	1.85	69120000	68960000
1.85	2.35	66620000	66450000
2.35	2.48	14670000	14630000
2.48	3	53200000	53060000
3	4.8	97080000	96820000
4.8	6.43	25110000	25060000
6.43	8.19	7894000	7880000
8.19	20	2704000	2699000
totals		551100000	549900000

3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y
0.000003431	0.000003431	0.000003431	0.000003431	0.00000343
0.000002472	0.000002471	0.000002471	0.000002471	0.000002471
0.000002051	0.000002051	0.000002051	0.000002051	0.000002051
0.000005679	0.000005679	0.000005679	0.000005679	0.000005677
0.000002429	0.000002429	0.000002429	0.000002429	0.000002429
0.000008741	0.000008741	0.000008742	0.000008745	0.000008753
0.000006138	0.000006138	0.000006139	0.000006139	0.000006142
0.00001339	0.00001335	0.00001328	0.00001324	0.00001323
0.00002222	0.00002216	0.00002205	0.00002197	0.00002197
0.00004243	0.0000423	0.0000421	0.00004195	0.00004194
0.00005004	0.0000499	0.00004966	0.00004948	0.00004946
0.00003065	0.00003058	0.00003045	0.00003036	0.00003035
0.00004035	0.00004028	0.00004014	0.00004005	0.00004007
0.00003366	0.00003357	0.00003343	0.00003333	0.00003333
0.01113	0.01089	0.0103	0.009129	0.008038
0.00424	0.004113	0.003814	0.003231	0.00277
0.005824	0.005542	0.004883	0.003644	0.002858
0.004698	0.004546	0.004187	0.003494	0.002967
0.04151	0.04015	0.03696	0.0308	0.02612
0.09852	0.09533	0.08783	0.07332	0.06227
0.2755	0.2666	0.2457	0.2054	0.1746
0.5472	0.5294	0.4874	0.4062	0.3446
1.007	0.9744	0.8985	0.7516	0.6391
0.8625	0.8353	0.7714	0.6477	0.5519
1.632	1.58	1.457	1.221	1.038
1.664	1.612	1.489	1.249	1.065
26	25.17	23.21	19.42	16.51
165.6	160.2	147.4	122.9	104.2
2354	2277	2097	1748	1484
29850	28880	26610	22210	18860
403900	390800	359800	300100	254700
340700	329600	303400	252800	214500
5310000	5136000	4728000	3939000	3342000
38350000	37100000	34150000	28450000	24130000
83650000	80920000	74480000	62060000	52640000
84090000	81310000	74760000	62130000	52610000
68250000	65920000	60430000	49870000	42050000
65730000	63370000	57820000	47180000	39510000
14470000	13930000	12660000	10250000	8536000
52440000	50430000	45700000	36700000	30420000
95700000	92030000	83420000	66990000	55490000
24820000	24040000	22190000	18620000	15850000
7807000	7567000	7002000	5903000	5042000
2674000	2593000	2403000	2032000	1739000
544100000	525100000	480400000	394700000	331900000

Formulas

10.0 y	11.7 y	26 Assemblies
0.000003426	0.000003426	=26*O5
0.000002468	0.000002468	=26*O6
0.00000205	0.000002049	=26*O7
0.000005671	0.00000567	=26*O8
0.00000243	0.00000243	=26*O9
0.000008775	0.000008779	=26*O10
0.000006148	0.000006149	=26*O11
0.00001323	0.00001323	=26*O12
0.00002197	0.00002197	=26*O13
0.00004195	0.00004195	=26*O14
0.00004943	0.00004942	=26*O15
0.00003036	0.00003036	=26*O16
0.00004012	0.00004013	=26*O17
0.00003333	0.00003333	=26*O18
0.006145	0.005769	=26*O19
0.002118	0.001989	=26*O20
0.002172	0.002039	=26*O21
0.002269	0.002132	=26*O22
0.01997	0.01876	=26*O23
0.04758	0.04468	=26*O24
0.1333	0.1252	=26*O25
0.2632	0.2472	=26*O26
0.4882	0.4584	=26*O27
0.4216	0.3959	=26*O28
0.7933	0.7449	=26*O29
0.8133	0.7637	=26*O30
12.61	11.84	=26*O31
79.73	74.89	=26*O32
1134	1065	=26*O33
14420	13550	=26*O34
194800	182900	=26*O35
164000	154100	=26*O36
2555000	2400000	=26*O37
18450000	17330000	=26*O38
40240000	37790000	=26*O39
40220000	37780000	=26*O40
32180000	30240000	=26*O41
30290000	28480000	=26*O42
6555000	6166000	=26*O43
23370000	21990000	=26*O44
42480000	39930000	=26*O45
12100000	11360000	=26*O46
3847000	3611000	=26*O47
1326000	1245000	=26*O48
254000000	238700000	=26*O49

Neutron ENDF5 Group			grp
grp			
ORIGEN ENDF5 44 Group	Max Energy		
45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.00000001	0.01	3
41	0.0000000253	0.0253	4
40	0.00000003	0.03	5
39	0.00000004	0.04	6
38	0.00000005	0.05	7
37	0.00000007	0.07	8
36	0.0000001	0.1	9
35	0.00000015	0.15	10
34	0.0000002	0.2	11
33	0.000000225	0.225	12
32	0.00000025	0.25	13
31	0.000000275	0.275	14
30	0.000000325	0.325	15
29	0.00000035	0.35	16
28	0.000000375	0.375	17
27	0.0000004	0.4	18
26	0.000000625	0.625	19
25	0.000001	1	20
24	0.00000177	1.77	21
23	0.000003	3	22
22	0.00000475	4.75	23
21	0.000006	6	24
20	0.0000081	8.1	25
19	0.00001	10	26
18	0.00003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

Formulas

boundaries	mev	initial	1E-02 y
0.00000000001	0.000000003	0.000003097	0.000003097
0.000000003	0.0000000075	0.000002235	0.000002235
0.0000000075	0.00000001	0.00000191	0.00000191
0.00000001	0.0000000253	0.000005097	0.000005097
0.0000000253	0.00000003	0.000002243	0.000002243
0.00000003	0.00000004	0.000008308	0.000008308
0.00000004	0.00000005	0.00000572	0.00000572
0.00000005	0.00000007	0.00001248	0.00001247
0.00000007	0.0000001	0.00002074	0.00002073
0.0000001	0.00000015	0.00003965	0.00003963
0.00000015	0.0000002	0.00004691	0.00004697
0.0000002	0.000000225	0.00002894	0.00002897
0.000000225	0.00000025	0.00003848	0.00003852
0.00000025	0.000000275	0.00003178	0.00003182
0.000000275	0.000000325	0.01057	0.01056
0.000000325	0.00000035	0.004054	0.004046
0.00000035	0.000000375	0.005661	0.005638
0.000000375	0.0000004	0.004502	0.004493
0.0000004	0.000000625	0.03978	0.0397
0.000000625	0.000001	0.09439	0.09419
0.000001	0.00000177	0.2639	0.2633
0.00000177	0.000003	0.5244	0.5233
0.000003	0.00000475	0.9642	0.9622
0.00000475	0.000006	0.8256	0.824
0.000006	0.0000081	1.563	1.559
0.0000081	0.00001	1.593	1.59
0.00001	0.00003	24.9	24.85
0.00003	0.0001	158.7	158.3
0.0001	0.00055	2256	2251
0.00055	0.003	28600	28540
0.003	0.017	387100	386300
0.017	0.025	326500	325800
0.025	0.1	5089000	5078000
0.1	0.4	36760000	36680000
0.4	0.9	80170000	80000000
0.9	1.4	80630000	80450000
1.4	1.85	65510000	65350000
1.85	2.35	63200000	63040000
2.35	2.48	13930000	13890000
2.48	3	50540000	50390000
3	4.8	92200000	91940000
4.8	6.43	23760000	23710000
6.43	8.19	7468000	7453000
8.19	20	2557000	2552000
totals		522500000	521300000

3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y
0.000003097	0.000003097	0.000003097	0.000003097	0.000003096
0.000002235	0.000002235	0.000002235	0.000002234	0.000002234
0.00000191	0.00000191	0.00000191	0.00000191	0.00000191
0.000005097	0.000005097	0.000005097	0.000005097	0.000005095
0.000002243	0.000002243	0.000002243	0.000002243	0.000002244
0.000008308	0.000008308	0.000008309	0.000008312	0.000008319
0.00000572	0.00000572	0.00000572	0.000005721	0.000005723
0.00001246	0.00001243	0.00001238	0.00001235	0.00001234
0.00002072	0.00002067	0.00002058	0.00002052	0.00002052
0.0000396	0.0000395	0.00003934	0.00003923	0.00003922
0.00004698	0.00004687	0.00004669	0.00004655	0.00004653
0.00002897	0.00002892	0.00002882	0.00002875	0.00002874
0.00003852	0.00003846	0.00003835	0.00003828	0.0000383
0.00003181	0.00003175	0.00003164	0.00003156	0.00003156
0.01048	0.01024	0.009677	0.008541	0.007503
0.004009	0.003885	0.003593	0.003027	0.002586
0.005554	0.005279	0.004634	0.003427	0.002668
0.004448	0.004299	0.003949	0.003275	0.00277
0.03929	0.03797	0.03486	0.02887	0.02439
0.09325	0.09014	0.08282	0.06872	0.05813
0.2607	0.2521	0.2317	0.1925	0.163
0.518	0.5006	0.4596	0.3807	0.3217
0.9526	0.9212	0.8471	0.7043	0.5966
0.8159	0.7895	0.7272	0.6069	0.5152
1.544	1.493	1.374	1.144	0.9694
1.575	1.524	1.403	1.171	0.9937
24.6	23.79	21.88	18.2	15.42
156.7	151.5	139.1	115.2	97.32
2228	2154	1978	1639	1385
28250	27310	25090	20820	17610
382400	369500	339400	281300	237800
322500	311700	286100	237000	200300
5026000	4857000	4459000	3692000	3120000
36300000	35080000	32210000	26670000	22530000
79190000	76520000	70250000	58170000	49150000
79620000	76910000	70520000	58240000	49120000
64660000	62380000	57030000	46760000	39270000
62340000	60030000	54610000	44260000	36900000
13730000	13200000	11970000	9617000	7974000
49800000	47830000	43220000	34460000	28420000
90850000	87270000	78860000	62880000	51820000
23480000	22720000	20920000	17440000	14800000
7382000	7148000	6597000	5530000	4706000
2528000	2449000	2263000	1903000	1623000
515600000	497100000	453600000	370200000	309900000

10.0 y	13.2 y	31 Assemblies
0.000003093	0.000003092	=31*O5
0.000002232	0.000002231	=31*O6
0.000001909	0.000001908	=31*O7
0.00000509	0.000005088	=31*O8
0.000002245	0.000002245	=31*O9
0.000008339	0.000008347	=31*O10
0.000005729	0.000005731	=31*O11
0.00001235	0.00001235	=31*O12
0.00002053	0.00002053	=31*O13
0.00003924	0.00003924	=31*O14
0.00004651	0.00004649	=31*O15
0.00002875	0.00002875	=31*O16
0.00003835	0.00003836	=31*O17
0.00003157	0.00003157	=31*O18
0.005736	0.005088	=31*O19
0.001977	0.001755	=31*O20
0.002027	0.001798	=31*O21
0.002119	0.001882	=31*O22
0.01864	0.01656	=31*O23
0.04441	0.03943	=31*O24
0.1245	0.1105	=31*O25
0.2457	0.2181	=31*O26
0.4557	0.4045	=31*O27
0.3935	0.3493	=31*O28
0.7404	0.6572	=31*O29
0.7591	0.6738	=31*O30
11.77	10.45	=31*O31
74.43	66.11	=31*O32
1059	940.5	=31*O33
13460	11960	=31*O34
181800	161500	=31*O35
153100	136000	=31*O36
2385000	2119000	=31*O37
17220000	15290000	=31*O38
37560000	33360000	=31*O39
37550000	33350000	=31*O40
30050000	26710000	=31*O41
28300000	25180000	=31*O42
6125000	5456000	=31*O43
21840000	19460000	=31*O44
39680000	35300000	=31*O45
11290000	10020000	=31*O46
3590000	3185000	=31*O47
1237000	1097000	=31*O48
237200000	210800000	=31*O49

Neutron ENDF5 Group

grp

grp

ORIGEN ENDF5 44 Group

Max Energy

45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.00000001	0.01	3
41	0.0000000253	0.0253	4
40	0.00000003	0.03	5
39	0.00000004	0.04	6
38	0.00000005	0.05	7
37	0.00000007	0.07	8
36	0.0000001	0.1	9
35	0.00000015	0.15	10
34	0.0000002	0.2	11
33	0.000000225	0.225	12
32	0.00000025	0.25	13
31	0.000000275	0.275	14
30	0.000000325	0.325	15
29	0.00000035	0.35	16
28	0.000000375	0.375	17
27	0.0000004	0.4	18
26	0.000000625	0.625	19
25	0.000001	1	20
24	0.00000177	1.77	21
23	0.000003	3	22
22	0.00000475	4.75	23
21	0.000006	6	24
20	0.0000081	8.1	25
19	0.00001	10	26
18	0.00003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

Formulas

boundaries	mev	initial	1E-02 y
0.00000000001	0.000000003	0.000004308	0.000004308
0.000000003	0.0000000075	0.000003093	0.000003093
0.0000000075	0.00000001	0.000002407	0.000002407
0.00000001	0.0000000253	0.000007216	0.000007216
0.0000000253	0.00000003	0.000002916	0.000002916
0.00000003	0.00000004	0.00000989	0.00000989
0.00000004	0.00000005	0.000007236	0.000007236
0.00000005	0.00000007	0.00001585	0.00001584
0.00000007	0.0000001	0.00002624	0.00002622
0.0000001	0.00000015	0.00004997	0.00004994
0.00000015	0.0000002	0.00005837	0.00005841
0.0000002	0.000000225	0.00003524	0.00003526
0.000000225	0.00000025	0.00004539	0.00004542
0.00000025	0.000000275	0.00003867	0.00003869
0.000000275	0.000000325	0.01296	0.01295
0.000000325	0.00000035	0.004923	0.004915
0.00000035	0.000000375	0.006721	0.006695
0.000000375	0.0000004	0.005449	0.005438
0.0000004	0.000000625	0.04815	0.04806
0.000000625	0.000001	0.1143	0.1141
0.000001	0.00000177	0.3196	0.319
0.00000177	0.000003	0.6348	0.6336
0.000003	0.00000475	1.168	1.166
0.00000475	0.000006	1.001	0.9991
0.000006	0.0000081	1.893	1.89
0.0000081	0.00001	1.932	1.928
0.00001	0.00003	30.17	30.11
0.00003	0.0001	192.1	191.7
0.0001	0.00055	2731	2726
0.00055	0.003	34630	34560
0.003	0.017	468600	467700
0.017	0.025	395200	394400
0.025	0.1	6159000	6147000
0.1	0.4	44490000	44400000
0.4	0.9	97040000	96840000
0.9	1.4	97530000	97340000
1.4	1.85	79120000	78950000
1.85	2.35	76150000	75970000
2.35	2.48	16750000	16710000
2.48	3	60690000	60530000
3	4.8	110800000	110500000
4.8	6.43	28810000	28760000
6.43	8.19	9066000	9050000
8.19	20	3106000	3101000
totals		630600000	629200000

3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y
0.000004308	0.000004308	0.000004308	0.000004308	0.000004306
0.000003093	0.000003093	0.000003093	0.000003093	0.000003092
0.000002407	0.000002407	0.000002407	0.000002406	0.000002406
0.000007216	0.000007215	0.000007215	0.000007215	0.000007212
0.000002916	0.000002916	0.000002916	0.000002916	0.000002916
0.00000989	0.00000989	0.000009891	0.000009895	0.000009904
0.000007236	0.000007236	0.000007236	0.000007237	0.00000724
0.00001582	0.00001575	0.00001565	0.00001558	0.00001557
0.00002619	0.00002608	0.00002591	0.00002578	0.00002578
0.00004987	0.00004967	0.00004934	0.0000491	0.00004908
0.00005837	0.00005815	0.00005777	0.00005749	0.00005746
0.00003524	0.00003512	0.00003492	0.00003477	0.00003476
0.00004539	0.00004527	0.00004505	0.0000449	0.00004491
0.00003867	0.00003854	0.00003831	0.00003815	0.00003814
0.01287	0.0126	0.01196	0.01066	0.009422
0.004873	0.004734	0.004406	0.003766	0.003246
0.006602	0.006295	0.005576	0.004223	0.00335
0.005387	0.005221	0.004829	0.004068	0.003475
0.04761	0.04612	0.04264	0.03587	0.03061
0.113	0.1095	0.1013	0.08542	0.07297
0.316	0.3064	0.2836	0.2393	0.2046
0.6276	0.6082	0.5622	0.4732	0.4038
1.155	1.12	1.037	0.8757	0.749
0.9901	0.9604	0.8906	0.7547	0.6469
1.873	1.816	1.682	1.422	1.217
1.911	1.853	1.718	1.456	1.248
29.83	28.92	26.78	22.63	19.36
189.9	184	170.1	143.1	122.2
2700	2616	2419	2036	1739
34240	33180	30700	25870	22110
463300	448900	415100	349600	298500
390700	378600	350000	294500	251400
6090000	5900000	5454000	4589000	3916000
43980000	42610000	39390000	33140000	28280000
95940000	92950000	85920000	72300000	61700000
96410000	93370000	86220000	72360000	61660000
78180000	75630000	69640000	58060000	49280000
75190000	72610000	66540000	54890000	46280000
16530000	15940000	14560000	11910000	9997000
59870000	57670000	52520000	42660000	35620000
109300000	105300000	95880000	77890000	65010000
28500000	27640000	25630000	21700000	18590000
8970000	8708000	8090000	6883000	5912000
3074000	2986000	2778000	2370000	2039000
622900000	602200000	553400000	459400000	388800000

10.0 y	14.7 y	41 Assemblies
0.000004302	0.0000043	=41*O5
0.000003089	0.000003087	=41*O6
0.000002405	0.000002404	=41*O7
0.000007205	0.000007201	=41*O8
0.000002917	0.000002918	=41*O9
0.00000993	0.000009943	=41*O10
0.000007247	0.00000725	=41*O11
0.00001557	0.00001556	=41*O12
0.00002577	0.00002577	=41*O13
0.00004908	0.00004907	=41*O14
0.0000574	0.00005736	=41*O15
0.00003475	0.00003475	=41*O16
0.00004496	0.00004499	=41*O17
0.00003813	0.00003813	=41*O18
0.007203	0.006036	=41*O19
0.002482	0.002082	=41*O20
0.002547	0.002135	=41*O21
0.002658	0.002232	=41*O22
0.0234	0.01965	=41*O23
0.05576	0.04678	=41*O24
0.1563	0.1311	=41*O25
0.3085	0.2588	=41*O26
0.5722	0.48	=41*O27
0.4942	0.4145	=41*O28
0.9299	0.7799	=41*O29
0.9533	0.7996	=41*O30
14.79	12.4	=41*O31
93.43	78.44	=41*O32
1329	1116	=41*O33
16900	14190	=41*O34
228200	191600	=41*O35
192200	161400	=41*O36
2995000	2514000	=41*O37
21620000	18150000	=41*O38
47160000	39580000	=41*O39
47140000	39570000	=41*O40
37710000	31680000	=41*O41
35480000	29860000	=41*O42
7673000	6466000	=41*O43
27360000	23070000	=41*O44
49760000	41860000	=41*O45
14190000	11890000	=41*O46
4511000	3780000	=41*O47
1555000	1303000	=41*O48
297600000	250100000	=41*O49

Neutron ENDF5 Group

grp

grp

ORIGEN ENDF5 44 Group

Max Energy

45	0.000000001	0.00001	
44	0.000000003	0.003	1
43	0.0000000075	0.0075	2
42	0.000000001	0.01	3
41	0.0000000253	0.0253	4
40	0.000000003	0.03	5
39	0.000000004	0.04	6
38	0.000000005	0.05	7
37	0.000000007	0.07	8
36	0.00000001	0.1	9
35	0.000000015	0.15	10
34	0.00000002	0.2	11
33	0.000000225	0.225	12
32	0.00000025	0.25	13
31	0.000000275	0.275	14
30	0.000000325	0.325	15
29	0.00000035	0.35	16
28	0.000000375	0.375	17
27	0.0000004	0.4	18
26	0.000000625	0.625	19
25	0.000001	1	20
24	0.00000177	1.77	21
23	0.000003	3	22
22	0.00000475	4.75	23
21	0.000006	6	24
20	0.0000081	8.1	25
19	0.00001	10	26
18	0.00003	30	27
17	0.0001	100	28
16	0.00055	550	29
15	0.003	3000	30
14	0.017	17000	31
13	0.025	25000	32
12	0.1	100000	33
11	0.4	400000	34
10	0.9	900000	35
9	1.4	1400000	36
8	1.85	1850000	37
7	2.35	2354000	38
6	2.48	2479000	39
5	3	3000000	40
4	4.8	4800000	41
3	6.43	6434000	42
2	8.19	8187300	43
1	20	20000000	44

boundaries	mev	initial	1E-02 y
0.00000000001	0.000000003	0.000002446	0.000002446
0.000000003	0.0000000075	0.000001772	0.000001772
0.0000000075	0.00000001	0.000001626	0.000001626
0.00000001	0.0000000253	0.000003966	0.000003966
0.0000000253	0.00000003	0.000001877	0.000001877
0.00000003	0.00000004	0.000007439	0.000007439
0.00000004	0.00000005	0.000004892	0.000004892
0.00000005	0.00000007	0.00001066	0.00001065
0.00000007	0.0000001	0.00001777	0.00001777
0.0000001	0.00000015	0.00003406	0.00003405
0.00000015	0.0000002	0.00004092	0.00004099
0.0000002	0.000000225	0.00002563	0.00002567
0.000000225	0.00000025	0.00003483	0.00003487
0.00000025	0.000000275	0.00002816	0.00002819
0.000000275	0.000000325	0.009202	0.009193
0.000000325	0.00000035	0.003563	0.003556
0.00000035	0.000000375	0.005076	0.005054
0.000000375	0.0000004	0.00397	0.00396
0.0000004	0.000000625	0.03507	0.03499
0.000000625	0.000001	0.08318	0.08299
0.000001	0.00000177	0.2325	0.232
0.00000177	0.000003	0.4623	0.4612
0.000003	0.00000475	0.8493	0.8474
0.00000475	0.000006	0.7268	0.7252
0.000006	0.0000081	1.376	1.373
0.0000081	0.00001	1.403	1.4
0.00001	0.00003	21.93	21.88
0.00003	0.0001	139.9	139.6
0.0001	0.00055	1989	1984
0.00055	0.003	25210	25150
0.003	0.017	341200	340400
0.017	0.025	287900	287200
0.025	0.1	4487000	4476000
0.1	0.4	32400000	32330000
0.4	0.9	70680000	70510000
0.9	1.4	71120000	70950000
1.4	1.85	57860000	57710000
1.85	2.35	55950000	55800000
2.35	2.48	12350000	12310000
2.48	3	44880000	44740000
3	4.8	81830000	81580000
4.8	6.43	20920000	20870000
6.43	8.19	6566000	6552000
8.19	20	2246000	2242000
totals		461900000	460700000

3E-02 y	0.1 y	0.3 y	1.0 y	3.0 y
0.000002446	0.000002446	0.000002445	0.000002445	0.000002445
0.000001772	0.000001772	0.000001772	0.000001771	0.000001771
0.000001626	0.000001626	0.000001626	0.000001626	0.000001626
0.000003966	0.000003966	0.000003966	0.000003966	0.000003964
0.000001877	0.000001877	0.000001877	0.000001877	0.000001878
0.000007439	0.00000744	0.00000744	0.000007443	0.000007449
0.000004893	0.000004893	0.000004893	0.000004894	0.000004895
0.00001065	0.00001063	0.0000106	0.00001058	0.00001058
0.00001776	0.00001773	0.00001768	0.00001765	0.00001765
0.00003404	0.00003398	0.00003389	0.00003383	0.00003383
0.00004101	0.00004095	0.00004085	0.00004077	0.00004076
0.00002568	0.00002565	0.00002559	0.00002556	0.00002556
0.00003487	0.00003484	0.00003479	0.00003475	0.00003476
0.0000282	0.00002817	0.00002811	0.00002807	0.00002807
0.009125	0.0089	0.008369	0.007315	0.006389
0.003521	0.003404	0.00313	0.002601	0.002203
0.004975	0.004715	0.004107	0.002971	0.002273
0.003918	0.003778	0.003449	0.002819	0.002362
0.03461	0.03337	0.03044	0.02483	0.02078
0.0821	0.07917	0.07229	0.05911	0.04952
0.2295	0.2213	0.2022	0.1656	0.1388
0.4562	0.4398	0.4013	0.3275	0.274
0.8384	0.8088	0.7392	0.6057	0.5081
0.7176	0.6927	0.6342	0.5217	0.4388
1.359	1.311	1.199	0.9834	0.8257
1.385	1.337	1.224	1.006	0.8464
21.65	20.89	19.09	15.65	13.13
138	133.1	121.4	99.07	82.91
1963	1892	1727	1410	1180
24880	23990	21900	17910	15000
336700	324700	296300	242000	202600
284100	273900	249900	203900	170600
4427000	4268000	3894000	3177000	2658000
31980000	30830000	28120000	22940000	19200000
69750000	67240000	61340000	50040000	41870000
70170000	67610000	61610000	50110000	41850000
57060000	54920000	49880000	40270000	33470000
55140000	52960000	47860000	38170000	31470000
12160000	11670000	10500000	8301000	6805000
44180000	42320000	37980000	29760000	24260000
80550000	77180000	69260000	54270000	44190000
20650000	19930000	18240000	14990000	12600000
6485000	6265000	5747000	4750000	4006000
2219000	2145000	1971000	1634000	1381000
455400000	438000000	397000000	318900000	264100000

10.0 y	16.0 y	518 Assemblies
0.000002442	0.000002441	=518*O5
0.00000177	0.000001768	=518*O6
0.000001625	0.000001625	=518*O7
0.000003961	0.000003957	=518*O8
0.000001878	0.000001879	=518*O9
0.000007466	0.000007476	=518*O10
0.000004901	0.000004903	=518*O11
0.00001059	0.00001059	=518*O12
0.00001766	0.00001766	=518*O13
0.00003385	0.00003386	=518*O14
0.00004075	0.00004073	=518*O15
0.00002556	0.00002557	=518*O16
0.00003481	0.00003484	=518*O17
0.00002808	0.00002808	=518*O18
0.004885	0.003894	=518*O19
0.001684	0.001345	=518*O20
0.001725	0.001376	=518*O21
0.001806	0.001445	=518*O22
0.01588	0.01269	=518*O23
0.03782	0.0302	=518*O24
0.106	0.08461	=518*O25
0.2092	0.167	=518*O26
0.388	0.3097	=518*O27
0.3351	0.2675	=518*O28
0.6305	0.5032	=518*O29
0.6464	0.5159	=518*O30
10.03	8.001	=518*O31
63.4	50.69	=518*O32
902.1	721	=518*O33
11470	9164	=518*O34
154900	123800	=518*O35
130500	104300	=518*O36
2032000	1624000	=518*O37
14670000	11720000	=518*O38
32000000	25560000	=518*O39
31990000	25570000	=518*O40
25620000	20500000	=518*O41
24150000	19390000	=518*O42
5230000	4208000	=518*O43
18660000	15030000	=518*O44
33840000	27140000	=518*O45
9613000	7666000	=518*O46
3056000	2436000	=518*O47
1053000	839000	=518*O48
202200000	161900000	=518*O49

Energy Output Group	Spent Fuel Cooled Batcl		
	3.167	7.083	8.5
1	=3.167 Years!R4	=7.083 Years!R5	=8.5 Years!R5
2	=3.167 Years!R5	=7.083 Years!R6	=8.5 Years!R6
3	=3.167 Years!R6	=7.083 Years!R7	=8.5 Years!R7
4	=3.167 Years!R7	=7.083 Years!R8	=8.5 Years!R8
5	=3.167 Years!R8	=7.083 Years!R9	=8.5 Years!R9
6	=3.167 Years!R9	=7.083 Years!R10	=8.5 Years!R10
7	=3.167 Years!R10	=7.083 Years!R11	=8.5 Years!R11
8	=3.167 Years!R11	=7.083 Years!R12	=8.5 Years!R12
9	=3.167 Years!R12	=7.083 Years!R13	=8.5 Years!R13
10	=3.167 Years!R13	=7.083 Years!R14	=8.5 Years!R14
11	=3.167 Years!R14	=7.083 Years!R15	=8.5 Years!R15
12	=3.167 Years!R15	=7.083 Years!R16	=8.5 Years!R16
13	=3.167 Years!R16	=7.083 Years!R17	=8.5 Years!R17
14	=3.167 Years!R17	=7.083 Years!R18	=8.5 Years!R18
15	=3.167 Years!R18	=7.083 Years!R19	=8.5 Years!R19
16	=3.167 Years!R19	=7.083 Years!R20	=8.5 Years!R20
17	=3.167 Years!R20	=7.083 Years!R21	=8.5 Years!R21
18	=3.167 Years!R21	=7.083 Years!R22	=8.5 Years!R22
19	=3.167 Years!R22	=7.083 Years!R23	=8.5 Years!R23
20	=3.167 Years!R23	=7.083 Years!R24	=8.5 Years!R24
21	=3.167 Years!R24	=7.083 Years!R25	=8.5 Years!R25
22	=3.167 Years!R25	=7.083 Years!R26	=8.5 Years!R26
23	=3.167 Years!R26	=7.083 Years!R27	=8.5 Years!R27
24	=3.167 Years!R27	=7.083 Years!R28	=8.5 Years!R28
25	=3.167 Years!R28	=7.083 Years!R29	=8.5 Years!R29
26	=3.167 Years!R29	=7.083 Years!R30	=8.5 Years!R30
27	=3.167 Years!R30	=7.083 Years!R31	=8.5 Years!R31
28	=3.167 Years!R31	=7.083 Years!R32	=8.5 Years!R32
29	=3.167 Years!R32	=7.083 Years!R33	=8.5 Years!R33
30	=3.167 Years!R33	=7.083 Years!R34	=8.5 Years!R34
31	=3.167 Years!R34	=7.083 Years!R35	=8.5 Years!R35
32	=3.167 Years!R35	=7.083 Years!R36	=8.5 Years!R36
33	=3.167 Years!R36	=7.083 Years!R37	=8.5 Years!R37
34	=3.167 Years!R37	=7.083 Years!R38	=8.5 Years!R38
35	=3.167 Years!R38	=7.083 Years!R39	=8.5 Years!R39
36	=3.167 Years!R39	=7.083 Years!R40	=8.5 Years!R40
37	=3.167 Years!R40	=7.083 Years!R41	=8.5 Years!R41
38	=3.167 Years!R41	=7.083 Years!R42	=8.5 Years!R42
39	=3.167 Years!R42	=7.083 Years!R43	=8.5 Years!R43
40	=3.167 Years!R43	=7.083 Years!R44	=8.5 Years!R44
41	=3.167 Years!R44	=7.083 Years!R45	=8.5 Years!R45
42	=3.167 Years!R45	=7.083 Years!R46	=8.5 Years!R46
43	=3.167 Years!R46	=7.083 Years!R47	=8.5 Years!R47
44	=3.167 Years!R47	=7.083 Years!R48	=8.5 Years!R48
Totals	=SUM(B5:B48)	=SUM(C5:C48)	=SUM(D5:D48)

10.083	11.67	13.167	14.67	16
=10.083 Years!R5	=11.67 Years!R5	=13.167 Years!R5	=14.67 Years!R5	=16 Years!R5
=10.083 Years!R6	=11.67 Years!R6	=13.167 Years!R6	=14.67 Years!R6	=16 Years!R6
=10.083 Years!R7	=11.67 Years!R7	=13.167 Years!R7	=14.67 Years!R7	=16 Years!R7
=10.083 Years!R8	=11.67 Years!R8	=13.167 Years!R8	=14.67 Years!R8	=16 Years!R8
=10.083 Years!R9	=11.67 Years!R9	=13.167 Years!R9	=14.67 Years!R9	=16 Years!R9
=10.083 Years!R10	=11.67 Years!R10	=13.167 Years!R10	=14.67 Years!R10	=16 Years!R10
=10.083 Years!R11	=11.67 Years!R11	=13.167 Years!R11	=14.67 Years!R11	=16 Years!R11
=10.083 Years!R12	=11.67 Years!R12	=13.167 Years!R12	=14.67 Years!R12	=16 Years!R12
=10.083 Years!R13	=11.67 Years!R13	=13.167 Years!R13	=14.67 Years!R13	=16 Years!R13
=10.083 Years!R14	=11.67 Years!R14	=13.167 Years!R14	=14.67 Years!R14	=16 Years!R14
=10.083 Years!R15	=11.67 Years!R15	=13.167 Years!R15	=14.67 Years!R15	=16 Years!R15
=10.083 Years!R16	=11.67 Years!R16	=13.167 Years!R16	=14.67 Years!R16	=16 Years!R16
=10.083 Years!R17	=11.67 Years!R17	=13.167 Years!R17	=14.67 Years!R17	=16 Years!R17
=10.083 Years!R18	=11.67 Years!R18	=13.167 Years!R18	=14.67 Years!R18	=16 Years!R18
=10.083 Years!R19	=11.67 Years!R19	=13.167 Years!R19	=14.67 Years!R19	=16 Years!R19
=10.083 Years!R20	=11.67 Years!R20	=13.167 Years!R20	=14.67 Years!R20	=16 Years!R20
=10.083 Years!R21	=11.67 Years!R21	=13.167 Years!R21	=14.67 Years!R21	=16 Years!R21
=10.083 Years!R22	=11.67 Years!R22	=13.167 Years!R22	=14.67 Years!R22	=16 Years!R22
=10.083 Years!R23	=11.67 Years!R23	=13.167 Years!R23	=14.67 Years!R23	=16 Years!R23
=10.083 Years!R24	=11.67 Years!R24	=13.167 Years!R24	=14.67 Years!R24	=16 Years!R24
=10.083 Years!R25	=11.67 Years!R25	=13.167 Years!R25	=14.67 Years!R25	=16 Years!R25
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=10.083 Years!R31	=11.67 Years!R31	=13.167 Years!R31	=14.67 Years!R31	=16 Years!R31
=10.083 Years!R32	=11.67 Years!R32	=13.167 Years!R32	=14.67 Years!R32	=16 Years!R32
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=10.083 Years!R46	=11.67 Years!R46	=13.167 Years!R46	=14.67 Years!R46	=16 Years!R46
=10.083 Years!R47	=11.67 Years!R47	=13.167 Years!R47	=14.67 Years!R47	=16 Years!R47
=10.083 Years!R48	=11.67 Years!R48	=13.167 Years!R48	=14.67 Years!R48	=16 Years!R48
=SUM(E5:E48)	=SUM(F5:F48)	=SUM(G5:G48)	=SUM(H5:H48)	=SUM(I5:I48)

Total for Spent Fuel in F

=SUM(B5:I5)
=SUM(B6:I6)
=SUM(B7:I7)
=SUM(B8:I8)
=SUM(B9:I9)
=SUM(B10:I10)
=SUM(B11:I11)
=SUM(B12:I12)
=SUM(B13:I13)
=SUM(B14:I14)
=SUM(B15:I15)
=SUM(B16:I16)
=SUM(B17:I17)
=SUM(B18:I18)
=SUM(B19:I19)
=SUM(B20:I20)
=SUM(B21:I21)
=SUM(B22:I22)
=SUM(B23:I23)
=SUM(B24:I24)
=SUM(B25:I25)
=SUM(B26:I26)
=SUM(B27:I27)
=SUM(B28:I28)
=SUM(B29:I29)
=SUM(B30:I30)
=SUM(B31:I31)
=SUM(B32:I32)
=SUM(B33:I33)
=SUM(B34:I34)
=SUM(B35:I35)
=SUM(B36:I36)
=SUM(B37:I37)
=SUM(B38:I38)
=SUM(B39:I39)
=SUM(B40:I40)
=SUM(B41:I41)
=SUM(B42:I42)
=SUM(B43:I43)
=SUM(B44:I44)
=SUM(B45:I45)
=SUM(B46:I46)
=SUM(B47:I47)
=SUM(B48:I48)
=SUM(K5:K48)

Eighteen Month	Decay	
Energy	Old Fuel	Core Offload
Output Group	811 Assemblies neutrons/s/mev	133 Assemblies neutrons/s/mev
1	=Total Neutron by Group!K5	0.000336
2	=Total Neutron by Group!K6	0.000242
3	=Total Neutron by Group!K7	0.000197
4	=Total Neutron by Group!K8	0.000558
5	=Total Neutron by Group!K9	0.000242
6	=Total Neutron by Group!K10	0.000906
7	=Total Neutron by Group!K11	0.000619
8	=Total Neutron by Group!K12	0.00134
9	=Total Neutron by Group!K13	0.00222
10	=Total Neutron by Group!K14	0.00425
11	=Total Neutron by Group!K15	0.00524
12	=Total Neutron by Group!K16	0.00323
13	=Total Neutron by Group!K17	0.00428
14	=Total Neutron by Group!K18	0.00354
15	=Total Neutron by Group!K19	0.781
16	=Total Neutron by Group!K20	0.273
17	=Total Neutron by Group!K21	0.294
18	=Total Neutron by Group!K22	0.294
19	=Total Neutron by Group!K23	2.59
20	=Total Neutron by Group!K24	6.16
21	=Total Neutron by Group!K25	17.3
22	=Total Neutron by Group!K26	34.1
23	=Total Neutron by Group!K27	63.2
24	=Total Neutron by Group!K28	54.5
25	=Total Neutron by Group!K29	103
26	=Total Neutron by Group!K30	105
27	=Total Neutron by Group!K31	1630
28	=Total Neutron by Group!K32	10300
29	=Total Neutron by Group!K33	147000
30	=Total Neutron by Group!K34	1870000
31	=Total Neutron by Group!K35	25200000
32	=Total Neutron by Group!K36	21200000
33	=Total Neutron by Group!K37	331000000
34	=Total Neutron by Group!K38	2390000000
35	=Total Neutron by Group!K39	5210000000
36	=Total Neutron by Group!K40	5210000000
37	=Total Neutron by Group!K41	4180000000
38	=Total Neutron by Group!K42	3940000000
39	=Total Neutron by Group!K43	853000000
40	=Total Neutron by Group!K44	3050000000
41	=Total Neutron by Group!K45	5560000000
42	=Total Neutron by Group!K46	1570000000
43	=Total Neutron by Group!K47	497000000
44	=Total Neutron by Group!K48	171000000
Total	=SUM(B5:B48)	=SUM(C5:C48)

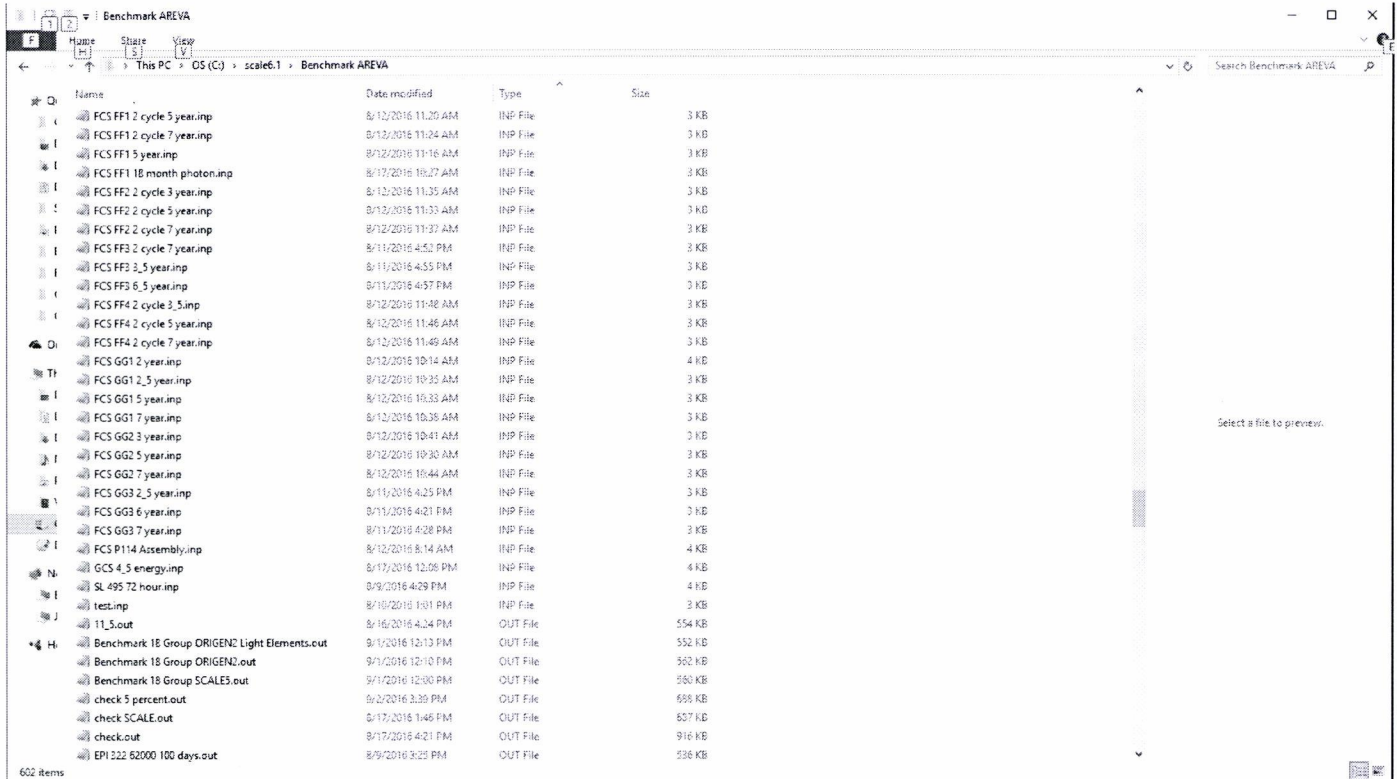
Total Neutron Spectrum Core Offload and Old Fuel neutrons/s/mev	14 Month Decay Scaled	
	Energy	Total Neutron Spectrum
	Output Group	Core Offload and Old Fuel neutrons/s/mev
=B5+C5	1	=1.035*D5
=B6+C6	2	=1.035*D6
=B7+C7	3	=1.035*D7
=B8+C8	4	=1.035*D8
=B9+C9	5	=1.035*D9
=B10+C10	6	=1.035*D10
=B11+C11	7	=1.035*D11
=B12+C12	8	=1.035*D12
=B13+C13	9	=1.035*D13
=B14+C14	10	=1.035*D14
=B15+C15	11	=1.035*D15
=B16+C16	12	=1.035*D16
=B17+C17	13	=1.035*D17
=B18+C18	14	=1.035*D18
=B19+C19	15	=1.035*D19
=B20+C20	16	=1.035*D20
=B21+C21	17	=1.035*D21
=B22+C22	18	=1.035*D22
=B23+C23	19	=1.035*D23
=B24+C24	20	=1.035*D24
=B25+C25	21	=1.035*D25
=B26+C26	22	=1.035*D26
=B27+C27	23	=1.035*D27
=B28+C28	24	=1.035*D28
=B29+C29	25	=1.035*D29
=B30+C30	26	=1.035*D30
=B31+C31	27	=1.035*D31
=B32+C32	28	=1.035*D32
=B33+C33	29	=1.035*D33
=B34+C34	30	=1.035*D34
=B35+C35	31	=1.035*D35
=B36+C36	32	=1.035*D36
=B37+C37	33	=1.035*D37
=B38+C38	34	=1.035*D38
=B39+C39	35	=1.035*D39
=B40+C40	36	=1.035*D40
=B41+C41	37	=1.035*D41
=B42+C42	38	=1.035*D42
=B43+C43	39	=1.035*D43
=B44+C44	40	=1.035*D44
=B45+C45	41	=1.035*D45
=B46+C46	42	=1.035*D46
=B47+C47	43	=1.035*D47
=B48+C48	44	=1.035*D48
=B49+C49	Total	=1.035*D49

