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ESTIMATE OF FISSION PRODUCTS IN THE MARK-18A OH TARGETS

The Savannah River Site (SRS) has been evaluating options for the disposition of 65 Mark-18A outer housing targets. One option is to package the targets for shipment to Oak Ridge National Laboratory (ORNL), where they will be processed to recover plutonium and possibly other transuranic actinides. One issue at ORNL is the presence of fission products, which must be estimated to plan for proper handling and eventual disposal of waste products. ORNL made a request to gather available information on the topic, including any estimate of fission product content, or support information on irradiation history and core physics that would allow an independent estimate of fission product content to be made.

The review of SRS literature uncovered one estimate of fission products in the Mark-18A targets (Ref. 1). It was noted that the estimates were made by simple manual computations, since neither the basic data nor the intended application merited the effort required for a thorough computer analysis. A fission product yield for ^{134}Cs, ^{137}Cs, and ^{90}Sr was assigned to ^{242}Pu, and the difference between initial and final ^{242}Pu content was used to derive an estimate of these key fission products. The content of each full strength target tube was put at approximately 250 Curies of ^{137}Cs, and about 40 curies of ^{90}Sr. It was noted that the ^{134}Cs content was highly dependent on irradiation history, due to the short (~2 yrs) half-life. The irradiation history of the targets is recreated here, and an estimate of neutron fluence is made for the purpose of recreating the estimate of fission product inventories and decay with time. The Cf-I irradiations which ending on 11/8/1970 are estimated to have contributed to ~88% of the total neutron fluence seen by the targets. As a result, most fission products created have been decaying for ~33 years. As of September 1, 2003, the maximum exposed assemblies are estimated to contain ~150 Ci of ^{137}Cs, and ~24 Ci ^{90}Sr, while the average assembly is put at ~100 Ci of ^{137}Cs, and ~15 Ci ^{90}Sr. For the entire 65 assemblies, the inventory is estimated at ~6.3E+3 Ci of ^{137}Cs, ~9.8E+2 Ci ^{90}Sr, and ~5 Ci of ^{134}Cs, again as of to September 1, 2003.

Finally, the actual irradiation history of the targets is captured here for completeness, and to support any more detailed effort to model neutron fluence and fission product generation.

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Short History of the Mark-18A Targets

The original Californium I production campaign was initiated in on August 11, 1969 in K-Reactor. The core consisted of 90 Mark-18 driver fuel elements with Mark-18A Outer Housing (OH) targets on 86 of the 90 Mark-18 driver elements. The driver fuel had a relatively low nominal ^{235}U content of 180 grams per assembly (Ref. 2), and ability to dissipate up to ~18 MW/assembly of thermal energy (Ref.3), which combined to produce a high neutron flux environment. The fuel drivers were changed every ~4 full power days over a two year period. Figure 1 below shows the Mark-18A configuration, with the actual target being the outer housing (OH). The ^{242}Pu was confined to a tube section approximately four (4) feet in length, with the active ^{235}U fuel region in the driver fuel being six (6) feet in length.

The targets were originally fabricated with ~98% Pu-242 for the purpose of producing californium-252 (Cf-252). The initial plutonium isotopics were put at (Ref. 3):

Isotope	wt. %	Isotope	wt. %
^{238}Pu	0.164	^{241}Pu	0.106 (corrected to July 1969)
^{239}Pu	0.043	^{242}Pu	98.29
^{240}Pu	1.21	^{244}Pu	0.185

TABLE 1. Initial Plutonium Isotopics in the Mark-18A Targets

The high flux Californium I irradiation campaign ended on November 8, 1970 at the end of the K-94 cycle. The failure of a source rod required an extended shutdown, and irradiation did not continue until March 12, 1971. At that time, the K-Reactor operations reverted to a plutonium and tritium production mission. The Mark-18A OH Targets were removed from the Mark-18 fuel drivers, and were placed on lithium target inserts for virtually all subsequent irradiation cycles. The Mark-18A OH targets with Li inserts were then placed within production core lattices, these being either an enriched/depleted charge for plutonium production (e.g. Mark-14 or Mark-16 enriched drivers with Mark-30 depleted uranium targets), or a core of Mark-22 fuel for tritium production. Several of the targets were processed during this period:

- 3 targets were processed after the K-1.2 cycle ending 6-14-71, leaving 83
- 6 targets were processed after the K-1.3 cycle ending 7-22-71, leaving 77
- 6 targets were processed after the K-2.3 cycle ending 11-17-71, leaving 71
- 5 targets were processed after the K-3.1 cycle ending 1-10-72, leaving 66
- 1 target was processed after the K-4.3 cycle ending 6-28-72, leaving 65

The 65 remaining targets were irradiated in various positions in the core until final discharge on 6/18/79. The targets were placed in water basin storage in the Receiving Basin for Off-Site Fuels (RBOF) at SRS, and finally moved to their present storage location in L-Basin in 2001.