Attachment 10.5 File Listings

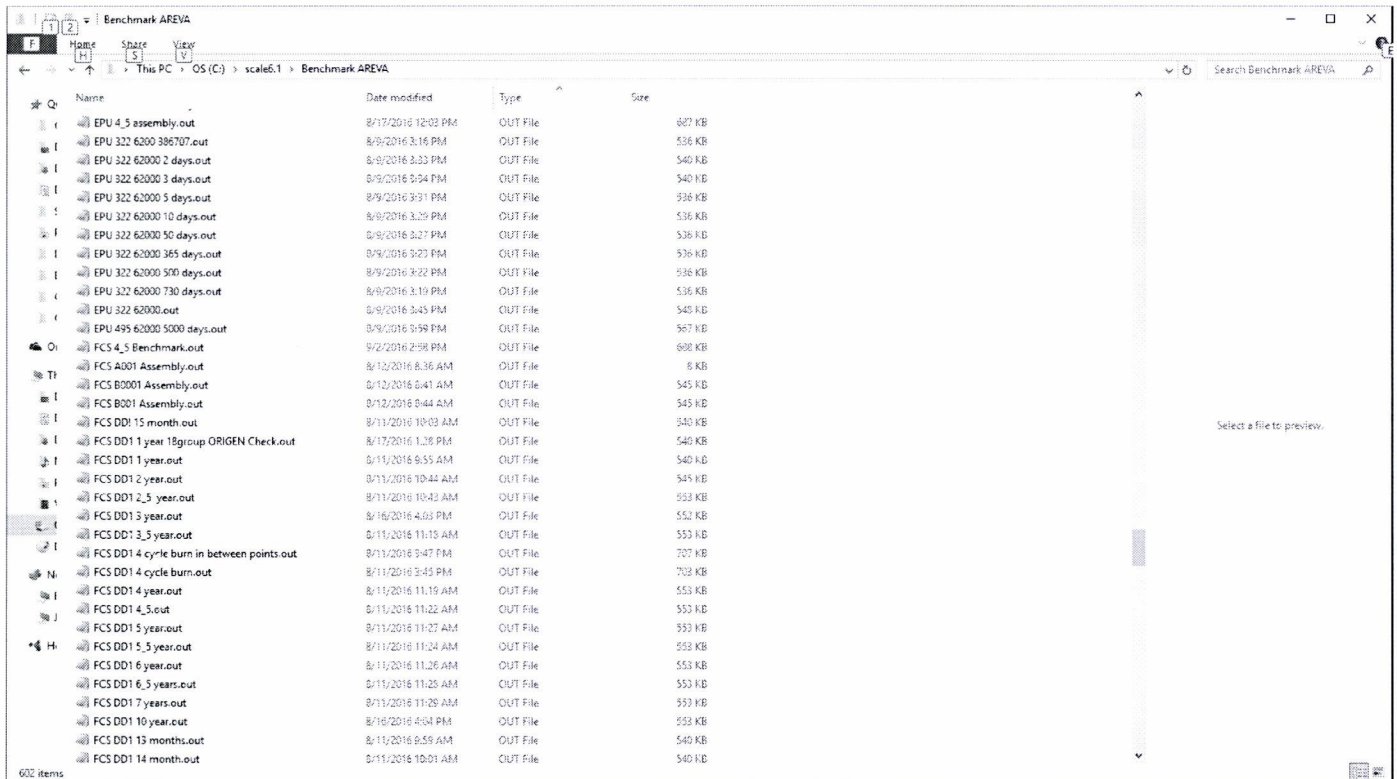
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EPU 495 62000 5000 days.inp	8/9/2016 5:59 PM	INP File	5 KB
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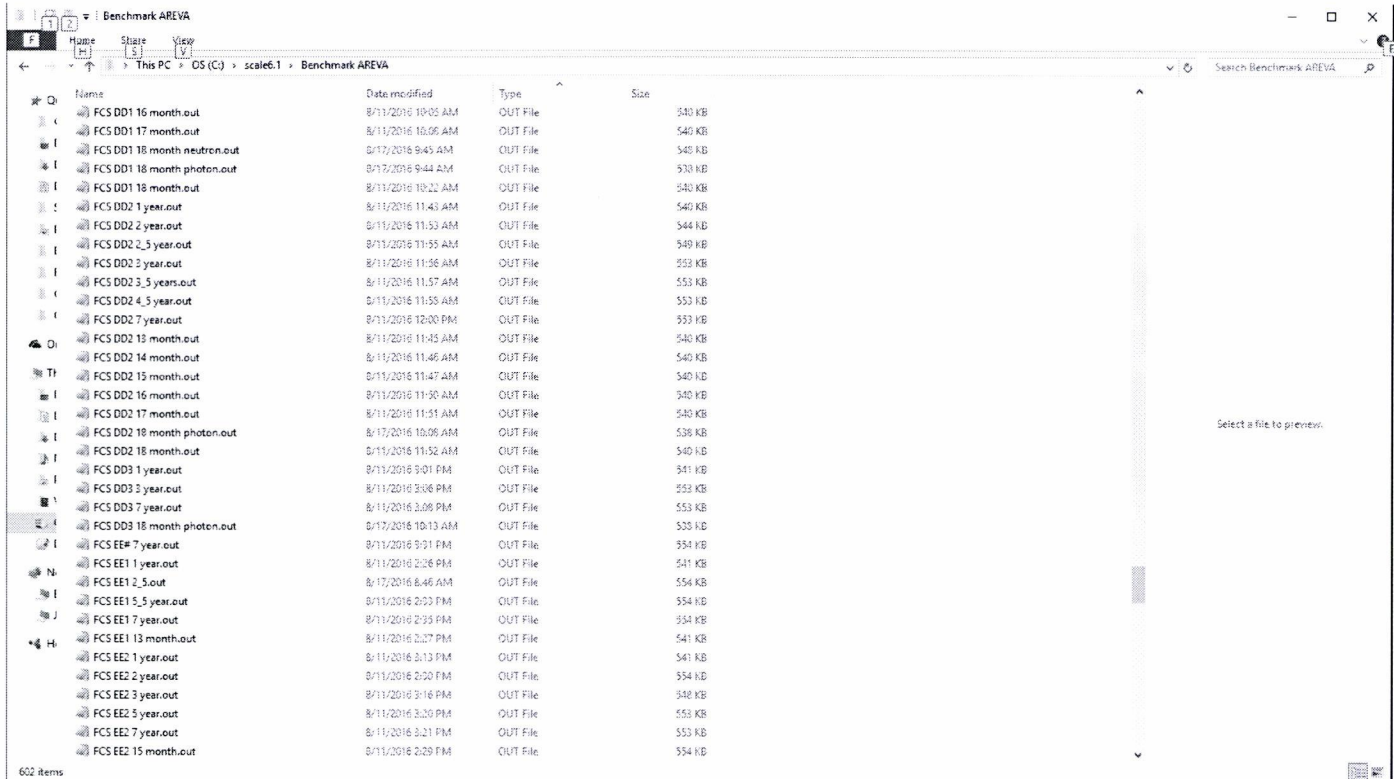
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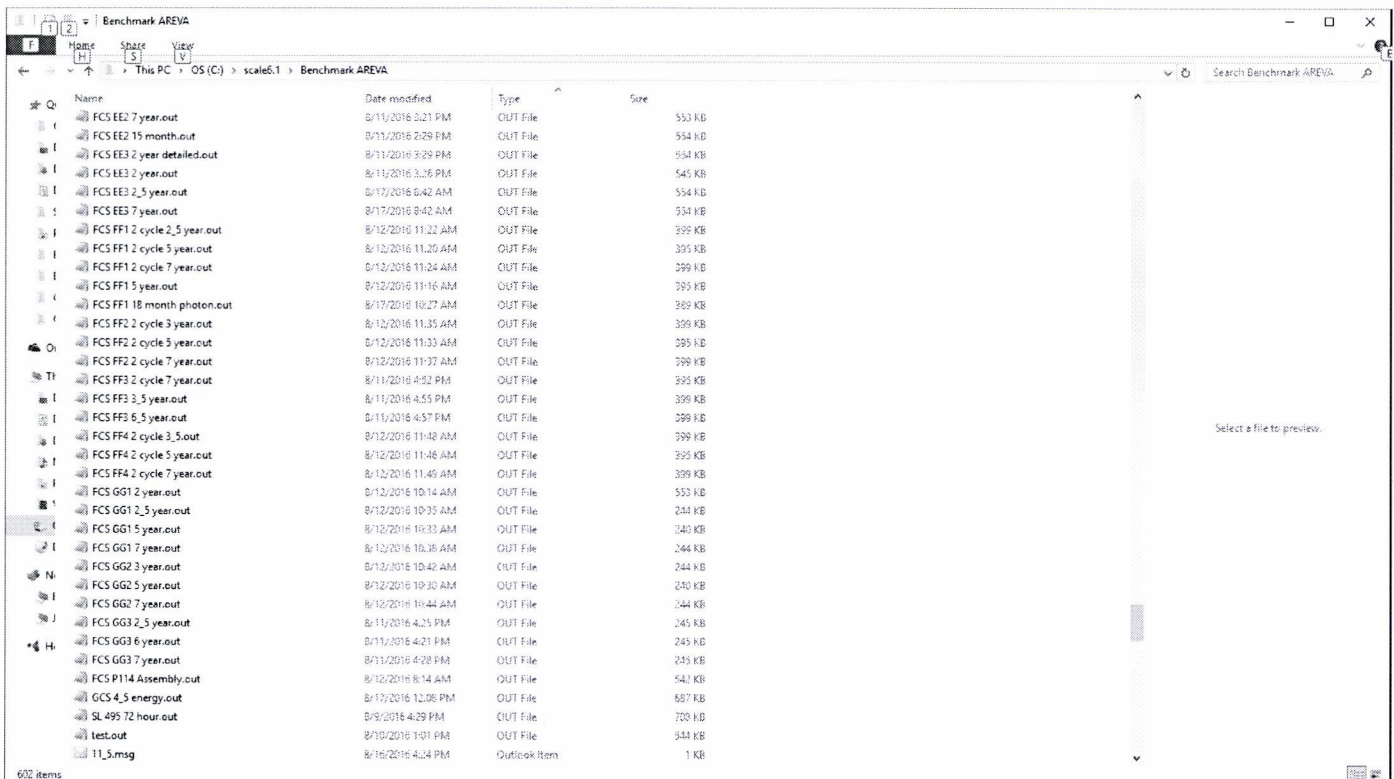
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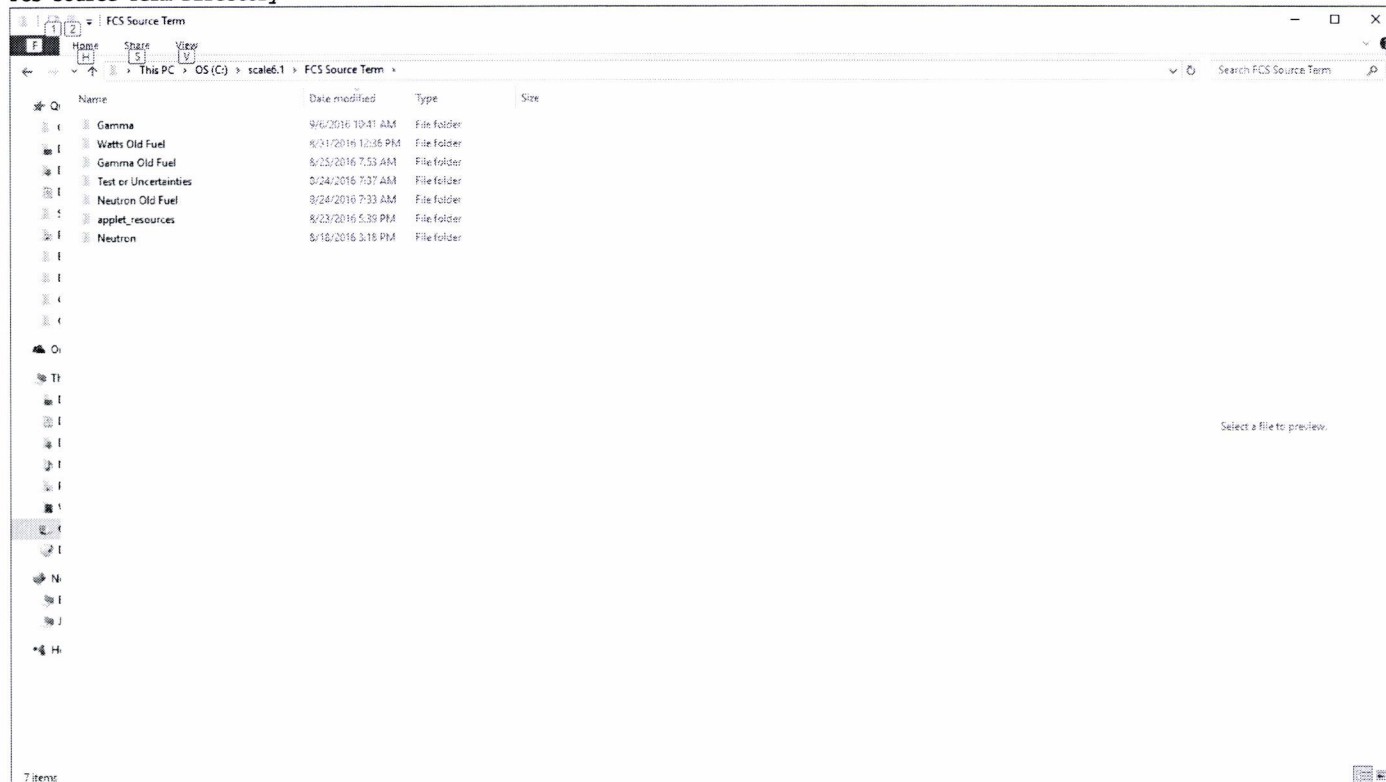


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FCS DD1 17 month.out	8/11/2016 10:06 AM	OUT File	540 KB
FCS DD1 18 month neutron.out	8/17/2016 9:45 AM	OUT File	540 KB
FCS DD1 18 month photon.out	8/17/2016 9:44 AM	OUT File	530 KB
FCS DD1 18 month.out	8/11/2016 10:22 AM	OUT File	540 KB
FCS DD2 1 year.out	8/11/2016 11:43 AM	OUT File	540 KB
FCS DD2 2 year.out	8/11/2016 11:53 AM	OUT File	544 KB
FCS DD2 2.5 year.out	8/11/2016 11:55 AM	OUT File	549 KB
FCS DD2 3 year.out	8/11/2016 11:56 AM	OUT File	553 KB
FCS DD2 3.5 year.out	8/11/2016 11:57 AM	OUT File	553 KB
FCS DD2 4.5 year.out	8/11/2016 11:55 AM	OUT File	553 KB
FCS DD2 7 year.out	8/11/2016 12:00 PM	OUT File	553 KB
FCS DD2 18 month.out	8/11/2016 11:45 AM	OUT File	540 KB
FCS DD2 14 month.out	8/11/2016 11:46 AM	OUT File	540 KB
FCS DD2 15 month.out	8/11/2016 11:47 AM	OUT File	540 KB
FCS DD2 16 month.out	8/11/2016 11:50 AM	OUT File	540 KB
FCS DD2 17 month.out	8/11/2016 11:51 AM	OUT File	540 KB
FCS DD2 18 month photon.out	8/17/2016 10:06 AM	OUT File	538 KB
FCS DD2 18 month.out	8/11/2016 11:52 AM	OUT File	540 KB
FCS DD3 1 year.out	8/11/2016 9:01 PM	OUT File	541 KB
FCS DD3 3 year.out	8/11/2016 3:06 PM	OUT File	553 KB
FCS DD3 7 year.out	8/11/2016 3:06 PM	OUT File	553 KB
FCS DD3 18 month photon.out	8/17/2016 10:13 AM	OUT File	538 KB
FCS EE4 7 year.out	8/11/2016 9:01 PM	OUT File	554 KB
FCS EE1 1 year.out	8/11/2016 2:26 PM	OUT File	541 KB
FCS EE1 2.5 year.out	8/17/2016 8:46 AM	OUT File	554 KB
FCS EE1 5.5 year.out	8/11/2016 2:23 PM	OUT File	554 KB
FCS EE1 7 year.out	8/11/2016 2:33 PM	OUT File	554 KB
FCS EE1 13 month.out	8/11/2016 2:27 PM	OUT File	541 KB
FCS EE2 1 year.out	8/11/2016 2:13 PM	OUT File	541 KB
FCS EE2 2 year.out	8/11/2016 2:20 PM	OUT File	554 KB
FCS EE2 3 year.out	8/11/2016 3:16 PM	OUT File	548 KB
FCS EE2 5 year.out	8/11/2016 3:20 PM	OUT File	553 KB
FCS EE2 7 year.out	8/11/2016 3:21 PM	OUT File	553 KB
FCS EE2 15 month.out	8/11/2016 2:29 PM	OUT File	554 KB



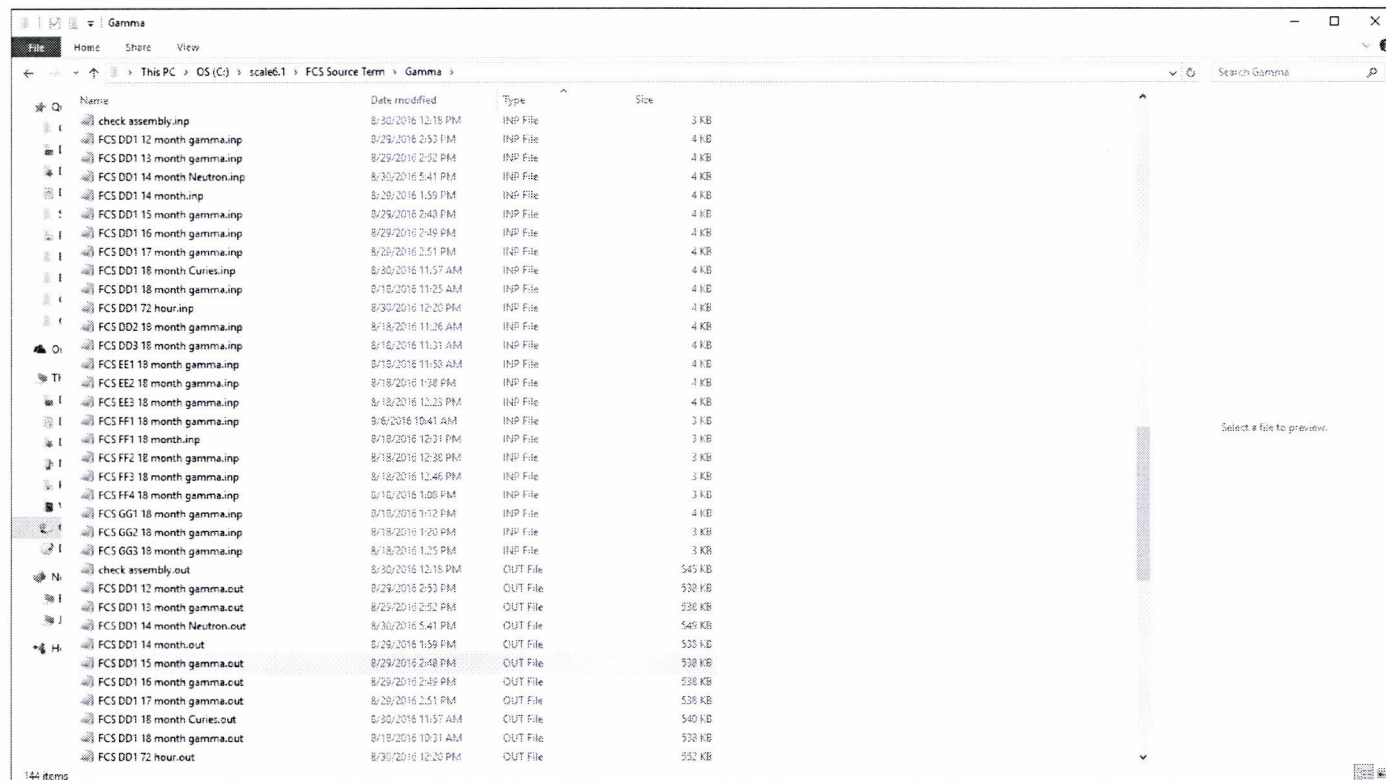
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FCS EE3 7 year.out	8/17/2016 8:42 AM	OUT File	534 KB
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FCS FF1 2 cycle 3 year.out	8/12/2016 11:20 AM	OUT File	395 KB
FCS FF1 2 cycle 7 year.out	8/12/2016 11:24 AM	OUT File	399 KB
FCS FF1 3 year.out	8/12/2016 11:16 AM	OUT File	395 KB
FCS FF1 18 month photon.out	8/17/2016 10:27 AM	OUT File	389 KB
FCS FF2 2 cycle 3 year.out	8/12/2016 11:35 AM	OUT File	399 KB
FCS FF2 2 cycle 5 year.out	8/12/2016 11:33 AM	OUT File	395 KB
FCS FF2 2 cycle 7 year.out	8/12/2016 11:37 AM	OUT File	399 KB
FCS FF3 2 cycle 7 year.out	8/11/2016 4:52 PM	OUT File	395 KB
FCS FF3 3.5 year.out	8/11/2016 4:55 PM	OUT File	399 KB
FCS FF3 6.5 year.out	8/11/2016 4:57 PM	OUT File	399 KB
FCS FF4 2 cycle 3.5 year.out	8/12/2016 11:42 AM	OUT File	399 KB
FCS FF4 2 cycle 5 year.out	8/12/2016 11:46 AM	OUT File	395 KB
FCS FF4 2 cycle 7 year.out	8/12/2016 11:49 AM	OUT File	399 KB
FCS GG1 2 year.out	8/12/2016 10:14 AM	OUT File	553 KB
FCS GG1 2.5 year.out	8/12/2016 10:35 AM	OUT File	244 KB
FCS GG1 5 year.out	8/12/2016 10:33 AM	OUT File	240 KB
FCS GG1 7 year.out	8/12/2016 10:36 AM	OUT File	244 KB
FCS GG2 3 year.out	8/12/2016 10:42 AM	OUT File	244 KB
FCS GG2 5 year.out	8/12/2016 10:30 AM	OUT File	240 KB
FCS GG2 7 year.out	8/12/2016 10:44 AM	OUT File	244 KB
FCS GG3 2.5 year.out	8/11/2016 4:25 PM	OUT File	245 KB
FCS GG3 6 year.out	8/11/2016 4:21 PM	OUT File	245 KB
FCS GG3 7 year.out	8/11/2016 4:28 PM	OUT File	245 KB
FCS P114 Assembly.out	8/12/2016 8:14 AM	OUT File	541 KB
GCS 4.5 energy.out	8/12/2016 12:06 PM	OUT File	687 KB
SL 495 72 hour.out	8/9/2016 4:29 PM	OUT File	700 KB
test.out	8/10/2016 1:01 PM	OUT File	544 KB
11_3.msg	8/16/2016 4:34 PM	Outlook Item	1 KB

FCS Source Term Directory



Name	Date modified	Type	Size
Gamma	9/6/2016 10:41 AM	File folder	
Watts Old Fuel	8/31/2016 12:36 PM	File folder	
Gamma Old Fuel	8/25/2016 7:53 AM	File folder	
Test or Uncertainties	9/24/2016 7:37 AM	File folder	
Neutron Old Fuel	9/24/2016 7:33 AM	File folder	
applet_resources	8/23/2016 5:39 PM	File folder	
Neutron	8/18/2016 3:18 PM	File folder	

Gamma Cases

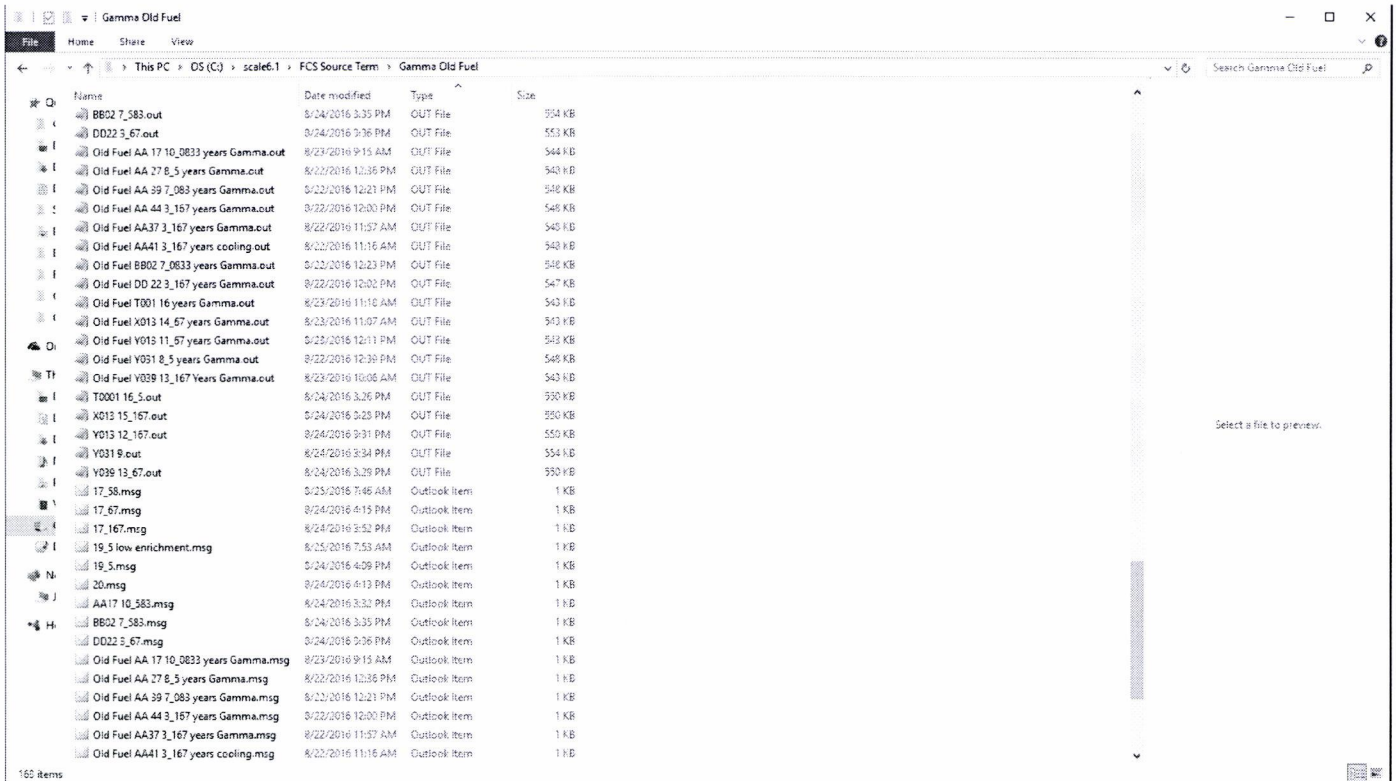


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FCS DD1 13 month gamma.inp	8/29/2016 2:52 PM	INP File	4 KB
FCS DD1 14 month gamma.inp	8/30/2016 5:41 PM	INP File	4 KB
FCS DD1 14 month Neutron.inp	8/29/2016 1:59 PM	INP File	4 KB
FCS DD1 15 month gamma.inp	8/29/2016 2:48 PM	INP File	4 KB
FCS DD1 16 month gamma.inp	8/29/2016 2:49 PM	INP File	4 KB
FCS DD1 17 month gamma.inp	8/29/2016 2:51 PM	INP File	4 KB
FCS DD1 18 month Curies.inp	8/30/2016 11:57 AM	INP File	4 KB
FCS DD1 18 month gamma.inp	8/19/2016 10:25 AM	INP File	4 KB
FCS DD1 72 hour.inp	8/30/2016 12:20 PM	INP File	4 KB
FCS DD2 18 month gamma.inp	8/18/2016 11:26 AM	INP File	4 KB
FCS DD3 18 month gamma.inp	8/18/2016 11:31 AM	INP File	4 KB
FCS EE1 18 month gamma.inp	8/18/2016 11:33 AM	INP File	4 KB
FCS EE2 18 month gamma.inp	8/18/2016 1:38 PM	INP File	4 KB
FCS EE3 18 month gamma.inp	8/18/2016 12:25 PM	INP File	4 KB
FCS FF1 18 month gamma.inp	9/6/2016 10:41 AM	INP File	3 KB
FCS FF1 18 month.inp	8/18/2016 12:31 PM	INP File	3 KB
FCS FF2 18 month gamma.inp	8/18/2016 12:36 PM	INP File	3 KB
FCS FF3 18 month gamma.inp	8/18/2016 12:46 PM	INP File	3 KB
FCS FF4 18 month gamma.inp	8/19/2016 1:06 PM	INP File	3 KB
FCS GG1 18 month gamma.inp	8/19/2016 1:12 PM	INP File	4 KB
FCS GG2 18 month gamma.inp	8/18/2016 1:20 PM	INP File	3 KB
FCS GG3 18 month gamma.inp	8/18/2016 1:25 PM	INP File	3 KB
check assembly.out	8/30/2016 12:18 PM	OUT File	545 KB
FCS DD1 12 month gamma.out	8/29/2016 2:53 PM	OUT File	538 KB
FCS DD1 13 month gamma.out	8/29/2016 2:52 PM	OUT File	538 KB
FCS DD1 14 month Neutron.out	8/30/2016 5:41 PM	OUT File	549 KB
FCS DD1 14 month.out	8/29/2016 1:59 PM	OUT File	525 KB
FCS DD1 15 month gamma.out	8/29/2016 2:48 PM	OUT File	538 KB
FCS DD1 16 month gamma.out	8/29/2016 2:49 PM	OUT File	538 KB
FCS DD1 17 month gamma.out	8/29/2016 2:51 PM	OUT File	538 KB
FCS DD1 18 month Curies.out	8/30/2016 11:57 AM	OUT File	540 KB
FCS DD1 18 month gamma.out	8/19/2016 10:25 AM	OUT File	538 KB
FCS DD1 72 hour.out	8/30/2016 12:20 PM	OUT File	552 KB

Name	Date modified	Type	Size
FCS DD2 18 month gamma.out	8/18/2016 11:26 AM	OUT File	538 KB
FCS DD3 18 month gamma.out	8/18/2016 11:31 AM	OUT File	544 KB
FCS EE1 18 month gamma.out	8/18/2016 11:55 AM	OUT File	544 KB
FCS EE2 18 month gamma.out	8/18/2016 11:58 PM	OUT File	524 KB
FCS EE3 18 month gamma.out	8/18/2016 12:22 PM	OUT File	542 KB
FCS FF1 18 month gamma.out	8/6/2016 10:41 AM	OUT File	389 KB
FCS FF1 18 month.out	8/18/2016 12:31 PM	OUT File	329 KB
FCS FF2 18 month gamma.out	8/18/2016 12:38 PM	OUT File	324 KB
FCS FF3 18 month gamma.out	8/18/2016 12:46 PM	OUT File	364 KB
FCS FF4 18 month gamma.out	8/18/2016 1:08 PM	OUT File	364 KB
FCS GG1 18 month gamma.out	8/18/2016 1:12 PM	OUT File	547 KB
FCS GG2 18 month gamma.out	8/18/2016 1:20 PM	OUT File	229 KB
FCS GG3 18 month gamma.out	8/18/2016 1:25 PM	OUT File	229 KB
check assembly.msg	8/30/2016 12:16 PM	Outlook Item	1 KB
FCS DD1 12 month gamma.msg	8/29/2016 2:53 PM	Outlook Item	1 KB
FCS DD1 13 month gamma.msg	8/29/2016 2:52 PM	Outlook Item	1 KB
FCS DD1 14 month Neutron.msg	8/29/2016 5:41 PM	Outlook Item	1 KB
FCS DD1 14 month.msg	8/29/2016 1:59 PM	Outlook Item	1 KB
FCS DD1 15 month gamma.msg	8/29/2016 2:45 PM	Outlook Item	1 KB
FCS DD1 16 month gamma.msg	8/29/2016 2:49 PM	Outlook Item	1 KB
FCS DD1 17 month gamma.msg	8/29/2016 2:51 PM	Outlook Item	1 KB
FCS DD1 18 month Curies.msg	8/30/2016 11:57 AM	Outlook Item	1 KB
FCS DD1 18 month gamma.msg	8/18/2016 10:31 AM	Outlook Item	1 KB
FCS DD1 72 hour.msg	8/30/2016 12:20 PM	Outlook Item	1 KB
FCS DD2 18 month gamma.msg	8/18/2016 11:26 AM	Outlook Item	1 KB
FCS DD3 18 month gamma.msg	8/18/2016 11:31 AM	Outlook Item	1 KB
FCS EE1 18 month gamma.msg	8/18/2016 11:55 AM	Outlook Item	1 KB
FCS EE2 18 month gamma.msg	8/18/2016 11:58 PM	Outlook Item	1 KB
FCS EE3 18 month gamma.msg	8/18/2016 12:23 PM	Outlook Item	1 KB
FCS FF1 18 month gamma.msg	8/6/2016 10:41 AM	Outlook Item	1 KB
FCS FF1 18 month.msg	8/18/2016 12:31 PM	Outlook Item	1 KB
FCS FF2 18 month gamma.msg	8/18/2016 12:38 PM	Outlook Item	1 KB
FCS FF3 18 month gamma.msg	8/18/2016 12:46 PM	Outlook Item	1 KB
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FCS GG1 18 month gamma.msg	8/18/2016 1:12 PM	Outlook Item	1 KB

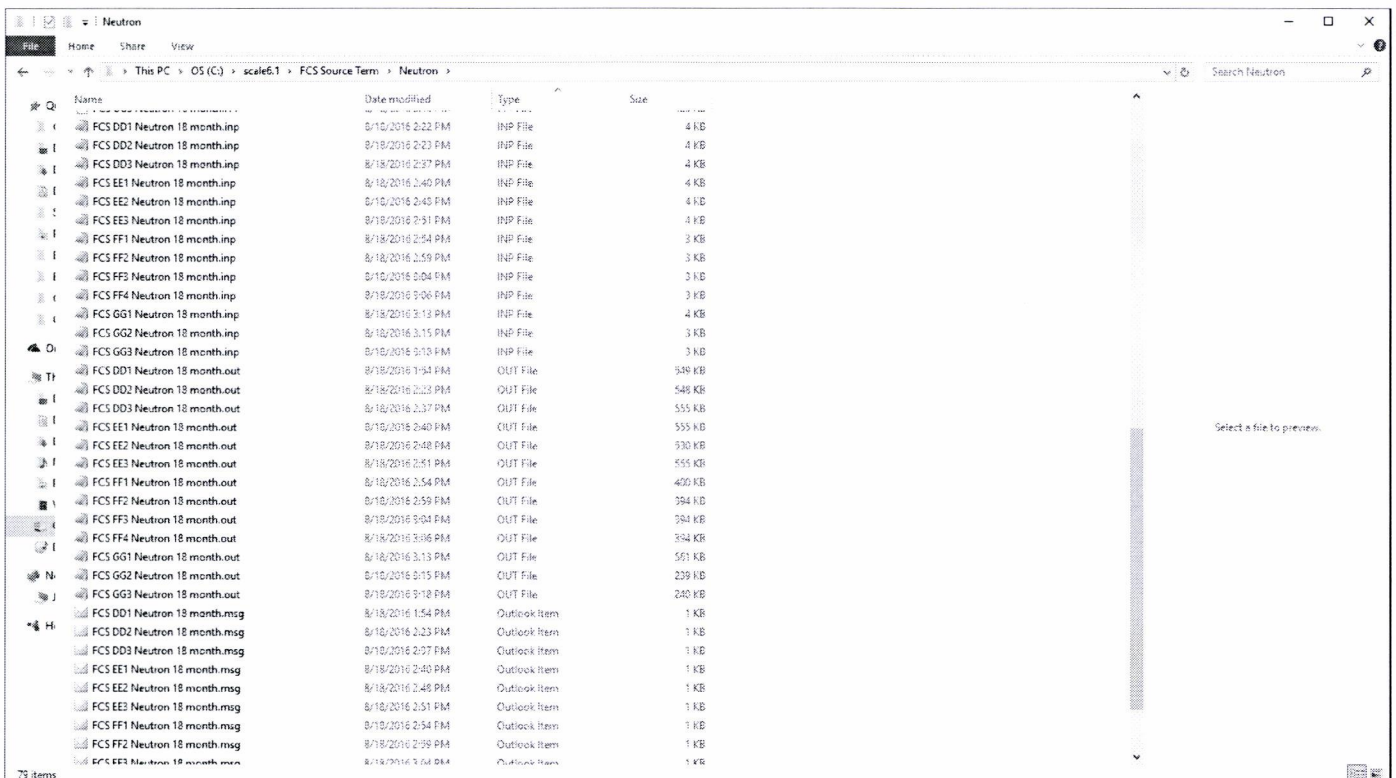
Gamma Old Fuel

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17_67.inp	8/24/2016 4:15 PM	INP File	4 KB
17_167.inp	8/24/2016 3:52 PM	INP File	4 KB
19_5 low enrichment.inp	8/23/2016 7:53 AM	INP File	4 KB
19_5.inp	8/24/2016 4:09 PM	INP File	4 KB
20.inp	8/24/2016 4:13 PM	INP File	4 KB
AA17 10_583.inp	8/24/2016 3:32 PM	INP File	4 KB
BB02 7_583.inp	8/24/2016 3:35 PM	INP File	4 KB
DD22 3_67.inp	8/24/2016 3:26 PM	INP File	4 KB
Old Fuel AA 17 10_0833 years Gamma.inp	8/23/2016 9:15 AM	INP File	4 KB
Old Fuel AA 27 8_5 years Gamma.inp	8/22/2016 12:36 PM	INP File	4 KB
Old Fuel AA 39 7_083 years Gamma.inp	8/22/2016 12:21 PM	INP File	4 KB
Old Fuel AA 44 3_167 years Gamma.inp	8/22/2016 12:00 PM	INP File	4 KB
Old Fuel AA431 3_167 years Gamma.inp	8/22/2016 11:57 AM	INP File	4 KB
Old Fuel AA41 3_167 years Gamma.inp	8/22/2016 11:16 AM	INP File	4 KB
Old Fuel BB02 7_0833 years Gamma.inp	8/22/2016 12:23 PM	INP File	4 KB
Old Fuel DD 22 3_167 years Gamma.inp	8/22/2016 12:02 PM	INP File	4 KB
Old Fuel T001 16 years Gamma.inp	8/23/2016 11:18 AM	INP File	4 KB
Old Fuel X013 14_67 years Gamma.inp	8/23/2016 11:07 AM	INP File	4 KB
Old Fuel Y013 11_67 years Gamma.inp	8/23/2016 12:11 PM	INP File	4 KB
Old Fuel Y061 8_5 years Gamma.inp	8/22/2016 12:38 PM	INP File	4 KB
Old Fuel Y039 13_167 Years Gamma.inp	8/23/2016 10:06 AM	INP File	4 KB
T0001 16_5.inp	8/24/2016 3:26 PM	INP File	4 KB
X013 15_167.inp	8/24/2016 3:26 PM	INP File	4 KB
Y012 12_167.inp	8/24/2016 3:31 PM	INP File	4 KB
Y031 9.inp	8/24/2016 3:33 PM	INP File	4 KB
Y039 13_67.inp	8/24/2016 3:29 PM	INP File	4 KB
17_58.out	8/23/2016 7:46 AM	OUT File	545 KB
17_67.out	8/24/2016 4:15 PM	OUT File	545 KB
17_167.out	8/24/2016 3:52 PM	OUT File	545 KB
19_5 low enrichment.out	8/23/2016 7:53 AM	OUT File	545 KB
19_5.out	8/24/2016 4:09 PM	OUT File	544 KB
20.out	8/24/2016 4:13 PM	OUT File	545 KB
AA17 10_583.out	8/24/2016 3:32 PM	OUT File	550 KB



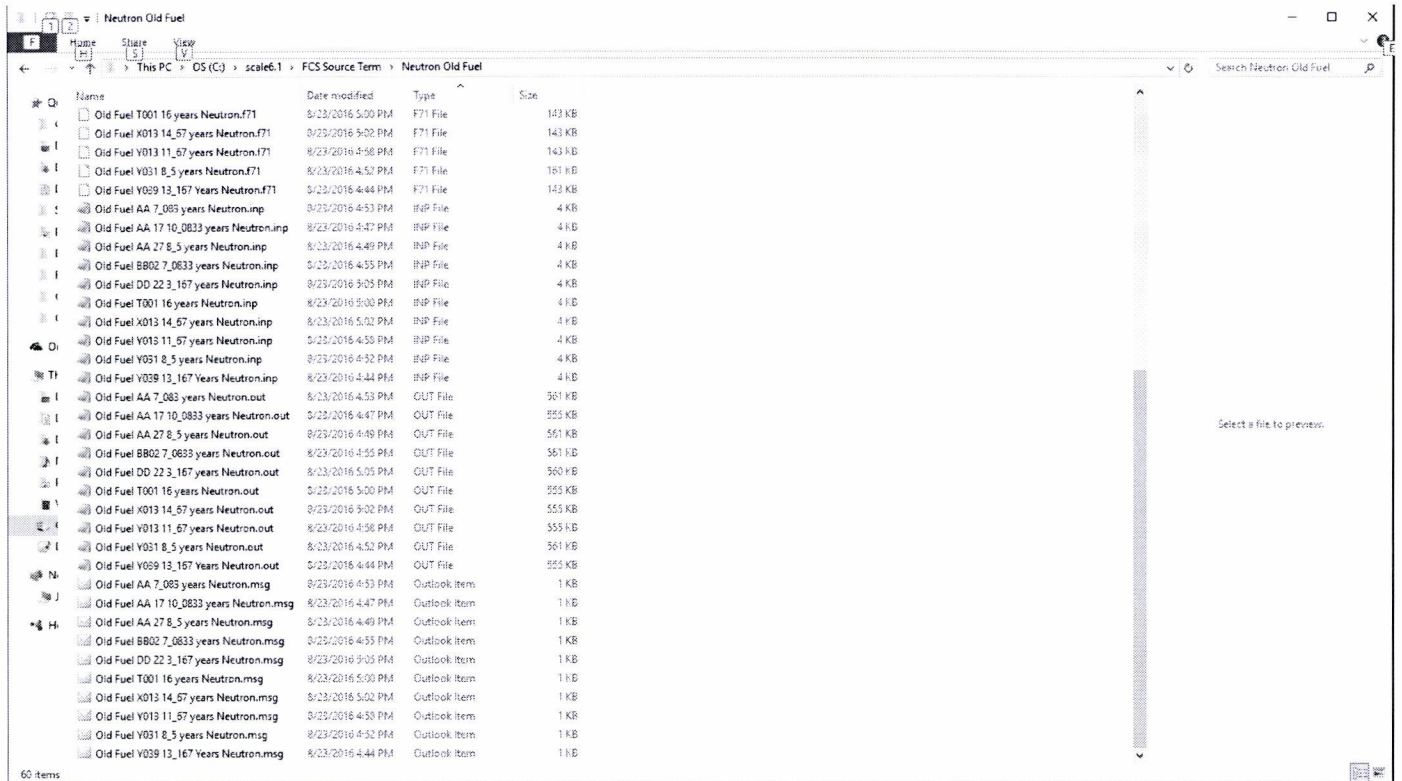
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DD22 3_67.out	8/24/2016 3:36 PM	OUT File	553 KB
Old Fuel AA 17 10_0833 years Gamma.out	8/23/2016 9:15 AM	OUT File	544 KB
Old Fuel AA 27 8_5 years Gamma.out	8/22/2016 12:36 PM	OUT File	540 KB
Old Fuel AA 39 7_083 years Gamma.out	8/22/2016 12:21 PM	OUT File	546 KB
Old Fuel AA 44 3_167 years Gamma.out	8/22/2016 12:00 PM	OUT File	548 KB
Old Fuel AA37 3_167 years Gamma.out	8/22/2016 11:57 AM	OUT File	540 KB
Old Fuel AA41 3_167 years cooling.out	8/22/2016 11:16 AM	OUT File	540 KB
Old Fuel BB02 7_0833 years Gamma.out	8/22/2016 12:23 PM	OUT File	546 KB
Old Fuel DD 22 3_167 years Gamma.out	8/22/2016 12:02 PM	OUT File	547 KB
Old Fuel T001 16 years Gamma.out	8/23/2016 11:10 AM	OUT File	543 KB
Old Fuel X013 14_67 years Gamma.out	8/23/2016 11:07 AM	OUT File	543 KB
Old Fuel Y013 11_57 years Gamma.out	8/23/2016 12:11 PM	OUT File	543 KB
Old Fuel Y031 13_67 years Gamma.out	8/23/2016 12:39 PM	OUT File	548 KB
Old Fuel Y039 13_167 Years Gamma.out	8/23/2016 10:06 AM	OUT File	543 KB
T0001 16_5.out	8/24/2016 3:26 PM	OUT File	950 KB
X013 15_167.out	8/24/2016 2:25 PM	OUT File	950 KB
Y013 12_167.out	8/24/2016 9:31 PM	OUT File	550 KB
Y031 9.out	8/24/2016 3:34 PM	OUT File	554 KB
Y039 13_67.out	8/24/2016 3:29 PM	OUT File	950 KB
17_58.msg	8/23/2016 7:46 AM	Outlook Item	1 KB
17_67.msg	8/24/2016 4:15 PM	Outlook Item	1 KB
17_167.msg	8/24/2016 3:52 PM	Outlook Item	1 KB
19_5 low enrichment.msg	8/25/2016 7:53 AM	Outlook Item	1 KB
19_5.msg	8/24/2016 4:09 PM	Outlook Item	1 KB
20.msg	8/24/2016 4:13 PM	Outlook Item	1 KB
AA17 10_583.msg	8/24/2016 3:32 PM	Outlook Item	1 KB
BB02 7_583.msg	8/24/2016 3:35 PM	Outlook Item	1 KB
DD22 3_67.msg	8/24/2016 3:36 PM	Outlook Item	1 KB
Old Fuel AA 17 10_0833 years Gamma.msg	8/23/2016 9:15 AM	Outlook Item	1 KB
Old Fuel AA 27 8_5 years Gamma.msg	8/22/2016 12:36 PM	Outlook Item	1 KB
Old Fuel AA 39 7_083 years Gamma.msg	8/22/2016 12:21 PM	Outlook Item	1 KB
Old Fuel AA 44 3_167 years Gamma.msg	8/22/2016 12:00 PM	Outlook Item	1 KB
Old Fuel AA37 3_167 years Gamma.msg	8/22/2016 11:57 AM	Outlook Item	1 KB
Old Fuel AA41 3_167 years cooling.msg	8/22/2016 11:16 AM	Outlook Item	1 KB

Neutron Files



Name	Date modified	Type	Size
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FCS DD2 Neutron 18 month.inp	8/18/2016 2:23 PM	INP File	4 KB
FCS DD3 Neutron 18 month.inp	8/18/2016 2:37 PM	INP File	4 KB
FCS EE1 Neutron 18 month.inp	8/18/2016 2:40 PM	INP File	4 KB
FCS EE2 Neutron 18 month.inp	8/18/2016 2:45 PM	INP File	4 KB
FCS EE3 Neutron 18 month.inp	8/18/2016 2:51 PM	INP File	4 KB
FCS FF1 Neutron 18 month.inp	8/18/2016 2:54 PM	INP File	3 KB
FCS FF2 Neutron 18 month.inp	8/18/2016 2:59 PM	INP File	3 KB
FCS FF3 Neutron 18 month.inp	8/18/2016 3:04 PM	INP File	3 KB
FCS FF4 Neutron 18 month.inp	8/18/2016 3:06 PM	INP File	3 KB
FCS GG1 Neutron 18 month.inp	8/18/2016 3:13 PM	INP File	4 KB
FCS GG2 Neutron 18 month.inp	8/18/2016 3:15 PM	INP File	3 KB
FCS GG3 Neutron 18 month.inp	8/18/2016 3:19 PM	INP File	3 KB
FCS DD1 Neutron 18 month.out	8/18/2016 1:54 PM	OUT File	538 KB
FCS DD2 Neutron 18 month.out	8/18/2016 2:23 PM	OUT File	548 KB
FCS DD3 Neutron 18 month.out	8/18/2016 2:37 PM	OUT File	555 KB
FCS EE1 Neutron 18 month.out	8/18/2016 2:40 PM	OUT File	555 KB
FCS EE2 Neutron 18 month.out	8/18/2016 2:48 PM	OUT File	930 KB
FCS EE3 Neutron 18 month.out	8/18/2016 2:51 PM	OUT File	555 KB
FCS FF1 Neutron 18 month.out	8/18/2016 2:54 PM	OUT File	400 KB
FCS FF2 Neutron 18 month.out	8/18/2016 2:59 PM	OUT File	394 KB
FCS FF3 Neutron 18 month.out	8/18/2016 3:04 PM	OUT File	394 KB
FCS FF4 Neutron 18 month.out	8/18/2016 3:06 PM	OUT File	394 KB
FCS GG1 Neutron 18 month.out	8/18/2016 3:13 PM	OUT File	561 KB
FCS GG2 Neutron 18 month.out	8/18/2016 3:15 PM	OUT File	239 KB
FCS GG3 Neutron 18 month.out	8/18/2016 3:19 PM	OUT File	240 KB
FCS DD1 Neutron 18 month.msg	8/18/2016 1:54 PM	Outlook Item	1 KB
FCS DD2 Neutron 18 month.msg	8/18/2016 2:23 PM	Outlook Item	1 KB
FCS DD3 Neutron 18 month.msg	8/18/2016 2:37 PM	Outlook Item	1 KB
FCS EE1 Neutron 18 month.msg	8/18/2016 2:40 PM	Outlook Item	1 KB
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FCS EE3 Neutron 18 month.msg	8/18/2016 2:51 PM	Outlook Item	1 KB
FCS FF1 Neutron 18 month.msg	8/18/2016 2:54 PM	Outlook Item	1 KB
FCS FF2 Neutron 18 month.msg	8/18/2016 2:59 PM	Outlook Item	1 KB
FCS FF3 Neutron 18 month.msg	8/18/2016 3:04 PM	Outlook Item	1 KB
FCS FF4 Neutron 18 month.msg	8/18/2016 3:06 PM	Outlook Item	1 KB

Neutron Old Fuel



The screenshot shows a Windows File Explorer window titled 'Neutron Old Fuel'. The address bar indicates the path: 'This PC > OS (C:) > scale6.1 > FCS Source Term > Neutron Old Fuel'. The search bar contains 'Search Neutron Old Fuel'. The file list is organized into columns: Name, Date modified, Type, and Size. The files are listed in descending order of date modified. The list includes various file types such as F71 File, INP File, OUT File, and Outlook Item. The files are named with identifiers like 'Old Fuel T001', 'Old Fuel X013', 'Old Fuel Y013', 'Old Fuel AA', 'Old Fuel BB', 'Old Fuel DD', and 'Old Fuel T001', followed by a description and a date. The file sizes range from 1 KB to 561 KB. The status bar at the bottom left indicates '60 items'.