A full history of the target irradiation campaign including core placement and cycle dates will be given in later sections, following a discussion of fission product estimates.

Fission Products

Ref. 1 estimated the fission product content of each full strength target tube at approximately 250 Curies of ^{134}Cs and ^{137}Cs, and about 40 curies of ^{90}Sr. This was based on the difference between the initial ^{242}Pu and final actinide atoms mass. The difference was attributed to fission, with an assumed fission product yield from ^{242}Pu of 0.075, 0.065, and 0.10 for ^{134}Cs, ^{137}Cs, and ^{90}Sr, respectively. The reactor exposure history was then used to estimate the fission product inventory as of August 1979.

The original data will be provided here, along with a simple estimate of fission products based on missing mass to show how the validity of the estimates from Ref. 1. This method will ignore reactor decay periods for the time being.

Tables 2, 3, and 4 provide the initial ^{242}Pu inventory (per Ref. 1), and also provide the final ^{242}Pu inventory (per Ref. 5). The 65 assemblies are broken up into three groups.

- Group 1 in Table 2 presents the actinide contents of the 6 outer housings, which received the most time in the active core region.

- Group 2 in Table 3 presents the actinide contents of 38 housings with similar ^{242}Pu inventory to group I, but with more residence time in the outer buckle zone or blanket of the reactor.
- Group 3 in Table 4 presents the actinide contents of the final 21 assemblies, with residence time by reactor zone identical to Group 2, but with significantly lower ^{242}Pu initial inventory.

	1	2	3	4	5	6	
	FT-0-63	FT-0-64	FT-0-65	FT-0-66	FT-0-67	FT-0-69	
	Grams	Grams	Grams	Grams	Grams	Grams	Total
Initial							
Pu-242	117.8	121.4	121.4	121.4	121.4	121.5	724.9
Final							
Pu-238	0.00247	0.00255	0.00255	0.00255	0.00255	0.00255	0.01522
Pu-239	0.00072	0.00074	0.00074	0.00074	0.00074	0.00074	0.00442
Pu-240	0.15347	0.15816	0.15816	0.15816	0.15816	0.15829	0.94440
Pu-241	0.06147	0.06334	0.06334	0.06334	0.06334	0.06340	0.37823
Pu-242	0.36486	0.37601	0.37601	0.37601	0.37601	0.37632	2.24522
Pu-244	0.44101	0.45448	0.45448	0.45448	0.45448	0.45486	2.71379
Am-241	0.00176	0.00181	0.00181	0.00181	0.00181	0.00181	0.01081
Am-243	0.23089	0.23794	0.23794	0.23794	0.23794	0.23814	1.42079
Cm-242	0.00098	0.00101	0.00101	0.00101	0.00101	0.00101	0.00603
Cm-244	6.51321	6.71225	6.71225	6.71225	6.71225	6.71778	40.07999
Cm-245	0.12588	0.12972	0.12972	0.12972	0.12972	0.12983	0.77459
Cm-246	9.81856	10.11861	10.11861	10.11861	10.11861	10.12695	60.41995
Cm-247	0.37402	0.38545	0.38545	0.38545	0.38545	0.38577	2.30159
Cm-248	1.10471	1.13847	1.13847	1.13847	1.13847	1.13941	6.79800
Bk-249	0.01045	0.01077	0.01077	0.01077	0.01077	0.01078	0.06431
Cf-249	0.00373	0.00384	0.00384	0.00384	0.00384	0.00384	0.02293
Cf-250	0.00871	0.00898	0.00898	0.00898	0.00898	0.00899	0.05362
Cf-251	0.00289	0.00298	0.00298	0.00298	0.00298	0.00299	0.01780
Cf-252	0.04254	0.04384	0.04384	0.04384	0.04384	0.04388	0.26178
Total gms	19.26233	19.85095	19.85095	19.85095	19.85095	19.86734	118.53347
Delta gms	98.53767	101.54905	101.54905	101.54905	101.54905	101.63266	606.36653
avg. delta gms							101.06109