Name	Date modified	Type	Size
Old Fuel T001 16 years Neutron.f71	8/23/2016 5:00 PM	F71 File	143 KB
Old Fuel X013 14_57 years Neutron.f71	8/23/2016 5:02 PM	F71 File	143 KB
Old Fuel Y013 11_57 years Neutron.f71	8/23/2016 4:58 PM	F71 File	143 KB
Old Fuel Y031 8_5 years Neutron.f71	8/23/2016 4:52 PM	F71 File	161 KB
Old Fuel Y039 13_167 years Neutron.f71	8/23/2016 4:44 PM	F71 File	143 KB
Old Fuel AA 7_083 years Neutron.inp	8/23/2016 4:53 PM	INP File	4 KB
Old Fuel AA 17 10_0833 years Neutron.inp	8/23/2016 4:47 PM	INP File	4 KB
Old Fuel AA 27 8_5 years Neutron.inp	8/23/2016 4:49 PM	INP File	4 KB
Old Fuel BB02 7_0833 years Neutron.inp	8/23/2016 4:55 PM	INP File	4 KB
Old Fuel DD 22 3_167 years Neutron.inp	8/23/2016 5:05 PM	INP File	4 KB
Old Fuel T001 16 years Neutron.inp	8/23/2016 5:00 PM	INP File	4 KB
Old Fuel X013 14_57 years Neutron.inp	8/23/2016 5:02 PM	INP File	4 KB
Old Fuel Y013 11_57 years Neutron.inp	8/23/2016 4:58 PM	INP File	4 KB
Old Fuel Y031 8_5 years Neutron.inp	8/23/2016 4:52 PM	INP File	4 KB
Old Fuel Y039 13_167 years Neutron.inp	8/23/2016 4:44 PM	INP File	4 KB
Old Fuel AA 7_083 years Neutron.out	8/23/2016 4:53 PM	OUT File	561 KB
Old Fuel AA 17 10_0833 years Neutron.out	8/23/2016 4:47 PM	OUT File	555 KB
Old Fuel AA 27 8_5 years Neutron.out	8/23/2016 4:49 PM	OUT File	561 KB
Old Fuel BB02 7_0833 years Neutron.out	8/23/2016 4:55 PM	OUT File	561 KB
Old Fuel DD 22 3_167 years Neutron.out	8/23/2016 5:05 PM	OUT File	560 KB
Old Fuel T001 16 years Neutron.out	8/23/2016 5:00 PM	OUT File	555 KB
Old Fuel X013 14_57 years Neutron.out	8/23/2016 5:02 PM	OUT File	555 KB
Old Fuel Y013 11_57 years Neutron.out	8/23/2016 4:58 PM	OUT File	555 KB
Old Fuel Y031 8_5 years Neutron.out	8/23/2016 4:52 PM	OUT File	561 KB
Old Fuel Y039 13_167 years Neutron.out	8/23/2016 4:44 PM	OUT File	555 KB
Old Fuel AA 7_083 years Neutron.msg	8/23/2016 4:53 PM	Outlook Item	1 KB
Old Fuel AA 17 10_0833 years Neutron.msg	8/23/2016 4:47 PM	Outlook Item	1 KB
Old Fuel AA 27 8_5 years Neutron.msg	8/23/2016 4:49 PM	Outlook Item	1 KB
Old Fuel BB02 7_0833 years Neutron.msg	8/23/2016 4:55 PM	Outlook Item	1 KB
Old Fuel DD 22 3_167 years Neutron.msg	8/23/2016 5:05 PM	Outlook Item	1 KB
Old Fuel T001 16 years Neutron.msg	8/23/2016 5:00 PM	Outlook Item	1 KB
Old Fuel X013 14_57 years Neutron.msg	8/23/2016 5:02 PM	Outlook Item	1 KB
Old Fuel Y013 11_57 years Neutron.msg	8/23/2016 4:58 PM	Outlook Item	1 KB
Old Fuel Y031 8_5 years Neutron.msg	8/23/2016 4:52 PM	Outlook Item	1 KB
Old Fuel Y039 13_167 years Neutron.msg	8/23/2016 4:44 PM	Outlook Item	1 KB

Sample Input File ORIGEN-ARP

'This SCALE input file was generated by

'OrigenArp Version 6.1 Compiled on Thu Oct 7 11:31:00 2010

=arp

ce14x14

4.336

3

656.9504

656.9504

656.9504

29.6032

29.6032

29.6032

1

1

1

0.7332

ft33f001

end

#origens

05\$ a4 33 a11 71 e t

ce14x14

35\$ 33 a3 1 44 a16 2 a33 18 e t

35\$ 0 t

56\$ 10 10 a6 3 a10 0 a13 4 a15 3 a18 1 e

57** 0 a3 1e-05 0.3333333 e

95\$ 0 t

Cycle 1 -DD Assembly

0.3883 MTU

58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492

11.49492 11.49492 11.49492

60** 65.69504 131.3901 197.0851 262.7801 328.4752 394.1702 459.8653

525.5603 591.2553 656.9504

66\$ a1 2 a5 2 a9 2 e

73\$ 922340 922350 922360 922380

74** 149.8465 16836.69 77.44876 371236

75\$ 2 2 2 2

t

ce14x14

35\$ 33 a3 2 44 a33 18 e t

35\$ 0 t

56\$ 10 10 a6 3 a10 10 a15 3 a18 1 e

57** 656.9504 a3 1e-05 0.3333333 e

95\$ 0 t

Cycle 2 -DD Assembly

0.3883 MTU

58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492

11.49492 11.49492 11.49492

60** 722.6454 788.3404 854.0355 919.7305 985.4256 1051.121 1116.816

1182.511 1248.206 1313.901

66\$ a1 2 a5 2 a9 2 e t

ce14x14

35\$ 33 a3 3 44 a33 18 e t

35\$ 0 t

56\$ 10 10 a10 10 a15 3 a18 1 e

57** 1313.901 a3 1e-05 0.3333333 e

95\$ 0 t

Cycle 3 -DD Assembly

0.3883 MTU

58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492

11.49492 11.49492 11.49492

60** 1379.596 1445.291 1510.986 1576.681 1642.376 1708.071 1773.766

1839.461 1905.156 1970.851

66\$ a1 2 a5 2 a9 2 e t

54\$ a8 1 a11 0 e

56\$ a2 7 a6 1 a10 10 a14 5 a15 3 a17 2 e

57** 0 a3 1e-05 e

95\$ 0 t

Cycle 3 Down - DD Assembly

0.3883 MTU

60** 0.001 0.003 0.02469 0.074074 0.2222 0.667 1

61** f0.05

65\$

'Gram-Atoms Grams Curies Watts-All Watts-Gamma

3z 1 0 0 3z 3z 6z

3z 1 0 0 3z 3z 6z

3z 1 0 0 3z 3z 6z

81\$ 2 0 26 1 a7 200 e

82\$ 2 2 2 2 2 2 2 e

83**

1.1000000e+07 8.0000000e+06 6.0000000e+06 4.0000000e+06 3.0000000e+06

2.5000000e+06 2.0000000e+06 1.5000000e+06 1.0000000e+06 7.0000000e+05

4.5000000e+05 3.0000000e+05 1.5000000e+05 1.0000000e+05 7.0000000e+04

cross section library provided with SCALE 6.1

assembly average enrichment for limiting assembly, then three cycles of irradiation

first through third cycle irradiation days

first through third specific power, MW/MTU

moderator density, g/cc

uranium loading, MTU

assembly power (MW) each time step

cumulative irradiation time (days) at end of
each time stepnuclide ID U-234, U-235, U-236, U-238, nuclide concentration
(grams/assembly) for nuclide ID listed

library type 2=fuel

decay time years to 1 for this example

gamma energy group structure, in eV and descending order

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----------------------	--------------------------------------	---------------------------------

```

4.5000000e+04 3.0000000e+04 2.0000000e+04 1.0000000e+04
84** neutron energy group structure, in eV and descending order
2.0000000e+07 8.1873000e+06 6.4340000e+06 4.8000000e+06
3.0000000e+06 2.4790000e+06 2.3540000e+06 1.8500000e+06 1.4000000e+06
9.0000000e+05 4.0000000e+05 1.0000000e+05 2.5000000e+04 1.7000000e+04
3.0000000e+03 5.5000000e+02 1.0000000e+02 3.0000000e+01 1.0000000e+01
8.1000000e+00 6.0000000e+00 4.7500000e+00 3.0000000e+00 1.7700000e+00
1.0000000e+00 6.2500000e-01 4.0000000e-01 3.7500000e-01 3.5000000e-01
3.2500000e-01 2.7500000e-01 2.5000000e-01 2.2500000e-01 2.0000000e-01
1.5000000e-01 1.0000000e-01 7.0000000e-02 5.0000000e-02 4.0000000e-02
3.0000000e-02 2.5300000e-02 1.0000000e-02 7.5000000e-03 3.0000000e-03
1.0000000e-05 e
t
56$$ 0 0 a10 1 e t
56$$ 0 0 a10 2 e t
56$$ 0 0 a10 3 e t
56$$ 0 0 a10 4 e t
56$$ 0 0 a10 5 e t
56$$ 0 0 a10 6 e t
56$$ 0 0 a10 7 e t
56$$ f0 t
end
=opus
LIBUNIT=33
TYPARAMS=GSPECTRUM
UNITS=GRAMS
TIME=YEARS
NPOSITION=1 2 3 4 5 6 7 end
end
#shell
copy ft71f001 "C:\scale6.1\FCS Source Term\Gamma\Gamma DD1 12 month gamma.f71"
del ft71f001
end

```

Sample Output File

```

*****
*
*                               SCALE 6.1.2
*                               -----
*                               February 2013
*
*   SCALE:  A Comprehensive Modeling and Simulation Suite
*           for Nuclear Safety Analysis and Design
*
*           Reactor and Nuclear Systems Division
*           Oak Ridge National Laboratory
*
*           http://scale.ornl.gov
*           scalehelp@ornl.gov
*
*****

*****

Job Information
-----
Job started on JANBOSTELMAN-WS on Mon 29/08/2016 14:53:44
Working directory: C:\Users\JANBOS~1\AppData\Local\Temp\scale.Jan Bostelman.8796
Input file name   : C:\scale6.1\FCS Source Term\Gamma\FCS DD1 12 month gamma.inp
Output file name  : C:\scale6.1\FCS Source Term\Gamma\FCS DD1 12 month gamma.out

*****

primary module access and input record ( Scale 6.1 driver )

The following data cards precede an = card
'This SCALE input file was generated by
'OrigenArp Version 6.1 Compiled on Thu Oct 7 11:31:00 2010

module arp will be called at 14:53:45.392 on 08/29/2016.
sequence specification record:=arp

Input Data:

cel4x14
4.336
3
656.9504
656.9504
656.9504
29.6032
29.6032
29.6032
1
1
1
0.7332
ft33f001

module arp is finished. completion code      0. total cpu time used 0.24 seconds.

module origins will be called at 14:53:45.627 on 08/29/2016.
sequence specification record:#origens

Input Data:

0$$$ a4 33 a11 71 e t
cel4x14
3$$$ 33 a3 1 44 a16 2 a33 18 e t
35$$$ 0 t
56$$$ 10 10 a6 3 a10 0 a13 4 a15 3 a18 1 e
57** 0 a3 1e-05 0.333333 e
95$$$ 0 t
Cycle 1 -DD Assembly
0.3883 MTU
58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492
11.49492 11.49492 11.49492
60** 65.69504 131.3901 197.0851 262.7801 328.4752 394.1702 459.8653
525.5603 591.2553 656.9504
66$$$ a1 2 a5 2 a9 2 e
73$$$ 922340 922350 922360 922380
74** 149.8465 16836.69 77.44876 371236
75$$$ 2 2 2 2
t

```



```

cel4x14
35$ 33 a3 2 44 a33 18 e t
35$ 0 t
56$ 10 10 a6 3 a10 10 a15 3 a18 1 e
57** 656.9504 a3 1e-05 0.3333333 e
95$ 0 t
Cycle 2 -DD Assembly
0.3883 MTU
58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492
11.49492 11.49492 11.49492
60** 722.6454 788.3404 854.0355 919.7305 985.4256 1051.121 1116.816
1182.511 1248.206 1313.901
66$ a1 2 a5 2 a9 2 e t
cel4x14
35$ 33 a3 3 44 a33 18 e t
35$ 0 t
56$ 10 10 a10 10 a15 3 a18 1 e
57** 1313.901 a3 1e-05 0.3333333 e
95$ 0 t
Cycle 3 -DD Assembly
0.3883 MTU
58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492
11.49492 11.49492 11.49492
60** 1379.596 1445.291 1510.986 1576.681 1642.376 1708.071 1773.766
1839.461 1905.156 1970.851
66$ a1 2 a5 2 a9 2 e t
54$ a8 1 a11 0 e
56$ a2 7 a6 1 a10 10 a14 5 a15 3 a17 2 e
57** 0 a3 1e-05 e
95$ 0 t
Cycle 3 Down - DD Assembly
0.3883 MTU
60** 0.001 0.003 0.02469 0.074074 0.2222 0.667 1
61** f0.05
65$
'Gram-Atoms   Grams   Curies   Watts-All   Watts-Gamma
3z   1   0   0   3z   3z   3z   6z
3z   1   0   0   3z   3z   3z   6z
3z   1   0   0   3z   3z   3z   6z
81$ 2 0 26 1 a7 200 e
82$ 2 2 2 2 2 2 2 e
83**
1.1000000e+07 8.0000000e+06 6.0000000e+06 4.0000000e+06 3.0000000e+06
2.5000000e+06 2.0000000e+06 1.5000000e+06 1.0000000e+06 7.0000000e+05
4.5000000e+05 3.0000000e+05 1.5000000e+05 1.0000000e+05 7.0000000e+04
4.5000000e+04 3.0000000e+04 2.0000000e+04 0.0000000e+00 e
84**
2.0000000e+07 8.1873000e+06 6.4340000e+06 4.8000000e+06
3.0000000e+06 2.4790000e+06 2.3540000e+06 1.8500000e+06 1.4000000e+06
9.0000000e+05 4.0000000e+05 1.0000000e+05 2.5000000e+04 1.7000000e+04
3.0000000e+03 5.5000000e+02 1.0000000e+02 3.0000000e+01 1.0000000e+01
8.1000000e+00 6.0000000e+00 4.7500000e+00 3.0000000e+00 1.7700000e+00
1.0000000e+00 6.2500000e-01 4.0000000e-01 3.7500000e-01 3.5000000e-01
3.2500000e-01 2.7500000e-01 2.5000000e-01 2.2500000e-01 2.0000000e-01
1.5000000e-01 1.0000000e-01 7.0000000e-02 5.0000000e-02 4.0000000e-02
3.0000000e-02 2.5300000e-02 1.0000000e-02 7.5000000e-03 3.0000000e-03
1.0000000e-05 e
t
56$ 0 0 a10 1 e t
56$ 0 0 a10 2 e t
56$ 0 0 a10 3 e t
56$ 0 0 a10 4 e t
56$ 0 0 a10 5 e t
56$ 0 0 a10 6 e t
56$ 0 0 a10 7 e t
56$ f0 t

```

module origins is finished. completion code 0. total cpu time used 1.74 seconds.

module opus will be called at 14:53:47.368 on 08/29/2016.
sequence specification record:=opus

Input Data:

```

LIBUNIT=33
TYPARAMS=GSPECTRUM
UNITS=GRAMS
TIME=YEARS
NPOSITION=1 2 3 4 5 6 7 end

```

module opus is finished. completion code 0. total cpu time used 0.09 seconds.

```
module shell will be called at 14:53:47.469 on 08/29/2016.
sequence specification record:#shell
```

Input Data:

```
copy ft71f001 "C:\scale6.1\FCS Source Term\Gamma\FCS DD1 12 month gamma.f71"
del ft71f001
```

```
module shell is finished. completion code      0. total cpu time used 0.09 seconds.
```

Scale is finished at 14:53:47.548 on 08/29/2016
 1_plot00000000000000000000.plt copied to C:\scale6.1\FCS Source Term\Gamma\FCS DD1 12 month gamma.00000000000000000000.plt.

```
*****  
*****  
***** program verification information *****  
***** code system: SCALE version: 6.1 *****  
*****  
*****  
*****  
***** program: arp *****  
***** creation date: 21_jun_2011 *****  
***** library: C:\Users\JANBOS~1\AppData\Local\Temp\scalescale.Jan Bostelman.8796 *****  
*****  
***** production code: arp *****  
***** revision: 6.1.0 *****  
***** jobname: *****  
***** machine name: *****  
***** date of execution: 29_aug_2016 *****  
***** time of execution: 14:53:45.40 *****  
*****
```

```
data library:                cel4x14
u-235 enrichment:           4.336
number of cycles:            3
water density (g/cm3):      0.7332
```

			cycle	cumulative	midpoint	
cycle	time(days)	power(mw)	burnup(mwd)	burnup(mwd)	burnup(mwd)	libs/cycle
1	656.950	29.6032	19447.8	19447.8	9723.92	1
2	656.950	29.6032	19447.8	38895.7	29171.8	1
3	656.950	29.6032	19447.8	58343.5	48619.6	1

```
interpolated library name: ft33f001
```

```
cross section library interpolation completed.
cpu time used 0.100 seconds.
```

```
*****
*****
*****
*****
*****
```

```
***** program verification information *****
***** code system: SCALE version: 6.1 *****
*****
*****
*****
***** program: origen *****
***** creation date: 21_feb_2013 *****
***** library: C:\Users\JANBOS~1\AppData\Local\Temp\scale.Jan Bostelman.8796 *****
***** production code: origen *****
***** revision: 6.1.2 *****
***** jobname: *****
***** machine name: *****
***** date of execution: 29_aug_2016 *****
***** time of execution: 14:53:45.64 *****
*****
*****
*****
*****
```

```

1
1      * input echo * (with break between col. 1-72 and 73-80)
0      note:  only comments are permitted after column 72.
0-----only this is used as input data.-----comment or title end
0.....columns 1-72.....73-80.

```

```

0$$ a4 33 a11 71 e t
cel4x14
3$$ 33 a3 1 44 a16 2 a33 18 e t
35$$ 0 t
56$$ 10 10 a6 3 a10 0 a13 4 a15 3 a18 1 e
57** 0 a3 1e-05 0.3333333 e
95$$ 0 t
Cycle 1 -DD Assembly
0.3883 MTU
58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492
11.49492 11.49492 11.49492
60** 65.69504 131.3901 197.0851 262.7801 328.4752 394.1702 459.8653
525.5603 591.2553 656.9504
66$$ a1 2 a5 2 a9 2 e
73$$ 922340 922350 922360 922380
74** 149.8465 16836.69 77.44876 371236
75$$ 2 2 2 2
t
cel4x14
3$$ 33 a3 2 44 a33 18 e t
35$$ 0 t
56$$ 10 10 a6 3 a10 10 a15 3 a18 1 e
57** 656.9504 a3 1e-05 0.3333333 e
95$$ 0 t
Cycle 2 -DD Assembly
0.3883 MTU
58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492
11.49492 11.49492 11.49492
60** 722.6454 788.3404 854.0355 919.7305 985.4256 1051.121 1116.816
1182.511 1248.206 1313.901
66$$ a1 2 a5 2 a9 2 e t
cel4x14
3$$ 33 a3 3 44 a33 18 e t
35$$ 0 t
56$$ 10 10 a10 10 a15 3 a18 1 e
57** 1313.901 a3 1e-05 0.3333333 e
95$$ 0 t
Cycle 3 -DD Assembly
0.3883 MTU
58** 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492 11.49492
11.49492 11.49492 11.49492
60** 1379.596 1445.291 1510.986 1576.681 1642.376 1708.071 1773.766
1839.461 1905.156 1970.851
66$$ a1 2 a5 2 a9 2 e t
54$$ a8 1 a11 0 e
56$$ a2 7 a6 1 a10 10 a14 5 a15 3 a17 2 e

```


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```

57** 0 a3 1e-05 e
95$$ 0 t
Cycle 3 Down - DD Assembly
0.3883 MTU
60** 0.001 0.003 0.02469 0.074074 0.2222 0.667 1
61** f0.05
65$$
'Gram-Atoms    Grams    Curies    Watts-All    Watts-Gamma
3z   1   0   0   3z   3z   3z   6z
3z   1   0   0   3z   3z   3z   6z
3z   1   0   0   3z   3z   3z   6z
81$$ 2 0 26 1 a7 200 e
82$$ 2 2 2 2 2 2 2 e
83**
1.1000000e+07 8.0000000e+06 6.0000000e+06 4.0000000e+06 3.0000000e+06
2.5000000e+06 2.0000000e+06 1.5000000e+06 1.0000000e+06 7.0000000e+05
4.5000000e+05 3.0000000e+05 1.5000000e+05 1.0000000e+05 7.0000000e+04
4.5000000e+04 3.0000000e+04 2.0000000e+04 0.0000000e+00 e
84**
2.0000000e+07 8.1873000e+06 6.4340000e+06 4.8000000e+06
3.0000000e+06 2.4790000e+06 2.3540000e+06 1.8500000e+06 1.4000000e+06
9.0000000e+05 4.0000000e+05 1.0000000e+05 2.5000000e+04 1.7000000e+04
3.0000000e+03 5.5000000e+02 1.0000000e+02 3.0000000e+01 1.0000000e+01
8.1000000e+00 6.0000000e+00 4.7500000e+00 3.0000000e+00 1.7700000e+00
1.0000000e+00 6.2500000e-01 4.0000000e-01 3.7500000e-01 3.5000000e-01
3.2500000e-01 2.7500000e-01 2.5000000e-01 2.2500000e-01 2.0000000e-01
1.5000000e-01 1.0000000e-01 7.0000000e-02 5.0000000e-02 4.0000000e-02
3.0000000e-02 2.5300000e-02 1.0000000e-02 7.5000000e-03 3.0000000e-03
1.0000000e-05 e
t
56$$ 0 0 a10 1 e t
56$$ 0 0 a10 2 e t
56$$ 0 0 a10 3 e t
56$$ 0 0 a10 4 e t
56$$ 0 0 a10 5 e t
56$$ 0 0 a10 6 e t
56$$ 0 0 a10 7 e t
56$$ f0 t
Owhen job "fails", make sure no fido input..... is out here!

0$ array      12 entries read

0t

3$ array      33 entries read

0t
library information...

cross-section data taken from position number      1 of library on unit 33.

ORIGEN working library updated with 2D transport weighted cross-sections.
pass 2
pass 1
pass  0
0 *****
0      .other identification and sizes of library.
0      data set name: Bostelman.8796\ft33f001
0      3/18/2006    date library was produced
0      1946      total number of nuclides in library
0      698      number of light-element nuclides
0      129      number of actinide nuclides
0      1119     number of fission product nuclides
0      35013    number of nonzero off-diagonal matrix elements
0 *****

35$ array      1 entries read

0t

56$ array      20 entries read

57* array      5 entries read

95$ array      1 entries read

0t

58* array      10 entries read

60* array      10 entries read

```

66\$ array 12 entries read

73\$ array 4 entries read

74* array 4 entries read

75\$ array 4 entries read

0t

totals	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
flux	2.879E+13	2.888E+13	2.908E+13	2.936E+13	2.972E+13	3.012E+13	3.058E+13	3.107E+13	3.159E+13	3.214E+13		

Cycle 1 -DD Assembly actinides page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
he 4	0.000E+00	1.758E-05	7.265E-05	1.775E-04	3.621E-04	6.858E-04	1.246E-03	2.183E-03	3.682E-03	5.971E-03	9.318E-03
th226	0.000E+00	3.050E-18	8.663E-18	1.595E-17	2.540E-17	3.768E-17	5.351E-17	7.367E-17	9.897E-17	1.303E-16	1.684E-16
th227	0.000E+00	7.214E-15	4.339E-14	1.189E-13	2.398E-13	4.103E-13	6.331E-13	9.100E-13	1.242E-12	1.628E-12	2.068E-12
th228	0.000E+00	8.770E-10	3.599E-09	8.430E-09	1.579E-08	2.624E-08	4.045E-08	5.921E-08	8.339E-08	1.139E-07	1.518E-07
th229	0.000E+00	2.872E-10	1.162E-09	2.658E-09	4.826E-09	7.743E-09	1.152E-08	1.629E-08	2.224E-08	2.960E-08	3.863E-08
th230	0.000E+00	7.288E-05	1.421E-04	2.079E-04	2.701E-04	3.290E-04	3.846E-04	4.369E-04	4.859E-04	5.317E-04	5.745E-04
th231	0.000E+00	1.100E-07	1.497E-07	1.882E-07	2.256E-07	2.623E-07	2.984E-07	3.338E-07	3.685E-07	4.026E-07	4.361E-07
th232	0.000E+00	8.577E-07	2.581E-06	5.116E-06	8.414E-06	1.243E-05	1.712E-05	2.244E-05	2.835E-05	3.482E-05	4.181E-05
th233	0.000E+00	1.048E-12	3.134E-12	6.237E-12	1.035E-11	1.546E-11	2.157E-11	2.870E-11	3.684E-11	4.600E-11	5.620E-11
th234	0.000E+00	4.566E-06	5.249E-06	5.346E-06	5.356E-06	5.351E-06	5.345E-06	5.339E-06	5.332E-06	5.325E-06	5.318E-06
pa231	0.000E+00	3.645E-06	8.849E-06	1.540E-05	2.318E-05	3.207E-05	4.196E-05	5.275E-05	6.434E-05	7.663E-05	8.953E-05
pa232	0.000E+00	5.801E-09	1.414E-08	2.478E-08	3.766E-08	5.274E-08	6.995E-08	8.927E-08	1.106E-07	1.340E-07	1.593E-07
pa233	0.000E+00	4.636E-08	1.712E-07	3.462E-07	5.628E-07	8.170E-07	1.106E-06	1.428E-06	1.779E-06	2.159E-06	2.564E-06
pa234m	0.000E+00	1.540E-10	1.770E-10	1.804E-10	1.807E-10	1.807E-10	1.805E-10	1.804E-10	1.803E-10	1.802E-10	1.801E-10
pa234	0.000E+00	7.268E-11	9.354E-11	1.100E-10	1.291E-10	1.518E-10	1.783E-10	2.085E-10	2.425E-10	2.803E-10	3.219E-10
pa235	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
u230	0.000E+00	2.999E-15	8.506E-15	1.564E-14	2.488E-14	3.687E-14	5.232E-14	7.198E-14	9.664E-14	1.271E-13	1.643E-13
u231	0.000E+00	3.033E-13	6.685E-13	1.131E-12	1.729E-12	2.502E-12	3.490E-12	4.739E-12	6.294E-12	8.203E-12	1.052E-11
u232	0.000E+00	1.060E-06	2.334E-06	3.936E-06	5.979E-06	8.573E-06	1.183E-05	1.586E-05	2.076E-05	2.666E-05	3.363E-05
u233	0.000E+00	1.223E-04	2.334E-04	3.344E-04	4.264E-04	5.100E-04	5.860E-04	6.548E-04	7.170E-04	7.729E-04	8.228E-04
u234	1.498E+02	1.463E+02	1.429E+02	1.395E+02	1.362E+02	1.329E+02	1.296E+02	1.264E+02	1.232E+02	1.201E+02	1.169E+02
u235	1.684E+04	1.593E+04	1.507E+04	1.426E+04	1.348E+04	1.273E+04	1.201E+04	1.133E+04	1.068E+04	1.005E+04	9.449E+03
u236	7.745E+01	2.489E+02	4.100E+02	5.619E+02	7.053E+02	8.408E+02	9.688E+02	1.090E+03	1.204E+03	1.311E+03	1.412E+03
u237	0.000E+00	6.129E-01	8.248E-01	1.029E+00	1.229E+00	1.424E+00	1.617E+00	1.807E+00	1.996E+00	2.181E+00	2.365E+00
u238	3.712E+05	3.708E+05	3.704E+05	3.700E+05	3.695E+05	3.691E+05	3.686E+05	3.682E+05	3.677E+05	3.673E+05	3.668E+05
u239	0.000E+00	1.346E-01	1.349E-01	1.357E-01	1.368E-01	1.383E-01	1.401E-01	1.420E-01	1.441E-01	1.463E-01	1.487E-01
u240	0.000E+00	8.829E-20	2.519E-18	1.767E-17	6.948E-17	1.990E-16	4.670E-16	9.551E-16	1.767E-15	3.028E-15	4.886E-15
u241	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
np235	0.000E+00	4.896E-09	2.473E-08	6.313E-08	1.230E-07	2.067E-07	3.166E-07	4.544E-07	6.220E-07	8.208E-07	1.052E-06
np236m	0.000E+00	2.485E-08	6.416E-08	1.143E-07	1.750E-07	2.463E-07	3.283E-07	4.208E-07	5.239E-07	6.376E-07	7.619E-07
np236	0.000E+00	1.630E-07	7.909E-07	1.944E-06	3.653E-06	5.935E-06	8.794E-06	1.223E-05	1.622E-05	2.075E-05	2.580E-05
np237	0.000E+00	2.958E+00	7.611E+00	1.346E+01	2.041E+01	2.839E+01	3.731E+01	4.712E+01	5.775E+01	6.911E+01	8.117E+01
np238	0.000E+00	5.438E-03	1.404E-02	2.501E-02	3.831E-02	5.392E-02	7.185E-02	9.209E-02	1.146E-01	1.395E-01	1.667E-01
np239	0.000E+00	1.944E+01	1.948E+01	1.959E+01	1.976E+01	1.997E+01	2.022E+01	2.050E+01	2.080E+01	2.112E+01	2.147E+01
np240m	0.000E+00	7.535E-22	2.150E-20	1.508E-19	5.929E-19	1.699E-18	3.985E-18	8.151E-18	1.508E-17	2.584E-17	4.170E-17
np240	0.000E+00	3.595E-04	3.614E-04	3.660E-04	3.728E-04	3.813E-04	3.914E-04	4.027E-04	4.152E-04	4.288E-04	4.433E-04
np241	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
pu236	0.000E+00	2.306E-07	1.190E-06	3.083E-06	6.080E-06	1.034E-05	1.599E-05	2.317E-05	3.198E-05	4.254E-05	5.492E-05
pu237	0.000E+00	1.943E-07	6.650E-07	1.370E-06	2.356E-06	3.697E-06	5.477E-06	7.785E-06	1.071E-05	1.436E-05	1.883E-05
pu238	0.000E+00	4.603E-02	2.432E-01	6.403E-01	1.281E+00	2.208E+00	3.464E+00	5.091E+00	7.133E+00	9.631E+00	1.263E+01
pu239	0.000E+00	3.269E-02	6.182E-02	8.636E-02	1.070E+03	1.245E+03	1.392E+03	1.515E+03	1.619E+03	1.706E+03	1.778E+03
pu240	0.000E+00	1.038E+01	3.722E+01	7.476E+01	1.188E+02	1.661E+02	2.145E+02	2.623E+02	3.082E+02	3.514E+02	3.915E+02
pu241	0.000E+00	7.163E-01	5.012E+00	1.491E+01	3.126E+01	5.409E+01	8.294E+01	1.170E+02	1.554E+02	1.970E+02	2.407E+02
pu242	0.000E+00	8.234E-03	1.161E-01	5.287E-01	1.512E+00	3.349E+00	6.318E+00	1.067E+01	1.661E+01	2.430E+01	3.387E+01
pu243	0.000E+00	1.562E-06	2.209E-05	1.013E-04	2.925E-04	6.560E-04	1.254E-03	2.150E-03	3.400E-03	5.059E-03	7.174E-03
pu244	0.000E+00	4.470E-09	1.275E-07	8.947E-07	3.518E-06	1.008E-05	2.365E-05	4.836E-05	8.946E-05	1.533E-04	2.474E-04
pu245	0.000E+00	1.607E-13	4.599E-12	3.249E-11	1.290E-10	3.740E-10	8.895E-10	1.847E-09	3.471E-09	6.049E-09	9.930E-09
pu246	0.000E+00	3.607E-16	1.461E-14	1.200E-13	5.206E-13	1.605E-12	4.002E-12	8.639E-12	1.680E-11	3.021E-11	5.105E-11
am239	0.000E+00	7.611E-14	1.055E-12	4.734E-12	1.333E-11	2.911E-11	5.409E-11	8.995E-11	1.379E-10	1.986E-10	2.724E-10
am240	0.000E+00	3.377E-11	4.684E-10	2.102E-09	5.924E-09	1.294E-08	2.404E-08	3.999E-08	6.131E-08	8.832E-08	1.211E-07

Cycle 1 -DD Assembly actinides page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
am241	0.000E+00	1.585E-03	2.191E-02	9.756E-02	2.721E-01	5.868E-01	1.076E+00	1.762E+00	2.658E+00	3.766E+00	5.075E+00
am242m	0.000E+00	5.582E-06	1.383E-04	8.437E-04	2.888E-03	7.209E-03	1.476E-02	2.636E-02	4.264E-02	6.395E-02	9.040E-02
am242	0.000E+00	2.318E-06	3.214E-05	1.442E-04	4.060E-04	8.863E-04	1.647E-03	2.739E-03	4.200E-03	6.049E-03	8.295E-03
am243	0.000E+00	7.044E-05	1.987E-03	1.374E-02	5.310E-02	1.492E-01	3.429E-01	6.858E-01	1.239E+00	2.072E+00	3.259E+00
am244m	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
am244	0.000E+00	3.860E-08	1.092E-06	7.605E-06	2.968E-05	8.442E-05	1.967E-04	3.992E-04	7.329E-04	1.246E-03	1.994E-03
am245	0.000E+00	3.138E-14	8.980E-13	6.343E-12	2.519E-11	7.302E-11	1.737E-10	3.605E-10	6.776E-10	1.181E-09	1.939E-09
am246	0.000E+00	9.011E-19	3.650E-17	2.999E-16	1.301E-15	4.009E-15	9.998E-15	2.158E-14	4.199E-14	7.547E-14	1.275E-13

cm241	0.000E+00	2.444E-13	1.101E-11	9.382E-11	4.045E-10	1.206E-09	2.859E-09	5.792E-09	1.048E-08	1.740E-08	2.702E-08
cm242	0.000E+00	2.552E-05	6.825E-04	4.472E-03	1.636E-02	4.347E-02	9.441E-02	1.784E-01	3.046E-01	4.812E-01	7.150E-01
cm243	0.000E+00	2.732E-08	1.463E-06	1.447E-05	7.114E-05	2.384E-04	6.273E-04	1.397E-03	2.752E-03	4.940E-03	8.238E-03
cm244	0.000E+00	7.087E-07	4.021E-05	4.228E-04	2.214E-03	7.915E-03	2.223E-02	5.285E-02	1.113E-01	2.136E-01	3.810E-01
cm245	0.000E+00	1.435E-09	1.608E-07	2.513E-06	1.744E-05	7.753E-05	2.602E-04	7.192E-04	1.725E-03	3.714E-03	7.341E-03
cm246	0.000E+00	3.691E-12	8.342E-10	1.973E-08	1.848E-07	1.042E-06	4.266E-06	1.400E-05	3.907E-05	9.641E-05	2.159E-04
cm247	0.000E+00	1.408E-15	6.375E-13	2.262E-11	2.841E-10	2.018E-09	9.996E-09	3.863E-08	1.245E-07	3.492E-07	8.783E-07
cm248	0.000E+00	2.935E-18	2.667E-15	1.426E-13	2.410E-12	2.164E-11	1.303E-10	5.951E-10	2.223E-09	7.119E-09	2.020E-08
cm249	0.000E+00	1.957E-23	1.785E-20	9.605E-19	1.639E-17	1.490E-16	9.090E-16	4.216E-15	1.600E-14	5.210E-14	1.504E-13
cm250	0.000E+00	1.822E-26	3.327E-23	2.699E-21	6.191E-20	7.099E-19	5.252E-18	2.873E-17	1.261E-16	4.675E-16	1.518E-15
cm251	0.000E+00	3.094E-32	5.669E-29	4.631E-27	1.073E-25	1.245E-24	9.336E-24	5.184E-23	2.311E-22	8.713E-22	2.879E-21
totals	3.883E+05	3.875E+05	3.867E+05	3.859E+05	3.851E+05	3.843E+05	3.835E+05	3.827E+05	3.819E+05	3.812E+05	3.804E+05
flux		2.879E+13	2.888E+13	2.908E+13	2.936E+13	2.972E+13	3.012E+13	3.058E+13	3.107E+13	3.159E+13	3.214E+13

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
h 1	0.000E+00	5.449E-05	1.137E-04	1.780E-04	2.475E-04	3.224E-04	4.025E-04	4.880E-04	5.788E-04	6.749E-04	7.762E-04
h 2	0.000E+00	5.491E-05	1.115E-04	1.695E-04	2.286E-04	2.886E-04	3.492E-04	4.104E-04	4.719E-04	5.336E-04	5.954E-04
h 3	0.000E+00	1.048E-03	2.128E-03	3.239E-03	4.381E-03	5.551E-03	6.749E-03	7.973E-03	9.224E-03	1.050E-02	1.180E-02
he 3	0.000E+00	4.602E-06	1.639E-05	3.306E-05	5.306E-05	7.526E-05	9.887E-05	1.233E-04	1.482E-04	1.732E-04	1.981E-04
he 4	0.000E+00	2.566E-02	5.149E-02	7.746E-02	1.036E-01	1.298E-01	1.560E-01	1.824E-01	2.088E-01	2.353E-01	2.618E-01
he 6	0.000E+00	1.222E-10	1.233E-10	1.241E-10	1.246E-10	1.249E-10	1.249E-10	1.246E-10	1.242E-10	1.236E-10	1.229E-10
li 6	0.000E+00	5.716E-04	1.109E-03	1.611E-03	2.079E-03	2.513E-03	2.912E-03	3.278E-03	3.609E-03	3.907E-03	4.173E-03
li 7	0.000E+00	1.963E-05	4.001E-05	6.099E-05	8.247E-05	1.044E-04	1.266E-04	1.490E-04	1.717E-04	1.944E-04	2.173E-04
be 7	0.000E+00	3.092E-12	2.926E-12	2.769E-12	2.620E-12	2.477E-12	2.341E-12	2.210E-12	2.085E-12	1.965E-12	1.850E-12
he 8	0.000E+00	1.115E-12	1.125E-12	1.132E-12	1.137E-12	1.139E-12	1.139E-12	1.136E-12	1.132E-12	1.127E-12	1.120E-12
li 8	0.000E+00	1.428E-11	1.396E-11	1.366E-11	1.338E-11	1.311E-11	1.284E-11	1.257E-11	1.230E-11	1.203E-11	1.177E-11
be 8	0.000E+00	3.600E-17	3.536E-17	3.476E-17	3.418E-17	3.360E-17	3.302E-17	3.244E-17	3.185E-17	3.125E-17	3.065E-17
li 9	0.000E+00	3.865E-13	4.129E-13	4.351E-13	4.539E-13	4.698E-13	4.833E-13	4.946E-13	5.042E-13	5.122E-13	5.189E-13
be 9	0.000E+00	1.302E-05	2.694E-05	4.163E-05	5.695E-05	7.281E-05	8.913E-05	1.058E-04	1.228E-04	1.401E-04	1.576E-04
be 10	0.000E+00	1.888E-04	3.841E-04	5.847E-04	7.896E-04	9.979E-04	1.209E-03	1.422E-03	1.636E-03	1.852E-03	2.068E-03
b 10	0.000E+00	6.398E-12	2.284E-11	4.616E-11	7.410E-11	1.050E-10	1.378E-10	1.714E-10	2.053E-10	2.389E-10	2.720E-10
be 11	0.000E+00	4.531E-11	4.734E-11	4.902E-11	5.042E-11	5.157E-11	5.252E-11	5.329E-11	5.390E-11	5.438E-11	5.474E-11
b 11	0.000E+00	1.222E-05	2.509E-05	3.850E-05	5.235E-05	6.656E-05	8.109E-05	9.586E-05	1.108E-04	1.260E-04	1.412E-04
be 12	0.000E+00	1.163E-14	1.556E-14	1.893E-14	2.185E-14	2.441E-14	2.667E-14	2.867E-14	3.045E-14	3.206E-14	3.350E-14
b 12	0.000E+00	1.250E-14	1.615E-14	1.928E-14	2.199E-14	2.436E-14	2.645E-14	2.830E-14	2.994E-14	3.142E-14	3.274E-14
c 12	0.000E+00	2.050E-06	4.878E-06	8.371E-06	1.244E-05	1.701E-05	2.202E-05	2.742E-05	3.317E-05	3.922E-05	4.556E-05
c 14	0.000E+00	4.307E-05	9.040E-05	1.413E-04	1.953E-04	2.519E-04	3.107E-04	3.714E-04	4.337E-04	4.975E-04	5.624E-04
n 14	0.000E+00	4.609E-10	1.907E-09	4.423E-09	8.081E-09	1.294E-08	1.906E-08	2.647E-08	3.523E-08	4.535E-08	5.687E-08
c 15	0.000E+00	6.859E-12	6.510E-12	6.199E-12	5.917E-12	5.657E-12	5.413E-12	5.181E-12	4.960E-12	4.747E-12	4.542E-12
n 15	0.000E+00	1.133E-05	2.208E-05	3.232E-05	4.210E-05	5.146E-05	6.041E-05	6.898E-05	7.719E-05	8.505E-05	9.258E-05
ne 21	0.000E+00	1.565E-04	3.050E-04	4.465E-04	5.816E-04	7.107E-04	8.343E-04	9.527E-04	1.066E-03	1.175E-03	1.278E-03
zn 66	0.000E+00	6.172E-07	1.282E-06	1.962E-06	2.657E-06	3.367E-06	4.093E-06	4.834E-06	5.590E-06	6.362E-06	7.150E-06
ga 66	0.000E+00	7.471E-24	1.651E-23	2.804E-23	4.301E-23	6.241E-23	8.730E-23	1.188E-22	1.580E-22	2.063E-22	2.648E-22
ge 66	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
zn 67	0.000E+00	3.440E-06	7.093E-06	1.076E-05	1.446E-05	1.818E-05	2.194E-05	2.574E-05	2.958E-05	3.347E-05	3.740E-05
ga 67	0.000E+00	3.852E-21	8.965E-21	1.766E-20	3.445E-20	6.622E-20	1.224E-19	2.149E-19	3.580E-19	5.687E-19	8.665E-19
ge 67	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.2140E-33	3.349E-33	4.995E-33	7.188E-33	1.006E-32	1.377E-32
zn 68	0.000E+00	5.422E-06	1.094E-05	1.657E-05	2.230E-05	2.814E-05	3.408E-05	4.014E-05	4.631E-05	5.259E-05	5.899E-05
ga 68	0.000E+00	1.192E-15	2.417E-15	3.678E-15	4.987E-15	6.352E-15	7.782E-15	9.281E-15	1.086E-14	1.251E-14	1.425E-14
ge 68	0.000E+00	1.088E-22	4.409E-22	1.024E-21	1.909E-21	3.167E-21	4.889E-21	7.184E-21	1.018E-20	1.401E-20	1.884E-20
zn 69	0.000E+00	7.626E-09	7.975E-09	8.294E-09	8.593E-09	8.876E-09	9.145E-09	9.404E-09	9.653E-09	9.896E-09	1.013E-08
zn 69m	0.000E+00	1.302E-10	2.128E-10	2.844E-10	3.475E-10	4.039E-10	4.549E-10	5.013E-10	5.439E-10	5.834E-10	6.201E-10
ga 69	0.000E+00	8.659E-06	1.777E-05	2.727E-05	3.714E-05	4.736E-05	5.790E-05	6.874E-05	7.988E-05	9.131E-05	1.030E-04
ge 69	0.000E+00	4.800E-18	1.944E-17	4.458E-17	8.114E-17	1.303E-16	1.932E-16	2.714E-16	3.665E-16	4.801E-16	6.142E-16
as 69	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
zn 70	0.000E+00	1.525E-05	3.220E-05	5.065E-05	7.045E-05	9.147E-05	1.136E-04	1.369E-04	1.611E-04	1.863E-04	2.124E-04
ga 70	0.000E+00	2.401E-12	4.886E-12	7.475E-12	1.019E-11	1.305E-11	1.606E-11	1.924E-11	2.259E-11	2.613E-11	2.986E-11
ge 70	0.000E+00	3.713E-09	1.499E-08	3.414E-08	6.155E-08	9.763E-08	1.429E-07	1.977E-07	2.627E-07	3.385E-07	4.256E-07
zn 71	0.000E+00	1.040E-09	1.120E-09	1.193E-09	1.262E-09	1.327E-09	1.391E-09	1.454E-09	1.515E-09	1.576E-09	1.636E-09
zn 71m	0.000E+00	5.338E-09	7.444E-09	9.304E-09	1.099E-08	1.254E-08	1.399E-08	1.536E-08	1.667E-08	1.793E-08	1.914E-08
ga 71	0.000E+00	2.786E-05	5.867E-05	9.210E-05	1.279E-04	1.660E-04	2.061E-04	2.484E-04	2.926E-04	3.388E-04	3.869E-04
ge 71	0.000E+00	4.372E-12	1.018E-11	1.597E-11	2.191E-11	2.816E-11	3.489E-11	4.225E-11	5.037E-11	5.940E-11	6.948E-11
ge 71m	0.000E+00	5.648E-20	1.071E-19	1.510E-19	1.895E-19	2.239E-19	2.548E-19	2.829E-19	3.085E-19	3.322E-19	3.542E-19
as 71	0.000E+00	2.968E-22	6.345E-22	1.039E-21	1.542E-21	2.173E-21	2.967E-21	3.957E-21	5.179E-21	6.671E-21	8.471E-21
zn 72	0.000E+00	3.443E-06	3.824E-06	4.151E-06	4.436E-06	4.688E-06	4.912E-06	5.112E-06	5.292E-06	5.456E-06	5.605E-06

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
ga 72	0.000E+00	1.049E-06	1.168E-06	1.270E-06	1.360E-06	1.439E-06	1.510E-06	1.573E-06	1.630E-06	1.682E-06	1.730E-06
ga 72m	0.000E+00	1.653E-15	2.743E-15	3.683E-15	4.505E-15	5.232E-15	5.881E-15	6.464E-15	6.992E-15	7.474E-15	7.916E-15
ge 72	0.000E+00	7.226E-05	1.586E-04	2.538E-04	3.565E-04	4.660E-04	5.813E-04	7.020E-04	8.274E-04	9.572E-04	1.091E-03
as 72	0.000E+00	4.315E-15	8.202E-15	1.154E-14	1.445E-14	1.702E-14	1.929E-14	2.132E-14	2.315E-14	2.480E-14	2.631E-14
se 72	0.000E+00	1.480E-31	3.627E-31	6.389E-31	1.003E-30	1.486E-30	2.120E-30	2.942E-30	3.992E-30	5.315E-30	6.962E-30
zn 73	0.000E+00	1.675E-09	1.751E-09	1.817E-09	1.874E-09	1.923E-09	1.966E-09	2.004E-09	2.037E-09	2.066E-09	2.092E-0

ga 73	0.000E+00	1.270E-06	1.337E-06	1.393E-06	1.443E-06	1.485E-06	1.523E-06	1.556E-06	1.585E-06	1.611E-06	1.634E-06
ge 73	0.000E+00	2.761E-04	5.693E-04	8.757E-04	1.193E-03	1.521E-03	1.856E-03	2.198E-03	2.546E-03	2.899E-03	3.256E-03
ge 73m	0.000E+00	3.576E-11	3.763E-11	3.923E-11	4.062E-11	4.183E-11	4.289E-11	4.382E-11	4.464E-11	4.537E-11	4.602E-11
as 73	0.000E+00	6.837E-12	2.245E-11	4.138E-11	6.085E-11	7.956E-11	9.696E-11	1.129E-10	1.274E-10	1.405E-10	1.524E-10
se 73	0.000E+00	7.649E-24	1.690E-23	2.870E-23	4.403E-23	6.389E-23	8.937E-23	1.216E-22	1.618E-22	2.112E-22	2.711E-22
se 73m	0.000E+00	1.427E-25	3.154E-25	5.355E-25	8.213E-25	1.192E-24	1.667E-24	2.269E-24	3.018E-24	3.940E-24	5.057E-24
zn 74	0.000E+00	2.043E-08	2.079E-08	2.109E-08	2.132E-08	2.151E-08	2.165E-08	2.176E-08	2.183E-08	2.187E-08	2.188E-08
ga 74	0.000E+00	8.944E-08	9.212E-08	9.434E-08	9.620E-08	9.775E-08	9.903E-08	1.001E-07	1.009E-07	1.016E-07	1.021E-07
ga 74m	0.000E+00	1.574E-09	1.614E-09	1.647E-09	1.675E-09	1.697E-09	1.716E-09	1.730E-09	1.742E-09	1.750E-09	1.757E-09
ge 74	0.000E+00	8.731E-04	1.778E-03	2.710E-03	3.664E-03	4.637E-03	5.627E-03	6.630E-03	7.644E-03	8.668E-03	9.699E-03
as 74	0.000E+00	2.084E-10	4.826E-10	7.258E-10	9.378E-10	1.124E-09	1.289E-09	1.436E-09	1.569E-09	1.689E-09	1.798E-09
se 74	0.000E+00	7.574E-11	3.764E-10	8.934E-10	1.593E-09	2.446E-09	3.428E-09	4.517E-09	5.695E-09	6.948E-09	8.262E-09
zn 75	0.000E+00	5.534E-09	5.471E-09	5.410E-09	5.352E-09	5.294E-09	5.235E-09	5.175E-09	5.113E-09	5.050E-09	4.987E-09
ga 75	0.000E+00	8.484E-08	8.527E-08	8.556E-08	8.572E-08	8.577E-08	8.571E-08	8.555E-08	8.530E-08	8.497E-08	8.458E-08
ge 75	0.000E+00	3.369E-06	3.393E-06	3.411E-06	3.423E-06	3.429E-06	3.431E-06	3.429E-06	3.422E-06	3.412E-06	3.400E-06
ge 75m	0.000E+00	1.743E-09	1.810E-09	1.867E-09	1.915E-09	1.955E-09	1.989E-09	2.017E-09	2.041E-09	2.061E-09	2.077E-09
as 75	0.000E+00	2.653E-03	5.330E-03	8.021E-03	1.072E-02	1.342E-02	1.612E-02	1.882E-02	2.150E-02	2.417E-02	2.682E-02
se 75	0.000E+00	4.986E-12	1.886E-11	4.024E-11	6.816E-11	1.019E-10	1.409E-10	1.847E-10	2.329E-10	2.853E-10	3.415E-10
br 75	0.000E+00	3.021E-25	6.675E-25	1.134E-24	1.739E-24	2.523E-24	3.529E-24	4.802E-24	6.389E-24	8.339E-24	1.070E-23
zn 76	0.000E+00	6.636E-09	6.449E-09	6.281E-09	6.126E-09	5.981E-09	5.843E-09	5.709E-09	5.580E-09	5.454E-09	5.330E-09
ga 76	0.000E+00	6.043E-08	5.967E-08	5.895E-08	5.826E-08	5.758E-08	5.690E-08	5.622E-08	5.553E-08	5.483E-08	5.413E-08
ge 76	0.000E+00	7.689E-03	1.534E-02	2.295E-02	3.052E-02	3.803E-02	4.550E-02	5.290E-02	6.024E-02	6.752E-02	7.473E-02
as 76	0.000E+00	1.915E-07	3.742E-07	5.590E-07	7.471E-07	9.396E-07	1.137E-06	1.340E-06	1.549E-06	1.763E-06	1.984E-06
se 76	0.000E+00	4.075E-06	1.570E-05	3.488E-05	6.170E-05	9.625E-05	1.387E-04	1.891E-04	2.478E-04	3.148E-04	3.903E-04
zn 77	0.000E+00	4.138E-09	3.977E-09	3.834E-09	3.704E-09	3.583E-09	3.470E-09	3.362E-09	3.259E-09	3.159E-09	3.062E-09
ga 77	0.000E+00	6.065E-08	5.936E-08	5.818E-08	5.709E-08	5.604E-08	5.503E-08	5.405E-08	5.307E-08	5.211E-08	5.116E-08
ge 77	0.000E+00	5.732E-05	5.837E-05	5.921E-05	5.990E-05	6.045E-05	6.087E-05	6.118E-05	6.140E-05	6.154E-05	6.160E-05
ge 77m	0.000E+00	2.465E-07	2.416E-07	2.372E-07	2.331E-07	2.291E-07	2.253E-07	2.215E-07	2.178E-07	2.141E-07	2.104E-07
as 77	0.000E+00	7.122E-04	7.061E-04	7.001E-04	6.941E-04	6.880E-04	6.816E-04	6.750E-04	6.681E-04	6.610E-04	6.536E-04
se 77	0.000E+00	1.936E-02	3.928E-02	5.898E-02	7.845E-02	9.769E-02	1.167E-01	1.354E-01	1.539E-01	1.721E-01	1.899E-01
se 77m	0.000E+00	2.879E-10	2.890E-10	2.902E-10	2.916E-10	2.930E-10	2.944E-10	2.959E-10	2.975E-10	2.991E-10	3.009E-10
br 77	0.000E+00	2.028E-13	3.848E-13	5.412E-13	6.775E-13	7.975E-13	9.039E-13	9.989E-13	1.084E-12	1.162E-12	1.232E-12
br 77m	0.000E+00	1.955E-16	3.706E-16	5.211E-16	6.522E-16	7.676E-16	8.700E-16	9.614E-16	1.044E-15	1.118E-15	1.186E-15
kr 77	0.000E+00	4.144E-26	1.572E-25	3.386E-25	5.803E-25	8.786E-25	1.231E-24	1.636E-24	2.092E-24	2.598E-24	3.155E-24
zn 78	0.000E+00	3.387E-09	3.245E-09	3.118E-09	3.004E-09	2.900E-09	2.802E-09	2.710E-09	2.622E-09	2.538E-09	2.457E-09
ga 78	0.000E+00	4.553E-08	4.421E-08	4.303E-08	4.197E-08	4.099E-08	4.007E-08	3.920E-08	3.837E-08	3.757E-08	3.679E-08
ge 78	0.000E+00	7.165E-05	7.087E-05	7.015E-05	6.946E-05	6.881E-05	6.816E-05	6.752E-05	6.688E-05	6.625E-05	6.561E-05
as 78	0.000E+00	7.445E-05	7.377E-05	7.313E-05	7.252E-05	7.193E-05	7.134E-05	7.075E-05	7.015E-05	6.955E-05	6.895E-05
se 78	0.000E+00	5.401E-02	1.079E-01	1.614E-01	2.146E-01	2.675E-01	3.201E-01	3.724E-01	4.244E-01	4.760E-01	5.273E-01
br 78	0.000E+00	4.080E-14	7.629E-14	1.069E-13	1.336E-13	1.573E-13	1.784E-13	1.974E-13	2.146E-13	2.303E-13	2.447E-13
kr 78	0.000E+00	2.194E-14	8.295E-14	1.775E-13	3.013E-13	4.507E-13	6.229E-13	8.154E-13	1.026E-12	1.254E-12	1.496E-12
zn 79	0.000E+00	1.140E-09	1.093E-09	1.052E-09	1.014E-09	9.806E-10	9.491E-10	9.196E-10	8.915E-10	8.648E-10	8.391E-10
ga 79	0.000E+00	3.750E-08	3.623E-08	3.510E-08	3.408E-08	3.314E-08	3.226E-08	3.143E-08	3.063E-08	2.986E-08	2.911E-08
ge 79	0.000E+00	3.824E-07	3.757E-07	3.696E-07	3.640E-07	3.586E-07	3.534E-07	3.482E-07	3.432E-07	3.382E-07	3.332E-07

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm*2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
ge 79m	0.000E+00	3.288E-07	3.300E-07	3.307E-07	3.311E-07	3.310E-07	3.307E-07	3.300E-07	3.291E-07	3.279E-07	3.265E-07
as 79	0.000E+00	1.622E-05	1.612E-05	1.602E-05	1.592E-05	1.582E-05	1.571E-05	1.559E-05	1.546E-05	1.533E-05	1.520E-05
se 79	0.000E+00	1.184E-01	2.362E-01	3.534E-01	4.698E-01	5.853E-01	7.000E-01	8.137E-01	9.263E-01	1.038E+00	1.148E+00
se 79m	0.000E+00	6.965E-06	6.924E-06	6.882E-06	6.840E-06	6.795E-06	6.748E-06	6.698E-06	6.646E-06	6.591E-06	6.534E-06
br 79	0.000E+00	4.381E-08	1.662E-07	3.622E-07	6.280E-07	9.600E-07	1.355E-06	1.811E-06	2.326E-06	2.896E-06	3.520E-06
br 79m	0.000E+00	3.164E-14	5.704E-14	7.890E-14	9.796E-14	1.148E-13	1.297E-13	1.430E-13	1.551E-13	1.660E-13	1.760E-13
kr 79	0.000E+00	7.646E-14	1.456E-13	2.055E-13	2.581E-13	3.050E-13	3.470E-13	3.851E-13	4.198E-13	4.518E-13	4.815E-13
kr 79m	0.000E+00	1.497E-17	2.839E-17	3.992E-17	4.996E-17	5.880E-17	6.665E-17	7.365E-17	7.995E-17	8.565E-17	9.084E-17
rb 79	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.355E-33	5.095E-32	2.441E-31	9.730E-31	3.354E-30
zn 80	0.000E+00	1.043E-10	1.008E-10	9.771E-11	9.499E-11	9.255E-11	9.030E-11	8.822E-11	8.627E-11	8.443E-11	8.268E-11
ga 80	0.000E+00	1.353E-08	1.308E-08	1.268E-08	1.232E-08	1.199E-08	1.168E-08	1.139E-08	1.110E-08	1.083E-08	1.057E-08
ge 80	0.000E+00	2.197E-06	2.140E-06	2.087E-06	2.039E-06	1.994E-06	1.950E-06	1.908E-06	1.867E-06	1.827E-06	1.787E-06
as 80	0.000E+00	1.277E-06	1.255E-06	1.234E-06	1.214E-06	1.195E-06	1.176E-06	1.158E-06	1.139E-06	1.121E-06	1.103E-06
se 80	0.000E+00	3.356E-01	6.662E-01	9.922E-01	1.314E+00	1.631E+00	1.944E+00	2.253E+00	2.557E+00	2.858E+00	3.153E+00
br 80	0.000E+00	1.465E-10	1.853E-10	2.189E-10	2.486E-10	2.750E-10	2.989E-10	3.206E-10	3.405E-10	3.590E-10	3.762E-10
br 80m	0.000E+00	1.647E-09	2.082E-09	2.458E-09	2.788E-09	3.082E-09	3.345E-09	3.583E-09	3.801E-09	4.001E-09	4.186E-09
kr 80	0.000E+00	4.256E-07	9.948E-07	1.686E-06	2.484E-06	3.376E-06	4.352E-06	5.402E-06	6.520E-06	7.700E-06	8.936E-06
zn 81	0.000E+00	1.709E-12	1.725E-12	1.747E-12	1.772E-12	1.800E-12	1.831E-12	1.864E-12	1.899E-12	1.936E-12	1.973E-12
ga 81	0.000E+00	7.131E-09	6.865E-09	6.631E-09	6.421E-09	6.229E-09	6.051E-09	5.883E-09	5.724E-09	5.571E-09	5.425E-09
ge 81	0.000E+00	6.605E-07	6.409E-07	6.232E-07	6.070E-07	5.920E-07	5.777E-07	5.641E-07	5.508E-07	5.380E-07	5.255E-07
ge 81m	0.000E+00	1.806E-08	1.739E-08	1.680E-08	1.627E-08	1.578E-08	1.533E-08	1.490E-08	1.450E-08	1.411E-08	1.374E-08
as 81	0.000E+00	4.372E-06	4.315E-06	4.262E-06	4.211E-06	4.161E-06	4.111E-06	4.061E-06	4.010E-06	3.959E-06	3.908E-06
se 81	0.000E+00	1.517E-04	1.503E-04	1.490E-04	1.476E-04	1.463E-04	1.449E-04	1.435E-04	1.420E-04	1.405E-04	1.389E-04
se 81m	0.000E+00	3.079E-05	3.191E-05	3.285E-05	3.363E-05	3.429E-05	3.484E-05	3.530E-05	3.567E-05	3.597E-05	3.622E-05
br 81	0.000E+00	5.417E-01	1.078E+00	1.610E+00	2.137E+00	2.658E+00	3.173E+00	3.682E+00	4.185E+00	4.682E+00	5.172E+00
kr 81	0.000E+00	1.858E-08	6.740E-08	1.430E-07	2.427E-07	3.645E-07	5.066E-07	6.680E-07	8.475E-07	1.044E-06	1.258E-06
kr 81m	0.000E+00	1.620E-14	3.073E-14	4.444E-14	5.763E-14	7.050E-14	8.322E-14	9.589E-14	1.086E-13	1.215E-13	1.347E-13
rb 81											

Fort Calhoun Station	CALCULATION SHEET Attachment 10.5	FC08514 Revision 0 Page 18
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as 82m	0.000E+00	2.797E-07	2.902E-07	2.993E-07	3.074E-07	3.147E-07	3.214E-07	3.276E-07	3.333E-07	3.386E-07	3.435E-07
se 82	0.000E+00	8.833E-01	1.752E+00	2.609E+00	3.453E+00	4.285E+00	5.106E+00	5.917E+00	6.716E+00	7.505E+00	8.283E+00
br 82	0.000E+00	4.665E-05	8.800E-05	1.290E-04	1.702E-04	2.117E-04	2.538E-04	2.967E-04	3.403E-04	3.847E-04	4.302E-04
br 82m	0.000E+00	1.092E-07	2.135E-07	3.182E-07	4.240E-07	5.316E-07	6.412E-07	7.533E-07	8.679E-07	9.853E-07	1.105E-06
kr 82	0.000E+00	7.871E-04	2.893E-03	6.287E-03	1.096E-02	1.691E-02	2.413E-02	3.265E-02	4.246E-02	5.358E-02	6.602E-02
zn 83	0.000E+00	3.623E-14	3.614E-14	3.619E-14	3.635E-14	3.659E-14	3.691E-14	3.728E-14	3.769E-14	3.815E-14	3.863E-14
ga 83	0.000E+00	8.983E-11	8.821E-11	8.697E-11	8.604E-11	8.534E-11	8.483E-11	8.446E-11	8.421E-11	8.407E-11	8.401E-11
ge 83	0.000E+00	7.222E-08	6.953E-08	6.717E-08	6.507E-08	6.316E-08	6.141E-08	5.977E-08	5.824E-08	5.678E-08	5.539E-08
as 83	0.000E+00	3.225E-06	3.124E-06	3.034E-06	2.952E-06	2.878E-06	2.808E-06	2.742E-06	2.680E-06	2.619E-06	2.561E-06
se 83	0.000E+00	2.264E-04	2.217E-04	2.175E-04	2.137E-04	2.101E-04	2.067E-04	2.033E-04	2.001E-04	1.970E-04	1.939E-04
se 83m	0.000E+00	1.342E-05	1.305E-05	1.271E-05	1.241E-05	1.214E-05	1.188E-05	1.163E-05	1.139E-05	1.116E-05	1.094E-05
br 83	0.000E+00	3.230E-03	3.152E-03	3.083E-03	3.020E-03	2.961E-03	2.906E-03	2.852E-03	2.801E-03	2.751E-03	2.702E-03
kr 83	0.000E+00	1.471E+00	2.886E+00	4.244E+00	5.548E+00	6.799E+00	8.000E+00	9.151E+00	1.025E+01	1.131E+01	1.231E+01
kr 83m	0.000E+00	2.463E-03	2.405E-03	2.353E-03	2.306E-03	2.262E-03	2.220E-03	2.181E-03	2.142E-03	2.105E-03	2.069E-03
rb 83	0.000E+00	3.218E-09	9.816E-09	1.771E-08	2.584E-08	3.366E-08	4.094E-08	4.762E-08	5.368E-08	5.918E-08	6.416E-08
sr 83	0.000E+00	4.359E-15	8.290E-15	1.167E-14	1.461E-14	1.720E-14	1.950E-14	2.156E-14	2.341E-14	2.508E-14	2.660E-14
ga 84	0.000E+00	7.118E-10	6.758E-10	6.437E-10	6.146E-10	5.878E-10	5.626E-10	5.388E-10	5.160E-10	4.941E-10	4.730E-10
ge 84	0.000E+00	2.547E-08	2.447E-08	2.361E-08	2.284E-08	2.215E-08	2.151E-08	2.092E-08	2.036E-08	1.984E-08	1.934E-08

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

as 84	0.000E+00	5.091E-07	4.925E-07	4.780E-07	4.651E-07	4.534E-07	4.428E-07	4.328E-07	4.235E-07	4.147E-07	4.064E-07
as 84m	0.000E+00	4.376E-08	4.241E-08	4.122E-08	4.017E-08	3.921E-08	3.834E-08	3.752E-08	3.676E-08	3.604E-08	3.535E-08
se 84	0.000E+00	1.396E-04	1.353E-04	1.315E-04	1.281E-04	1.249E-04	1.220E-04	1.192E-04	1.165E-04	1.139E-04	1.114E-04
br 84	0.000E+00	1.412E-03	1.370E-03	1.333E-03	1.299E-03	1.268E-03	1.238E-03	1.210E-03	1.184E-03	1.158E-03	1.133E-03
br 84m	0.000E+00	4.538E-06	4.854E-06	5.123E-06	5.356E-06	5.560E-06	5.740E-06	5.899E-06	6.040E-06	6.167E-06	6.281E-06
kr 84	0.000E+00	3.022E+00	5.992E+00	8.915E+00	1.180E+01	1.465E+01	1.746E+01	2.025E+01	2.301E+01	2.574E+01	2.845E+01
rb 84	0.000E+00	1.685E-07	4.760E-07	8.153E-07	1.163E-06	1.515E-06	1.871E-06	2.233E-06	2.601E-06	2.976E-06	3.358E-06
sr 84	0.000E+00	3.513E-09	2.116E-08	5.698E-08	1.119E-07	1.862E-07	2.802E-07	3.941E-07	5.281E-07	6.828E-07	8.583E-07
ga 85	0.000E+00	3.945E-13	3.936E-13	3.942E-13	3.961E-13	3.989E-13	4.025E-13	4.066E-13	4.113E-13	4.164E-13	4.219E-13
ge 85	0.000E+00	6.570E-10	6.407E-10	6.275E-10	6.167E-10	6.077E-10	6.002E-10	5.938E-10	5.883E-10	5.837E-10	5.797E-10
as 85	0.000E+00	3.849E-07	3.681E-07	3.534E-07	3.402E-07	3.281E-07	3.170E-07	3.066E-07	2.967E-07	2.873E-07	2.784E-07
se 85	0.000E+00	2.279E-05	2.209E-05	2.146E-05	2.089E-05	2.037E-05	1.987E-05	1.940E-05	1.895E-05	1.851E-05	1.809E-05
br 85	0.000E+00	1.516E-04	1.472E-04	1.432E-04	1.397E-04	1.363E-04	1.332E-04	1.302E-04	1.273E-04	1.245E-04	1.218E-04
kr 85	0.000E+00	8.084E-01	1.587E+00	2.337E+00	3.058E+00	3.754E+00	4.425E+00	5.072E+00	5.697E+00	6.299E+00	6.880E+00
kr 85m	0.000E+00	1.423E-02	1.382E-02	1.345E-02	1.312E-02	1.281E-02	1.252E-02	1.224E-02	1.197E-02	1.171E-02	1.145E-02
rb 85	0.000E+00	2.787E+00	5.516E+00	8.182E+00	1.079E+01	1.335E+01	1.585E+01	1.831E+01	2.073E+01	2.310E+01	2.542E+01
sr 85	0.000E+00	7.075E-10	2.002E-09	3.460E-09	4.897E-09	6.245E-09	7.486E-09	8.623E-09	9.667E-09	1.063E-08	1.153E-08
sr 85m	0.000E+00	8.662E-13	1.547E-12	2.141E-12	2.667E-12	3.142E-12	3.575E-12	3.975E-12	4.350E-12	4.705E-12	5.046E-12
y 85	0.000E+00	3.236E-23	3.044E-22	1.761E-21	6.319E-21	1.683E-20	3.691E-20	7.065E-20	1.224E-19	1.965E-19	2.969E-19
ge 86	0.000E+00	1.034E-07	9.811E-08	9.343E-08	8.918E-08	8.526E-08	8.159E-08	7.810E-08	7.477E-08	7.157E-08	6.848E-08
as 86	0.000E+00	3.152E-07	2.998E-07	2.862E-07	2.738E-07	2.625E-07	2.518E-07	2.418E-07	2.322E-07	2.230E-07	2.141E-07
se 86	0.000E+00	1.419E-05	1.365E-05	1.318E-05	1.275E-05	1.235E-05	1.198E-05	1.164E-05	1.130E-05	1.099E-05	1.068E-05
br 86	0.000E+00	6.915E-05	6.699E-05	6.507E-05	6.333E-05	6.172E-05	6.021E-05	5.878E-05	5.741E-05	5.609E-05	5.481E-05
kr 86	0.000E+00	5.412E+00	1.066E+01	1.577E+01	2.074E+01	2.560E+01	3.034E+01	3.497E+01	3.950E+01	4.392E+01	4.825E+01
rb 86	0.000E+00	2.322E-04	5.762E-04	9.265E-04	1.277E-03	1.631E-03	1.988E-03	2.351E-03	2.720E-03	3.096E-03	3.479E-03
rb 86m	0.000E+00	1.382E-09	2.584E-09	3.758E-09	4.921E-09	6.083E-09	7.249E-09	8.426E-09	9.617E-09	1.082E-08	1.205E-08
sr 86	0.000E+00	2.268E-04	1.213E-03	3.053E-03	5.751E-03	9.312E-03	1.374E-02	1.905E-02	2.526E-02	3.238E-02	4.042E-02
ge 87	0.000E+00	2.003E-10	1.902E-10	1.812E-10	1.731E-10	1.656E-10	1.586E-10	1.520E-10	1.456E-10	1.395E-10	1.336E-10
as 87	0.000E+00	1.126E-08	1.074E-08	1.027E-08	9.853E-09	9.469E-09	9.111E-09	8.773E-09	8.451E-09	8.144E-09	7.848E-09
se 87	0.000E+00	3.204E-06	3.078E-06	2.967E-06	2.867E-06	2.775E-06	2.690E-06	2.610E-06	2.534E-06	2.462E-06	2.392E-06
br 87	0.000E+00	8.226E-05	7.953E-05	7.710E-05	7.491E-05	7.289E-05	7.099E-05	6.920E-05	6.749E-05	6.585E-05	6.426E-05
kr 87	0.000E+00	8.435E-03	8.171E-03	7.935E-03	7.721E-03	7.523E-03	7.336E-03	7.159E-03	6.989E-03	6.825E-03	6.667E-03
rb 87	0.000E+00	7.374E+00	1.453E+01	2.149E+01	2.826E+01	3.486E+01	4.130E+01	4.758E+01	5.372E+01	5.972E+01	6.558E+01
sr 87	0.000E+00	5.701E-06	1.536E-05	2.876E-05	4.583E-05	6.659E-05	9.114E-05	1.197E-04	1.524E-04	1.896E-04	2.316E-04
sr 87m	0.000E+00	3.927E-09	6.649E-09	1.005E-08	1.423E-08	1.926E-08	2.524E-08	3.226E-08	4.040E-08	4.978E-08	6.050E-08
y 87	0.000E+00	2.993E-11	5.523E-11	7.698E-11	9.594E-11	1.126E-10	1.275E-10	1.407E-10	1.526E-10	1.634E-10	1.733E-10
zr 87	0.000E+00	1.241E-23	8.890E-23	4.387E-22	1.496E-21	3.908E-21	8.498E-21	1.620E-20	2.800E-20	4.489E-20	6.778E-20
ge 88	0.000E+00	4.808E-12	4.576E-12	4.371E-12	4.185E-12	4.014E-12	3.855E-12	3.704E-12	3.561E-12	3.423E-12	3.290E-12
as 88	0.000E+00	1.152E-08	1.094E-08	1.042E-08	9.954E-09	9.522E-09	9.117E-09	8.734E-09	8.367E-09	8.015E-09	7.675E-09
se 88	0.000E+00	4.149E-07	3.979E-07	3.829E-07	3.695E-07	3.573E-07	3.459E-07	3.352E-07	3.252E-07	3.156E-07	3.064E-07
br 88	0.000E+00	2.110E-05	2.036E-05	1.971E-05	1.912E-05	1.858E-05	1.807E-05	1.760E-05	1.714E-05	1.671E-05	1.629E-05
rb 88	0.000E+00	2.594E-02	2.510E-02	2.435E-02	2.366E-02	2.303E-02	2.244E-02	2.188E-02	2.133E-02	2.078E-02	2.031E-02
rb 88	0.000E+00	2.725E-03	2.639E-03	2.561E-03	2.491E-03	2.426E-03	2.365E-03	2.307E-03	2.251E-03	2.197E-03	2.145E-03
sr 88	0.000E+00	1.020E+01	2.012E+01	2.974E+01	3.911E+01	4.824E+01	5.714E+01	6.582E+01	7.430E+01	8.258E+01	9.066E+01
y 88	0.000E+00	1.208E-07	6.718E-07	1.690E-06	3.087E-06	4.761E-06	6.632E-06	8.641E-06	1.075E-05	1.294E-05	1.518E-05
zr 88	0.000E+00	2.825E-13	9.331E-13	1.728E-12	2.552E-12	3.349E-12	4.092E-12	4.775E-12	5.396E-12	5.960E-12	6.473E-12
as 89	0.000E+00	3.181E-11	3.122E-11	3.076E-11	3.042E-11	3.016E-11	2.997E-11	2.984E-11	2.974E-11	2.969E-11	2.966E-11
se 89	0.000E+00	2.002E-08	1.941E-08	1.889E-08	1.844E-08	1.806E-08	1.771E-08	1.741E-08	1.713E-08	1.688E-08	1.665E-08
br 89	0.000E+00	3.710E-06	3.593E-06	3.490E-06	3.398E-06	3.314E-06	3.237E-06	3.165E-06	3.097E-06	3.032E-06	2.971E-06
kr 89	0.000E+00	6.229E-04	6.017E-04	5.827E-04	5.655E-04	5.496E-04	5.347E-04	5.205E-04	5.069E-04	4.939E-04	4.812E-04