Table 2. 6 Mark-18A OH Targets with the Highest Exposure

	1	2	3	4	5	6	7	8	9	10	11	12
	FT-0-01	FT-0-04	FT-0-05	FT-0-11	FT-0-12	FT-0-13	FT-0-14	FT-0-15	FT-0-16	FT-0-17	FT-0-18	FT-0-19
	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams
Initial												
Pu-242	109.4	109.4	110.0	108.6	108.1	108.1	107.9	108.0	107.9	107.9	107.9	107.9
Final												
Pu-238	0.01074	0.01074	0.01080	0.01799	0.01790	0.01790	0.01787	0.01789	0.01787	0.01787	0.01787	0.01787
Pu-239	0.00155	0.00155	0.00156	0.00265	0.00264	0.00264	0.00263	0.00264	0.00263	0.00263	0.00263	0.00263
Pu-240	0.80788	0.80788	0.81231	1.39913	1.39269	1.39269	1.39011	1.39140	1.39011	1.39011	1.39011	1.39011
Pu-241	0.32333	0.32333	0.32511	0.51990	0.51751	0.51751	0.51655	0.51703	0.51655	0.51655	0.51655	0.51655
Pu-242	0.46079	0.46079	0.46331	0.91300	0.90880	0.90880	0.90712	0.90796	0.90712	0.90712	0.90712	0.90712
Pu-244	0.46299	0.46299	0.46553	0.43086	0.42887	0.42887	0.42808	0.42848	0.42808	0.42808	0.42808	0.42808
Am-241	0.02753	0.02753	0.02768	0.04475	0.04455	0.04455	0.04446	0.04451	0.04446	0.04446	0.04446	0.04446
Am-243	0.25847	0.25847	0.25988	0.55735	0.55478	0.55478	0.55375	0.55427	0.55375	0.55375	0.55375	0.55375
Cm-242	0.00396	0.00396	0.00398	0.00646	0.00643	0.00643	0.00642	0.00643	0.00642	0.00642	0.00642	0.00642
Cm-244	7.42112	7.42112	7.46181	12.43906	12.38179	12.38179	12.35889	12.37033	12.35889	12.35889	12.35889	12.35889
Cm-245	0.17285	0.17285	0.17379	0.25906	0.25787	0.25787	0.25739	0.25763	0.25739	0.25739	0.25739	0.25739
Cm-246	9.69497	9.69497	9.74814	9.91663	9.87098	9.87098	9.85272	9.86185	9.85272	9.85272	9.85272	9.85272
Cm-247	0.38370	0.38870	0.39083	0.38964	0.38784	0.38784	0.38713	0.38749	0.38713	0.38713	0.38713	0.38713
Cm-248	0.93721	0.93721	0.94235	0.78945	0.78582	0.78582	0.78436	0.78509	0.78436	0.78436	0.78436	0.78436
Bk-249	0.00537	0.00537	0.00540	0.00455	0.00453	0.00453	0.00452	0.00452	0.00452	0.00452	0.00452	0.00452
Cf-249	0.00697	0.00697	0.00701	0.00587	0.00584	0.00584	0.00583	0.00583	0.00583	0.00583	0.00583	0.00583
Cf-250	0.00495	0.00495	0.00497	0.00416	0.00414	0.00414	0.00414	0.00414	0.00414	0.00414	0.00414	0.00414
Cf-251	0.00169	0.00169	0.00170	0.00142	0.00141	0.00141	0.00141	0.00141	0.00141	0.00141	0.00141	0.00141
Cf-252	0.01534	0.01534	0.01542	0.01186	0.01181	0.01181	0.01179	0.01180	0.01179	0.01179	0.01179	0.01179
Total gms	21.00141	21.00641	21.12158	27.71379	27.58620	27.58620	27.53517	27.56070	27.53517	27.53517	27.53517	27.53517
Delta gms	88.39859	88.39359	88.87842	80.88621	80.51380	80.51380	80.36483	80.43930	80.36483	80.36483	80.36483	80.36483