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

rb 89	0.000E+00	3.127E-03	3.026E-03	2.935E-03	2.853E-03	2.777E-03	2.706E-03	2.637E-03	2.572E-03	2.509E-03	2.448E-03
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Cycle 1 -DD Assembly		fission products											page
power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec													
		nuclide concentrations, grams											
		basis = 0.3883 MTU											
	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d		
tc 93	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00		
br 94	0.000E+00	6.597E-11	7.522E-11	8.332E-11	9.053E-11	9.699E-11	1.028E-10	1.082E-10	1.131E-10	1.176E-10	1.218E-10		
kr 94	0.000E+00	2.086E-08	2.037E-08	1.996E-08	1.963E-08	1.935E-08	1.912E-08	1.892E-08	1.875E-08	1.860E-08	1.848E-08		
rb 94	0.000E+00	3.731E-06	3.633E-06	3.548E-06	3.474E-06	3.407E-06	3.347E-06	3.292E-06	3.241E-06	3.193E-06	3.149E-06		
sr 94	0.000E+00	3.580E-04	3.502E-04	3.433E-04	3.369E-04	3.311E-04	3.256E-04	3.204E-04	3.154E-04	3.106E-04	3.060E-04		
y 94	0.000E+00	5.691E-03	5.583E-03	5.487E-03	5.398E-03	5.316E-03	5.239E-03	5.164E-03	5.092E-03	5.022E-03	4.954E-03		
zr 94	0.000E+00	2.024E+01	4.015E+01	5.977E+01	7.911E+01	9.820E+01	1.170E+02	1.357E+02	1.541E+02	1.722E+02	1.902E+02		
nb 94	0.000E+00	1.925E-06	6.070E-06	1.211E-05	1.978E-05	2.886E-05	3.919E-05	5.061E-05	6.300E-05	7.625E-05	9.027E-05		
nb 94m	0.000E+00	1.189E-10	1.993E-10	2.685E-10	3.287E-10	3.817E-10	4.288E-10	4.708E-10	5.086E-10	5.428E-10	5.740E-10		
mo 94	0.000E+00	2.732E-06	1.519E-05	4.616E-05	1.018E-04	1.857E-04	3.000E-04	4.461E-04	6.249E-04	8.372E-04	1.084E-03		
rb 95	0.000E+00	7.875E-13	7.629E-13	7.815E-13	7.828E-13	7.862E-13	7.913E-13	7.980E-13	8.059E-13	8.149E-13	8.248E-13		
kr 95	0.000E+00	8.903E-09	8.737E-09	8.613E-09	8.523E-09	8.461E-09	8.421E-09	8.400E-09	8.395E-09	8.403E-09	8.422E-09		
rb 95	0.000E+00	2.562E-07	2.508E-07	2.461E-07	2.420E-07	2.383E-07	2.350E-07	2.319E-07	2.291E-07	2.265E-07	2.240E-07		
sr 95	0.000E+00	1.060E-04	1.037E-04	1.016E-04	9.966E-05	9.793E-05	9.632E-05	9.481E-05	9.337E-05	9.200E-05	9.069E-05		
y 95	0.000E+00	3.220E-03	3.169E-03	3.124E-03	3.082E-03	3.044E-03	3.007E-03	2.972E-03	2.939E-03	2.906E-03	2.874E-03		
zr 95	0.000E+00	1.478E+01	2.183E+01	2.509E+01	2.652E+01	2.705E+01	2.715E+01	2.705E+01	2.685E+01	2.660E+01	2.633E+01		
nb 95	0.000E+00	3.897E+00	8.796E+00	1.193E+01	1.360E+01	1.439E+01	1.470E+01	1.477E+01	1.472E+01	1.462E+01	1.449E+01		
nb 95m	0.000E+00	9.256E-03	1.394E-02	1.611E-02	1.707E-02	1.743E-02	1.750E-02	1.744E-02	1.731E-02	1.715E-02	1.698E-02		
mo 95	0.000E+00	1.992E+00	1.040E+01	2.403E+01	4.064E+01	5.870E+01	7.735E+01	9.614E+01	1.148E+02	1.333E+02	1.515E+02		
tc 95	0.000E+00	3.866E-21	9.930E-20	6.540E-19	2.417E-18	6.507E-18	1.434E-17	2.753E-17	4.779E-17	7.682E-17	1.162E-16		
tc 95m	0.000E+00	7.300E-21	3.183E-19	2.896E-18	1.325E-17	4.155E-17	1.028E-16	2.161E-16	4.038E-16	6.898E-16	1.098E-15		
ru 95	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00		
br 96	0.000E+00	2.799E-13	2.757E-13	2.724E-13	2.700E-13	2.681E-13	2.667E-13	2.656E-13	2.649E-13	2.644E-13	2.640E-13		
kr 96	0.000E+00	8.812E-09	8.474E-09	8.173E-09	7.899E-09	7.646E-09	7.407E-09	7.179E-09	6.960E-09	6.748E-09	6.542E-09		
rb 96	0.000E+00	4.202E-08	4.085E-08	3.986E-08	3.904E-08	3.834E-08	3.773E-08	3.721E-08	3.675E-08	3.635E-08	3.600E-08		
sr 96	0.000E+00	3.299E-06	3.217E-06	3.145E-06	3.082E-06	3.024E-06	2.972E-06	2.923E-06	2.878E-06	2.836E-06	2.795E-06		
v 96	0.000E+00	1.942E-05	1.897E-05	1.857E-05	1.821E-05	1.789E-05	1.759E-05	1.732E-05	1.707E-05	1.683E-05	1.660E-05		

y 96m	0.000E+00	1.556E-05	1.555E-05	1.554E-05	1.552E-05	1.549E-05	1.546E-05	1.542E-05	1.538E-05	1.532E-05	1.527E-05
zr 96	0.000E+00	2.058E+01	4.090E+01	6.098E+01	8.084E+01	1.005E+02	1.199E+02	1.392E+02	1.583E+02	1.772E+02	1.959E+02
nb 96	0.000E+00	1.318E-04	2.498E-04	3.301E-04	3.789E-04	4.091E-04	4.296E-04	4.453E-04	4.589E-04	4.716E-04	4.841E-04
mo 96	0.000E+00	6.128E-03	4.280E-02	1.393E-01	3.150E-01	5.814E-01	9.456E-01	1.412E+00	1.984E+00	2.663E+00	3.454E+00
tc 96	0.000E+00	1.047E-17	4.082E-17	9.036E-17	1.584E-16	2.444E-16	3.480E-16	4.691E-16	6.077E-16	7.638E-16	9.380E-16
ru 96	0.000E+00	2.764E-28	1.408E-26	1.438E-25	7.327E-25	2.545E-24	6.945E-24	1.604E-23	3.283E-23	6.123E-23	1.062E-22
kr 97	0.000E+00	1.222E-11	1.755E-11	2.214E-11	2.617E-11	2.972E-11	3.289E-11	3.573E-11	3.830E-11	4.063E-11	4.277E-11
rb 97	0.000E+00	5.715E-09	5.510E-09	5.334E-09	5.181E-09	5.047E-09	4.928E-09	4.822E-09	4.726E-09	4.639E-09	4.559E-09
sr 97	0.000E+00	6.251E-07	6.088E-07	5.946E-07	5.823E-07	5.713E-07	5.615E-07	5.526E-07	5.445E-07	5.370E-07	5.300E-07
y 97	0.000E+00	8.974E-06	8.826E-06	8.697E-06	8.583E-06	8.481E-06	8.388E-06	8.302E-06	8.223E-06	8.148E-06	8.078E-06
y 97m	0.000E+00	1.870E-06	1.851E-06	1.835E-06	1.820E-06	1.807E-06	1.794E-06	1.782E-06	1.771E-06	1.760E-06	1.750E-06
zr 97	0.000E+00	3.044E-01	3.018E-01	2.994E-01	2.972E-01	2.952E-01	2.933E-01	2.915E-01	2.898E-01	2.881E-01	2.864E-01
nb 97	0.000E+00	2.171E-02	2.153E-02	2.137E-02	2.122E-02	2.108E-02	2.096E-02	2.083E-02	2.071E-02	2.060E-02	2.048E-02
nb 97m	0.000E+00	2.848E-04	2.823E-04	2.801E-04	2.781E-04	2.762E-04	2.745E-04	2.728E-04	2.712E-04	2.696E-04	2.681E-04
mo 97	0.000E+00	1.951E-01	1.921E+01	1.877E+01	1.820E+01	1.750E+01	1.67E+02	1.357E+02	1.547E+02	1.735E+02	1.922E+02
tc 97	0.000E+00	3.966E-10	1.640E-09	3.773E-09	6.778E-09	1.061E-08	1.522E-08	2.056E-08	2.657E-08	3.322E-08	4.047E-08
tc 97m	0.000E+00	2.869E-10	9.195E-10	1.695E-09	2.503E-09	3.290E-09	4.028E-09	4.709E-09	5.331E-09	5.896E-09	6.411E-09
ru 97	0.000E+00	2.835E-21	7.396E-20	4.878E-19	1.804E-18	4.859E-18	1.071E-17	2.056E-17	3.569E-17	5.736E-17	8.678E-17
kr 98	0.000E+00	2.005E-10	1.904E-10	1.815E-10	1.733E-10	1.658E-10	1.588E-10	1.521E-10	1.457E-10	1.396E-10	1.337E-10
rb 98	0.000E+00	8.146E-10	8.016E-10	7.922E-10	7.857E-10	7.815E-10	7.792E-10	7.785E-10	7.791E-10	7.807E-10	7.833E-10
sr 98	0.000E+00	4.837E-07	4.711E-07	4.602E-07	4.506E-07	4.422E-07	4.347E-07	4.278E-07	4.215E-07	4.157E-07	4.103E-07
y 98	0.000E+00	1.089E-06	1.076E-06	1.065E-06	1.055E-06	1.047E-06	1.040E-06	1.033E-06	1.028E-06	1.023E-06	1.018E-06
y 98m	0.000E+00	1.919E-06	1.917E-06	1.915E-06	1.914E-06	1.914E-06	1.915E-06	1.916E-06	1.918E-06	1.920E-06	1.923E-06

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
zr 98	0.000E+00	1.456E-04	1.449E-04	1.444E-04	1.438E-04	1.433E-04	1.428E-04	1.424E-04	1.419E-04	1.414E-04	1.410E-04
nb 98	0.000E+00	1.383E-05	1.377E-05	1.371E-05	1.366E-05	1.362E-05	1.357E-05	1.352E-05	1.348E-05	1.343E-05	1.339E-05
nb 98m	0.000E+00	9.536E-05	9.547E-05	9.545E-05	9.532E-05	9.508E-05	9.472E-05	9.427E-05	9.372E-05	9.310E-05	9.241E-05
mo 98	0.000E+00	1.921E+01	3.839E+01	5.754E+01	7.665E+01	9.572E+01	1.148E+02	1.338E+02	1.527E+02	1.716E+02	1.905E+02
tc 98	0.000E+00	8.821E-06	3.038E-05	6.468E-05	1.118E-04	1.718E-04	2.448E-04	3.312E-04	4.309E-04	5.443E-04	6.716E-04
ru 98	0.000E+00	2.759E-06	5.437E-06	8.043E-06	1.058E-05	1.305E-05	1.546E-05	1.780E-05	2.009E-05	2.231E-05	2.447E-05
rb 99	0.000E+00	5.226E-11	5.235E-11	5.263E-11	5.307E-11	5.362E-11	5.427E-11	5.500E-11	5.579E-11	5.664E-11	5.754E-11
sr 99	0.000E+00	4.189E-08	4.087E-08	4.003E-08	3.936E-08	3.880E-08	3.835E-08	3.799E-08	3.769E-08	3.746E-08	3.728E-08
y 99	0.000E+00	2.781E-06	2.740E-06	2.704E-06	2.675E-06	2.650E-06	2.629E-06	2.611E-06	2.596E-06	2.582E-06	2.571E-06
zr 99	0.000E+00	1.015E-05	1.008E-05	1.001E-05	9.954E-06	9.903E-06	9.857E-06	9.815E-06	9.777E-06	9.741E-06	9.707E-06
nb 99	0.000E+00	4.680E-05	4.648E-05	4.619E-05	4.595E-05	4.573E-05	4.553E-05	4.535E-05	4.518E-05	4.502E-05	4.488E-05
nb 99m	0.000E+00	3.256E-04	3.259E-04	3.261E-04	3.262E-04	3.262E-04	3.262E-04	3.260E-04	3.259E-04	3.256E-04	3.253E-04
mo 99	0.000E+00	1.244E+00	1.240E+00	1.236E+00	1.232E+00	1.229E+00	1.226E+00	1.224E+00	1.221E+00	1.218E+00	1.216E+00
tc 99	0.000E+00	1.927E+01	3.965E+01	5.978E+01	7.967E+01	9.931E+01	1.187E+02	1.378E+02	1.567E+02	1.753E+02	1.936E+02
tc 99m	0.000E+00	9.985E-02	9.953E-02	9.923E-02	9.898E-02	9.875E-02	9.855E-02	9.836E-02	9.818E-02	9.801E-02	9.785E-02
ru 99	0.000E+00	6.336E-04	1.320E-03	2.013E-03	2.714E-03	3.422E-03	4.136E-03	4.857E-03	5.584E-03	6.317E-03	7.055E-03
rh 99	0.000E+00	5.227E-22	2.144E-20	1.714E-19	7.063E-19	2.038E-18	4.712E-18	9.370E-18	1.671E-17	2.743E-17	4.221E-17
pd 99	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
rb100	0.000E+00	2.655E-09	2.520E-09	2.400E-09	2.292E-09	2.191E-09	2.097E-09	2.008E-09	1.922E-09	1.840E-09	1.761E-09
sr100	0.000E+00	9.610E-09	9.340E-09	9.114E-09	8.923E-09	8.760E-09	8.619E-09	8.496E-09	8.387E-09	8.290E-09	8.205E-09
y100	0.000E+00	4.764E-07	4.685E-07	4.624E-07	4.577E-07	4.544E-07	4.521E-07	4.507E-07	4.502E-07	4.503E-07	4.510E-07
zr100	0.000E+00	3.447E-05	3.420E-05	3.397E-05	3.377E-05	3.358E-05	3.341E-05	3.326E-05	3.312E-05	3.298E-05	3.285E-05
nb100	0.000E+00	7.703E-06	7.669E-06	7.637E-06	7.609E-06	7.584E-06	7.561E-06	7.540E-06	7.520E-06	7.500E-06	7.482E-06
nb100m	0.000E+00	8.373E-07	8.786E-07	9.140E-07	9.450E-07	9.726E-07	9.972E-07	1.019E-06	1.040E-06	1.058E-06	1.075E-06
mo100	0.000E+00	2.159E+01	4.319E+01	6.480E+01	8.641E+01	1.080E+02	1.296E+02	1.512E+02	1.727E+02	1.943E+02	2.158E+02
tc100	0.000E+00	8.198E-07	1.692E-06	2.569E-06	3.457E-06	4.361E-06	5.284E-06	6.227E-06	7.192E-06	8.181E-06	9.194E-06
ru100	0.000E+00	1.024E-01	4.219E-01	9.602E-01	1.720E+00	2.704E+00	3.916E+00	5.363E+00	7.049E+00	8.979E+00	1.116E+01
rb101	0.000E+00	3.224E-13	3.170E-13	3.132E-13	3.106E-13	3.090E-13	3.082E-13	3.079E-13	3.083E-13	3.090E-13	3.102E-13
sr101	0.000E+00	1.159E-09	1.128E-09	1.102E-09	1.081E-09	1.063E-09	1.048E-09	1.035E-09	1.024E-09	1.015E-09	1.007E-09
y101	0.000E+00	1.506E-07	1.466E-07	1.434E-07	1.406E-07	1.384E-07	1.365E-07	1.350E-07	1.337E-07	1.326E-07	1.317E-07
zr101	0.000E+00	5.571E-06	5.502E-06	5.444E-06	5.396E-06	5.357E-06	5.325E-06	5.300E-06	5.279E-06	5.262E-06	5.249E-06
nb101	0.000E+00	3.163E-05	3.172E-05	3.179E-05	3.186E-05	3.194E-05	3.201E-05	3.209E-05	3.216E-05	3.223E-05	3.231E-05
mo101	0.000E+00	4.036E-03	4.045E-03	4.053E-03	4.062E-03	4.070E-03	4.079E-03	4.087E-03	4.096E-03	4.104E-03	4.113E-03
tc101	0.000E+00	3.926E-03	3.935E-03	3.944E-03	3.952E-03	3.960E-03	3.969E-03	3.977E-03	3.986E-03	3.994E-03	4.002E-03
ru101	0.000E+00	1.808E+01	3.619E+01	5.430E+01	7.241E+01	9.050E+01	1.086E+02	1.266E+02	1.446E+02	1.626E+02	1.806E+02
rh101	0.000E+00	1.018E-10	1.962E-10	2.839E-10	3.657E-10	4.421E-10	5.139E-10	5.813E-10	6.450E-10	7.052E-10	7.625E-10
rh101m	0.000E+00	5.617E-13	1.074E-12	1.515E-12	1.899E-12	2.238E-12	2.540E-12	2.812E-12	3.059E-12	3.286E-12	3.497E-12
pd101	0.000E+00	5.509E-18	6.629E-17	7.282E-16	7.209E-16	1.502E-15	2.702E-15	4.402E-15	6.679E-15	9.608E-15	1.326E-14
rb102	0.000E+00	1.861E-14	1.864E-14	1.875E-14	1.891E-14	1.911E-14	1.935E-14	1.961E-14	1.990E-14	2.021E-14	2.053E-14
sr102	0.000E+00	1.322E-10	1.306E-10	1.295E-10	1.288E-10	1.286E-10	1.287E-10	1.290E-10	1.295E-10	1.302E-10	1.311E-10
y102	0.000E+00	2.153E-07	2.059E-07	1.977E-07	1.904E-07	1.838E-07	1.777E-07	1.721E-07	1.668E-07	1.619E-07	1.572E-07
zr102	0.000E+00	5.488E-06	5.383E-06	5.295E-06	5.221E-06	5.159E-06	5.107E-06	5.062E-06	5.025E-06	4.994E-06	4.967E-06
nb102	0.000E+00	3.409E-06	3.393E-06	3.381E-06	3.374E-06	3.370E-06	3.369E-06	3.371E-06	3.376E-06	3.382E-06	3.390E-06
nb102m	0.000E+00	3.137E-06	3.241E-06	3.333E-06	3.418E-06	3.497E-06	3.572E-06	3.644E-06	3.714E-06	3.782E-06	3.848E-06
mo102	0.000E+00	2.671E-03	2.704E-03	2.734E-03	2.761E-03	2.788E-03	2.813E-03	2.838E-03	2.862E-03	2.885E-03	2.908E-03
tc102	0.000E+00	2.085E-05	2.111E-05	2.134E-05	2.156E-05	2.177E-05	2.197E-05	2.216E-05	2.235E-05	2.254E-05	2.272E-05
tc102m	0.000E+00	2.318E-06	2.530E-06	2.710E-06	2.864E-06	2.996E-06	3.110E-06	3.209E-06	3.294E-06	3.368E-06	3.432E-06
ru102	0.000E+00	1.551E+01	3.133E+01	4.743E+01	6.380E+01	8.041E+01	9.726E+01	1.143E+02	1.317E+02	1.492E+02	1.670E+02
rh102	0.000E+00										

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
pd102	0.000E+00	5.450E-09	6.538E-08	2.672E-07	6.992E-07	1.440E-06	2.555E-06	4.100E-06	6.123E-06	8.662E-06	1.175E-05
sr103	0.000E+00	1.149E-12	1.148E-12	1.152E-12	1.159E-12	1.170E-12	1.183E-12	1.199E-12	1.217E-12	1.236E-12	1.257E-12
y103	0.000E+00	2.348E-09	2.336E-09	2.334E-09	2.341E-09	2.355E-09	2.376E-09	2.402E-09	2.433E-09	2.467E-09	2.505E-09
zr103	0.000E+00	7.185E-07	7.038E-07	6.922E-07	6.834E-07	6.770E-07	6.726E-07	6.699E-07	6.687E-07	6.688E-07	6.700E-07
nb103	0.000E+00	2.923E-06	2.969E-06	3.014E-06	3.059E-06	3.105E-06	3.153E-06	3.202E-06	3.253E-06	3.304E-06	3.357E-06
mo103	0.000E+00	1.992E-04	2.078E-04	2.154E-04	2.223E-04	2.287E-04	2.348E-04	2.405E-04	2.460E-04	2.513E-04	2.564E-04
tc103	0.000E+00	1.640E-04	1.712E-04	1.776E-04	1.834E-04	1.888E-04	1.938E-04	1.985E-04	2.031E-04	2.074E-04	2.116E-04
ru103	0.000E+00	6.912E+00	9.415E+00	1.050E+01	1.111E+01	1.154E+01	1.191E+01	1.224E+01	1.255E+01	1.285E+01	1.313E+01
rh103	0.000E+00	4.642E+00	1.397E+01	2.479E+01	3.606E+01	4.743E+01	5.873E+01	6.990E+01	8.090E+01	9.169E+01	1.022E+02
rh103m	0.000E+00	6.843E-03	9.324E-03	1.040E-02	1.100E-02	1.144E-02	1.180E-02	1.213E-02	1.244E-02	1.273E-02	1.301E-02
pd103	0.000E+00	3.264E-09	3.045E-08	9.975E-08	2.201E-07	3.972E-07	6.358E-07	9.407E-07	1.317E-06	1.769E-06	2.304E-06
ag103	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
sr104	0.000E+00	1.903E-13	1.899E-13	1.902E-13	1.911E-13	1.924E-13	1.942E-13	1.963E-13	1.986E-13	2.011E-13	2.038E-13
y104	0.000E+00	1.689E-10	1.666E-10	1.650E-10	1.640E-10	1.636E-10	1.635E-10	1.639E-10	1.645E-10	1.653E-10	1.664E-10
zr104	0.000E+00	3.182E-07	3.159E-07	3.147E-07	3.147E-07	3.158E-07	3.177E-07	3.203E-07	3.237E-07	3.276E-07	3.321E-07
nb104	0.000E+00	2.178E-06	2.224E-06	2.270E-06	2.321E-06	2.375E-06	2.433E-06	2.495E-06	2.561E-06	2.631E-06	2.702E-06
nb104m	0.000E+00	3.288E-07	3.392E-07	3.495E-07	3.600E-07	3.709E-07	3.823E-07	3.943E-07	4.068E-07	4.197E-07	4.330E-07
mo104	0.000E+00	1.155E-04	1.234E-04	1.305E-04	1.370E-04	1.432E-04	1.491E-04	1.547E-04	1.602E-04	1.656E-04	1.709E-04
tc104	0.000E+00	2.220E-03	2.383E-03	2.527E-03	2.660E-03	2.785E-03	2.903E-03	3.017E-03	3.126E-03	3.233E-03	3.337E-03
ru104	0.000E+00	7.666E+00	1.599E+01	2.489E+01	3.430E+01	4.419E+01	5.453E+01	6.530E+01	7.648E+01	8.805E+01	1.000E+02
rh104	0.000E+00	2.122E-06	6.403E-06	1.144E-05	1.681E-05	2.237E-05	2.809E-05	3.393E-05	3.990E-05	4.598E-05	5.217E-05
rh104m	0.000E+00	9.536E-07	2.878E-06	5.143E-06	7.556E-06	1.006E-05	1.262E-05	1.525E-05	1.793E-05	2.067E-05	2.345E-05
pd104	0.000E+00	7.123E-02	4.575E-01	1.283E+00	2.594E+00	4.415E+00	6.761E+00	9.646E+00	1.308E+01	1.708E+01	2.164E+01
y105	0.000E+00	2.836E-11	2.845E-11	2.865E-11	2.893E-11	2.927E-11	2.967E-11	3.011E-11	3.059E-11	3.110E-11	3.163E-11
zr105	0.000E+00	5.205E-08	4.983E-08	4.788E-08	4.616E-08	4.459E-08	4.316E-08	4.183E-08	4.059E-08	3.941E-08	3.830E-08
nb105	0.000E+00	9.813E-07	1.008E-06	1.034E-06	1.061E-06	1.090E-06	1.120E-06	1.152E-06	1.186E-06	1.220E-06	1.256E-06
mo105	0.000E+00	3.991E-05	4.392E-05	4.751E-05	5.084E-05	5.398E-05	5.700E-05	5.991E-05	6.276E-05	6.554E-05	6.826E-05
tc105	0.000E+00	5.608E-04	6.379E-04	7.064E-04	7.689E-04	8.269E-04	8.817E-04	9.338E-04	9.838E-04	1.032E-03	1.079E-03
ru105	0.000E+00	1.970E-02	2.244E-02	2.487E-02	2.710E-02	2.916E-02	3.111E-02	3.297E-02	3.475E-02	3.647E-02	3.814E-02
rh105	0.000E+00	1.493E-01	1.701E-01	1.885E-01	2.052E-01	2.207E-01	2.353E-01	2.492E-01	2.625E-01	2.752E-01	2.876E-01
rh105m	0.000E+00	1.575E-05	1.794E-05	1.989E-05	2.166E-05	2.332E-05	2.487E-05	2.636E-05	2.779E-05	2.916E-05	3.050E-05
pd105	0.000E+00	4.123E+00	9.065E+00	1.460E+01	2.067E+01	2.722E+01	3.421E+01	4.162E+01	4.943E+01	5.760E+01	6.614E+01
ag105	0.000E+00	9.547E-20	1.706E-18	1.229E-17	5.145E-17	1.541E-16	3.706E-16	7.642E-16	1.408E-15	2.382E-15	3.765E-15
ag105m	0.000E+00	1.791E-23	4.514E-22	2.986E-21	1.111E-20	3.010E-20	6.681E-20	1.292E-19	2.260E-19	3.661E-19	5.583E-19
cd105	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
y106	0.000E+00	4.880E-17	2.017E-16	5.208E-16	1.038E-15	1.763E-15	2.695E-15	3.818E-15	5.115E-15	6.560E-15	8.129E-15
zr106	0.000E+00	4.390E-11	5.221E-11	6.263E-11	7.585E-11	9.213E-11	1.115E-10	1.338E-10	1.587E-10	1.859E-10	2.150E-10
nb106	0.000E+00	4.631E-08	4.727E-08	4.859E-08	5.031E-08	5.246E-08	5.502E-08	5.795E-08	6.123E-08	6.479E-08	6.860E-08
mo106	0.000E+00	4.448E-06	5.023E-06	5.549E-06	6.047E-06	6.528E-06	7.001E-06	7.470E-06	7.937E-06	8.402E-06	8.865E-06
tc106	0.000E+00	2.261E-05	2.750E-05	3.189E-05	3.595E-05	3.978E-05	4.346E-05	4.702E-05	5.049E-05	5.389E-05	5.723E-05
ru106	0.000E+00	2.092E+00	4.533E+00	7.215E+00	1.006E+01	1.302E+01	1.607E+01	1.916E+01	2.228E+01	2.543E+01	2.859E+01
rh106	0.000E+00	3.167E-06	5.608E-06	8.260E-06	1.106E-05	1.396E-05	1.694E-05	1.996E-05	2.302E-05	2.609E-05	2.918E-05
rh106m	0.000E+00	1.440E-04	1.646E-04	1.837E-04	2.021E-04	2.200E-04	2.378E-04	2.556E-04	2.735E-04	2.916E-04	3.100E-04
pd106	0.000E+00	3.425E-01	1.027E+00	2.083E+00	3.536E+00	5.403E+00	7.700E+00	1.044E+01	1.362E+01	1.726E+01	2.136E+01
ag106	0.000E+00	2.052E-16	3.924E-16	5.579E-16	7.085E-16	8.493E-16	9.845E-16	1.118E-15	1.253E-15	1.393E-15	1.540E-15
ag106m	0.000E+00	1.962E-13	4.142E-13	6.023E-13	7.662E-13	9.109E-13	1.040E-12	1.158E-12	1.266E-12	1.366E-12	1.462E-12
cd106	0.000E+00	3.429E-23	1.870E-21	1.884E-20	9.443E-20	3.229E-19	8.671E-19	1.972E-18	3.973E-18	7.296E-18	1.246E-17
y107	0.000E+00	2.632E-18	5.086E-18	7.388E-18	9.676E-18	1.206E-17	1.462E-17	1.745E-17	2.058E-17	2.408E-17	2.798E-17
zr107	0.000E+00	4.319E-13	5.698E-13	7.049E-13	8.434E-13	9.887E-13	1.143E-12	1.306E-12	1.478E-12	1.658E-12	1.845E-12
nb107	0.000E+00	7.798E-09	8.052E-09	8.346E-09	8.689E-09	9.086E-09	9.536E-09	1.003E-08	1.058E-08	1.116E-08	1.177E-08

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
mo107	0.000E+00	7.046E-07	7.692E-07	8.316E-07	8.947E-07	9.598E-07	1.028E-06	1.098E-06	1.172E-06	1.247E-06	1.325E-06
tc107	0.000E+00	6.348E-06	7.189E-06	9.859E-06	1.142E-05	1.292E-05	1.438E-05	1.581E-05	1.722E-05	1.862E-05	2.001E-05
ru107	0.000E+00	7.522E-05	1.018E-04	1.257E-04	1.477E-04	1.685E-04	1.884E-04	2.076E-04	2.263E-04	2.446E-04	2.626E-04
rh107	0.000E+00	4.394E-04	5.972E-04	7.385E-04	8.687E-04	9.913E-04	1.108E-03	1.222E-03	1.332E-03	1.439E-03	1.545E-03
pd107	0.000E+00	1.073E+00	2.656E+00	4.687E+00	7.125E+00	9.941E+00	1.311E+01	1.663E+01	2.047E+01	2.463E+01	2.910E+01
pd107m	0.000E+00	1.022E-09	2.939E-09	5.831E-09	9.792E-09	1.491E-08	2.129E-08	2.900E-08	3.915E-08	4.883E-08	6.113E-08
ag107	0.000E+00	9.547E-09	4.477E-08	1.146E-07	2.270E-07	3.892E-07	6.079E-07	8.893E-07	1.239E-06	1.664E-06	2.168E-06
ag107m	0.000E+00	1.562E-15	2.987E-15	4.249E-15	5.398E-15	6.472E-15	7.504E-15	8.519E-15	9.542E-15	1.060E-14	1.170E-14
cd107	0.000E+00	4.856E-17	2.526E-16	6.941E-16	1.454E-15	2.617E-15	4.270E-15	6.509E-15	9.437E-15	1.316E-14	1.780E-14
in107	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
zr108	0.000E+00	2.578E-14	3.376E-14	4.286E-14	5.362E-14	6.628E-14	8.089E-14	9.737E-14	1.156E-13	1.352E-13	1.561E-13
nb108	0.000E+00	2.580E-10	2.672E-10	2.778E-10	2.900E-10	3.040E-10	3.198E-10	3.372E-10	3.560E-10	3.762E-10	3.974E-10
mo108	0.000E+00	9.471E-08	1.057E-07	1.162E-07	1.265E-07	1.370E-07	1.477E-07	1.588E-07	1.701E-07	1.817E-07	1.935E-07
tc108	0.000E+00	5.884E-07	7.499E-07	9.022E-07	1.052E-06	1.203E-06	1.357E-06	1.515E-06	1.678E-06	1.844E-06	2.013E-06
ru108	0.000E+00	4.604E-05	6.794E-05	8.769E-05	1.060E-04	1.235E-04	1.404E-04	1.569E-04	1.730E-04	1.890E-04	2.047E-04
rh108	0.000E+00	2.847E-06	4.207E-06	5.433E-06	6.573E-06	7.656E-06	8.702E-06	9.723E-06	1.072E-05	1.171E-05	1.268E-05
rh108m	0.000E+00	2.996E-07	5.696E-07	8.036E-07	1.010E-06	1.194E-06	1.361E-06	1.513E-06	1.652E-06	1.781E-06	1.901E-06
pd108	0.000E+00	4.999E-01	1.344E+00	2.492E+00	3.920E+00	5.608E+00	7.544E+00	9.721E+00	1.213E+01	1.477E+01	1.763E+01
ag108	0.000E+00	4.377E-12	1.224E-11	2.317E-11	3.697E-11	5.353E-11	7.282E-11	9.484E-11	1.196E-10	1.471E-10	1.774E-10
ag108m	0.000E+00	1.755E-09	6.787E-09	1.456E-08	2.465E-08	3.671E-08	5.043E-08	6.557E-08	8.193E-08	9.932E-08	1.176E-07
cd108	0.000E+00	5.452E-08	2.827E-07	7.715E-07	1.600E-06	2.845E-06	4.581E-06	6.879E-06	9.815E-06	1.346E-05	1.790E-05
zr109	0.000E+00	4.374E-14	4.162E-14	3.979E-14	3.818E-14	3.676E-14	3.549E-14	3.435E-14	3.331E-14	3.237E-14	3.150E-14

nb109	0.000E+00	1.554E-10	1.490E-10	1.435E-10	1.387E-10	1.346E-10	1.309E-10	1.277E-10	1.247E-10	1.221E-10	1.197E-10
mo109	0.000E+00	3.250E-08	3.199E-08	3.172E-08	3.169E-08	3.190E-08	3.232E-08	3.293E-08	3.370E-08	3.462E-08	3.565E-08
tc109	0.000E+00	7.858E-08	9.976E-08	1.196E-07	1.389E-07	1.582E-07	1.778E-07	1.978E-07	2.182E-07	2.389E-07	2.600E-07
ru109	0.000E+00	2.721E-06	3.916E-06	5.003E-06	6.025E-06	7.008E-06	7.970E-06	8.920E-06	9.863E-06	1.080E-05	1.173E-05
ru109m	0.000E+00	2.843E-07	5.345E-07	7.567E-07	9.592E-07	1.148E-06	1.325E-06	1.495E-06	1.659E-06	1.817E-06	1.970E-06
rh109	0.000E+00	8.213E-06	1.271E-05	1.675E-05	2.051E-05	2.407E-05	2.751E-05	3.087E-05	3.416E-05	3.739E-05	4.059E-05
rh109m	0.000E+00	2.020E-06	2.944E-06	3.781E-06	4.565E-06	5.318E-06	6.051E-06	6.773E-06	7.487E-06	8.195E-06	8.897E-06
pd109	0.000E+00	5.119E-03	7.983E-03	1.060E-02	1.308E-02	1.548E-02	1.783E-02	2.016E-02	2.249E-02	2.483E-02	2.718E-02
pd109m	0.000E+00	6.560E-09	1.770E-08	3.308E-08	5.258E-08	7.617E-08	1.039E-07	1.360E-07	1.725E-07	2.136E-07	2.596E-07
ag109	0.000E+00	2.803E-01	7.882E-01	1.489E+00	2.359E+00	3.382E+00	4.544E+00	5.835E+00	7.246E+00	8.770E+00	1.040E+01
ag109m	0.000E+00	4.108E-06	6.407E-06	8.511E-06	1.050E-05	1.242E-05	1.431E-05	1.618E-05	1.806E-05	1.993E-05	2.182E-05
cd109	0.000E+00	4.054E-10	4.002E-09	1.583E-08	4.259E-08	9.237E-08	1.746E-07	2.997E-07	4.797E-07	7.272E-07	1.056E-06
in109	0.000E+00	5.272E-24	1.431E-22	9.553E-22	3.571E-21	9.718E-21	2.165E-20	4.204E-20	7.380E-20	1.200E-19	1.837E-19
nb110	0.000E+00	2.495E-12	2.413E-12	2.342E-12	2.281E-12	2.227E-12	2.179E-12	2.135E-12	2.094E-12	2.057E-12	2.021E-12
mol10	0.000E+00	1.880E-08	1.836E-08	1.800E-08	1.771E-08	1.747E-08	1.728E-08	1.711E-08	1.697E-08	1.686E-08	1.676E-08
tc110	0.000E+00	1.889E-08	1.976E-08	2.071E-08	2.180E-08	2.304E-08	2.443E-08	2.597E-08	2.765E-08	2.945E-08	3.135E-08
ru110	0.000E+00	8.340E-07	1.183E-06	1.500E-06	1.799E-06	2.086E-06	2.368E-06	2.646E-06	2.922E-06	3.196E-06	3.470E-06
rh110	0.000E+00	2.240E-09	4.121E-09	5.766E-09	7.234E-09	8.568E-09	9.796E-09	1.094E-08	1.202E-08	1.304E-08	1.402E-08
rh110m	0.000E+00	1.605E-06	2.285E-06	2.902E-06	3.483E-06	4.041E-06	4.587E-06	5.125E-06	5.660E-06	6.191E-06	6.719E-06
pd110	0.000E+00	1.737E-01	4.505E-01	8.194E-01	1.274E+00	1.809E+00	2.423E+00	3.115E+00	3.883E+00	4.726E+00	5.645E+00
ag110	0.000E+00	7.505E-08	2.117E-07	4.028E-07	6.445E-07	9.350E-07	1.273E-06	1.660E-06	2.095E-06	2.578E-06	3.110E-06
ag110m	0.000E+00	1.927E-04	9.714E-04	2.560E-03	5.112E-03	8.737E-03	1.352E-02	1.952E-02	2.678E-02	3.536E-02	4.528E-02
cd110	0.000E+00	5.175E-03	2.756E-02	7.646E-02	1.604E-01	2.875E-01	4.657E-01	7.027E-01	1.006E+00	1.384E+00	1.845E+00
nb111	0.000E+00	2.882E-12	2.887E-12	2.903E-12	2.927E-12	2.959E-12	2.995E-12	3.036E-12	3.080E-12	3.128E-12	3.178E-12
mol11	0.000E+00	5.473E-10	5.437E-10	5.422E-10	5.425E-10	5.442E-10	5.468E-10	5.504E-10	5.546E-10	5.594E-10	5.648E-10
tc111	0.000E+00	1.529E-08	1.547E-08	1.570E-08	1.600E-08	1.638E-08	1.683E-08	1.734E-08	1.792E-08	1.854E-08	1.921E-08
ru111	0.000E+00	4.605E-08	6.102E-08	7.466E-08	8.753E-08	9.997E-08	1.122E-07	1.243E-07	1.363E-07	1.484E-07	1.603E-07
rh111	0.000E+00	3.461E-07	4.676E-07	5.778E-07	6.810E-07	7.800E-07	8.764E-07	9.714E-07	1.065E-06	1.159E-06	1.251E-06

Cycle 1 -DD Assembly

fission products

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power=	11.49mw,	burnup=	7552.mwd,	flux=	3.01E+13n/cm**2-sec	nuclide concentrations, grams					
basis = 0.3883 MTU											
	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
pd111	0.000E+00	4.420E-05	5.975E-05	7.386E-05	8.709E-05	9.979E-05	1.122E-04	1.244E-04	1.365E-04	1.485E-04	1.605E-04
pd111m	0.000E+00	1.407E-07	2.237E-07	3.322E-07	4.661E-07	6.262E-07	8.139E-07	1.031E-06	1.279E-06	1.562E-06	1.881E-06
ag111	0.000E+00	1.890E-02	2.614E-02	3.267E-02	3.878E-02	4.462E-02	5.032E-02	5.593E-02	6.149E-02	6.702E-02	7.252E-02
ag111m	0.000E+00	2.025E-06	2.738E-06	3.385E-06	3.992E-06	4.575E-06	5.144E-06	5.706E-06	6.263E-06	6.817E-06	7.368E-06
cd111	0.000E+00	8.186E-02	2.217E-01	4.036E-01	6.241E-01	8.810E-01	1.173E+00	1.499E+00	1.860E+00	2.254E+00	2.682E+00
cd111m	0.000E+00	5.509E-09	1.572E-08	3.028E-08	4.965E-08	7.441E-08	1.052E-07	1.428E-07	1.880E-07	2.417E-07	3.047E-07
in111	0.000E+00	4.525E-19	1.237E-17	8.319E-17	3.135E-16	8.601E-16	1.932E-15	3.783E-15	6.700E-15	1.099E-14	1.698E-14
sn111	0.000E+00	1.466E-25	3.934E-24	2.596E-23	9.589E-23	2.580E-22	5.681E-22	1.090E-21	1.891E-21	3.040E-21	4.600E-21
nb112	0.000E+00	9.324E-15	9.334E-15	9.378E-15	9.451E-15	9.545E-15	9.657E-15	9.782E-15	9.919E-15	1.007E-14	1.022E-14
mol12	0.000E+00	1.320E-10	1.319E-10	1.322E-10	1.330E-10	1.341E-10	1.354E-10	1.369E-10	1.386E-10	1.404E-10	1.423E-10
tc112	0.000E+00	8.979E-10	8.976E-10	9.009E-10	9.079E-10	9.179E-10	9.308E-10	9.461E-10	9.635E-10	9.827E-10	1.003E-09
ru112	0.000E+00	5.854E-08	7.032E-08	8.103E-08	9.109E-08	1.008E-07	1.102E-07	1.195E-07	1.288E-07	1.379E-07	1.470E-07
rh112	0.000E+00	2.987E-08	3.675E-08	4.296E-08	4.873E-08	5.423E-08	5.955E-08	6.474E-08	6.984E-08	7.487E-08	7.984E-08
pd112	0.000E+00	1.518E-03	1.865E-03	2.179E-03	2.470E-03	2.748E-03	3.016E-03	3.279E-03	3.536E-03	3.790E-03	4.042E-03
ag112	0.000E+00	2.267E-04	2.786E-04	3.254E-04	3.690E-04	4.105E-04	4.506E-04	4.898E-04	5.283E-04	5.663E-04	6.039E-04
cd112	0.000E+00	6.798E-02	1.572E-01	2.643E-01	3.880E-01	5.276E-01	6.825E-01	8.527E-01	1.038E+00	1.238E+00	1.453E+00
in112	0.000E+00	1.365E-22	7.739E-21	8.223E-20	4.371E-19	1.590E-18	4.551E-18	1.105E-17	2.377E-17	4.666E-17	8.516E-17
in112m	0.000E+00	1.497E-22	8.554E-21	9.112E-20	4.850E-19	1.765E-18	5.056E-18	1.228E-17	2.642E-17	5.187E-17	9.469E-17
sn112	0.000E+00	7.705E-20	8.748E-18	1.401E-16	9.969E-16	4.547E-15	1.566E-14	4.445E-14	1.095E-13	2.423E-13	4.923E-13
mol13	0.000E+00	2.220E-12	2.224E-12	2.235E-12	2.254E-12	2.277E-12	2.305E-12	2.336E-12	2.370E-12	2.406E-12	2.444E-12
tc113	0.000E+00	3.728E-10	3.717E-10	3.720E-10	3.737E-10	3.765E-10	3.802E-10	3.847E-10	3.898E-10	3.956E-10	4.018E-10
ru113	0.000E+00	2.772E-08	3.156E-08	3.511E-08	3.855E-08	4.193E-08	4.533E-08	4.875E-08	5.222E-08	5.571E-08	5.924E-08
rh113	0.000E+00	1.583E-08	1.829E-08	2.051E-08	2.260E-08	2.461E-08	2.657E-08	2.850E-08	3.041E-08	3.231E-08	3.420E-08
pd113	0.000E+00	1.733E-06	1.983E-06	2.210E-06	2.424E-06	2.629E-06	2.829E-06	3.026E-06	3.221E-06	3.416E-06	3.608E-06
ag113	0.000E+00	3.470E-04	3.971E-04	4.425E-04	4.852E-04	5.262E-04	5.663E-04	6.058E-04	6.449E-04	6.838E-04	7.224E-04
ag113m	0.000E+00	2.371E-07	2.713E-07	3.023E-07	3.314E-07	3.594E-07	3.867E-07	4.137E-07	4.404E-07	4.669E-07	4.933E-07
cd113	0.000E+00	1.926E-02	2.280E-02	2.545E-02	2.779E-02	2.990E-02	3.184E-02	3.364E-02	3.532E-02	3.690E-02	3.839E-02
cd113m	0.000E+00	3.171E-04	3.792E-04	4.287E-04	4.741E-04	5.169E-04	5.578E-04	5.975E-04	6.363E-04	6.743E-04	7.117E-04
in113	0.000E+00	1.966E-06	5.054E-06	8.593E-06	1.252E-05	1.680E-05	2.141E-05	2.634E-05	3.156E-05	3.707E-05	4.287E-05
in113m	0.000E+00	1.060E-14	2.734E-14	4.680E-14	6.886E-14	9.353E-14	1.208E-13	1.509E-13	1.838E-13	2.196E-13	2.584E-13
sn113	0.000E+00	3.968E-17	4.784E-16	1.975E-15	5.268E-15	1.111E-14	2.025E-14	3.346E-14	5.156E-14	7.542E-14	1.060E-13
sn113m	0.000E+00	5.860E-28	6.586E-26	1.037E-24	7.264E-24	3.268E-23	1.112E-22	3.120E-22	7.604E-22	1.665E-21	3.347E-21
sb113	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
mol14	0.000E+00	1.899E-13	1.984E-13	2.064E-13	2.141E-13	2.214E-13	2.285E-13	2.354E-13	2.420E-13	2.485E-13	2.548E-13
tc114	0.000E+00	1.993E-11	2.205E-11	2.394E-11	2.565E-11	2.723E-11	2.868E-11	3.004E-11	3.131E-11	3.251E-11	3.365E-11
ru114	0.000E+00	2.853E-08	3.325E-08	3.755E-08	4.157E-08	4.541E-08	4.914E-08	5.280E-08	5.640E-08	5.996E-08	6.348E-08
rh114	0.000E+00	1.748E-08	2.029E-08	2.282E-08	2.517E-08	2.738E-08	2.951E-08	3.157E-08	3.359E-08	3.556E-08	3.750E-08
pd114	0.000E+00	2.149E-06	2.436E-06	2.692E-06	2.926E-06	3.145E-06	3.352E-06	3.550E-06	3.742E-06	3.927E-06	4.107E-06
ag114	0.000E+00	7.099E-08	7.982E-08	8.768E-08	9.487E-08	1.016E-07	1.080E-07	1.141E-07	1.199E-07	1.256E-07	1.312E-07
cd114	0.000E+00	1.051E-01	2.463E-01	4.060E-01	5.820E-01	7.733E-01	9.793E-01	1.199E+00	1.433E+00	1.681E+00	1.941E+00
in114	0.000E+00	1.393E-13	4.635E-13	9.028E-13	1.430E-12	2.034E-12	2.712E-12	3.462E-12	4.287E-12	5.188E-12	6.166E-12
in114m	0.000E+00	3.690E-09	1.600E-08	3.419E-08	5.663E-08	8.264E-08	1.120E-07	1.446E-07	1.805E-07	2.197E-07	2.624E-07
sn114	0.000E+00	3.161E-09	2.051E-08	6.004E-08	1.273E-07	2.268E-07	3.628E-07	5.394E-07	7.606E-07	1.031E-06	1.354E-06
mol15	0.000E+00	1.408E-15	1.421E-15	1.451E-15	1.498E-15	1.564E-15	1.646E-15	1.744E-15	1.855E-15	1.978E-15	2.110E-15
tc115	0.000E+00	2.688E-12	7.233E-12	2.814E-12	2.933E-12	3.091E-12	3.286E-12	3.515E-12	3.775E-12	4.062E-12	4.370E-12
ru115	0.000E+00	7.752E-10	8.347E-10	8.951E-10	9.588E-10	1.027E-09	1.100E-09	1.178E-09	1.260E-09	1.347E-09	1.436E-09
rh115	0.000E+00	5.169E-08	5.700E-08	6.182E-08	6.635E-08	7.070E-08	7.492E-08	7.906E-08	8.315E-08	8.719E-08	9.120E-08
pd115	0.000E+00	5.246E-07	5.694E-07	6.090E-07	6.450E-07	6.782E-07	7.092E-07	7.386E-07	7.666E-07	7.934E-07	8.192E-07

ag115 0.000E+00 1.234E-05 1.340E-05 1.433E-05 1.518E-05 1.596E-05 1.669E-05 1.738E-05 1.803E-05 1.866E-05 1.926E-05
ag115m 0.000E+00 8.966E-08 9.479E-08 9.930E-08 1.034E-07 1.071E-07 1.106E-07 1.139E-07 1.171E-07 1.200E-07 1.229E-07

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
cd115	0.000E+00	2.827E-03	3.047E-03	3.242E-03	3.421E-03	3.586E-03	3.742E-03	3.891E-03	4.033E-03	4.170E-03	4.304E-03
cd115m	0.000E+00	1.402E-03	2.043E-03	2.399E-03	2.641E-03	2.834E-03	3.005E-03	3.164E-03	3.315E-03	3.461E-03	3.603E-03
in115	0.000E+00	4.822E-02	9.933E-02	1.496E-01	1.983E-01	2.453E-01	2.902E-01	3.328E-01	3.732E-01	4.113E-01	4.470E-01
in115m	0.000E+00	2.373E-04	2.557E-04	2.721E-04	2.871E-04	3.010E-04	3.141E-04	3.266E-04	3.385E-04	3.501E-04	3.612E-04
sn115	0.000E+00	2.623E-03	5.621E-03	8.822E-03	1.220E-02	1.575E-02	1.944E-02	2.328E-02	2.724E-02	3.133E-02	3.553E-02
sb115	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.645E-33	1.184E-31	1.005E-30	6.127E-30	2.935E-29	1.170E-28	4.032E-28
te115	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
tc116	0.000E+00	1.634E-13	1.646E-13	1.666E-13	1.695E-13	1.730E-13	1.772E-13	1.820E-13	1.872E-13	1.929E-13	1.990E-13
ru116	0.000E+00	3.970E-10	4.105E-10	4.250E-10	4.411E-10	4.588E-10	4.780E-10	4.988E-10	5.210E-10	5.443E-10	5.686E-10
rh116	0.000E+00	2.394E-09	2.632E-09	2.852E-09	3.063E-09	3.268E-09	3.470E-09	3.671E-09	3.872E-09	4.072E-09	4.271E-09
pd116	0.000E+00	1.422E-07	1.600E-07	1.757E-07	1.897E-07	2.024E-07	2.142E-07	2.250E-07	2.352E-07	2.449E-07	2.540E-07
ag116	0.000E+00	2.516E-06	2.732E-06	2.920E-06	3.088E-06	3.240E-06	3.379E-06	3.507E-06	3.627E-06	3.738E-06	3.843E-06
ag116m	0.000E+00	9.103E-09	1.035E-08	1.142E-08	1.234E-08	1.314E-08	1.385E-08	1.448E-08	1.503E-08	1.553E-08	1.597E-08
cd116	0.000E+00	6.205E-02	1.305E-01	2.045E-01	2.833E-01	3.665E-01	4.537E-01	5.444E-01	6.385E-01	7.357E-01	8.357E-01
in116	0.000E+00	3.898E-09	8.056E-09	1.221E-08	1.636E-08	2.047E-08	2.455E-08	2.858E-08	3.256E-08	3.649E-08	4.035E-08
in116m	0.000E+00	3.379E-06	6.984E-06	1.059E-05	1.418E-05	1.775E-05	2.128E-05	2.478E-05	2.823E-05	3.163E-05	3.498E-05
sn116	0.000E+00	2.588E-03	1.071E-02	2.441E-02	4.370E-02	6.854E-02	9.891E-02	1.347E-01	1.760E-01	2.225E-01	2.743E-01
tc117	0.000E+00	4.510E-15	4.520E-15	4.551E-15	4.602E-15	4.670E-15	4.752E-15	4.848E-15	4.954E-15	5.069E-15	5.193E-15
ru117	0.000E+00	1.193E-11	1.205E-11	1.221E-11	1.243E-11	1.268E-11	1.297E-11	1.329E-11	1.365E-11	1.402E-11	1.442E-11
rh117	0.000E+00	1.463E-09	1.513E-09	1.563E-09	1.614E-09	1.666E-09	1.721E-09	1.778E-09	1.837E-09	1.897E-09	1.959E-09
pd117	0.000E+00	5.730E-08	6.007E-08	6.252E-08	6.475E-08	6.680E-08	6.871E-08	7.051E-08	7.222E-08	7.386E-08	7.542E-08
ag117	0.000E+00	5.548E-07	5.980E-07	6.357E-07	6.692E-07	6.994E-07	7.269E-07	7.522E-07	7.756E-07	7.974E-07	8.179E-07
ag117m	0.000E+00	4.071E-08	4.388E-08	4.664E-08	4.910E-08	5.131E-08	5.333E-08	5.519E-08	5.690E-08	5.850E-08	6.000E-08
cd117	0.000E+00	1.183E-04	1.276E-04	1.356E-04	1.428E-04	1.493E-04	1.552E-04	1.606E-04	1.656E-04	1.703E-04	1.747E-04
cd117m	0.000E+00	3.123E-05	3.382E-05	3.607E-05	3.806E-05	3.984E-05	4.146E-05	4.292E-05	4.427E-05	4.552E-05	4.668E-05
in117	0.000E+00	2.472E-05	2.669E-05	2.840E-05	2.992E-05	3.129E-05	3.253E-05	3.367E-05	3.473E-05	3.571E-05	3.663E-05
in117m	0.000E+00	8.423E-05	9.083E-05	9.657E-05	1.017E-04	1.063E-04	1.105E-04	1.143E-04	1.179E-04	1.213E-04	1.244E-04
sn117	0.000E+00	5.919E-02	1.240E-01	1.936E-01	2.672E-01	3.445E-01	4.250E-01	5.086E-01	5.950E-01	6.839E-01	7.751E-01
sn117m	0.000E+00	3.585E-05	4.442E-05	5.274E-05	6.191E-05	7.205E-05	8.327E-05	9.564E-05	1.092E-04	1.241E-04	1.404E-04
sb117	0.000E+00	1.175E-19	6.228E-19	1.651E-18	3.335E-18	5.817E-18	9.251E-18	1.380E-17	1.965E-17	2.698E-17	3.599E-17
te117	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
tc118	0.000E+00	3.634E-16	3.642E-16	3.663E-16	3.695E-16	3.735E-16	3.783E-16	3.835E-16	3.893E-16	3.954E-16	4.019E-16
ru118	0.000E+00	3.606E-12	3.619E-12	3.645E-12	3.684E-12	3.733E-12	3.790E-12	3.853E-12	3.923E-12	3.998E-12	4.077E-12
rh118	0.000E+00	1.108E-10	1.122E-10	1.141E-10	1.163E-10	1.188E-10	1.217E-10	1.248E-10	1.282E-10	1.317E-10	1.355E-10
pd118	0.000E+00	1.664E-08	1.734E-08	1.798E-08	1.860E-08	1.921E-08	1.980E-08	2.039E-08	2.097E-08	2.156E-08	2.214E-08
ag118	0.000E+00	3.400E-08	3.596E-08	3.769E-08	3.926E-08	4.070E-08	4.204E-08	4.330E-08	4.450E-08	4.563E-08	4.672E-08
ag118m	0.000E+00	1.228E-08	1.304E-08	1.372E-08	1.434E-08	1.490E-08	1.543E-08	1.592E-08	1.639E-08	1.683E-08	1.726E-08
cd118	0.000E+00	4.354E-05	4.605E-05	4.825E-05	5.023E-05	5.204E-05	5.372E-05	5.528E-05	5.675E-05	5.814E-05	5.946E-05
in118	0.000E+00	7.217E-08	7.633E-08	7.999E-08	8.328E-08	8.629E-08	8.907E-08	9.166E-08	9.410E-08	9.641E-08	9.860E-08
in118m	0.000E+00	6.517E-10	8.419E-10	1.005E-09	1.147E-09	1.272E-09	1.382E-09	1.480E-09	1.568E-09	1.648E-09	1.720E-09
sn118	0.000E+00	5.508E-02	1.139E-01	1.759E-01	2.408E-01	3.084E-01	3.783E-01	4.505E-01	5.248E-01	6.011E-01	6.793E-01
sb118	0.000E+00	2.109E-17	4.017E-17	5.686E-17	7.180E-17	8.544E-17	9.816E-17	1.103E-16	1.220E-16	1.337E-16	1.455E-16
sb118m	0.000E+00	2.531E-15	4.825E-15	6.839E-15	8.650E-15	1.031E-14	1.188E-14	1.338E-14	1.485E-14	1.633E-14	1.784E-14
te118	0.000E+00	1.968E-26	1.048E-25	2.798E-25	5.715E-25	1.010E-24	1.631E-24	2.474E-24	3.584E-24	5.012E-24	6.815E-24
ru119	0.000E+00	5.856E-14	5.871E-14	5.908E-14	5.964E-14	6.035E-14	6.119E-14	6.212E-14	6.314E-14	6.423E-14	6.539E-14
rh119	0.000E+00	3.243E-11	3.263E-11	3.297E-11	3.342E-11	3.397E-11	3.461E-11	3.532E-11	3.609E-11	3.692E-11	3.779E-11
pd119	0.000E+00	2.905E-09	3.001E-09	3.100E-09	3.204E-09	3.313E-09	3.428E-09	3.549E-09	3.676E-09	3.807E-09	3.941E-09
ag119	0.000E+00	2.123E-08	2.191E-08	2.253E-08	2.311E-08	2.367E-08	2.421E-08	2.473E-08	2.525E-08	2.576E-08	2.626E-08
cd119	0.000E+00	1.703E-06	1.777E-06	1.842E-06	1.902E-06	1.956E-06	2.008E-06	2.056E-06	2.101E-06	2.145E-06	2.187E-06
cd119m	0.000E+00	6.214E-07	6.591E-07	6.918E-07	7.209E-07	7.470E-07	7.707E-07	7.924E-07	8.124E-07	8.310E-07	8.484E-07

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
in119	0.000E+00	9.316E-07	9.819E-07	1.026E-06	1.065E-06	1.100E-06	1.131E-06	1.161E-06	1.187E-06	1.212E-06	1.236E-06
in119m	0.000E+00	1.028E-05	1.073E-05	1.113E-05	1.149E-05	1.183E-05	1.214E-05	1.243E-05	1.271E-05	1.298E-05	1.323E-05
sn119	0.000E+00	6.019E-02	1.237E-01	1.902E-01	2.592E-01	3.306E-01	4.041E-01	4.797E-01	5.570E-01	6.361E-01	7.168E-01
sn119m	0.000E+00	2.297E-04	4.723E-04	7.264E-04	9.913E-04	1.267E-03	1.553E-03	1.850E-03	2.159E-03	2.480E-03	2.815E-03
sb119	0.000E+00	6.113E-12	1.117E-11	1.553E-11	1.936E-11	2.276E-11	2.582E-11	2.861E-11	3.118E-11	3.357E-11	3.584E-11
te119	0.000E+00	1.233E-19	6.541E-19	1.735E-18	3.509E-18	6.130E-18	9.763E-18	1.459E-17	2.080E-17	2.859E-17	3.819E-17
ru120	0.000E+00	4.117E-15	4.121E-15	4.140E-15	4.173E-15	4.215E-15	4.265E-15	4.322E-15	4.384E-15	4.451E-15	4.522E-15
rh120	0.000E+00	1.884E-12	1.870E-12	1.865E-12	1.866E-12	1.872E-12	1.882E-12	1.897E-12	1.914E-12	1.934E-12	1.956E-12
pd120	0.000E+00	1.191E-08	1.146E-08	1.107E-08	1.072E-08	1.042E-08	1.014E-08	9.884E-09	9.650E-09	9.432E-09	9.228E-09
ag120	0.000E+00	5.532E-09	5.563E-09	5.602E-09	5.650E-09	5.706E-09	5.771E-09	5.843E-09	5.922E-09	6.007E-09	6.096E-09
ag120m	0.000E+00	3.923E-10	4.256E-10	4.567E-10	4.868E-10	5.164E-10	5.460E-10	5.756E-10	6.053E-10	6.352E-10	6.653E-10
cd120	0.000E+00	7.496E-07	7.801E-07	8.071E-07	8.318E-07	8.547E-07	8.762E-07	8.966E-07	9.161E-07	9.347E-07	9.527E-07
in120	0.000E+00	4.621E-08	4.817E-08	4.990E-08	5.148E-08	5.294E-08	5.430E-08	5.559E-08	5.682E-08	5.800E-08	5.913E-08
in120m	0.000E+00	2.287E-08	2.610E-08	2.887E-08	3.128E-08	3.339E-08	3.526E-08	3.692E-08	3.841E-08	3.975E-08	4.096E-08
sn120	0.000E+00	5.957E-02	1.223E-01	1.878E-01	2.557E-01	3.259E-01	3.981E-01	4.723E-01	5.483E-01	6.261E-01	7.055E-01
sb120	0.000E+00	8.415E-13	1.520E-12	2.105E-12	2.616E-12	3.068E-12	3.471E-12	3.835E-12	4.166E-12	4.470E-12	4.752E-12
sb120m	0.000E+00	6.329E-10	1.155E-09	1.604E-09	1.998E-09	2.346E-09	2.658E-09	2.939E-09	3.196E-09	3.433E-09	3.653E-09

te120	0.000E+00	2.387E-13	9.295E-13	2.012E-12	3.438E-12	5.173E-12	7.189E-12	9.465E-12	1.199E-11	1.474E-11	1.773E-11
rh121	0.000E+00	1.669E-13	1.672E-13	1.681E-13	1.696E-13	1.715E-13	1.737E-13	1.762E-13	1.789E-13	1.819E-13	1.850E-13
pd121	0.000E+00	1.090E-10	1.085E-10	1.084E-10	1.087E-10	1.094E-10	1.103E-10	1.115E-10	1.128E-10	1.144E-10	1.161E-10
ag121	0.000E+00	3.036E-09	3.023E-09	3.017E-09	3.018E-09	3.025E-09	3.037E-09	3.054E-09	3.075E-09	3.099E-09	3.126E-09
cd121	0.000E+00	1.108E-07	1.148E-07	1.184E-07	1.217E-07	1.248E-07	1.278E-07	1.307E-07	1.335E-07	1.362E-07	1.388E-07
cd121m	0.000E+00	2.120E-08	2.269E-08	2.399E-08	2.516E-08	2.623E-08	2.722E-08	2.814E-08	2.901E-08	2.983E-08	3.061E-08
in121	0.000E+00	1.696E-07	1.838E-07	1.960E-07	2.068E-07	2.165E-07	2.253E-07	2.333E-07	2.407E-07	2.475E-07	2.539E-07
in121m	0.000E+00	2.009E-06	2.097E-06	2.175E-06	2.246E-06	2.313E-06	2.376E-06	2.435E-06	2.493E-06	2.548E-06	2.601E-06
sn121	0.000E+00	1.500E-03	1.588E-03	1.666E-03	1.736E-03	1.799E-03	1.858E-03	1.912E-03	1.963E-03	2.011E-03	2.057E-03
sn121m	0.000E+00	3.270E-03	6.915E-03	1.088E-02	1.512E-02	1.959E-02	2.428E-02	2.915E-02	3.419E-02	3.937E-02	4.468E-02
sb121	0.000E+00	5.709E-02	1.192E-01	1.844E-01	2.523E-01	3.225E-01	3.948E-01	4.689E-01	5.447E-01	6.219E-01	7.006E-01
te121	0.000E+00	9.190E-12	2.385E-11	3.886E-11	5.350E-11	6.753E-11	8.083E-11	9.337E-11	1.052E-10	1.163E-10	1.269E-10
te121m	0.000E+00	1.588E-11	5.605E-11	1.102E-10	1.714E-10	2.355E-10	2.996E-10	3.621E-10	4.222E-10	4.795E-10	5.340E-10
i121	0.000E+00	2.042E-21	1.149E-20	3.372E-20	7.738E-20	1.545E-19	2.802E-19	4.717E-19	7.478E-19	1.128E-18	1.632E-18
rh122	0.000E+00	4.110E-15	4.118E-15	4.141E-15	4.177E-15	4.222E-15	4.276E-15	4.336E-15	4.401E-15	4.471E-15	4.545E-15
pd122	0.000E+00	4.274E-11	4.260E-11	4.264E-11	4.282E-11	4.311E-11	4.350E-11	4.397E-11	4.451E-11	4.510E-11	4.574E-11
ag122	0.000E+00	3.217E-10	3.193E-10	3.181E-10	3.178E-10	3.185E-10	3.199E-10	3.218E-10	3.244E-10	3.274E-10	3.308E-10
ag122m	0.000E+00	9.601E-10	9.528E-10	9.488E-10	9.479E-10	9.496E-10	9.534E-10	9.592E-10	9.665E-10	9.753E-10	9.852E-10
cd122	0.000E+00	7.889E-08	7.970E-08	8.043E-08	8.113E-08	8.181E-08	8.247E-08	8.312E-08	8.375E-08	8.438E-08	8.499E-08
in122	0.000E+00	2.441E-08	2.505E-08	2.562E-08	2.613E-08	2.661E-08	2.705E-08	2.746E-08	2.785E-08	2.823E-08	2.858E-08
in122m	0.000E+00	2.512E-08	3.075E-08	3.563E-08	3.993E-08	4.377E-08	4.723E-08	5.038E-08	5.326E-08	5.592E-08	5.839E-08
sn122	0.000E+00	7.356E-02	1.523E-01	2.356E-01	3.228E-01	4.136E-01	5.076E-01	6.046E-01	7.042E-01	8.064E-01	9.109E-01
sb122	0.000E+00	2.130E-05	4.444E-05	6.905E-05	9.521E-05	1.230E-04	1.524E-04	1.835E-04	2.164E-04	2.510E-04	2.875E-04
sb122m	0.000E+00	2.554E-09	5.243E-09	8.066E-09	1.104E-08	1.417E-08	1.746E-08	2.093E-08	2.458E-08	2.841E-08	3.244E-08
te122	0.000E+00	1.691E-04	7.134E-04	1.656E-03	3.021E-03	4.832E-03	7.116E-03	9.897E-03	1.320E-02	1.706E-02	2.150E-02
rh123	0.000E+00	2.199E-16	2.203E-16	2.216E-16	2.234E-16	2.258E-16	2.286E-16	2.318E-16	2.352E-16	2.388E-16	2.427E-16
pd123	0.000E+00	1.117E-12	1.114E-12	1.115E-12	1.120E-12	1.128E-12	1.138E-12	1.150E-12	1.163E-12	1.178E-12	1.194E-12
ag123	0.000E+00	2.088E-10	2.047E-10	2.016E-10	1.992E-10	1.975E-10	1.963E-10	1.954E-10	1.950E-10	1.948E-10	1.949E-10
cd123	0.000E+00	1.080E-07	1.056E-07	1.035E-07	1.018E-07	1.002E-07	9.892E-08	9.776E-08	9.673E-08	9.581E-08	9.499E-08
in123	0.000E+00	8.736E-08	9.002E-08	9.237E-08	9.451E-08	9.648E-08	9.831E-08	1.000E-07	1.017E-07	1.032E-07	1.047E-07
in123m	0.000E+00	1.612E-07	1.671E-07	1.723E-07	1.771E-07	1.815E-07	1.857E-07	1.896E-07	1.934E-07	1.970E-07	2.004E-07
sn123	0.000E+00	5.106E-03	1.021E-02	1.511E-02	1.969E-02	2.392E-02	2.778E-02	3.130E-02	3.449E-02	3.740E-02	4.004E-02
sn123m	0.000E+00	4.334E-05	4.508E-05	4.660E-05	4.798E-05	4.924E-05	5.041E-05	5.149E-05	5.252E-05	5.348E-05	5.440E-05

Cycle 1 -DD Assembly

fission products page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
sb123	0.000E+00	7.021E-02	1.452E-01	2.246E-01	3.077E-01	3.943E-01	4.841E-01	5.766E-01	6.716E-01	7.689E-01	8.682E-01
te123	0.000E+00	1.484E-07	1.077E-06	3.478E-06	8.009E-06	1.530E-05	2.596E-05	4.058E-05	5.970E-05	8.388E-05	1.136E-04
te123m	0.000E+00	1.308E-07	6.196E-07	1.583E-06	3.115E-06	5.302E-06	8.227E-06	1.197E-05	1.662E-05	2.225E-05	2.896E-05
i123	0.000E+00	2.651E-13	5.031E-13	7.077E-13	8.860E-13	1.043E-12	1.182E-12	1.306E-12	1.418E-12	1.519E-12	1.611E-12
pd124	0.000E+00	2.720E-13	2.654E-13	2.601E-13	2.558E-13	2.523E-13	2.493E-13	2.467E-13	2.446E-13	2.427E-13	2.412E-13
ag124	0.000E+00	1.484E-10	1.417E-10	1.358E-10	1.305E-10	1.257E-10	1.212E-10	1.170E-10	1.131E-10	1.093E-10	1.056E-10
cd124	0.000E+00	1.221E-08	1.167E-08	1.119E-08	1.077E-08	1.039E-08	1.004E-08	9.711E-09	9.405E-09	9.115E-09	8.840E-09
in124	0.000E+00	5.299E-08	5.323E-08	5.344E-08	5.362E-08	5.378E-08	5.393E-08	5.405E-08	5.416E-08	5.425E-08	5.433E-08
in124m	0.000E+00	7.568E-09	9.192E-09	1.061E-08	1.187E-08	1.302E-08	1.406E-08	1.503E-08	1.593E-08	1.677E-08	1.756E-08
sn124	0.000E+00	1.231E-01	2.555E-01	3.959E-01	5.433E-01	6.967E-01	8.556E-01	1.019E+00	1.187E+00	1.359E+00	1.535E+00
sb124	0.000E+00	1.575E-04	4.726E-04	8.787E-04	1.346E-03	1.861E-03	2.418E-03	3.015E-03	3.652E-03	4.328E-03	5.044E-03
sb124m	0.000E+00	6.695E-10	1.044E-09	1.405E-09	1.762E-09	2.123E-09	2.490E-09	2.867E-09	3.254E-09	3.651E-09	4.058E-09
te124	0.000E+00	5.279E-05	2.946E-04	8.162E-04	1.674E-03	2.908E-03	4.554E-03	6.644E-03	9.207E-03	1.228E-02	1.588E-02
i124	0.000E+00	5.923E-16	1.128E-15	1.598E-15	2.020E-15	2.407E-15	2.766E-15	3.104E-15	3.425E-15	3.732E-15	4.029E-15
xe124	0.000E+00	1.201E-18	1.328E-17	5.184E-17	1.340E-16	2.778E-16	5.025E-16	8.280E-16	1.275E-15	1.865E-15	2.620E-15
pd125	0.000E+00	2.172E-15	2.176E-15	2.189E-15	2.208E-15	2.232E-15	2.260E-15	2.291E-15	2.325E-15	2.361E-15	2.399E-15
ag125	0.000E+00	3.694E-12	3.701E-12	3.723E-12	3.755E-12	3.795E-12	3.843E-12	3.896E-12	3.953E-12	4.015E-12	4.080E-12
cd125	0.000E+00	9.285E-09	8.870E-09	8.504E-09	8.176E-09	7.877E-09	7.599E-09	7.338E-09	7.091E-09	6.855E-09	6.630E-09
in125	0.000E+00	2.454E-08	2.533E-08	2.602E-08	2.665E-08	2.722E-08	2.776E-08	2.826E-08	2.873E-08	2.918E-08	2.960E-08
in125m	0.000E+00	9.923E-08	1.047E-07	1.094E-07	1.138E-07	1.177E-07	1.214E-07	1.248E-07	1.281E-07	1.312E-07	1.341E-07
sn125	0.000E+00	1.000E-02	1.181E-02	1.330E-02	1.461E-02	1.576E-02	1.679E-02	1.772E-02	1.855E-02	1.932E-02	2.002E-02
sn125m	0.000E+00	1.648E-05	1.718E-05	1.778E-05	1.831E-05	1.879E-05	1.922E-05	1.961E-05	1.997E-05	2.030E-05	2.061E-05
sb125	0.000E+00	1.432E-01	3.016E-01	4.651E-01	6.317E-01	8.001E-01	9.691E-01	1.138E+00	1.306E+00	1.472E+00	1.637E+00
te125	0.000E+00	2.562E-03	1.131E-02	2.699E-02	4.997E-02	8.046E-02	1.186E-01	1.643E-01	2.177E-01	2.787E-01	3.472E-01
te125m	0.000E+00	5.675E-04	1.949E-03	3.756E-03	5.786E-03	7.936E-03	1.015E-02	1.240E-02	1.466E-02	1.691E-02	1.916E-02
i125	0.000E+00	1.759E-12	2.779E-12	3.577E-12	4.370E-12	5.257E-12	6.288E-12	7.492E-12	8.891E-12	1.050E-11	1.235E-11
xe125	0.000E+00	2.351E-16	1.295E-15	3.389E-15	6.673E-15	1.131E-14	1.747E-14	2.533E-14	3.508E-14	4.691E-14	6.104E-14
xe125m	0.000E+00	2.864E-20	1.578E-19	4.128E-19	8.128E-19	1.377E-18	2.128E-18	3.085E-18	4.272E-18	5.714E-18	7.435E-18
pd126	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.549E-36	6.230E-35	5.285E-34	3.223E-33	1.544E-32	6.155E-32	2.122E-31
ag126	0.000E+00	1.489E-16	1.458E-16	1.434E-16	1.416E-16	1.402E-16	1.391E-16	1.383E-16	1.377E-16	1.373E-16	1.370E-16
cd126	0.000E+00	4.014E-09	3.811E-09	3.632E-09	3.469E-09	3.318E-09	3.177E-09	3.044E-09	2.916E-09	2.794E-09	2.675E-09
in126	0.000E+00	5.088E-09	5.930E-09	6.681E-09	7.369E-09	8.012E-09	8.620E-09	9.201E-09	9.760E-09	1.030E-08	1.083E-08
in126m	0.000E+00	1.716E-08	1.743E-08	1.768E-08	1.790E-08	1.812E-08	1.833E-08	1.854E-08	1.874E-08	1.894E-08	1.913E-08
sn126	0.000E+00	2.553E-01	5.369E-01	8.410E-01	1.165E+00	1.506E+00	1.862E+00	2.233E+00	2.616E+00	3.010E+00	3.415E+00
sb126	0.000E+00	1.001E-03	1.081E-03	1.132E-03	1.179E-03	1.222E-03	1.262E-03	1.300E-03	1.335E-03	1.369E-03	1.401E-03
sb126m	0.000E+00	2.060E-06	2.100E-06	2.135E-06	2.166E-06	2.193E-06	2.218E-06	2.239E-06	2.259E-06	2.276E-06	2.291E-06
te126	0.000E+00	8.776E-03	1.883E-02	2.924E-02	3.995E-02	5.096E-02	6.224E-02	7.378E-02	8.588E-02	9.763E-02	1.099E-01
i126	0.000E+00	6.245E-08	1.640E-07	2.795E-07	4.068E-07	5.					

sn127	0.000E+00	8.376E-04	9.059E-04	9.647E-04	1.016E-03	1.062E-03	1.103E-03	1.140E-03	1.173E-03	1.204E-03	1.232E-03
sn127m	0.000E+00	1.709E-05	1.829E-05	1.933E-05	2.026E-05	2.109E-05	2.184E-05	2.252E-05	2.315E-05	2.374E-05	2.428E-05
sb127	0.000E+00	6.256E-02	6.747E-02	7.171E-02	7.543E-02	7.874E-02	8.171E-02	8.439E-02	8.684E-02	8.908E-02	9.114E-02
tel27	0.000E+00	5.535E-03	6.214E-03	6.771E-03	7.239E-03	7.640E-03	7.988E-03	8.294E-03	8.568E-03	8.814E-03	9.038E-03
tel27m	0.000E+00	9.315E-02	1.704E-01	2.289E-01	2.743E-01	3.101E-01	3.390E-01	3.629E-01	3.829E-01	4.001E-01	4.151E-01
i127	0.000E+00	5.487E-01	1.237E+00	1.995E+00	2.810E+00	3.673E+00	4.574E+00	5.510E+00	6.473E+00	7.461E+00	8.470E+00
xel27	0.000E+00	2.597E-10	1.816E-09	5.402E-09	1.149E-08	2.048E-08	3.277E-08	4.878E-08	6.894E-08	9.373E-08	1.236E-07

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
xel27m	0.000E+00	0.000E+00	0.000E+00	1.554E-32	4.540E-31	6.218E-30	5.276E-29	3.218E-28	1.542E-27	6.144E-27	2.118E-26
cs127	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.515E-31	2.134E-30	1.302E-29	6.237E-29	2.486E-28	8.569E-28
agl28	0.000E+00	1.601E-18	1.543E-18	1.492E-18	1.448E-18	1.408E-18	1.372E-18	1.339E-18	1.308E-18	1.279E-18	1.252E-18
cd128	0.000E+00	3.716E-09	3.528E-09	3.360E-09	3.208E-09	3.067E-09	2.936E-09	2.811E-09	2.691E-09	2.577E-09	2.466E-09
in128	0.000E+00	1.873E-08	1.938E-08	1.993E-08	2.042E-08	2.085E-08	2.123E-08	2.157E-08	2.188E-08	2.215E-08	2.240E-08
in128m	0.000E+00	1.556E-08	1.637E-08	1.707E-08	1.768E-08	1.823E-08	1.873E-08	1.917E-08	1.958E-08	1.995E-08	2.030E-08
sn128	0.000E+00	1.339E-03	1.378E-03	1.412E-03	1.441E-03	1.467E-03	1.489E-03	1.510E-03	1.528E-03	1.545E-03	1.560E-03
sn128m	0.000E+00	1.200E-06	1.236E-06	1.266E-06	1.293E-06	1.317E-06	1.337E-06	1.356E-06	1.373E-06	1.388E-06	1.402E-06
sb128	0.000E+00	8.989E-04	9.873E-04	1.063E-03	1.129E-03	1.186E-03	1.237E-03	1.282E-03	1.322E-03	1.359E-03	1.391E-03
sb128m	0.000E+00	2.414E-04	2.497E-04	2.568E-04	2.630E-04	2.684E-04	2.733E-04	2.776E-04	2.815E-04	2.851E-04	2.883E-04
tel28	0.000E+00	1.544E+00	3.161E+00	4.839E+00	6.567E+00	8.342E+00	1.016E+01	1.201E+01	1.389E+01	1.580E+01	1.773E+01
i128	0.000E+00	1.275E-06	2.878E-06	4.670E-06	6.640E-06	8.778E-06	1.108E-05	1.354E-05	1.616E-05	1.894E-05	2.187E-05
xel28	0.000E+00	1.532E-03	6.741E-03	1.615E-02	3.020E-02	4.932E-02	7.391E-02	1.044E-01	1.411E-01	1.845E-01	2.348E-01
cd129	0.000E+00	1.149E-12	1.142E-12	1.140E-12	1.143E-12	1.148E-12	1.157E-12	1.169E-12	1.183E-12	1.200E-12	1.218E-12
in129	0.000E+00	1.948E-08	1.877E-08	1.816E-08	1.762E-08	1.713E-08	1.668E-08	1.626E-08	1.588E-08	1.551E-08	1.517E-08
in129m	0.000E+00	3.775E-08	3.645E-08	3.531E-08	3.431E-08	3.341E-08	3.259E-08	3.183E-08	3.113E-08	3.047E-08	2.985E-08
sn129	0.000E+00	4.734E-05	4.964E-05	5.166E-05	5.347E-05	5.511E-05	5.663E-05	5.804E-05	5.937E-05	6.061E-05	6.179E-05
sn129m	0.000E+00	9.168E-05	9.293E-05	9.399E-05	9.491E-05	9.572E-05	9.643E-05	9.706E-05	9.762E-05	9.811E-05	9.855E-05
sb129	0.000E+00	1.075E-02	1.130E-02	1.178E-02	1.220E-02	1.258E-02	1.293E-02	1.324E-02	1.354E-02	1.381E-02	1.406E-02
tel29	0.000E+00	2.560E-03	2.755E-03	2.890E-03	3.000E-03	3.096E-03	3.183E-03	3.263E-03	3.336E-03	3.403E-03	3.466E-03
tel29m	0.000E+00	2.567E-01	3.382E-01	3.720E-01	3.920E-01	4.072E-01	4.201E-01	4.317E-01	4.423E-01	4.520E-01	4.610E-01
i129	0.000E+00	2.326E+00	4.986E+00	7.818E+00	1.077E+01	1.382E+01	1.696E+01	2.017E+01	2.345E+01	2.679E+01	3.019E+01
xel29	0.000E+00	3.471E-07	3.201E-06	1.179E-05	2.984E-05	6.158E-05	1.118E-04	1.857E-04	2.893E-04	4.290E-04	6.120E-04
xel29m	0.000E+00	8.383E-08	4.438E-07	1.142E-06	2.228E-06	3.757E-06	5.786E-06	8.376E-06	1.159E-05	1.550E-05	2.017E-05
cs129	0.000E+00	9.192E-22	2.147E-20	1.408E-19	5.213E-19	1.407E-18	3.111E-18	5.992E-18	1.044E-17	1.684E-17	2.559E-17
ba129	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
cd130	0.000E+00	4.212E-08	3.998E-08	3.808E-08	3.635E-08	3.475E-08	3.326E-08	3.184E-08	3.048E-08	2.917E-08	2.791E-08
in130	0.000E+00	2.994E-08	2.861E-08	2.744E-08	2.636E-08	2.537E-08	2.444E-08	2.355E-08	2.271E-08	2.189E-08	2.109E-08
in130m	0.000E+00	5.904E-09	6.287E-09	6.622E-09	6.921E-09	7.190E-09	7.434E-09	7.657E-09	7.862E-09	8.052E-09	8.229E-09
sn130	0.000E+00	1.539E-04	1.520E-04	1.503E-04	1.488E-04	1.476E-04	1.464E-04	1.454E-04	1.445E-04	1.437E-04	1.429E-04
sn130m	0.000E+00	6.748E-05	6.683E-05	6.627E-05	6.580E-05	6.539E-05	6.504E-05	6.474E-05	6.447E-05	6.423E-05	6.402E-05
sb130	0.000E+00	2.162E-03	2.185E-03	2.204E-03	2.220E-03	2.235E-03	2.248E-03	2.260E-03	2.271E-03	2.280E-03	2.289E-03
sb130m	0.000E+00	4.106E-04	4.106E-04	4.106E-04	4.105E-04	4.104E-04	4.103E-04	4.102E-04	4.101E-04	4.099E-04	4.096E-04
tel130	0.000E+00	8.104E+00	1.630E+01	2.456E+01	3.288E+01	4.126E+01	4.968E+01	5.813E+01	6.662E+01	7.514E+01	8.368E+01
i130	0.000E+00	9.593E-05	1.924E-04	2.949E-04	4.028E-04	5.163E-04	6.356E-04	7.609E-04	8.925E-04	1.030E-03	1.175E-03
i130m	0.000E+00	5.789E-07	1.192E-06	1.847E-06	2.542E-06	3.275E-06	4.048E-06	4.862E-06	5.719E-06	6.620E-06	7.565E-06
xel130	0.000E+00	6.296E-03	2.239E-02	4.890E-02	8.628E-02	1.350E-01	1.955E-01	2.684E-01	3.541E-01	4.533E-01	5.665E-01
cd131	0.000E+00	1.484E-09	1.409E-09	1.341E-09	1.281E-09	1.224E-09	1.171E-09	1.121E-09	1.074E-09	1.028E-09	9.833E-10
in131	0.000E+00	5.411E-09	5.207E-09	5.028E-09	4.871E-09	4.730E-09	4.603E-09	4.486E-09	4.379E-09	4.279E-09	4.186E-09
in131m	0.000E+00	2.361E-09	2.332E-09	2.311E-09	2.298E-09	2.292E-09	2.293E-09	2.298E-09	2.309E-09	2.324E-09	2.342E-09
sn131	0.000E+00	2.199E-05	2.164E-05	2.135E-05	2.110E-05	2.090E-05	2.073E-05	2.058E-05	2.047E-05	2.037E-05	2.029E-05
sn131m	0.000E+00	3.299E-05	3.249E-05	3.206E-05	3.171E-05	3.142E-05	3.118E-05	3.098E-05	3.081E-05	3.068E-05	3.057E-05
sb131	0.000E+00	4.053E-03	4.033E-03	4.016E-03	4.001E-03	3.989E-03	3.979E-03	3.970E-03	3.963E-03	3.956E-03	3.951E-03
tel131	0.000E+00	4.449E-03	4.461E-03	4.471E-03	4.481E-03	4.490E-03	4.498E-03	4.506E-03	4.513E-03	4.520E-03	4.526E-03
tel131m	0.000E+00	5.221E-02	5.512E-02	5.760E-02	5.975E-02	6.162E-02	6.325E-02	6.470E-02	6.597E-02	6.710E-02	6.811E-02
i131	0.000E+00	2.303E+00	2.334E+00	2.353E+00	2.370E+00	2.384E+00	2.397E+00	2.409E+00	2.419E+00	2.429E+00	2.437E+00
xel131	0.000E+00	1.056E+01	2.320E+01	3.554E+01	4.755E+01	5.922E+01	7.053E+01	8.146E+01	9.201E+01	1.022E+02	1.119E+02
xel131m	0.000E+00	3.490E-02	3.790E-02	3.877E-02	3.953E-02	4.026E-02	4.096E-02	4.164E-02	4.230E-02	4.294E-02	4.357E-02
cs131	0.000E+00	9.300E-11	1.983E-10	2.896E-10	3.695E-10	4.402E-10	5.034E-10	5.603E-10	6.120E-10	6.594E-10	7.031E-10
ba131	0.000E+00	4.051E-15	2.236E-14	5.679E-14	1.080E-13	1.767E-13	2.639E-13	3.706E-13	4.981E-13	6.475E-13	8.201E-13

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
cd132	0.000E+00	1.653E-12	1.660E-12	1.673E-12	1.691E-12	1.713E-12	1.738E-12	1.765E-12	1.794E-12	1.826E-12	1.859E-12
in132	0.000E+00	2.002E-09	1.958E-09	1.922E-09	1.892E-09	1.868E-09	1.848E-09	1.832E-09	1.818E-09	1.807E-09	1.797E-09
sn132	0.000E+00	3.064E-05	3.032E-05	3.005E-05	2.983E-05	2.963E-05	2.947E-05	2.932E-05	2.919E-05	2.907E-05	2.896E-05
sb132	0.000E+00	3.839E-04	3.887E-04	3.927E-04	3.964E-04	3.996E-04	4.025E-04	4.051E-04	4.076E-04	4.098E-04	4.118E-04
sb132m	0.000E+00	2.959E-04	2.914E-04	2.876E-04	2.843E-04	2.816E-04	2.792E-04	2.772E-04	2.754E-04	2.734E-04	2.724E-04
tel132	0.000E+00	1.408E+00	1.413E+00	1.418E+00	1.422E+00	1.425E+00	1.428E+00	1.431E+00	1.433E+00	1.435E+00	1.437E+00
i132	0.000E+00	4.139E-02	4.163E-02	4.183E-02	4.201E-02	4.217E-02	4.232E-02	4.244E-02	4.256E-02	4.268E-02	4.275E-02
i132m	0.000E+00	8.434E-05	1.127E-04	1.372E-04	1.587E-04	1.778E-04	1.949E-04	2.104E-04	2.244E-04	2.373E-04	2.492E-04
xel132	0.000E+00	1.850E+01	3.904E+01	6.018E+01	8.189E+01	1.042E+02	1.270E+02	1.503E+02	1.741E+02	1.985E+02	2.234E+02
cs132	0.000E+00	3.006E-06	6.419E-06	9.846E-06	1.331E-05	1.684E-05	2.043E-05	2.410E-05	2.785E-05	3.168E-05	3.560E-05
ba132	0.000E+00	1.791E-07	7.893E-07	1.839E-06	3.325E-06	5.248E-06	7.608E-06	1.041E-05	1.365E-05	1.734E-05	2.147E-05
in133	0.000E+00	7.541E-11	7.476E-11	7.443E-11	7.437E-11	7.453E-11	7.486E-11	7.535E-11	7.595E-11	7.666	

sn133	0.000E+00	2.726E-07	2.649E-07	2.584E-07	2.530E-07	2.484E-07	2.446E-07	2.413E-07	2.385E-07	2.362E-07	2.342E-07
sb133	0.000E+00	4.182E-04	4.081E-04	3.995E-04	3.921E-04	3.857E-04	3.801E-04	3.751E-04	3.707E-04	3.667E-04	3.631E-04
tel133	0.000E+00	3.235E-03	3.206E-03	3.181E-03	3.159E-03	3.141E-03	3.124E-03	3.109E-03	3.096E-03	3.084E-03	3.072E-03
tel133m	0.000E+00	1.273E-02	1.263E-02	1.254E-02	1.245E-02	1.238E-02	1.231E-02	1.225E-02	1.219E-02	1.213E-02	1.208E-02
i133	0.000E+00	5.775E-01	5.760E-01	5.745E-01	5.732E-01	5.720E-01	5.709E-01	5.698E-01	5.688E-01	5.678E-01	5.668E-01
i133m	0.000E+00	4.596E-06	4.760E-06	4.899E-06	5.019E-06	5.123E-06	5.213E-06	5.292E-06	5.362E-06	5.423E-06	5.476E-06
xel133	0.000E+00	3.486E+00	3.479E+00	3.471E+00	3.464E+00	3.457E+00	3.451E+00	3.446E+00	3.440E+00	3.435E+00	3.429E+00
xel133m	0.000E+00	4.271E-02	4.288E-02	4.303E-02	4.315E-02	4.326E-02	4.335E-02	4.343E-02	4.350E-02	4.355E-02	4.360E-02
cs133	0.000E+00	2.616E+01	5.607E+01	8.561E+01	1.148E+02	1.435E+02	1.719E+02	1.998E+02	2.273E+02	2.544E+02	2.810E+02
ba133	0.000E+00	1.361E-09	1.357E-08	5.502E-08	1.523E-07	3.402E-07	6.617E-07	1.168E-06	1.920E-06	2.986E-06	4.444E-06
la133	0.000E+00	2.526E-23	6.526E-22	4.295E-21	1.586E-20	4.265E-20	9.389E-20	1.801E-19	3.124E-19	5.018E-19	7.587E-19
in134	0.000E+00	2.980E+00	2.975E-12	2.981E-12	2.998E-12	3.022E-12	3.052E-12	3.087E-12	3.127E-12	3.170E-12	3.217E-12
sn134	0.000E+00	3.216E-08	3.142E-08	3.082E-08	3.035E-08	2.997E-08	2.967E-08	2.943E-08	2.924E-08	2.910E-08	2.900E-08
sb134	0.000E+00	4.205E-07	4.124E-07	4.057E-07	4.003E-07	3.960E-07	3.925E-07	3.898E-07	3.877E-07	3.861E-07	3.850E-07
sb134m	0.000E+00	4.891E-06	4.797E-06	4.720E-06	4.658E-06	4.608E-06	4.568E-06	4.536E-06	4.512E-06	4.494E-06	4.481E-06
tel134	0.000E+00	1.995E-02	1.961E-02	1.930E-02	1.904E-02	1.880E-02	1.859E-02	1.840E-02	1.822E-02	1.805E-02	1.789E-02
i134	0.000E+00	2.849E-02	2.831E-02	2.814E-02	2.799E-02	2.786E-02	2.774E-02	2.762E-02	2.752E-02	2.742E-02	2.733E-02
i134m	0.000E+00	1.021E-04	1.102E-04	1.172E-04	1.233E-04	1.288E-04	1.337E-04	1.381E-04	1.422E-04	1.459E-04	1.494E-04
xel134	0.000E+00	3.592E+01	7.179E+01	1.075E+02	1.432E+02	1.787E+02	2.141E+02	2.495E+02	2.848E+02	3.199E+02	3.550E+02
xel134m	0.000E+00	1.365E-08	1.638E-08	1.881E-08	2.101E-08	2.303E-08	2.490E-08	2.665E-08	2.831E-08	2.989E-08	3.141E-08
cs134	0.000E+00	1.535E-01	6.395E-01	1.440E+00	2.535E+00	3.909E+00	5.546E+00	7.434E+00	9.561E+00	1.192E+01	1.449E+01
cs134m	0.000E+00	6.381E-05	1.373E-04	2.112E-04	2.861E-04	3.624E-04	4.402E-04	5.199E-04	6.014E-04	6.850E-04	7.705E-04
ba134	0.000E+00	3.219E-03	2.604E-02	8.795E-02	2.073E-01	4.013E-01	6.862E-01	1.078E+00	1.590E+00	2.237E+00	3.033E+00
sn135	0.000E+00	8.199E-10	8.103E-10	8.042E-10	8.010E-10	8.002E-10	8.013E-10	8.040E-10	8.080E-10	8.132E-10	8.193E-10
sb135	0.000E+00	3.876E-07	3.803E-07	3.745E-07	3.700E-07	3.666E-07	3.640E-07	3.622E-07	3.610E-07	3.604E-07	3.602E-07
tel135	0.000E+00	7.562E-05	7.434E-05	7.324E-05	7.231E-05	7.151E-05	7.082E-05	7.022E-05	6.970E-05	6.924E-05	6.883E-05
i135	0.000E+00	1.744E-01	1.739E-01	1.735E-01	1.732E-01	1.729E-01	1.727E-01	1.725E-01	1.723E-01	1.721E-01	1.720E-01
xel135	0.000E+00	9.484E-02	9.488E-02	9.465E-02	9.424E-02	9.368E-02	9.301E-02	9.226E-02	9.144E-02	9.056E-02	8.964E-02
xel135m	0.000E+00	1.270E-03	1.292E-03	1.311E-03	1.327E-03	1.341E-03	1.354E-03	1.365E-03	1.376E-03	1.385E-03	1.393E-03
cs135	0.000E+00	1.123E+01	2.257E+01	3.389E+01	4.516E+01	5.637E+01	6.751E+01	7.857E+01	8.954E+01	1.004E+02	1.112E+02
cs135m	0.000E+00	4.050E-06	9.358E-06	1.670E-05	2.607E-05	3.749E-05	5.098E-05	6.659E-05	8.436E-05	1.044E-04	1.266E-04
ba135	0.000E+00	2.799E-06	2.105E-05	8.700E-05	2.550E-04	6.014E-04	1.225E-03	2.248E-03	3.816E-03	6.099E-03	9.291E-03
ba135m	0.000E+00	5.202E-08	1.870E-07	5.012E-07	1.088E-06	2.041E-06	3.458E-06	5.438E-06	8.084E-06	1.150E-05	1.581E-05
la135	0.000E+00	1.420E-12	2.698E-12	3.797E-12	4.755E-12	5.599E-12	6.350E-12	7.024E-12	7.634E-12	8.190E-12	8.704E-12
cel135	0.000E+00	7.086E-23	1.902E-21	1.255E-20	4.639E-20	1.248E-19	2.748E-19	5.273E-19	9.148E-19	1.470E-18	2.222E-18
sn136	0.000E+00	8.189E-11	8.152E-11	8.149E-11	8.174E-11	8.222E-11	8.287E-11	8.368E-11	8.461E-11	8.565E-11	8.678E-11
sb136	0.000E+00	2.359E-08	2.325E-08	2.302E-08	2.289E-08	2.283E-08	2.285E-08	2.293E-08	2.306E-08	2.322E-08	2.343E-08
tel136	0.000E+00	2.966E-05	2.886E-05	2.819E-05	2.762E-05	2.713E-05	2.672E-05	2.637E-05	2.607E-05	2.581E-05	2.559E-05

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
i136	0.000E+00	2.702E-04	2.656E-04	2.617E-04	2.585E-04	2.559E-04	2.537E-04	2.519E-04	2.504E-04	2.492E-04	2.483E-04
i136m	0.000E+00	7.021E-05	7.080E-05	7.133E-05	7.185E-05	7.235E-05	7.286E-05	7.336E-05	7.386E-05	7.436E-05	7.486E-05
xel136	0.000E+00	4.842E+01	9.721E+01	1.462E+02	1.953E+02	2.447E+02	2.942E+02	3.439E+02	3.938E+02	4.438E+02	4.941E+02
cs136	0.000E+00	1.702E-02	3.093E-02	4.418E-02	5.704E-02	6.966E-02	8.215E-02	9.459E-02	1.070E-01	1.196E-01	1.322E-01
cs136m	0.000E+00	1.050E-07	1.461E-07	1.816E-07	2.125E-07	2.399E-07	2.643E-07	2.863E-07	3.061E-07	3.242E-07	3.407E-07
ba136	0.000E+00	7.027E-02	2.130E-01	4.206E-01	6.891E-01	1.016E+00	1.398E+00	1.835E+00	2.324E+00	2.867E+00	3.461E+00
ba136m	0.000E+00	9.044E-10	1.482E-09	2.019E-09	2.528E-09	3.018E-09	3.493E-09	3.958E-09	4.417E-09	4.873E-09	5.327E-09
sb137	0.000E+00	3.895E-08	3.705E-08	3.535E-08	3.383E-08	3.242E-08	3.111E-08	2.986E-08	2.868E-08	2.755E-08	2.646E-08
tel137	0.000E+00	2.090E-06	2.029E-06	1.977E-06	1.933E-06	1.896E-06	1.864E-06	1.836E-06	1.812E-06	1.791E-06	1.772E-06
i137	0.000E+00	9.162E-05	9.051E-05	8.957E-05	8.879E-05	8.815E-05	8.763E-05	8.720E-05	8.684E-05	8.656E-05	8.634E-05
xel137	0.000E+00	1.661E-03	1.652E-03	1.645E-03	1.638E-03	1.633E-03	1.627E-03	1.623E-03	1.619E-03	1.615E-03	1.611E-03
cs137	0.000E+00	2.889E+01	5.768E+01	8.636E+01	1.149E+02	1.433E+02	1.717E+02	1.998E+02	2.279E+02	2.558E+02	2.836E+02
ba137	0.000E+00	6.162E-02	2.444E-01	5.477E-01	9.708E-01	1.513E+00	2.174E+00	2.952E+00	3.848E+00	4.860E+00	5.988E+00
ba137m	0.000E+00	4.472E-06	8.902E-06	1.331E-05	1.770E-05	2.206E-05	2.641E-05	3.073E-05	3.504E-05	3.932E-05	4.358E-05
la137	0.000E+00	3.344E-07	1.244E-06	2.644E-06	4.469E-06	6.661E-06	9.175E-06	1.197E-05	1.502E-05	1.829E-05	2.176E-05
cel137	0.000E+00	2.262E-13	4.402E-13	6.386E-13	8.258E-13	1.005E-12	1.179E-12	1.349E-12	1.516E-12	1.683E-12	1.850E-12
sb138	0.000E+00	5.645E-11	5.626E-11	5.631E-11	5.657E-11	5.700E-11	5.757E-11	5.825E-11	5.903E-11	5.989E-11	6.083E-11
tel138	0.000E+00	1.540E-07	1.500E-07	1.468E-07	1.443E-07	1.423E-07	1.407E-07	1.395E-07	1.387E-07	1.381E-07	1.378E-07
i138	0.000E+00	1.241E-05	1.230E-05	1.221E-05	1.215E-05	1.210E-05	1.207E-05	1.205E-05	1.204E-05	1.204E-05	1.205E-05
xel138	0.000E+00	6.254E-03	6.181E-03	6.115E-03	6.058E-03	6.007E-03	5.962E-03	5.920E-03	5.881E-03	5.845E-03	5.811E-03
cs138	0.000E+00	1.527E-02	1.513E-02	1.501E-02	1.490E-02	1.480E-02	1.471E-02	1.463E-02	1.455E-02	1.448E-02	1.441E-02
cs138m	0.000E+00	4.7C0E-05	5.049E-05	5.296E-05	5.510E-05	5.697E-05	5.862E-05	6.008E-05	6.138E-05	6.255E-05	6.360E-05
ba138	0.000E+00	3.147E+01	6.275E+01	9.384E+01	1.248E+02	1.555E+02	1.861E+02	2.165E+02	2.468E+02	2.770E+02	3.071E+02
la138	0.000E+00	1.433E-04	2.914E-04	4.433E-04	5.984E-04	7.559E-04	9.150E-04	1.075E-03	1.236E-03	1.397E-03	1.557E-03
cel138	0.000E+00	4.327E-05	8.824E-05	1.346E-04	1.821E-04	2.305E-04	2.797E-04	3.294E-04	3.796E-04	4.301E-04	4.808E-04
sb139	0.000E+00	5.138E-12	5.135E-12	5.153E-12	5.188E-12	5.239E-12	5.301E-12	5.373E-12	5.454E-12	5.542E-12	5.636E-12
tel139	0.000E+00	9.124E-09	8.955E-09	8.835E-09	8.758E-09	8.716E-09	8.705E-09	8.721E-09	8.758E-09	8.815E-09	8.888E-09
i139	0.000E+00	2.323E-06	2.262E-06	2.211E-06	2.168E-06	2.131E-06	2.099E-06	2.072E-06	2.048E-06	2.027E-06	2.008E-06
xel139	0.000E+00	2.368E-04	2.320E-04	2.278E-04	2.241E-04	2.209E-04	2.180E-04	2.153E-04	2.129E-04	2.107E-04	2.086E-04
cs139	0.000E+00	4.185E-03	4.141E-03	4.102E-03	4.068E-03	4.037E-03	4.009E-03	3.983E-03	3.959E-03	3.937E-03	3.915E-03
ba139	0.000E+00	3.863E-02	3.827E-02	3.795E-02	3.766E-02	3.740E-02	3.717E-02	3.695E-02	3.675E-02	3.656E-02	3.638E-02
la139	0.000E+00	3.007E+01	5.991E+01	8.952E+01	1.189E+02	1.481E+02	1.770E+02	2.058E+02	2.344E+02	2.628E+02	2.910E+02
cel139	0.000E+00	8.127E-08	3.270E-07	6.875E-07	1.202E-06	1.595E-06	2.095E-06	2.609E-06	3.129E-06	3.649E-06	4.169E-06
cel139m	0.000E+00	7.518E-13	1.387E-12	1.932E-12	2.408E-12	2.827E-12	3.199E-12	3.531E-12	3.831E-12	4.104E-12	4.353E-12
pr139	0.000E+00	1.090E-11	3.140E-11	5.444E-11	7.842E-11	1.031E-10	1.283E-10	1.543E-10	1.811E-10	2.086E-10	2.370E-10
tel40	0.000E+00	1.756E-08	1.674E-08	1.601E-08	1.536E-08	1.476E-08	1.420E-08	1.367E-08	1.317E-08	1.269E-08	1.224E-08
i140	0.000E+00	1.975E-07	1.931E-07	1.895E-07	1.866E-07	1.843E-07	1.825E-07	1.810E-07	1.799E-07	1.790E-07	1.784E-07
xel40	0.000E+00	5.988E-05	5.825E-05	5.683E-05	5.559E-05	5.449E-05	5.350E-05	5.261E-05	5.179E-05	5.104E-05	5.034E-05

cs140	0.000E+00	4.355E-04	4.278E-04	4.211E-04	4.152E-04	4.099E-04	4.052E-04	4.009E-04	3.970E-04	3.934E-04	3.900E-04
ba140	0.000E+00	7.999E+00	8.149E+00	8.085E+00	8.022E+00	7.965E+00	7.912E+00	7.863E+00	7.816E+00	7.772E+00	7.730E+00
la140	0.000E+00	1.055E+00	1.080E+00	1.073E+00	1.066E+00	1.059E+00	1.054E+00	1.048E+00	1.043E+00	1.039E+00	1.035E+00
ce140	0.000E+00	2.143E+01	5.151E+01	8.162E+01	1.115E+02	1.413E+02	1.709E+02	2.003E+02	2.296E+02	2.588E+02	2.878E+02
pr140	0.000E+00	4.393E-10	1.266E-09	2.194E-09	3.161E-09	4.155E-09	5.174E-09	6.222E-09	7.300E-09	8.411E-09	9.556E-09
nd140	0.000E+00	3.411E-18	8.227E-18	1.326E-17	1.887E-17	2.560E-17	3.409E-17	4.508E-17	5.933E-17	7.758E-17	1.006E-16
te141	0.000E+00	1.175E-10	1.174E-10	1.177E-10	1.184E-10	1.193E-10	1.205E-10	1.219E-10	1.234E-10	1.250E-10	1.267E-10
i141	0.000E+00	2.903E-08	2.818E-08	2.747E-08	2.687E-08	2.636E-08	2.593E-08	2.555E-08	2.522E-08	2.493E-08	2.467E-08
xe141	0.000E+00	2.785E-06	2.709E-06	2.645E-06	2.590E-06	2.543E-06	2.503E-06	2.468E-06	2.437E-06	2.410E-06	2.387E-06
cs141	0.000E+00	1.269E-04	1.253E-04	1.240E-04	1.228E-04	1.218E-04	1.209E-04	1.200E-04	1.193E-04	1.186E-04	1.179E-04
ba141	0.000E+00	7.693E-03	7.623E-03	7.560E-03	7.503E-03	7.450E-03	7.401E-03	7.354E-03	7.309E-03	7.266E-03	7.223E-03
la141	0.000E+00	9.939E-02	9.852E-02	9.774E-02	9.703E-02	9.637E-02	9.576E-02	9.517E-02	9.461E-02	9.406E-02	9.352E-02

Cycle 1 -DD Assembly

fission products

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
ce141	0.000E+00	1.490E+01	1.847E+01	1.925E+01	1.935E+01	1.928E+01	1.918E+01	1.908E+01	1.897E+01	1.887E+01	1.876E+01
pr141	0.000E+00	1.283E+01	3.684E+01	6.343E+01	9.049E+01	1.175E+02	1.444E+02	1.710E+02	1.975E+02	2.238E+02	2.499E+02
nd141	0.000E+00	3.568E-11	8.537E-11	1.344E-10	1.828E-10	2.308E-10	2.785E-10	3.261E-10	3.735E-10	4.209E-10	4.682E-10
pm141	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
te142	0.000E+00	5.290E-12	5.248E-12	5.228E-12	5.228E-12	5.242E-12	5.268E-12	5.304E-12	5.349E-12	5.402E-12	5.460E-12
i142	0.000E+00	1.918E-09	1.880E-09	1.849E-09	1.825E-09	1.807E-09	1.793E-09	1.782E-09	1.775E-09	1.771E-09	1.769E-09
xe142	0.000E+00	7.357E-07	7.153E-07	6.981E-07	6.837E-07	6.716E-07	6.612E-07	6.525E-07	6.450E-07	6.386E-07	6.332E-07
cs142	0.000E+00	5.690E-06	5.567E-06	5.462E-06	5.371E-06	5.293E-06	5.226E-06	5.167E-06	5.115E-06	5.069E-06	5.028E-06
ba142	0.000E+00	4.393E-03	4.337E-03	4.287E-03	4.242E-03	4.201E-03	4.163E-03	4.127E-03	4.092E-03	4.059E-03	4.028E-03
la142	0.000E+00	3.842E-02	3.799E-02	3.760E-02	3.725E-02	3.693E-02	3.663E-02	3.635E-02	3.607E-02	3.581E-02	3.555E-02
ce142	0.000E+00	2.783E+01	5.546E+01	8.285E+01	1.100E+02	1.370E+02	1.637E+02	1.902E+02	2.166E+02	2.428E+02	2.687E+02
pr142	0.000E+00	3.322E-04	9.572E-04	1.659E-03	2.391E-03	3.142E-03	3.913E-03	4.705E-03	5.521E-03	6.360E-03	7.226E-03
pr142m	0.000E+00	2.858E-11	5.209E-11	7.229E-11	8.990E-11	1.054E-10	1.192E-10	1.315E-10	1.426E-10	1.527E-10	1.619E-10
nd142	0.000E+00	6.949E-03	4.321E-02	1.181E-01	2.345E-01	3.936E-01	5.965E-01	8.444E-01	1.138E+00	1.480E+00	1.870E+00
i143	0.000E+00	2.255E-10	2.258E-10	2.269E-10	2.287E-10	2.310E-10	2.338E-10	2.369E-10	2.404E-10	2.441E-10	2.480E-10
xe143	0.000E+00	4.388E-08	4.281E-08	4.196E-08	4.131E-08	4.082E-08	4.047E-08	4.024E-08	4.010E-08	4.005E-08	4.008E-08
xe143m	0.000E+00	1.357E-08	1.324E-08	1.297E-08	1.277E-08	1.261E-08	1.250E-08	1.243E-08	1.238E-08	1.237E-08	1.237E-08
cs143	0.000E+00	3.302E-06	3.220E-06	3.151E-06	3.092E-06	3.041E-06	2.997E-06	2.959E-06	2.925E-06	2.895E-06	2.869E-06
ba143	0.000E+00	9.672E-05	9.484E-05	9.318E-05	9.170E-05	9.036E-05	8.912E-05	8.798E-05	8.690E-05	8.588E-05	8.491E-05
la143	0.000E+00	6.057E-03	5.964E-03	5.880E-03	5.805E-03	5.737E-03	5.673E-03	5.613E-03	5.556E-03	5.502E-03	5.449E-03
ce143	0.000E+00	8.525E-01	8.394E-01	8.278E-01	8.173E-01	8.078E-01	7.989E-01	7.905E-01	7.826E-01	7.750E-01	7.677E-01
pr143	0.000E+00	7.892E+00	8.082E+00	7.984E+00	7.887E+00	7.797E+00	7.713E+00	7.633E+00	7.558E+00	7.486E+00	7.416E+00
nd143	0.000E+00	1.948E+01	4.646E+01	7.267E+01	9.786E+01	1.221E+02	1.453E+02	1.676E+02	1.890E+02	2.094E+02	2.289E+02
pm143	0.000E+00	2.198E-19	3.167E-18	2.121E-17	9.030E-17	2.833E-16	7.190E-16	1.566E-15	3.040E-15	5.400E-15	8.937E-15
sm143	0.000E+00	1.516E-27	3.168E-26	1.745E-25	5.690E-25	1.404E-24	2.914E-24	5.378E-24	9.117E-24	1.450E-23	2.192E-23
sm143m	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
i144	0.000E+00	1.341E-12	1.336E-12	1.336E-12	1.342E-12	1.353E-12	1.367E-12	1.384E-12	1.405E-12	1.427E-12	1.452E-12
xe144	0.000E+00	1.730E-08	1.699E-08	1.678E-08	1.664E-08	1.655E-08	1.652E-08	1.654E-08	1.659E-08	1.667E-08	1.678E-08
cs144	0.000E+00	6.296E-07	6.141E-07	6.013E-07	5.909E-07	5.825E-07	5.758E-07	5.705E-07	5.664E-07	5.632E-07	5.610E-07
ba144	0.000E+00	6.097E-05	5.950E-05	5.820E-05	5.706E-05	5.604E-05	5.510E-05	5.424E-05	5.344E-05	5.270E-05	5.199E-05
la144	0.000E+00	2.712E-04	2.661E-04	2.616E-04	2.576E-04	2.540E-04	2.506E-04	2.475E-04	2.446E-04	2.418E-04	2.391E-04
ce144	0.000E+00	2.452E+01	4.500E+01	6.209E+01	7.631E+01	8.813E+01	9.791E+01	1.060E+02	1.126E+02	1.180E+02	1.224E+02
pr144	0.000E+00	1.058E-03	1.922E-03	2.641E-03	3.241E-03	3.738E-03	4.150E-03	4.490E-03	4.769E-03	4.997E-03	5.181E-03
pr144m	0.000E+00	6.039E-06	1.108E-05	1.528E-05	1.878E-05	2.169E-05	2.410E-05	2.608E-05	2.771E-05	2.904E-05	3.012E-05
nd144	0.000E+00	2.294E+00	8.858E+00	1.911E+01	3.255E+01	4.874E+01	6.732E+01	8.799E+01	1.105E+02	1.346E+02	1.602E+02
pm144	0.000E+00	1.362E-13	6.005E-13	1.461E-12	2.774E-12	4.586E-12	6.939E-12	9.869E-12	1.341E-11	1.759E-11	2.244E-11
sm144	0.000E+00	7.601E-17	1.584E-15	8.662E-15	2.798E-14	6.820E-14	1.396E-13	2.539E-13	4.237E-13	6.625E-13	9.844E-13
i145	0.000E+00	1.662E-13	1.666E-13	1.678E-13	1.695E-13	1.718E-13	1.746E-13	1.776E-13	1.810E-13	1.847E-13	1.886E-13
xe145	0.000E+00	9.339E-10	9.353E-10	9.406E-10	9.435E-10	9.614E-10	9.758E-10	9.924E-10	1.011E-09	1.031E-09	1.052E-09
cs145	0.000E+00	7.616E-08	7.456E-08	7.330E-08	7.239E-08	7.164E-08	7.114E-08	7.082E-08	7.066E-08	7.062E-08	7.070E-08
ba145	0.000E+00	1.052E-05	1.024E-05	9.991E-06	9.778E-06	9.591E-06	9.426E-06	9.278E-06	9.145E-06	9.024E-06	8.914E-06
la145	0.000E+00	1.175E-04	1.153E-04	1.134E-04	1.117E-04	1.101E-04	1.087E-04	1.074E-04	1.062E-04	1.051E-04	1.040E-04
ce145	0.000E+00	8.783E-04	8.657E-04	8.546E-04	8.446E-04	8.356E-04	8.273E-04	8.196E-04	8.122E-04	8.053E-04	7.986E-04
pr145	0.000E+00	1.048E-01	1.033E-01	1.020E-01	1.008E-01	9.971E-02	9.872E-02	9.780E-02	9.693E-02	9.610E-02	9.531E-02
nd145	0.000E+00	1.910E+01	3.786E+01	5.621E+01	7.417E+01	9.176E+01	1.090E+02	1.258E+02	1.424E+02	1.585E+02	1.744E+02
pm145	0.000E+00	2.578E-08	1.232E-07	2.880E-07	5.126E-07	7.908E-07	1.117E-06	1.486E-06	1.894E-06	2.337E-06	2.810E-06
sm145	0.000E+00	1.484E-10	1.457E-09	5.097E-09	1.194E-08	2.259E-08	3.747E-08	5.681E-08	8.075E-08	1.093E-07	1.424E-07
xe146	0.000E+00	4.564E-11	4.544E-11	4.544E-11	4.551E-11	4.591E-11	4.633E-11	4.684E-11	4.744E-11	4.810E-11	4.882E-11
cs146	0.000E+00	5.997E-09	5.896E-09	5.826E-09	5.783E-09	5.763E-09	5.763E-09	5.781E-09	5.812E-09	5.857E-09	5.912E-09
ba146	0.000E+00	2.660E-06	2.573E-06	2.498E-06	2.434E-06	2.378E-06	2.328E-06	2.284E-06	2.245E-06	2.209E-06	2.177E-06

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
la146	0.000E+00	1.336E-05	1.304E-05	1.276E-05	1.251E-05	1.230E-05	1.211E-05	1.194E-05	1.179E-05	1.165E-05	1.153E-05
la146m	0.000E+00	9.221E-06	9.096E-06	8.986E-06	8.891E-06	8.806E-06	8.731E-06	8.662E-06	8.600E-06	8.542E-06	8.489E-06
ce146	0.000E+00	3.065E-03	3.029E-03	2.996E-03	2.968E-03	2.943E-03	2.920E-03	2.899E-03	2.879E-03	2.860E-03	2.843E-03
pr146	0.000E+00	5.483E-03	5.419E-03	5.362E-03	5.312E-03	5.268E-03	5.227E-03	5.190E-03	5.155E-03	5.123E-03	5.092E-03
nd146	0.000E+00	1.508E+01	3.021E+01	4.539E+01	6.064E+01	7.597E+01	9.139E+01	1.069E+02	1.225E+02	1.383E+02	1.542E+02
pm146	0.000E+00	8.865E-06	3.556E-05	7.034E-05	1.071E-04	1.428E-04	1.759E-04	2.060E-04	2.327E-04	2.562E-04	2.766E-04
sm146	0.000E+00	3.575E-07	3.608E-06	1.302E-05	3.14						

xe147	0.000E+00	6.478E-13	6.284E-13	6.128E-13	6.006E-13	5.911E-13	5.839E-13	5.786E-13	5.750E-13	5.728E-13	5.717E-13
cs147	0.000E+00	1.976E-09	1.909E-09	1.854E-09	1.810E-09	1.773E-09	1.744E-09	1.721E-09	1.702E-09	1.688E-09	1.678E-09
ba147	0.000E+00	2.407E-07	2.322E-07	2.251E-07	2.191E-07	2.139E-07	2.094E-07	2.055E-07	2.021E-07	1.991E-07	1.965E-07
la147	0.000E+00	5.373E-06	5.300E-06	5.242E-06	5.198E-06	5.166E-06	5.144E-06	5.131E-06	5.125E-06	5.126E-06	5.133E-06
ce147	0.000E+00	1.380E-04	1.373E-04	1.368E-04	1.364E-04	1.360E-04	1.357E-04	1.355E-04	1.354E-04	1.352E-04	1.352E-04
pr147	0.000E+00	2.337E-03	2.316E-03	2.298E-03	2.283E-03	2.269E-03	2.257E-03	2.245E-03	2.235E-03	2.226E-03	2.217E-03
nd147	0.000E+00	2.668E+00	2.688E+00	2.670E+00	2.654E+00	2.640E+00	2.627E+00	2.615E+00	2.604E+00	2.594E+00	2.585E+00
pm147	0.000E+00	8.216E+00	1.787E+01	2.643E+01	3.397E+01	4.060E+01	4.640E+01	5.146E+01	5.585E+01	5.963E+01	6.287E+01
sm147	0.000E+00	1.632E+01	7.750E-01	1.796E+00	3.163E+00	4.820E+00	6.718E+00	8.809E+00	1.105E+01	1.341E+01	1.585E+01
eu147	0.000E+00	3.464E-22	1.519E-20	1.270E-19	5.398E-19	1.594E-18	3.748E-18	7.553E-18	1.361E-17	2.254E-17	3.492E-17
gd147	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
cs148	0.000E+00	4.091E-11	4.087E-11	4.101E-11	4.130E-11	4.172E-11	4.224E-11	4.286E-11	4.355E-11	4.430E-11	4.512E-11
ba148	0.000E+00	2.693E-08	2.628E-08	2.578E-08	2.540E-08	2.514E-08	2.496E-08	2.486E-08	2.483E-08	2.486E-08	2.493E-08
la148	0.000E+00	5.440E-07	5.295E-07	5.177E-07	5.084E-07	5.012E-07	4.958E-07	4.919E-07	4.893E-07	4.879E-07	4.874E-07
ce148	0.000E+00	1.143E-04	1.121E-04	1.103E-04	1.087E-04	1.073E-04	1.061E-04	1.050E-04	1.041E-04	1.032E-04	1.025E-04
pr148	0.000E+00	2.866E-04	2.832E-04	2.802E-04	2.777E-04	2.756E-04	2.737E-04	2.721E-04	2.707E-04	2.695E-04	2.684E-04
pr148m	0.000E+00	7.556E-06	9.200E-06	1.061E-05	1.184E-05	1.292E-05	1.388E-05	1.473E-05	1.549E-05	1.618E-05	1.681E-05
nd148	0.000E+00	8.606E+00	1.719E+01	2.575E+01	3.427E+01	4.277E+01	5.124E+01	5.969E+01	6.813E+01	7.654E+01	8.493E+01
pm148	0.000E+00	3.005E-02	6.601E-02	9.849E-02	1.278E-01	1.544E-01	1.786E-01	2.007E-01	2.207E-01	2.391E-01	2.557E-01
sm148m	0.000E+00	5.033E-02	1.379E-01	2.185E-01	2.903E-01	3.541E-01	4.108E-01	4.610E-01	5.055E-01	5.446E-01	5.789E-01
sm148	0.000E+00	1.164E-01	6.236E-01	1.535E+00	2.824E+00	4.468E+00	6.446E+00	8.738E+00	1.133E+01	1.420E+01	1.734E+01
cs149	0.000E+00	8.846E-13	8.819E-13	8.834E-13	8.886E-13	8.971E-13	9.082E-13	9.216E-13	9.370E-13	9.541E-13	9.727E-13
ba149	0.000E+00	3.314E-09	3.288E-09	3.279E-09	3.284E-09	3.302E-09	3.330E-09	3.368E-09	3.414E-09	3.467E-09	3.525E-09
la149	0.000E+00	3.590E-07	3.530E-07	3.487E-07	3.459E-07	3.446E-07	3.445E-07	3.454E-07	3.473E-07	3.500E-07	3.533E-07
ce149	0.000E+00	5.458E-06	5.389E-06	5.333E-06	5.289E-06	5.256E-06	5.231E-06	5.214E-06	5.204E-06	5.199E-06	5.198E-06
pr149	0.000E+00	1.940E-04	1.939E-04	1.938E-04	1.939E-04	1.940E-04	1.942E-04	1.945E-04	1.949E-04	1.953E-04	1.957E-04
nd149	0.000E+00	8.964E-03	8.985E-03	9.007E-03	9.032E-03	9.061E-03	9.093E-03	9.128E-03	9.165E-03	9.205E-03	9.246E-03
pm149	0.000E+00	2.825E-01	2.964E-01	3.094E-01	3.215E-01	3.329E-01	3.436E-01	3.538E-01	3.634E-01	3.726E-01	3.814E-01
sm149	0.000E+00	8.719E-01	9.153E-01	9.511E-01	9.805E-01	1.005E+00	1.024E+00	1.040E+00	1.053E+00	1.063E+00	1.073E+00
eu149	0.000E+00	2.770E-13	1.495E-12	3.453E-12	5.706E-12	7.927E-12	9.946E-12	1.171E-11	1.323E-11	1.456E-11	1.574E-11
gd149	0.000E+00	2.637E-23	9.739E-22	7.329E-21	2.907E-20	8.174E-20	1.855E-19	3.637E-19	6.413E-19	1.044E-18	1.594E-18
cs150	0.000E+00	4.546E-14	4.555E-14	4.581E-14	4.623E-14	4.675E-14	4.737E-14	4.807E-14	4.884E-14	4.966E-14	5.052E-14
ba150	0.000E+00	4.536E-10	4.525E-10	4.534E-10	4.561E-10	4.604E-10	4.660E-10	4.726E-10	4.802E-10	4.886E-10	4.977E-10
la150	0.000E+00	1.771E-08	1.755E-08	1.748E-08	1.750E-08	1.761E-08	1.778E-08	1.801E-08	1.830E-08	1.863E-08	1.900E-08
ce150	0.000E+00	2.263E-06	2.231E-06	2.205E-06	2.185E-06	2.171E-06	2.162E-06	2.156E-06	2.154E-06	2.155E-06	2.159E-06
pr150	0.000E+00	5.345E-06	5.383E-06	5.419E-06	5.457E-06	5.497E-06	5.540E-06	5.585E-06	5.631E-06	5.680E-06	5.730E-06
nd150	0.000E+00	3.563E+00	7.187E+00	1.086E+01	1.459E+01	1.836E+01	2.218E+01	2.604E+01	2.994E+01	3.388E+01	3.786E+01
pm150	0.000E+00	8.487E-05	8.983E-05	9.483E-05	9.984E-05	1.049E-04	1.099E-04	1.150E-04	1.202E-04	1.254E-04	1.306E-04
sm150	0.000E+00	4.587E+00	1.048E+01	1.658E+01	2.287E+01	2.931E+01	3.588E+01	4.257E+01	4.936E+01	5.622E+01	6.330E+01
ba151	0.000E+00	2.488E-11	2.493E-11	2.507E-11	2.529E-11	2.557E-11	2.589E-11	2.626E-11	2.666E-11	2.708E-11	2.753E-11
la151	0.000E+00	3.345E-09	3.330E-09	3.332E-09	3.350E-09	3.383E-09	3.429E-09	3.487E-09	3.554E-09	3.630E-09	3.713E-09
ce151	0.000E+00	1.619E-07	1.596E-07	1.580E-07	1.570E-07	1.566E-07	1.567E-07	1.573E-07	1.583E-07	1.597E-07	1.613E-07
pr151	0.000E+00	9.091E-06	9.160E-06	9.231E-06	9.309E-06	9.395E-06	9.490E-06	9.593E-06	9.703E-06	9.820E-06	9.941E-06

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power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm*2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
nd151	0.000E+00	4.427E-04	4.539E-04	4.640E-04	4.736E-04	4.828E-04	4.918E-04	5.006E-04	5.092E-04	5.178E-04	5.264E-04
pm151	0.000E+00	6.060E-02	6.218E-02	6.361E-02	6.496E-02	6.625E-02	6.750E-02	6.872E-02	6.993E-02	7.112E-02	7.230E-02
sm151	0.000E+00	1.713E+00	2.800E+00	3.504E+00	3.992E+00	4.356E+00	4.648E+00	4.899E+00	5.126E+00	5.338E+00	5.546E+00
eu151	0.000E+00	1.023E-03	2.873E-03	4.622E-03	6.021E-03	7.069E-03	7.838E-03	8.404E-03	8.830E-03	9.160E-03	9.429E-03
gd151	0.000E+00	2.216E-11	2.639E-10	1.006E-09	2.430E-09	4.601E-09	7.511E-09	1.111E-08	1.533E-08	2.011E-08	2.540E-08
tb151	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
ba152	0.000E+00	4.924E-13	4.933E-13	4.962E-13	5.008E-13	5.069E-13	5.141E-13	5.222E-13	5.312E-13	5.409E-13	5.512E-13
la152	0.000E+00	1.432E-10	1.433E-10	1.441E-10	1.456E-10	1.478E-10	1.505E-10	1.537E-10	1.573E-10	1.613E-10	1.656E-10
ce152	0.000E+00	3.030E-07	2.993E-07	2.971E-07	2.964E-07	2.971E-07	2.991E-07	3.023E-07	3.063E-07	3.113E-07	3.170E-07
pr152	0.000E+00	1.300E-06	1.315E-06	1.332E-06	1.352E-06	1.374E-06	1.399E-06	1.427E-06	1.457E-06	1.490E-06	1.524E-06
nd152	0.000E+00	2.625E-04	2.719E-04	2.803E-04	2.881E-04	2.956E-04	3.028E-04	3.098E-04	3.168E-04	3.236E-04	3.303E-04
pm152	0.000E+00	9.525E-05	9.875E-05	1.019E-04	1.048E-04	1.076E-04	1.103E-04	1.129E-04	1.155E-04	1.180E-04	1.205E-04
pm152m	0.000E+00	1.590E-06	2.074E-06	2.490E-06	2.853E-06	3.173E-06	3.458E-06	3.713E-06	3.943E-06	4.151E-06	4.342E-06
sm152	0.000E+00	1.996E+00	4.712E+00	7.790E+00	1.103E+01	1.432E+01	1.760E+01	2.083E+01	2.400E+01	2.710E+01	3.012E+01
eu152	0.000E+00	1.652E-04	9.591E-04	2.381E-03	4.216E-03	6.242E-03	8.293E-03	1.026E-02	1.209E-02	1.376E-02	1.525E-02
eu152m	0.000E+00	2.171E-06	6.123E-06	9.924E-06	1.306E-05	1.552E-05	1.745E-05	1.899E-05	2.027E-05	2.138E-05	2.239E-05
gd152	0.000E+00	6.708E-05	4.136E-04	1.091E-03	2.058E-03	3.251E-03	4.616E-03	6.111E-03	7.706E-03	9.380E-03	1.112E-02
la153	0.000E+00	1.695E-11	1.699E-11	1.710E-11	1.728E-11	1.752E-11	1.781E-11	1.815E-11	1.852E-11	1.893E-11	1.936E-11
ce153	0.000E+00	9.471E-09	9.439E-09	9.464E-09	9.545E-09	9.678E-09	9.858E-09	1.008E-08	1.034E-08	1.063E-08	1.095E-08
pr153	0.000E+00	3.224E-07	3.252E-07	3.290E-07	3.341E-07	3.404E-07	3.479E-07	3.566E-07	3.663E-07	3.768E-07	3.881E-07
nd153	0.000E+00	1.526E-05	1.574E-05	1.618E-05	1.661E-05	1.704E-05	1.747E-05	1.790E-05	1.834E-05	1.878E-05	1.923E-05
pm153	0.000E+00	7.804E-05	8.133E-05	8.433E-05	8.715E-05	8.988E-05	9.254E-05	9.517E-05	9.778E-05	1.004E-04	1.029E-04
sm153	0.000E+00	4.707E-02	5.848E-02	7.120E-02	8.469E-02	9.866E-02	1.130E-01	1.275E-01	1.423E-01	1.572E-01	1.724E-01
eu153	0.000E+00	9.318E-01	2.081E+00	3.440E+00	5.018E+00	6.812E+00	8.815E+00	1.102E+01	1.340E+01	1.596E+01	1.868E+01
gd153	0.000E+00	2.005E-07	2.109E-06	7.223E-06	1.590E-05	2.778E-05	4.231E-05	5.891E-05	7.713E-05	9.666E-05	1.173E-04
tb153	0.000E+00	4.059E-21	1.085E-19	7.164E-19	2.650E-18	7.134E-18	1.572E-17	3.017E-17	5.237E-17	8.415E-17	1.273E-16
la154	0.000E+00	3.318E-13	3.327E-13	3.351E-13	3.387E-13	3.435E-13	3.492E-13	3.556E-13	3.627E-13	3.704E-13	3.787E-13
ce154	0.000E+00	1.491E-09	1.495E-09	1.508E-09	1.530E-09	1.560E-09	1.598E-09	1.642E-0			

eu154	0.000E+00	2.615E-02	1.053E-01	2.373E-01	4.232E-01	6.646E-01	9.622E-01	1.316E+00	1.727E+00	2.193E+00	2.712E+00
eu154m	0.000E+00	2.632E-09	4.690E-09	6.459E-09	8.001E-09	9.358E-09	1.056E-08	1.164E-08	1.261E-08	1.350E-08	1.430E-08
gd154	0.000E+00	1.313E-04	1.031E-03	3.449E-03	8.138E-03	1.585E-02	2.736E-02	4.342E-02	6.476E-02	9.212E-02	1.262E-01
la155	0.000E+00	9.201E-15	9.233E-15	9.313E-15	9.438E-15	9.602E-15	9.802E-15	1.003E-14	1.029E-14	1.057E-14	1.087E-14
ce155	0.000E+00	3.677E-11	3.693E-11	3.729E-11	3.785E-11	3.859E-11	3.950E-11	4.055E-11	4.173E-11	4.302E-11	4.440E-11
pr155	0.000E+00	3.691E-09	3.753E-09	3.838E-09	3.951E-09	4.090E-09	4.254E-09	4.443E-09	4.653E-09	4.881E-09	5.125E-09
nd155	0.000E+00	6.306E-07	6.648E-07	6.980E-07	7.319E-07	7.672E-07	8.040E-07	8.426E-07	8.829E-07	9.246E-07	9.674E-07
pm155	0.000E+00	2.724E-06	3.019E-06	3.287E-06	3.537E-06	3.777E-06	4.009E-06	4.237E-06	4.462E-06	4.685E-06	4.905E-06
sm155	0.000E+00	8.005E-05	8.999E-05	9.899E-05	1.074E-04	1.154E-04	1.231E-04	1.307E-04	1.381E-04	1.454E-04	1.527E-04
eu155	0.000E+00	1.279E-01	1.891E-01	2.363E-01	2.851E-01	3.408E-01	4.050E-01	4.788E-01	5.625E-01	6.562E-01	7.597E-01
gd155	0.000E+00	1.034E-03	1.996E-03	2.650E-03	3.241E-03	3.883E-03	4.618E-03	5.464E-03	6.426E-03	7.507E-03	8.706E-03
gd155m	0.000E+00	2.520E-15	4.878E-15	6.521E-15	8.054E-15	9.765E-15	1.177E-14	1.414E-14	1.690E-14	2.007E-14	2.368E-14
tb155	0.000E+00	1.282E-13	2.457E-13	3.474E-13	4.379E-13	5.211E-13	6.009E-13	6.809E-13	7.648E-13	8.560E-13	9.576E-13
dy155	0.000E+00	3.753E-23	1.007E-21	6.646E-21	2.456E-20	6.606E-20	1.454E-19	2.790E-19	4.840E-19	7.775E-19	1.176E-18
ce156	0.000E+00	2.610E-12	2.621E-12	2.646E-12	2.685E-12	2.736E-12	2.797E-12	2.868E-12	2.947E-12	3.034E-12	3.126E-12
pr156	0.000E+00	1.804E-10	1.834E-10	1.878E-10	1.939E-10	2.016E-10	2.110E-10	2.217E-10	2.338E-10	2.469E-10	2.610E-10
nd156	0.000E+00	2.124E-07	2.253E-07	2.385E-07	2.524E-07	2.673E-07	2.835E-07	3.007E-07	3.191E-07	3.383E-07	3.584E-07

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nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
pm156	0.000E+00	3.265E-07	3.747E-07	4.189E-07	4.607E-07	5.013E-07	5.412E-07	5.808E-07	6.204E-07	6.598E-07	6.992E-07
sm156	0.000E+00	1.062E-03	1.263E-03	1.443E-03	1.608E-03	1.764E-03	1.914E-03	2.058E-03	2.198E-03	2.335E-03	2.468E-03
eu156	0.000E+00	7.525E-02	1.152E-01	1.436E-01	1.709E-01	2.007E-01	2.344E-01	2.729E-01	3.167E-01	3.661E-01	4.215E-01
gd156	0.000E+00	1.258E-01	4.204E-01	8.141E-01	1.290E+00	1.851E+00	2.507E+00	3.270E+00	4.156E+00	5.181E+00	6.361E+00
tb156	0.000E+00	7.449E-12	1.426E-11	2.012E-11	2.524E-11	2.978E-11	3.387E-11	3.762E-11	4.112E-11	4.445E-11	4.770E-11
tb156m	0.000E+00	3.373E-14	6.402E-14	9.009E-14	1.129E-13	1.331E-13	1.513E-13	1.680E-13	1.836E-13	1.983E-13	2.127E-13
dy156	0.000E+00	2.425E-20	1.287E-18	1.289E-17	6.430E-17	2.187E-16	5.844E-16	1.322E-15	2.648E-15	4.834E-15	8.203E-15
ce157	0.000E+00	3.743E-14	3.757E-14	3.791E-14	3.843E-14	3.911E-14	3.994E-14	4.089E-14	4.196E-14	4.312E-14	4.436E-14
pr157	0.000E+00	2.225E-11	2.251E-11	2.296E-11	2.363E-11	2.450E-11	2.556E-11	2.681E-11	2.821E-11	2.975E-11	3.140E-11
nd157	0.000E+00	5.113E-09	5.398E-09	5.733E-09	6.136E-09	6.614E-09	7.168E-09	7.792E-09	8.481E-09	9.225E-09	1.002E-08
pm157	0.000E+00	5.524E-07	6.447E-07	7.325E-07	8.198E-07	9.086E-07	9.999E-07	1.094E-06	1.192E-06	1.292E-06	1.394E-06
sm157	0.000E+00	7.269E-06	9.020E-06	1.061E-05	1.210E-05	1.353E-05	1.492E-05	1.629E-05	1.765E-05	1.899E-05	2.032E-05
eu157	0.000E+00	9.152E-04	1.166E-03	1.385E-03	1.591E-03	1.794E-03	1.998E-03	2.205E-03	2.417E-03	2.637E-03	2.864E-03
gd157	0.000E+00	7.276E-03	9.352E-03	1.117E-02	1.288E-02	1.452E-02	1.616E-02	1.781E-02	1.949E-02	2.122E-02	2.302E-02
tb157	0.000E+00	1.004E-09	3.750E-09	7.831E-09	1.292E-08	1.875E-08	2.512E-08	3.184E-08	3.878E-08	4.583E-08	5.288E-08
dy157	0.000E+00	1.596E-17	6.129E-17	1.348E-16	2.390E-16	3.794E-16	5.640E-16	8.027E-16	1.106E-15	1.485E-15	1.951E-15
pr158	0.000E+00	6.376E-13	6.433E-13	6.550E-13	6.731E-13	6.973E-13	7.274E-13	7.629E-13	8.030E-13	8.472E-13	8.948E-13
nd158	0.000E+00	9.396E-10	9.769E-10	1.029E-09	1.099E-09	1.187E-09	1.294E-09	1.418E-09	1.558E-09	1.711E-09	1.875E-09
pm158	0.000E+00	9.390E-09	1.077E-08	1.220E-08	1.376E-08	1.548E-08	1.737E-08	1.944E-08	2.167E-08	2.403E-08	2.650E-08
sm158	0.000E+00	2.496E-06	3.113E-06	3.680E-06	4.223E-06	4.756E-06	5.285E-06	5.816E-06	6.350E-06	6.888E-06	7.428E-06
eu158	0.000E+00	2.219E-05	2.813E-05	3.356E-05	3.870E-05	4.369E-05	4.860E-05	5.348E-05	5.836E-05	6.323E-05	6.809E-05
gd158	0.000E+00	7.674E-02	1.900E-01	3.301E-01	4.954E-01	6.851E-01	8.994E-01	1.139E+00	1.404E+00	1.697E+00	2.018E+00
tb158	0.000E+00	1.379E-08	5.008E-08	1.025E-07	1.660E-07	2.368E-07	3.118E-07	3.886E-07	4.654E-07	5.409E-07	6.140E-07
tb158m	0.000E+00	7.463E-15	1.399E-14	1.961E-14	2.451E-14	2.882E-14	3.267E-14	3.612E-14	3.924E-14	4.211E-14	4.475E-14
dy158	0.000E+00	2.311E-09	8.770E-09	1.875E-08	3.176E-08	4.738E-08	6.529E-08	8.519E-08	1.069E-07	1.301E-07	1.547E-07
pr159	0.000E+00	3.181E-14	3.201E-14	3.246E-14	3.316E-14	3.410E-14	3.525E-14	3.661E-14	3.814E-14	3.982E-14	4.163E-14
nd159	0.000E+00	2.456E-11	2.525E-11	2.634E-11	2.791E-11	2.997E-11	3.251E-11	3.549E-11	3.886E-11	4.258E-11	4.658E-11
pm159	0.000E+00	1.727E-09	1.949E-09	2.194E-09	2.477E-09	2.801E-09	3.170E-09	3.580E-09	4.029E-09	4.511E-09	5.021E-09
sm159	0.000E+00	4.136E-07	5.315E-07	6.422E-07	7.505E-07	8.592E-07	9.696E-07	1.083E-06	1.198E-06	1.316E-06	1.435E-06
eu159	0.000E+00	3.460E-06	4.655E-06	5.751E-06	6.791E-06	7.803E-06	8.803E-06	9.800E-06	1.080E-05	1.180E-05	1.280E-05
gd159	0.000E+00	2.179E-04	2.975E-04	3.717E-04	4.435E-04	5.146E-04	5.861E-04	6.585E-04	7.324E-04	8.078E-04	8.849E-04
tb159	0.000E+00	1.017E-02	2.521E-02	4.451E-02	6.778E-02	9.484E-02	1.256E-01	1.600E-01	1.981E-01	2.398E-01	2.852E-01
dy159	0.000E+00	3.504E-11	1.435E-10	3.235E-10	5.718E-10	8.852E-10	1.261E-09	1.695E-09	2.187E-09	2.734E-09	3.335E-09
ho159	0.000E+00	8.974E-23	2.394E-21	1.582E-20	5.859E-20	1.580E-19	3.488E-19	6.708E-19	1.167E-18	1.880E-18	2.851E-18
ho159m	0.000E+00	4.023E-26	1.072E-24	7.087E-24	2.624E-23	7.075E-23	1.561E-22	3.003E-22	5.222E-22	8.410E-22	1.275E-21
nd160	0.000E+00	2.483E-12	2.528E-12	2.604E-12	2.717E-12	2.866E-12	3.050E-12	3.266E-12	3.511E-12	3.781E-12	4.072E-12
pm160	0.000E+00	6.783E-11	7.413E-11	8.179E-11	9.125E-11	1.027E-10	1.161E-10	1.314E-10	1.484E-10	1.669E-10	1.865E-10
sm160	0.000E+00	5.735E-08	7.411E-08	9.005E-08	1.059E-07	1.220E-07	1.386E-07	1.558E-07	1.735E-07	1.917E-07	2.103E-07
eu160	0.000E+00	5.340E-08	7.475E-08	9.428E-08	1.128E-07	1.308E-07	1.485E-07	1.662E-07	1.838E-07	2.015E-07	2.191E-07
gd160	0.000E+00	3.951E-03	1.017E-02	1.842E-02	2.855E-02	4.049E-02	5.417E-02	6.956E-02	8.666E-02	1.055E-01	1.259E-01
tb160	0.000E+00	6.751E-05	2.676E-04	5.927E-04	1.037E-03	1.598E-03	2.276E-03	3.073E-03	3.993E-03	5.042E-03	6.224E-03
dy160	0.000E+00	1.499E-05	1.133E-04	3.688E-04	8.466E-04	1.605E-03	2.698E-03	4.174E-03	6.083E-03	8.470E-03	1.138E-02
nd161	0.000E+00	4.461E-14	4.517E-14	4.625E-14	4.789E-14	5.009E-14	5.282E-14	5.605E-14	5.971E-14	6.374E-14	6.802E-14
pm161	0.000E+00	9.319E-12	9.947E-12	1.077E-11	1.183E-11	1.316E-11	1.474E-11	1.656E-11	1.861E-11	2.084E-11	2.323E-11
sm161	0.000E+00	7.618E-10	9.852E-10	1.207E-09	1.437E-09	1.680E-09	1.941E-09	2.218E-09	2.511E-09	2.817E-09	3.135E-09
eu161	0.000E+00	1.741E-08	2.593E-08	3.370E-08	4.105E-08	4.817E-08	5.518E-08	6.213E-08	6.907E-08	7.601E-08	8.293E-08
gd161	0.000E+00	1.115E-07	1.715E-07	2.256E-07	2.759E-07	3.238E-07	3.701E-07	4.154E-07	4.599E-07	5.038E-07	5.472E-07
tb161	0.000E+00	2.773E-04	4.450E-04	5.974E-04	7.402E-04	8.773E-04	1.011E-03	1.143E-03	1.275E-03	1.407E-03	1.539E-03
dy161	0.000E+00	1.119E-03	3.376E-03	6.494E-03	1.034E-02	1.481E-02	1.984E-02	2.540E-02	3.143E-02	3.792E-02	4.484E-02
ho161	0.000E+00	1.714E-15	3.255E-15	4.588E-15	5.775E-15	6.868E-15	7.921E-15	8.987E-15	1.012E-14	1.137E-14	1.280E-14

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

ho161m	0.000E+00	1.668E-23	2.178E-22	1.229E-21	4.354E-21	1.161E-20	2.565E-20	4.968E-20	8.731E-20	1.424E-19	2.189E-19
er161	0.000E+00	1.709E-23	4.587E-22	3.026E-21	1.118E-20	3.007E-20	6.621E-20	1.270E-19	2.203E-19	3.539E-19	5.350E-19

pml62	0.000E+00	2.562E-13	2.643E-13	2.722E-13	2.800E-13	2.878E-13	2.955E-13	3.032E-13	3.109E-13	3.185E-13	3.261E-13
sm162	0.000E+00	1.249E-10	1.575E-10	1.859E-10	2.109E-10	2.332E-10	2.533E-10	2.715E-10	2.881E-10	3.035E-10	3.177E-10
eu162	0.000E+00	1.611E-08	2.497E-08	3.260E-08	3.927E-08	4.517E-08	5.041E-08	5.513E-08	5.939E-08	6.328E-08	6.684E-08
gd162	0.000E+00	9.284E-08	1.541E-07	2.068E-07	2.528E-07	2.933E-07	3.294E-07	3.617E-07	3.909E-07	4.174E-07	4.417E-07
tb162	0.000E+00	8.894E-08	1.479E-07	1.988E-07	2.432E-07	2.824E-07	3.174E-07	3.489E-07	3.773E-07	4.033E-07	4.272E-07
dyl62	0.000E+00	4.979E-04	1.603E-03	3.264E-03	5.438E-03	8.089E-03	1.119E-02	1.471E-02	1.863E-02	2.294E-02	2.763E-02
ho162	0.000E+00	3.063E-15	5.812E-15	8.180E-15	1.025E-14	1.211E-14	1.379E-14	1.536E-14	1.687E-14	1.837E-14	1.990E-14
ho162m	0.000E+00	1.305E-14	2.477E-14	3.486E-14	4.371E-14	5.161E-14	5.880E-14	6.553E-14	7.200E-14	7.843E-14	8.502E-14
er162	0.000E+00	1.674E-20	8.561E-19	8.638E-18	4.351E-17	1.496E-16	4.041E-16	9.244E-16	1.873E-15	3.460E-15	5.941E-15
sm163	0.000E+00	6.056E-12	6.631E-12	7.147E-12	7.618E-12	8.052E-12	8.455E-12	8.833E-12	9.190E-12	9.529E-12	9.854E-12
eu163	0.000E+00	2.311E-10	3.233E-10	4.030E-10	4.730E-10	5.351E-10	5.906E-10	6.407E-10	6.862E-10	7.279E-10	7.664E-10
gd163	0.000E+00	7.029E-09	1.129E-08	1.496E-08	1.816E-08	2.099E-08	2.351E-08	2.577E-08	2.782E-08	2.968E-08	3.138E-08
tb163	0.000E+00	9.650E-08	1.569E-07	2.090E-07	2.544E-07	2.945E-07	3.302E-07	3.623E-07	3.912E-07	4.176E-07	4.418E-07
dyl63	0.000E+00	2.276E-04	7.286E-04	1.510E-03	2.582E-03	3.956E-03	5.648E-03	7.671E-03	1.004E-02	1.278E-02	1.591E-02
ho163	0.000E+00	1.393E-10	5.350E-10	1.140E-09	1.917E-09	2.834E-09	3.866E-09	4.992E-09	6.196E-09	7.465E-09	8.789E-09
ho163m	0.000E+00	9.867E-18	1.872E-17	2.634E-17	3.299E-17	3.887E-17	4.415E-17	4.896E-17	5.341E-17	5.764E-17	6.175E-17
er163	0.000E+00	1.926E-19	7.785E-19	1.817E-18	3.491E-18	6.116E-18	1.014E-17	1.613E-17	2.476E-17	3.678E-17	5.302E-17
sm164	0.000E+00	1.311E-12	1.346E-12	1.382E-12	1.417E-12	1.453E-12	1.489E-12	1.525E-12	1.561E-12	1.597E-12	1.633E-12
eu164	0.000E+00	1.258E-11	1.483E-11	1.680E-11	1.856E-11	2.015E-11	2.159E-11	2.291E-11	2.413E-11	2.527E-11	2.633E-11
gd164	0.000E+00	3.664E-08	5.496E-08	7.076E-08	8.459E-08	9.682E-08	1.077E-07	1.175E-07	1.264E-07	1.345E-07	1.420E-07
tb164	0.000E+00	6.023E-09	9.351E-09	1.222E-08	1.473E-08	1.695E-08	1.892E-08	2.070E-08	2.230E-08	2.377E-08	2.512E-08
dyl64	0.000E+00	9.104E-05	2.586E-04	4.935E-04	7.902E-04	1.146E-03	1.562E-03	2.039E-03	2.581E-03	3.193E-03	3.880E-03
ho164	0.000E+00	8.267E-13	1.622E-12	2.372E-12	3.108E-12	3.851E-12	4.624E-12	5.447E-12	6.343E-12	7.334E-12	8.447E-12
ho164m	0.000E+00	7.066E-13	1.341E-12	1.886E-12	2.362E-12	2.783E-12	3.159E-12	3.500E-12	3.815E-12	4.110E-12	4.394E-12
er164	0.000E+00	8.615E-10	3.378E-09	7.362E-09	1.268E-08	1.923E-08	2.696E-08	3.585E-08	4.589E-08	5.714E-08	6.965E-08
sm165	0.000E+00	5.544E-14	5.591E-14	5.653E-14	5.729E-14	5.813E-14	5.906E-14	6.004E-14	6.108E-14	6.216E-14	6.328E-14
eu165	0.000E+00	3.436E-12	3.678E-12	3.898E-12	4.101E-12	4.291E-12	4.470E-12	4.639E-12	4.800E-12	4.954E-12	5.104E-12
gd165	0.000E+00	4.585E-10	6.097E-10	7.407E-10	8.559E-10	9.582E-10	1.050E-09	1.133E-09	1.208E-09	1.277E-09	1.341E-09
tb165	0.000E+00	1.982E-09	2.894E-09	3.680E-09	4.369E-09	4.979E-09	5.523E-09	6.012E-09	6.456E-09	6.861E-09	7.235E-09
dyl65	0.000E+00	1.656E-07	2.880E-07	4.266E-07	5.824E-07	7.573E-07	9.535E-07	1.174E-06	1.423E-06	1.703E-06	2.020E-06
dyl65m	0.000E+00	1.238E-09	2.110E-09	3.085E-09	4.173E-09	5.385E-09	6.739E-09	8.255E-09	9.957E-09	1.187E-08	1.403E-08
ho165	0.000E+00	5.325E-05	1.589E-04	3.233E-04	5.523E-04	8.528E-04	1.232E-03	1.697E-03	2.259E-03	2.926E-03	3.713E-03
er165	0.000E+00	9.912E-14	2.873E-13	5.552E-13	8.999E-13	1.322E-12	1.822E-12	2.406E-12	3.079E-12	3.849E-12	4.727E-12
tm165	0.000E+00	6.976E-22	1.734E-20	1.164E-19	4.399E-19	1.212E-18	2.733E-18	5.373E-18	9.552E-18	1.573E-17	2.439E-17
tb166	0.000E+00	7.061E-10	9.539E-10	1.169E-09	1.357E-09	1.525E-09	1.675E-09	1.811E-09	1.934E-09	2.047E-09	2.152E-09
dyl66	0.000E+00	2.796E-06	3.926E-06	4.905E-06	5.765E-06	6.528E-06	7.211E-06	7.828E-06	8.390E-06	8.906E-06	9.384E-06
ho166	0.000E+00	9.560E-07	1.403E-06	1.843E-06	2.293E-06	2.769E-06	3.283E-06	3.850E-06	4.485E-06	5.204E-06	6.023E-06
ho166m	0.000E+00	2.757E-08	1.214E-07	3.005E-07	5.879E-07	1.011E-06	1.602E-06	2.398E-06	3.442E-06	4.782E-06	6.476E-06
er166	0.000E+00	2.702E-05	7.465E-05	1.402E-04	2.235E-04	3.253E-04	4.466E-04	5.892E-04	7.553E-04	9.477E-04	1.170E-03
tm166	0.000E+00	1.681E-21	3.786E-20	2.570E-19	9.888E-19	2.775E-18	6.378E-18	1.277E-17	2.313E-17	3.878E-17	6.120E-17
ybl66	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
dyl67	0.000E+00	1.845E-09	2.165E-09	2.446E-09	2.695E-09	2.920E-09	3.124E-09	3.311E-09	3.483E-09	3.644E-09	3.795E-09
ho167	0.000E+00	5.584E-08	6.570E-08	7.435E-08	8.206E-08	8.901E-08	9.533E-08	1.012E-07	1.066E-07	1.116E-07	1.165E-07
er167	0.000E+00	1.605E-05	3.259E-05	4.914E-05	6.540E-05	8.120E-05	9.645E-05	1.111E-04	1.253E-04	1.390E-04	1.524E-04
er167m	0.000E+00	1.903E-15	3.873E-15	5.874E-15	7.889E-15	9.907E-15	1.192E-14	1.394E-14	1.596E-14	1.800E-14	2.007E-14
tm167	0.000E+00	3.042E-18	2.020E-17	7.521E-17	2.309E-16	6.038E-16	1.373E-15	2.786E-15	5.159E-15	8.878E-15	1.439E-14
ybl67	0.000E+00	1.376E-25	3.462E-24	2.248E-23	8.253E-23	2.213E-22	4.866E-22	9.325E-22	1.616E-21	2.596E-21	3.923E-21
dyl68	0.000E+00	1.430E-09	1.557E-09	1.678E-09	1.797E-09	1.915E-09	2.035E-09	2.156E-09	2.279E-09	2.403E-09	2.530E-09

Cycle 1 -DD Assembly

fission products

page

power= 11.49mw, burnup= 7552.mwd, flux= 3.01E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	65.7 d	131.4 d	197.1 d	262.8 d	328.5 d	394.2 d	459.9 d	525.6 d	591.3 d	657.0 d
ho168	0.000E+00	4.943E-10	5.410E-10	5.852E-10	6.282E-10	6.709E-10	7.137E-10	7.568E-10	8.005E-10	8.448E-10	8.896E-10
er168	0.000E+00	1.209E-05	2.889E-05	5.042E-05	7.676E-05	1.070E-04	1.433E-04	1.838E-04	2.289E-04	2.788E-04	3.334E-04
tm168	0.000E+00	3.816E-12	1.551E-11	3.193E-11	5.112E-11	7.207E-11	9.428E-11	1.175E-10	1.417E-10	1.669E-10	1.930E-10
ybl68	0.000E+00	5.246E-17	4.291E-16	1.289E-15	6.312E-15	4.395E-15	6.501E-15	8.879E-15	1.147E-14	1.424E-14	1.714E-14
dyl69	0.000E+00	6.040E-11	6.325E-11	6.612E-11	6.911E-11	7.223E-11	7.551E-11	7.893E-11	8.250E-11	8.620E-11	9.003E-11
ho169	0.000E+00	4.465E-10	4.722E-10	4.975E-10	5.231E-10	5.493E-10	5.763E-10	6.041E-10	6.328E-10	6.624E-10	6.928E-10
er169	0.000E+00	1.263E-06	1.353E-06	1.435E-06	1.517E-06	1.603E-06	1.693E-06	1.788E-06	1.886E-06	1.990E-06	2.098E-06
tm169	0.000E+00	4.673E-06	1.059E-05	1.655E-05	2.256E-05	2.859E-05	3.466E-05	4.077E-05	4.693E-05	5.313E-05	5.938E-05
ybl69	0.000E+00	2.580E-15	4.017E-14	1.728E-13	4.558E-13	9.342E-13	1.645E-12	2.622E-12	3.894E-12	5.491E-12	7.439E-12
ybl69m	0.000E+00	1.868E-25	2.264E-24	1.502E-23	5.981E-23	1.748E-22	4.178E-22	8.680E-22	1.627E-21	2.816E-21	4.578E-21
dyl70	0.000E+00	1.759E-11	1.787E-11	1.823E-11	1.865E-11	1.915E-11	1.970E-11	2.032E-11	2.098E-11	2.169E-11	2.244E-11
ho170	0.000E+00	1.466E-10	1.495E-10	1.529E-10	1.569E-10	1.614E-10	1.664E-10	1.719E-10	1.778E-10	1.840E-10	1.906E-10
ho170m	0.000E+00	9.001E-13	1.052E-12	1.190E-12	1.320E-12	1.445E-12	1.567E-12	1.688E-12	1.811E-12	1.937E-12	2.067E-12
er170	0.000E+00	3.526E-06	7.137E-06	1.084E-05	1.464E-05	1.855E-05	2.259E-05	2.676E-05	3.107E-05	3.553E-05	4.015E-05
tm170	0.000E+00	1.054E-07	4.598E-07	1.002E-06	1.682E-06	2.465E-06	3.322E-06	4.268E-06	5.265E-06	6.319E-06	7.427E-06
ybl70	0.000E+00	1.104E-08	1.040E-07	3.556E-07	8.205E-07	1.538E-06	2.538E-06	3.843E-06	5.472E-06	7.441E-06	9.763E-06
ho171	0.000E+00	2.675E-11	2.723E-11	2.776E-11	2.835E-11	2.897E-11	2.964E-11	3.034E-11	3.108E-11	3.185E-11	3.265E-11
er171	0.000E+00	1.378E-08	1.412E-08	1.448E-08	1.486E-08	1.527E-08	1.570E-08	1.615E-08	1.662E-08	1.711E-08	1.762E-08
tm171	0.000E+00	1.892E-06	3.705E-06	5.440E-06	7.110E-06	8.725E-06	1.029E-05	1.182E-05	1.333E-05	1.480E-05	1.626E-05
ybl71	0.000E+00	6.173E-08	2.429E-07	5.378E-07	9.422E-07	1.453E-06	2.070E-06	2.791E-06	3.616E-06	4.547E-06	5.585E-06
ho172	0.000E+00	2.290E-11	2.299E-11	2.316E-11	2.340E-11	2.369E-11	2.403E-11	2.439E-11	2.479E-11	2.521E-11	2.566E-11
er172	0.000E+00	1.653E-07	1.662E-07	1.676E-07	1.695E-07	1.717E-07	1.742E-07	1.770E-07	1.800E-07	1.832E-07	1.865E-07
tm172	0.000E+00	2.147E-07	2.175E-07	2.210E-07	2.250E-07	2.295E-07	2.343E-07	2.395E-07	2.450E-07	2.508E-07	2.569E-07
ybl72	0.000E+00	3.291E-06	7.005E-								

0t
library information...

cross-section data taken from position number 2 of library on unit 33.

ORIGEN working library updated with 2D transport weighted cross-sections.

pass 2

pass 1

pass 0

0 *****
0 .other identification and sizes of library.
0 data set name: Bostelman.8796\ft33f001
0 3/18/2006 date library was produced
0 1946 total number of nuclides in library
0 698 number of light-element nuclides
0 129 number of actinide nuclides
0 1119 number of fission product nuclides
0 35013 number of nonzero off-diagonal matrix elements
0 *****

35\$ array 1 entries read

0t

56\$ array 20 entries read

57* array 5 entries read

95\$ array 1 entries read

0t

58* array 10 entries read

60* array 10 entries read

66\$ array 12 entries read

0t

totals 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00 0.000E+00
flux 3.236E+13 3.312E+13 3.388E+13 3.465E+13 3.542E+13 3.620E+13 3.699E+13 3.777E+13 3.856E+13 3.935E+13

1 Cycle 2 -DD Assembly actinides page

25 power= 11.49mw, burnup= 15103.mwd, flux= 3.58E+13n/cm**2-sec

0 nuclide concentrations, grams
basis = 0.3883 MTU

	charge	722.6 d	788.3 d	854.0 d	919.7 d	985.4 d	1051.1 d	1116.8 d	1182.5 d	1248.2 d	1313.9 d
he 4	9.318E-03	1.396E-02	2.012E-02	2.804E-02	3.791E-02	4.993E-02	6.430E-02	8.123E-02	1.009E-01	1.236E-01	1.494E-01
th226	1.684E-16	2.234E-16	2.834E-16	3.538E-16	4.361E-16	5.313E-16	6.405E-16	7.647E-16	9.046E-16	1.061E-15	1.235E-15
th227	2.068E-12	2.553E-12	3.089E-12	3.671E-12	4.297E-12	4.965E-12	5.674E-12	6.421E-12	7.203E-12	8.020E-12	8.869E-12
th228	1.518E-07	1.981E-07	2.541E-07	3.207E-07	3.990E-07	4.900E-07	5.944E-07	7.133E-07	8.472E-07	9.968E-07	1.163E-06
th229	3.863E-08	4.961E-08	6.302E-08	7.929E-08	9.891E-08	1.224E-07	1.504E-07	1.835E-07	2.223E-07	2.675E-07	3.198E-07
th230	5.745E-04	6.143E-04	6.510E-04	6.847E-04	7.154E-04	7.432E-04	7.681E-04	7.903E-04	8.098E-04	8.266E-04	8.409E-04
th231	4.361E-07	4.654E-07	4.993E-07	5.325E-07	5.648E-07	5.961E-07	6.262E-07	6.551E-07	6.827E-07	7.089E-07	7.335E-07
th232	4.181E-05	4.930E-05	5.725E-05	6.565E-05	7.445E-05	8.362E-05	9.314E-05	1.030E-04	1.130E-04	1.234E-04	1.339E-04
th233	5.620E-11	6.710E-11	7.975E-11	9.354E-11	1.085E-10	1.246E-10	1.418E-10	1.601E-10	1.796E-10	2.001E-10	2.216E-10
th234	5.318E-06	5.311E-06	5.304E-06	5.297E-06	5.289E-06	5.282E-06	5.274E-06	5.266E-06	5.257E-06	5.249E-06	5.241E-06
pa231	8.953E-05	1.027E-04	1.163E-04	1.303E-04	1.446E-04	1.590E-04	1.734E-04	1.878E-04	2.020E-04	2.161E-04	2.298E-04
pa232	1.593E-07	1.889E-07	2.189E-07	2.509E-07	2.846E-07	3.199E-07	3.567E-07	3.946E-07	4.336E-07	4.734E-07	5.136E-07
pa233	2.564E-06	2.965E-06	3.356E-06	3.761E-06	4.182E-06	4.619E-06	5.069E-06	5.531E-06	6.003E-06	6.482E-06	6.965E-06
pa234m	1.801E-10	1.800E-10	1.798E-10	1.797E-10	1.796E-10	1.795E-10	1.795E-10	1.794E-10	1.793E-10	1.792E-10	1.792E-10
pa234	3.219E-10	3.627E-10	4.073E-10	4.551E-10	5.065E-10	5.616E-10	6.201E-10	6.821E-10	7.473E-10	8.154E-10	8.864E-10
pa235	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
u230	1.643E-13	2.179E-13	2.763E-13	3.448E-13	4.249E-13	5.175E-13	6.236E-13	7.442E-13	8.801E-13	1.032E-12	1.201E-12
u231	1.052E-11	1.384E-11	1.740E-11	2.158E-11	2.645E-11	3.205E-11	3.846E-11	4.570E-11	5.384E-11	6.292E-11	7.296E-11
u232	3.363E-05	4.192E-05	5.152E-05	6.251E-05	7.494E-05	8.889E-05	1.044E-04	1.215E-04	1.402E-04	1.605E-04	1.824E-04
u233	8.228E-04	8.712E-04	9.141E-04	9.518E-04	9.845E-04	1.012E-03	1.036E-03	1.055E-03	1.070E-03	1.082E-03	1.090E-03
u234	1.169E+02	1.139E+02	1.110E+02	1.080E+02	1.051E+02	1.021E+02	9.924E+01	9.638E+01	9.355E+01	9.076E+01	8.800E+01
u235	9.449E+03	8.861E+03	8.297E+03	7.758E+03	7.243E+03	6.752E+03	6.284E+03	5.840E+03	5.419E+03	5.020E+03	4.644E+03
u236	1.412E+03	1.512E+03	1.606E+03	1.694E+03	1.776E+03	1.853E+03	1.924E+03	1.989E+03	2.050E+03	2.104E+03	2.154E+03
u237	2.365E+00	2.221E+00	2.390E+00	2.559E+00	2.726E+00	2.890E+00	3.052E+00	3.210E+00	3.364E+00	3.514E+00	3.660E+00
u238	3.668E+05	3.663E+05	3.659E+05	3.654E+05	3.648E+05	3.643E+05	3.638E+05	3.632E+05	3.627E+05	3.621E+05	3.616E+05
u239	1.487E-01	1.519E-01	1.552E-01	1.586E-01	1.620E-01	1.653E-01	1.687E-01	1.721E-01	1.755E-01	1.789E-01	1.823E-01
u240	4.886E-15	7.241E-15	1.039E-14	1.445E-14	1.957E-14	2.591E-14	3.366E-14	4.305E-14	5.428E-14	6.762E-14	8.331E-14
u241	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
np235	1.052E-06	1.330E-06	1.637E-06	1.973E-06	2.341E-06	2.742E-06	3.175E-06	3.642E-06	4.143E-06	4.677E-06	5.244E-06
np236m	7.619E-07	9.132E-07	1.048E-06	1.194E-06	1.351E-06	1.517E-06	1.694E-06	1.880E-06	2.075E-06	2.277E-06	2.487E-06
np236	2.580E-05	3.155E-05	3.748E-05	4.361E-05	4.997E-05	5.657E-05	6.339E-05	7.042E-05	7.763E-05	8.500E-05	9.250E-05
np237	8.117E+01	9.213E+01	1.034E+02	1.151E+02	1.273E+02	1.399E+02	1.528E+02	1.659E+02	1.793E+02	1.928E+02	2.064E+02
np238	1.667E-01	1.871E-01	2.147E-01	2.446E-01	2.766E-01	3.107E-01	3.467E-01	3.847E-01	4.245E-01	4.659E-01	5.087E-01
np239	2.147E+01	2.193E+01	2.241E+01	2.289E+01	2.338E+01	2.387E+01	2.436E+01	2.485E+01	2.533E+01	2.582E+01	2.631E+01

np240m	4.170E-17	6.180E-17	8.868E-17	1.233E-16	1.670E-16	2.211E-16	2.873E-16	3.674E-16	4.633E-16	5.771E-16	7.110E-16
np240	4.433E-04	4.609E-04	4.820E-04	5.037E-04	5.261E-04	5.491E-04	5.728E-04	5.969E-04	6.216E-04	6.468E-04	6.723E-04
np241	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
pu236	5.492E-05	6.972E-05	8.621E-05	1.045E-04	1.245E-04	1.465E-04	1.703E-04	1.960E-04	2.237E-04	2.533E-04	2.846E-04
pu237	1.883E-05	2.483E-05	3.147E-05	3.905E-05	4.773E-05	5.764E-05	6.885E-05	8.144E-05	9.547E-05	1.110E-04	1.281E-04
pu238	1.263E+01	1.600E+01	1.985E+01	2.420E+01	2.909E+01	3.453E+01	4.053E+01	4.711E+01	5.428E+01	6.202E+01	7.034E+01
pu239	1.778E+03	1.854E+03	1.917E+03	1.970E+03	2.014E+03	2.050E+03	2.080E+03	2.104E+03	2.123E+03	2.138E+03	2.150E+03
pu240	3.915E+02	4.563E+02	5.181E+02	5.764E+02	6.309E+02	6.814E+02	7.277E+02	7.698E+02	8.078E+02	8.418E+02	8.721E+02
pu241	2.407E+02	2.543E+02	2.743E+02	2.993E+02	3.281E+02	3.595E+02	3.925E+02	4.263E+02	4.601E+02	4.931E+02	5.250E+02
pu242	3.387E+01	4.453E+01	5.583E+01	6.804E+01	8.139E+01	9.603E+01	1.121E+02	1.295E+02	1.484E+02	1.687E+02	1.902E+02
pu243	7.174E-03	8.893E-03	1.141E-02	1.422E-02	1.740E-02	2.099E-02	2.504E-02	2.956E-02	3.459E-02	4.014E-02	4.619E-02
pu244	2.474E-04	3.666E-04	5.261E-04	7.318E-04	9.908E-04	1.312E-03	1.704E-03	2.179E-03	2.748E-03	3.424E-03	4.218E-03
pu245	9.930E-09	1.503E-08	2.207E-08	3.140E-08	4.348E-08	5.886E-08	7.816E-08	1.021E-07	1.315E-07	1.672E-07	2.102E-07
pu246	5.105E-11	8.053E-11	1.218E-10	1.784E-10	2.540E-10	3.531E-10	4.809E-10	6.437E-10	8.489E-10	1.105E-09	1.420E-09
am239	2.724E-10	3.691E-10	4.563E-10	5.467E-10	6.422E-10	7.438E-10	8.519E-10	9.665E-10	1.087E-09	1.212E-09	1.341E-09
am240	1.211E-07	1.630E-07	2.014E-07	2.413E-07	2.834E-07	3.282E-07	3.758E-07	4.262E-07	4.791E-07	5.342E-07	5.908E-07

Cycle 2 -DD Assembly

actinides

page

power= 11.49mw, burnup= 15103.mwd, flux= 3.58E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	722.6 d	788.3 d	854.0 d	919.7 d	985.4 d	1051.1 d	1116.8 d	1182.5 d	1248.2 d	1313.9 d
am241	5.075E+00	6.472E+00	7.818E+00	9.156E+00	1.052E+01	1.191E+01	1.335E+01	1.482E+01	1.632E+01	1.783E+01	1.933E+01
am242m	9.040E-02	1.152E-01	1.438E-01	1.736E-01	2.040E-01	2.351E-01	2.670E-01	2.997E-01	3.332E-01	3.672E-01	4.013E-01
am242	8.295E-03	1.019E-02	1.260E-02	1.509E-02	1.773E-02	2.053E-02	2.352E-02	2.668E-02	2.999E-02	3.345E-02	3.700E-02
am243	3.259E+00	4.753E+00	6.672E+00	9.041E+00	1.190E+01	1.529E+01	1.926E+01	2.386E+01	2.914E+01	3.514E+01	4.192E+01
am244m	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
am244	1.994E-03	2.702E-03	3.881E-03	5.381E-03	7.241E-03	9.512E-03	1.225E-02	1.550E-02	1.933E-02	2.380E-02	2.897E-02
am245	1.939E-09	2.934E-09	4.309E-09	6.131E-09	8.490E-09	1.149E-08	1.526E-08	1.994E-08	2.567E-08	3.265E-08	4.105E-08
am246	1.275E-13	2.012E-13	3.044E-13	4.458E-13	6.347E-13	8.821E-13	1.201E-12	1.608E-12	2.121E-12	2.760E-12	3.547E-12
cm241	2.702E-08	4.027E-08	5.577E-08	7.399E-08	9.488E-08	1.184E-07	1.446E-07	1.735E-07	2.053E-07	2.400E-07	2.774E-07
cm242	7.150E-01	9.836E-01	1.303E+00	1.663E+00	2.059E+00	2.490E+00	2.955E+00	3.455E+00	3.989E+00	4.556E+00	5.152E+00
cm243	8.238E-03	1.290E-02	1.908E-02	2.697E-02	3.666E-02	4.823E-02	6.174E-02	7.724E-02	9.477E-02	1.144E-01	1.360E-01
cm244	3.810E-01	6.137E-01	9.521E-01	1.426E+00	2.069E+00	2.918E+00	4.013E+00	5.401E+00	7.131E+00	9.259E+00	1.184E+01
cm245	7.341E-03	1.331E-02	2.262E-02	3.665E-02	5.712E-02	8.604E-02	1.258E-01	1.792E-01	2.493E-01	3.398E-01	4.547E-01
cm246	2.159E-04	4.538E-04	8.786E-04	1.597E-03	2.761E-03	4.579E-03	7.331E-03	1.138E-02	1.719E-02	2.534E-02	3.654E-02
cm247	8.783E-07	2.029E-06	4.370E-06	8.805E-06	1.675E-05	3.035E-05	5.274E-05	8.841E-05	1.436E-04	2.267E-04	3.491E-04
cm248	2.020E-08	5.025E-08	1.185E-07	2.631E-07	5.511E-07	1.095E-06	2.078E-06	3.787E-06	6.656E-06	1.133E-05	1.876E-05
cm249	1.504E-13	3.820E-13	9.217E-13	2.094E-12	4.485E-12	9.112E-12	1.767E-11	3.290E-11	5.906E-11	1.027E-10	1.733E-10
cm250	1.518E-15	4.357E-15	1.153E-14	2.862E-14	6.699E-14	1.484E-13	3.129E-13	6.311E-13	1.223E-12	2.287E-12	4.142E-12
cm251	2.879E-21	8.592E-21	2.327E-20	5.909E-20	1.414E-19	3.204E-19	6.903E-19	1.422E-18	2.815E-18	5.374E-18	9.931E-18
totals	3.804E+05	3.796E+05	3.788E+05	3.780E+05	3.772E+05	3.764E+05	3.757E+05	3.749E+05	3.741E+05	3.733E+05	3.726E+05
flux		3.236E+13	3.312E+13	3.388E+13	3.465E+13	3.542E+13	3.620E+13	3.699E+13	3.777E+13	3.856E+13	3.935E+13

Cycle 2 -DD Assembly

fission products

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power= 11.49mw, burnup= 15103.mwd, flux= 3.58E+13n/cm**2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	722.6 d	788.3 d	854.0 d	919.7 d	985.4 d	1051.1 d	1116.8 d	1182.5 d	1248.2 d	1313.9 d
h 1	7.762E-04	8.829E-04	9.953E-04	1.113E-03	1.237E-03	1.367E-03	1.502E-03	1.642E-03	1.788E-03	1.940E-03	2.097E-03
h 2	5.954E-04	6.570E-04	7.190E-04	7.812E-04	8.435E-04	9.058E-04	9.680E-04	1.030E-03	1.092E-03	1.154E-03	1.215E-03
h 3	1.180E-02	1.312E-02	1.447E-02	1.583E-02	1.722E-02	1.863E-02	2.005E-02	2.150E-02	2.295E-02	2.443E-02	2.591E-02
he 3	1.981E-04	2.210E-04	2.435E-04	2.655E-04	2.871E-04	3.080E-04	3.284E-04	3.481E-04	3.673E-04	3.860E-04	4.041E-04
he 4	2.618E-01	2.884E-01	3.150E-01	3.417E-01	3.684E-01	3.951E-01	4.219E-01	4.487E-01	4.754E-01	5.023E-01	5.291E-01
he 6	1.229E-10	1.222E-10	1.220E-10	1.215E-10	1.208E-10	1.201E-10	1.192E-10	1.182E-10	1.172E-10	1.161E-10	1.151E-10
li 6	4.173E-03	4.401E-03	4.599E-03	4.770E-03	4.913E-03	5.029E-03	5.121E-03	5.190E-03	5.237E-03	5.263E-03	5.271E-03
li 7	2.173E-04	2.401E-04	2.631E-04	2.862E-04	3.094E-04	3.326E-04	3.558E-04	3.790E-04	4.022E-04	4.253E-04	4.484E-04
be 7	1.850E-12	1.764E-12	1.655E-12	1.550E-12	1.449E-12	1.353E-12	1.261E-12	1.173E-12	1.090E-12	1.011E-12	9.368E-13
he 8	1.120E-12	1.114E-12	1.112E-12	1.107E-12	1.102E-12	1.094E-12	1.086E-12	1.078E-12	1.068E-12	1.059E-12	1.049E-12
li 8	1.177E-11	1.162E-11	1.140E-11	1.117E-11	1.094E-11	1.069E-11	1.045E-11	1.020E-11	9.947E-12	9.699E-12	9.454E-12
be 8	3.065E-17	3.032E-17	2.983E-17	2.932E-17	2.878E-17	2.823E-17	2.766E-17	2.709E-17	2.651E-17	2.593E-17	2.536E-17
li 9	5.189E-13	5.205E-13	5.290E-13	5.363E-13	5.425E-13	5.478E-13	5.523E-13	5.561E-13	5.594E-13	5.623E-13	5.648E-13
be 9	1.576E-04	1.751E-04	1.929E-04	2.109E-04	2.291E-04	2.475E-04	2.660E-04	2.846E-04	3.033E-04	3.221E-04	3.409E-04
be 10	2.068E-03	2.283E-03	2.500E-03	2.718E-03	2.936E-03	3.154E-03	3.373E-03	3.591E-03	3.808E-03	4.025E-03	4.241E-03
b 10	2.720E-10	3.045E-10	3.353E-10	3.646E-10	3.923E-10	4.187E-10	4.438E-10	4.677E-10	4.903E-10	5.119E-10	5.324E-10
be 11	5.474E-11	5.476E-11	5.532E-11	5.576E-11	5.610E-11	5.636E-11	5.655E-11	5.668E-11	5.676E-11	5.681E-11	5.683E-11
b 11	1.412E-04	1.565E-04	1.719E-04	1.875E-04	2.031E-04	2.189E-04	2.347E-04	2.506E-04	2.665E-04	2.824E-04	2.983E-04
be 12	3.350E-14	3.404E-14	3.558E-14	3.700E-14	3.832E-14	3.954E-14	4.067E-14	4.173E-14	4.273E-14	4.367E-14	4.456E-14
b 12	3.274E-14	3.323E-14	3.465E-14	3.596E-14	3.717E-14	3.829E-14	3.933E-14	4.029E-14	4.120E-14	4.206E-14	4.287E-14
c 12	4.556E-05	5.198E-05	5.870E-05	6.569E-05	7.292E-05	8.039E-05	8.806E-05	9.594E-05	1.040E-04	1.122E-04	1.206E-04
c 14	5.624E-04	6.276E-04	6.942E-04	7.620E-04	8.309E-04	9.007E-04	9.714E-04	1.043E-03	1.115E-03	1.187E-03	1.260E-03
n 14	5.687E-08	6.980E-08	8.416E-08	9.998E-08	1.173E-07	1.361E-07	1.564E-07	1.783E-07	2.017E-07	2.267E-07	2.532E-07
c 15	4.542E-12	4.443E-12	4.258E-12	4.072E-12	3.888E-12	3.706E-12	3.525E-12	3.347E-12	3.172E-12	3.000E-12	2.831E-12
n 15	9.258E-05	9.995E-05	1.070E-04	1.138E-04	1.203E-04	1.264E-04	1.323E-04	1.379E-04	1.432E-04	1.482E-04	1.529E-04
ne 21	1.778E-03	1.380E-03	1.478E-03	1.571E-03	1.660E-03	1.745E-03	1.826E-03	1.903E-03	1.976E-03	2.045E-03	2.110E-03
zn 66	7.150E-06	7.951E-06	8.770E-06	9.608E-06	1.046E-05	1.134E-05	1.223E-05	1.315E-05	1.408E-05	1.503E-05	1.599E-05
ga 66	2.648E-22	3.366E-22	4.234E-22	5.255E-22	6.444E-22	7.814E-22	9.378E-22	1.115E-21	1.314E-21	1.536E-21	1.781E-21
ge 66	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
zn 67	3.740E-05	4.139E-05	4.544E-05	4.955E-05	5.373E-05	5.798E-05	6.230E-05	6.668E-05	7.113E-05	7.564E-05	8.022E-05
ga 67	8.665E-19	1.246E-18	1.742E-18	2.369E-18	3.148E-18	4.107E-18	5.278E-18	6.698E-18	8.408E-18	1.045E-17	1.288E-17
ge 67	1.377E-32	1.845E-32	2.456E-32	3.222E-32	4.170E-32	5.329E-32	6.730E-32	8.405E-32	1.039E-31	1.272E-31	1.543E-31

zn 68	5.899E-05	6.549E-05	7.213E-05	7.891E-05	8.583E-05	9.288E-05	1.001E-04	1.074E-04	1.149E-04	1.225E-04	1.303E-04
ga 68	1.425E-14	1.600E-14	1.800E-14	2.012E-14	2.235E-14	2.470E-14	2.716E-14	2.974E-14	3.245E-14	3.528E-14	3.823E-14
ge 68	1.884E-20	2.486E-20	3.234E-20	4.146E-20	5.247E-20	6.559E-20	8.105E-20	9.908E-20	1.199E-19	1.438E-19	1.710E-19
zn 69	1.013E-08	1.027E-08	1.053E-08	1.078E-08	1.104E-08	1.128E-08	1.153E-08	1.177E-08	1.200E-08	1.224E-08	1.246E-08
zn 69m	6.201E-10	6.342E-10	6.706E-10	7.053E-10	7.384E-10	7.702E-10	8.007E-10	8.300E-10	8.582E-10	8.855E-10	9.118E-10
ga 69	1.030E-04	1.149E-04	1.270E-04	1.395E-04	1.522E-04	1.652E-04	1.785E-04	1.920E-04	2.059E-04	2.199E-04	2.342E-04
ge 69	6.142E-16	7.680E-16	9.529E-16	1.167E-15	1.412E-15	1.692E-15	2.010E-15	2.368E-15	2.770E-15	3.219E-15	3.718E-15
as 69	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
zn 70	2.124E-04	2.390E-04	2.665E-04	2.948E-04	3.240E-04	3.541E-04	3.850E-04	4.166E-04	4.491E-04	4.823E-04	5.163E-04
ga 70	2.986E-11	3.356E-11	3.786E-11	4.239E-11	4.718E-11	5.223E-11	5.754E-11	6.311E-11	6.895E-11	7.506E-11	8.143E-11
ge 70	4.256E-07	5.239E-07	6.353E-07	7.603E-07	8.999E-07	1.055E-06	1.226E-06	1.413E-06	1.619E-06	1.843E-06	2.086E-06
zn 71	1.636E-09	1.660E-09	1.713E-09	1.767E-09	1.822E-09	1.877E-09	1.933E-09	1.989E-09	2.045E-09	2.100E-09	2.155E-09
zn 71m	1.914E-08	1.959E-08	2.067E-08	2.175E-08	2.281E-08	2.387E-08	2.492E-08	2.595E-08	2.697E-08	2.797E-08	2.894E-08
ga 71	3.869E-04	4.359E-04	4.866E-04	5.388E-04	5.927E-04	6.483E-04	7.055E-04	7.644E-04	8.250E-04	8.871E-04	9.508E-04
ge 71	6.948E-11	8.026E-11	9.356E-11	1.085E-10	1.253E-10	1.441E-10	1.651E-10	1.885E-10	2.146E-10	2.434E-10	2.753E-10
ge 71m	3.542E-19	3.626E-19	3.844E-19	4.052E-19	4.249E-19	4.438E-19	4.618E-19	4.791E-19	4.957E-19	5.117E-19	5.272E-19
as 71	8.471E-21	1.065E-20	1.331E-20	1.643E-20	2.006E-20	2.423E-20	2.899E-20	3.438E-20	4.043E-20	4.718E-20	5.466E-20
zn 72	5.605E-06	5.660E-06	5.821E-06	5.970E-06	6.110E-06	6.241E-06	6.364E-06	6.480E-06	6.591E-06	6.696E-06	6.797E-06

Cycle 2 -DD Assembly

fission products

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power= 11.49mw, burnup= 15103.mwd, flux= 3.58E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	722.6 d	788.3 d	854.0 d	919.7 d	985.4 d	1051.1 d	1116.8 d	1182.5 d	1248.2 d	1313.9 d
ga 72	1.730E-06	1.749E-06	1.800E-06	1.848E-06	1.893E-06	1.936E-06	1.976E-06	2.014E-06	2.051E-06	2.086E-06	2.119E-06
ga 72m	7.916E-15	8.085E-15	8.540E-15	8.966E-15	9.366E-15	9.745E-15	1.010E-14	1.044E-14	1.077E-14	1.108E-14	1.138E-14
ge 72	1.091E-03	1.226E-03	1.366E-03	1.509E-03	1.656E-03	1.806E-03	1.959E-03	2.116E-03	2.275E-03	2.438E-03	2.603E-03
as 72	2.631E-14	2.689E-14	2.847E-14	2.994E-14	3.131E-14	3.260E-14	3.381E-14	3.495E-14	3.603E-14	3.707E-14	3.805E-14
se 72	6.962E-30	9.006E-30	1.162E-29	1.478E-29	1.858E-29	2.308E-29	2.836E-29	3.451E-29	4.160E-29	4.973E-29	5.897E-29
zn 73	2.092E-09	2.100E-09	2.131E-09	2.159E-09	2.184E-09	2.207E-09	2.229E-09	2.248E-09	2.266E-09	2.283E-09	2.299E-09
ga 73	1.634E-06	1.641E-06	1.668E-06	1.693E-06	1.715E-06	1.735E-06	1.754E-06	1.771E-06	1.787E-06	1.803E-06	1.817E-06
ge 73	3.256E-03	3.613E-03	3.975E-03	4.341E-03	4.710E-03	5.081E-03	5.455E-03	5.831E-03	6.209E-03	6.587E-03	6.966E-03
ge 73m	4.602E-11	4.624E-11	4.701E-11	4.770E-11	4.833E-11	4.891E-11	4.944E-11	4.993E-11	5.039E-11	5.082E-11	5.123E-11
as 73	1.524E-10	1.607E-10	1.701E-10	1.797E-10	1.891E-10	1.982E-10	2.069E-10	2.152E-10	2.230E-10	2.304E-10	2.374E-10
se 73	2.711E-22	3.446E-22	4.334E-22	5.379E-22	6.596E-22	7.999E-22	9.602E-22	1.142E-21	1.346E-21	1.574E-21	1.827E-21
se 73m	5.057E-24	6.428E-24	8.085E-24	1.003E-23	1.231E-23	1.492E-23	1.791E-23	2.130E-23	2.511E-23	2.936E-23	3.408E-23
zn 74	2.188E-08	2.185E-08	2.194E-08	2.199E-08	2.202E-08	2.204E-08	2.203E-08	2.201E-08	2.198E-08	2.194E-08	2.190E-08
ga 74	1.021E-07	1.022E-07	1.030E-07	1.037E-07	1.042E-07	1.046E-07	1.050E-07	1.052E-07	1.054E-07	1.056E-07	1.057E-07
ga 74m	1.757E-09	1.756E-09	1.768E-09	1.777E-09	1.784E-09	1.789E-09	1.793E-09	1.795E-09	1.796E-09	1.797E-09	1.797E-09
ge 74	9.699E-03	1.073E-02	1.178E-02	1.283E-02	1.390E-02	1.496E-02	1.604E-02	1.712E-02	1.820E-02	1.929E-02	2.038E-02
as 74	1.798E-09	1.842E-09	1.949E-09	2.053E-09	2.151E-09	2.242E-09	2.328E-09	2.409E-09	2.486E-09	2.559E-09	2.629E-09
se 74	8.262E-09	9.590E-09	1.095E-08	1.236E-08	1.380E-08	1.527E-08	1.676E-08	1.827E-08	1.982E-08	2.129E-08	2.280E-08
zn 75	4.987E-09	4.950E-09	4.902E-09	4.851E-09	4.796E-09	4.739E-09	4.681E-09	4.621E-09	4.560E-09	4.500E-09	4.440E-09
ga 75	8.458E-08	8.424E-08	8.410E-08	8.386E-08	8.355E-08	8.317E-08	8.275E-08	8.228E-08	8.179E-08	8.128E-08	8.076E-08
ge 75	3.400E-06	3.387E-06	3.385E-06	3.378E-06	3.369E-06	3.356E-06	3.342E-06	3.326E-06	3.308E-06	3.290E-06	3.271E-06
ge 75m	2.077E-09	2.080E-09	2.102E-09	2.120E-09	2.136E-09	2.149E-09	2.160E-09	2.170E-09	2.178E-09	2.184E-09	2.190E-09
as 75	2.682E-02	2.946E-02	3.209E-02	3.470E-02	3.729E-02	3.987E-02	4.242E-02	4.495E-02	4.746E-02	4.993E-02	5.239E-02
se 75	3.415E-10	3.989E-10	4.612E-10	5.279E-10	5.987E-10	6.734E-10	7.518E-10	8.335E-10	9.185E-10	1.006E-09	1.097E-09
br 75	1.070E-23	1.361E-23	1.711E-23	2.124E-23	2.605E-23	3.160E-23	3.794E-23	4.513E-23	5.324E-23	6.232E-23	7.244E-23
zn 76	5.330E-09	5.267E-09	5.161E-09	5.053E-09	4.945E-09	4.835E-09	4.726E-09	4.617E-09	4.509E-09	4.402E-09	4.297E-09
ga 76	5.413E-08	5.371E-08	5.315E-08	5.257E-08	5.195E-08	5.131E-08	5.066E-08	5.000E-08	4.934E-08	4.868E-08	4.802E-08
ge 76	7.473E-02	8.190E-02	8.902E-02	9.608E-02	1.031E-01	1.100E-01	1.169E-01	1.237E-01	1.304E-01	1.370E-01	1.436E-01
as 76	1.984E-06	2.195E-06	2.440E-06	2.693E-06	2.954E-06	3.222E-06	3.497E-06	3.779E-06	4.068E-06	4.363E-06	4.664E-06
se 76	3.903E-04	4.738E-04	5.665E-04	6.688E-04	7.807E-04	9.025E-04	1.034E-03	1.176E-03	1.329E-03	1.491E-03	1.665E-03
zn 77	3.062E-09	3.016E-09	2.931E-09	2.846E-09	2.761E-09	2.676E-09	2.592E-09	2.509E-09	2.426E-09	2.346E-09	2.267E-09
ga 77	5.116E-08	5.065E-08	4.986E-08	4.905E-08	4.822E-08	4.737E-08	4.652E-08	4.566E-08	4.481E-08	4.396E-08	4.313E-08
ge 77	6.160E-05	6.150E-05	6.173E-05	6.188E-05	6.196E-05	6.199E-05	6.198E-05	6.192E-05	6.184E-05	6.174E-05	6.162E-05
ge 77m	2.104E-07	2.084E-07	2.054E-07	2.022E-07	1.990E-07	1.957E-07	1.924E-07	1.891E-07	1.857E-07	1.824E-07	1.792E-07
as 77	6.536E-04	6.491E-04	6.438E-04	6.379E-04	6.316E-04	6.250E-04	6.181E-04	6.111E-04	6.039E-04	5.968E-04	5.896E-04
se 77	1.899E-01	2.076E-01	2.250E-01	2.422E-01	2.590E-01	2.756E-01	2.918E-01	3.078E-01	3.234E-01	3.387E-01	3.536E-01
se 77m	3.009E-10	3.038E-10	3.070E-10	3.103E-10	3.136E-10	3.170E-10	3.206E-10	3.244E-10	3.284E-10	3.327E-10	3.373E-10
br 77	1.232E-12	1.259E-12	1.333E-12	1.402E-12	1.466E-12	1.526E-12	1.583E-12	1.636E-12	1.687E-12	1.735E-12	1.781E-12
br 77m	1.186E-15	1.212E-15	1.283E-15	1.349E-15	1.411E-15	1.469E-15	1.523E-15	1.574E-15	1.623E-15	1.669E-15	1.713E-15
kr 77	3.155E-24	3.156E-24	4.399E-24	5.123E-24	5.907E-24	6.752E-24	7.660E-24	8.633E-24	9.674E-24	1.079E-23	1.199E-23
zn 78	2.457E-09	2.419E-09	2.347E-09	2.276E-09	2.205E-09	2.135E-09	2.066E-09	1.997E-09	1.930E-09	1.864E-09	1.800E-09
ga 78	3.679E-08	3.640E-08	3.572E-08	3.503E-08	3.436E-08	3.368E-08	3.301E-08	3.235E-08	3.170E-08	3.106E-08	3.044E-08
ge 78	6.561E-05	6.520E-05	6.468E-05	6.415E-05	6.359E-05	6.302E-05	6.244E-05	6.185E-05	6.127E-05	6.068E-05	6.011E-05
as 78	6.895E-05	6.854E-05	6.807E-05	6.756E-05	6.704E-05	6.650E-05	6.594E-05	6.538E-05	6.481E-05	6.425E-05	6.369E-05
se 78	5.273E-01	5.785E-01	6.295E-01	6.802E-01	7.306E-01	7.807E-01	8.305E-01	8.800E-01	9.292E-01	9.780E-01	1.027E+00
br 78	2.447E-13	2.502E-13	2.650E-13	2.788E-13	2.918E-13	3.041E-13	3.157E-13	3.268E-13	3.373E-13	3.473E-13	3.570E-13
kr 78	1.496E-12	1.744E-12	2.007E-12	2.285E-12	2.576E-12	2.879E-12	3.194E-12	3.520E-12	3.856E-12	4.202E-12	4.558E-12
zn 79	8.391E-10	8.280E-10	8.060E-10	7.841E-10	7.624E-10	7.408E-10	7.195E-10	6.986E-10	6.780E-10	6.578E-10	6.382E-10
ga 79	2.911E-08	2.876E-08	2.812E-08	2.747E-08	2.683E-08	2.619E-08	2.555E-08	2.492E-08	2.430E-08	2.369E-08	2.309E-08
ge 79	3.332E-07	3.305E-07	3.265E-07	3.224E-07	3.181E-07	3.137E-07	3.093E-07	3.049E-07	3.004E-07	2.960E-07	2.917E-07

Cycle 2 -DD Assembly

fission products

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power= 11.49mw, burnup= 15103.mwd, flux= 3.58E+13n/cm**2-sec

nuclide concentrations, grams
basis = 0.3883 MTU

	charge	722.6 d	788.3 d	854.0 d	919.7 d	985.4 d	1051.1 d	1116.8 d	1182.5 d	1248.2 d	1313.9 d
ge 79m	3.265E-07	3.252E-07	3.246E-07	3.237E-07	3.226E-07	3.213E-07	3.198E-07	3.181E-0			

as 79	1.520E-05	1.511E-05	1.502E-05	1.491E-05	1.480E-05	1.468E-05	1.455E-05	1.442E-05	1.429E-05	1.415E-05	1.402E-05
se 79	1.148E+00	1.258E+00	1.367E+00	1.474E+00	1.581E+00	1.686E+00	1.791E+00	1.894E+00	1.995E+00	2.096E+00	2.195E+00
se 79m	6.534E-06	6.497E-06	6.458E-06	6.414E-06	6.366E-06	6.315E-06	6.262E-06	6.207E-06	6.151E-06	6.094E-06	6.038E-06
br 79	3.520E-06	4.191E-06	4.913E-06	5.687E-06	6.509E-06	7.379E-06	8.294E-06	9.253E-06	1.025E-05	1.130E-05	1.238E-05
br 79m	1.760E-13	1.798E-13	1.902E-13	1.999E-13	2.089E-13	2.174E-13	2.254E-13	2.330E-13	2.401E-13	2.470E-13	2.535E-13
kr 79	4.815E-13	4.950E-13	5.265E-13	5.564E-13	5.849E-13	6.121E-13	6.384E-13	6.637E-13	6.884E-13	7.124E-13	7.359E-13
kr 79m	9.084E-17	9.284E-17	9.828E-17	1.033E-16	1.081E-16	1.125E-16	1.166E-16	1.206E-16	1.243E-16	1.278E-16	1.312E-16
rb 79	3.354E-30	1.016E-29	2.809E-29	7.185E-29	1.723E-28	3.899E-28	8.365E-28	1.710E-27	3.348E-27	6.304E-27	1.146E-26
zn 80	8.268E-11	8.206E-11	8.068E-11	7.932E-11	7.796E-11	7.662E-11	7.530E-11	7.400E-11	7.273E-11	7.150E-11	7.029E-11
ga 80	1.057E-08	1.045E-08	1.023E-08	1.000E-08	9.776E-09	9.552E-09	9.329E-09	9.110E-09	8.893E-09	8.681E-09	8.473E-09
ge 80	1.787E-06	1.767E-06	1.733E-06	1.698E-06	1.663E-06	1.628E-06	1.592E-06	1.557E-06	1.522E-06	1.487E-06	1.453E-06
as 80	1.103E-06	1.092E-06	1.077E-06	1.062E-06	1.045E-06	1.029E-06	1.012E-06	9.951E-07	9.781E-07	9.613E-07	9.446E-07
se 80	3.153E+00	3.447E+00	3.737E+00	4.024E+00	4.306E+00	4.585E+00	4.860E+00	5.130E+00	5.397E+00	5.659E+00	5.917E+00
br 80	3.762E-10	3.833E-10	4.011E-10	4.180E-10	4.343E-10	4.501E-10	4.653E-10	4.800E-10	4.945E-10	5.086E-10	5.224E-10
br 80m	4.186E-09	4.256E-09	4.445E-09	4.623E-09	4.793E-09	4.955E-09	5.110E-09	5.260E-09	5.403E-09	5.542E-09	5.677E-09
kr 80	8.936E-06	1.019E-05	1.151E-05	1.287E-05	1.429E-05	1.576E-05	1.727E-05	1.882E-05	2.042E-05	2.205E-05	2.372E-05
zn 81	1.973E-12	2.009E-12	2.057E-12	2.106E-12	2.156E-12	2.205E-12	2.255E-12	2.304E-12	2.354E-12	2.403E-12	2.451E-12
ga 81	5.425E-09	5.360E-09	5.235E-09	5.110E-09	4.986E-09	4.863E-09	4.741E-09	4.621E-09	4.503E-09	4.387E-09	4.275E-09
ge 81	5.255E-07	5.191E-07	5.083E-07	4.973E-07	4.862E-07	4.752E-07	4.641E-07	4.532E-07	4.423E-07	4.316E-07	4.211E-07
ge 81m	1.374E-08	1.358E-08	1.326E-08	1.295E-08	1.263E-08	1.232E-08	1.201E-08	1.171E-08	1.141E-08	1.111E-08	1.083E-08
as 81	3.908E-06	3.877E-06	3.837E-06	3.794E-06	3.749E-06	3.702E-06	3.655E-06	3.606E-06	3.558E-06	3.510E-06	3.462E-06
se 81	1.389E-04	1.380E-04	1.368E-04	1.355E-04	1.342E-04	1.328E-04	1.313E-04	1.298E-04	1.283E-04	1.268E-04	1.253E-04
se 81m	3.622E-05	3.624E-05	3.658E-05	3.686E-05	3.709E-05	3.728E-05	3.743E-05	3.755E-05	3.765E-05	3.772E-05	3.779E-05
br 81	5.172E+00	5.658E+00	6.138E+00	6.613E+00	7.081E+00	7.542E+00	7.997E+00	8.445E+00	8.885E+00	9.318E+00	9.744E+00
kr 81	1.258E-06	1.483E-06	1.725E-06	1.987E-06	2.267E-06	2.565E-06	2.882E-06	3.218E-06	3.574E-06	3.949E-06	4.344E-06
kr 81m	1.347E-13	1.455E-13	1.603E-13	1.756E-13	1.915E-13	2.079E-13	2.248E-13	2.424E-13	2.606E-13	2.795E-13	2.990E-13
rb 81	2.154E-14	2.201E-14	2.330E-14	2.450E-14	2.562E-14	2.667E-14	2.765E-14	2.858E-14	2.946E-14	3.030E-14	3.109E-14
zn 82	1.122E-12	1.119E-12	1.108E-12	1.098E-12	1.087E-12	1.077E-12	1.067E-12	1.057E-12	1.047E-12	1.038E-12	1.030E-12
ga 82	1.926E-09	1.898E-09	1.843E-09	1.788E-09	1.733E-09	1.679E-09	1.626E-09	1.573E-09	1.522E-09	1.472E-09	1.423E-09
ge 82	3.114E-07	3.071E-07	2.993E-07	2.915E-07	2.837E-07	2.760E-07	2.684E-07	2.609E-07	2.536E-07	2.464E-07	2.394E-07
as 82	2.592E-06	2.559E-06	2.499E-06	2.440E-06	2.381E-06	2.323E-06	2.265E-06	2.207E-06	2.151E-06	2.095E-06	2.041E-06
as 82m	3.435E-07	3.450E-07	3.499E-07	3.546E-07	3.591E-07	3.635E-07	3.677E-07	3.718E-07	3.757E-07	3.795E-07	3.832E-07
se 82	8.283E+00	9.056E+00	9.820E+00	1.058E+01	1.132E+01	1.206E+01	1.278E+01	1.350E+01	1.421E+01	1.490E+01	1.559E+01
br 82	4.302E-04	4.725E-04	5.225E-04	5.737E-04	6.261E-04	6.798E-04	7.346E-04	7.904E-04	8.473E-04	9.051E-04	9.638E-04
br 82m	1.105E-06	1.219E-06	1.352E-06	1.488E-06	1.628E-06	1.771E-06	1.917E-06	2.067E-06	2.219E-06	2.374E-06	2.531E-06
kr 82	6.602E-02	7.967E-02	9.474E-02	1.113E-01	1.292E-01	1.487E-01	1.696E-01	1.920E-01	2.160E-01	2.414E-01	2.683E-01
zn 83	3.863E-14	3.994E-14	3.994E-14	4.068E-14	4.142E-14	4.216E-14	4.291E-14	4.366E-14	4.441E-14	4.516E-14	4.590E-14
ga 83	8.401E-11	8.451E-11	8.489E-11	8.529E-11	8.571E-11	8.615E-11	8.660E-11	8.707E-11	8.756E-11	8.806E-11	8.857E-11
ge 83	5.539E-08	5.479E-08	5.359E-08	5.241E-08	5.125E-08	5.010E-08	4.897E-08	4.786E-08	4.678E-08	4.572E-08	4.469E-08
as 83	2.561E-06	2.533E-06	2.482E-06	2.432E-06	2.381E-06	2.331E-06	2.282E-06	2.233E-06	2.185E-06	2.138E-06	2.092E-06
se 83	1.939E-04	1.922E-04	1.895E-04	1.868E-04	1.841E-04	1.814E-04	1.786E-04	1.759E-04	1.732E-04	1.705E-04	1.679E-04
se 83m	1.094E-05	1.083E-05	1.064E-05	1.044E-05	1.025E-05	1.006E-05	9.869E-06	9.680E-06	9.493E-06	9.310E-06	9.131E-06
br 83	2.702E-03	2.677E-03	2.635E-03	2.593E-03	2.550E-03	2.507E-03	2.465E-03	2.422E-03	2.380E-03	2.339E-03	2.299E-03
kr 83	1.231E+01	1.328E+01	1.420E+01	1.507E+01	1.589E+01	1.667E+01	1.741E+01	1.809E+01	1.873E+01	1.933E+01	1.988E+01
kr 83m	2.069E-03	2.050E-03	2.019E-03	1.988E-03	1.956E-03	1.924E-03	1.893E-03	1.861E-03	1.830E-03	1.800E-03	1.770E-03
rb 83	6.416E-08	6.769E-08	7.157E-08	7.554E-08	7.943E-08	8.317E-08	8.673E-08	9.010E-08	9.328E-08	9.629E-08	9.913E-08
sr 83	2.660E-14	2.718E-14	2.878E-14	3.027E-14	3.165E-14	3.295E-14	3.418E-14	3.533E-14	3.642E-14	3.746E-14	3.845E-14
ga 84	4.730E-10	4.628E-10	4.438E-10	4.247E-10	4.058E-10	3.871E-10	3.685E-10	3.502E-10	3.322E-10	3.145E-10	2.973E-10
ge 84	1.934E-08	1.914E-08	1.872E-08	1.831E-08	1.790E-08	1.750E-08	1.710E-08	1.671E-08	1.633E-08	1.596E-08	1.560E-08

Cycle 2 -DD Assembly

fission products

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power= 11.49mw, burnup= 15103.mwd, flux= 3.58E+13n/cm*2-sec
nuclide concentrations, grams
basis = 0.3883 MTU

	charge	722.6 d	788.3 d	854.0 d	919.7 d	985.4 d	1051.1 d	1116.8 d	1182.5 d	1248.2 d	1313.9 d
as 84	4.064E-07	4.026E-07	3.954E-07	3.883E-07	3.813E-07	3.744E-07	3.677E-07	3.611E-07	3.546E-07	3.484E-07	3.422E-07
as 84m	3.535E-08	3.503E-08	3.444E-08	3.385E-08	3.327E-08	3.270E-08	3.214E-08	3.160E-08	3.106E-08	3.055E-08	3.004E-08
se 84	1.114E-04	1.101E-04	1.079E-04	1.058E-04	1.036E-04	1.014E-04	9.923E-05	9.710E-05	9.499E-05	9.293E-05	9.091E-05
br 84	1.133E-03	1.121E-03	1.099E-03	1.077E-03	1.055E-03	1.034E-03	1.012E-03	9.910E-04	9.701E-04	9.495E-04	9.294E-04
br 84m	6.281E-06	6.313E-06	6.435E-06	6.546E-06	6.649E-06	6.744E-06	6.832E-06	6.914E-06	6.991E-06	7.064E-06	7.133E-06
kr 84	2.845E+01	3.116E+01	3.386E+01	3.655E+01	3.921E+01	4.186E+01	4.450E+01	4.711E+01	4.971E+01	5.230E+01	5.486E+01
rb 84	3.358E-06	3.743E-06	4.158E-06	4.587E-06	5.029E-06	5.480E-06	5.940E-06	6.410E-06	6.887E-06	7.373E-06	7.865E-06
sr 84	8.583E-07	1.055E-06	1.274E-06	1.516E-06	1.783E-06	2.073E-06	2.389E-06	2.731E-06	3.098E-06	3.492E-06	3.913E-06
ga 85	4.219E-13	4.283E-13	4.364E-13	4.446E-13	4.528E-13	4.611E-13	4.694E-13	4.778E-13	4.861E-13	4.944E-13	5.027E-13
ge 85	5.797E-10	5.810E-10	5.799E-10	5.789E-10	5.782E-10	5.776E-10	5.771E-10	5.768E-10	5.767E-10	5.767E-10	5.769E-10
as 85	2.784E-07	2.743E-07	2.664E-07	2.580E-07	2.509E-07	2.432E-07	2.357E-07	2.283E-07	2.211E-07	2.141E-07	2.072E-07
se 85	1.809E-05	1.787E-05	1.750E-05	1.713E-05	1.675E-05	1.638E-05	1.601E-05	1.565E-05	1.528E-05	1.493E-05	1.458E-05
br 85	1.218E-04	1.204E-04	1.181E-04	1.157E-04	1.133E-04	1.109E-04	1.085E-04	1.062E-04	1.038E-04	1.016E-04	9.931E-05
kr 85	6.880E+00	7.447E+00	7.995E+00	8.524E+00	9.034E+00	9.525E+00	9.997E+00	1.045E+01	1.089E+01	1.131E+01	1.171E+01
kr 85m	1.145E-02	1.132E-02	1.110E-02	1.088E-02	1.066E-02	1.043E-02	1.021E-02	9.993E-03	9.777E-03	9.564E-03	9.355E-03
rb 85	2.542E+01	2.773E+01	3.001E+01	3.224E+01	3.443E+01	3.659E+01	3.871E+01	4.078E+01	4.282E+01	4.482E+01	4.678E+01
sr 85	1.153E-08	1.217E-08	1.295E-08	1.378E-08	1.463E-08	1.547E-08	1.632E-08	1.716E-08	1.800E-08	1.886E-08	1.972E-08
sr 85m	5.046E-12	5.235E-12	5.616E-12	5.992E-12	6.368E-12	6.746E-12	7.128E-12	7.518E-12	7.918E-12	8.330E-12	8.757E-12
y 85	2.969E-19	4.189E-19	5.677E-19	7.411E-19	9.385E-19	1.160E-18	1.408E-18	1.681E-18	1.982E-18	2.311E-18	2.667E-18
ge 86	6.848E-08	6.699E-08	6.420E-08	6.141E-08	5.864E-08	5.589E-08	5.317E-08	5.049E-08	4.785E-08	4.526E-08	4.273E-08
as 86	2.141E-07	2.100E-07	2.020E-07	1.941E-07	1.862E-07	1.785E-07	1.708E-07	1.632E-07	1.557E-07	1.484E-07	1.412E-07
se 86	1.068E-05	1.053E-05	1.026E-05	9.989E-06	9.720E-06	9.453E-06	9.190E-06	8.930E-06	8.674E-06	8.423E-06	8.178E-06
br 86	5.481E-05	5.416E-05	5.304E-05	5.191E-05	5.079E-05	4.967E-05	4.856E-05	4.746E-05	4.638E-05	4.532E-05	4.428E-05
kr 86	4.825E+01	5.253E+01	5.673E+01	6.084E+01	6.487E+01	6.880E+01	7.265E+01	7.642E+01	8.010E+01	8.370E+01	8.722E+01
rb 86	3.479E-03	3.849E-03	4.267E-03	4.699E-03	5.141E-03	5.592E-03	6.053E-03	6.523E-03	7.001E-03	7.486E-03	7.979E-03
rb 86m	1.205E-08	1.319E-08	1.454E-08	1.591E-08	1.731E-08	1.874E-08	2.019E-08	2.167E-08	2.317E-08	2.469E-08	2.623E-08
sr 86	4.042E-02	4.938E-02	5.931E-02	7.029E-02	8.232E-02	9.545E-02	1.097E-01	1.251E-01	1.416E-01	1.593E-01	1.781E-01