TABLE 3. 38 Mark-18A OH Targets with the Next Highest Exposure History

	13	14	15	16	17	18	19	20	21	22	23	24
	FT-0-20	FT-0-21	FT-0-22	FT-0-23	FT-0-24	FT-0-25	FT-0-26	FT-0-27	FT-0-28	FT-0-29	FT-0-33	FT-0-34
	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams
Initial												
Pu-242	107.9	107.9	107.9	108.0	107.9	107.8	108.8	108.8	108.8	108.8	108.8	109.2
Final												
Pu-238	0.01787	0.01787	0.01787	0.01789	0.01787	0.01785	0.01302	0.01027	0.01068	0.01068	0.01068	0.01072
Pu-239	0.00263	0.00263	0.00263	0.00264	0.00263	0.00263	0.00266	0.00148	0.00154	0.00154	0.00154	0.00155
Pu-240	1.39011	1.39011	1.39011	1.39140	1.39011	1.38883	1.40171	0.76847	0.80345	0.80345	0.80345	0.80640
Pu-241	0.51655	0.51655	0.51655	0.51703	0.51655	0.51607	0.52086	0.30938	0.32156	0.32156	0.32156	0.32274
Pu-242	0.90712	0.90712	0.90712	0.90796	0.90712	0.90628	0.91468	0.42964	0.45826	0.45826	0.45826	0.45994
Pu-244	0.42808	0.42808	0.42808	0.42848	0.42808	0.42763	0.43165	0.43394	0.46045	0.46045	0.46045	0.46215
Am-241	0.04446	0.04446	0.04446	0.04451	0.04446	0.04442	0.04484	0.02635	0.02738	0.02738	0.02738	0.02748
Am-243	0.55375	0.55375	0.55375	0.55427	0.55375	0.55324	0.55837	0.23623	0.25705	0.25705	0.25705	0.25799
Cm-242	0.00642	0.00642	0.00642	0.00643	0.00642	0.00641	0.00647	0.00379	0.00394	0.00394	0.00394	0.00395
Cm-244	12.35889	12.35889	12.35889	12.37033	12.35889	12.34743	12.46197	7.07491	7.38041	7.38041	7.38041	7.40755
Cm-245	0.25739	0.25739	0.25739	0.25763	0.25739	0.25715	0.25954	0.16627	0.17190	0.17190	0.17190	0.17253
Cm-246	9.85272	9.85272	9.85272	9.86185	9.85272	9.84359	9.93490	9.62484	9.64180	9.64180	9.64180	9.67725
Cm-247	0.38713	0.38713	0.38713	0.38749	0.38713	0.38677	0.39036	0.38653	0.38657	0.38657	0.38657	0.38799
Cm-248	0.78436	0.78436	0.78436	0.78509	0.78436	0.78363	0.79090	0.95530	0.93207	0.93207	0.93207	0.93550
Bk-249	0.00452	0.00452	0.00452	0.00452	0.00452	0.00452	0.00456	0.00547	0.00534	0.00534	0.00534	0.00536
Cf-249	0.00583	0.00583	0.00583	0.00583	0.00583	0.00582	0.00588	0.00710	0.00693	0.00693	0.00693	0.00696
Cf-250	0.00414	0.00414	0.00414	0.00414	0.00414	0.00413	0.00417	0.00504	0.00492	0.00492	0.00492	0.00494
Cf-251	0.00141	0.00141	0.00141	0.00141	0.00141	0.00141	0.00142	0.00172	0.00168	0.00168	0.00168	0.00169
Cf-252	0.01179	0.01179	0.01179	0.01180	0.01179	0.01177	0.01188	0.01582	0.01526	0.01526	0.01526	0.01531
Total gms	27.53517	27.53517	27.53517	27.56070	27.53517	27.50958	27.75984	20.46255	20.89119	20.89119	20.89119	20.96800
Delta gms	80.36483	80.36483	80.36483	80.43930	80.36483	80.29042	81.04016	88.33745	87.90881	87.90881	87.90881	88.23200

TABLE 3. 38 Mark-18A OH Targets with the Next Highest Exposure History, **Continued**

	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
	FT-0-36	FT-0-37	FT-0-38	FT-0-44	FT-0-45	FT-0-46	FT-0-47	FT-0-48	FT-0-50	FT-0-52	FT-0-55	FT-0-56	FT-0-57	FT-0-68	
	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	TOTAL
Initial															
Pu-242	109.2	109.1	109.1	109.1	109.1	109.1	108.9	108.8	106.8	116.4	116.4	116.4	116.4	101.2	4147.7
Final															
Pu-238	0.01031	0.01030	0.01071	0.01030	0.01030	0.01071	0.01069	0.01068	0.01027	0.01272	0.01272	0.01272	0.01272	0.01676	0.52849
Pu-239	0.00149	0.00149	0.00154	0.00149	0.00149	0.00154	0.00154	0.00154	0.00148	0.00183	0.00183	0.00183	0.00183	0.00247	0.07787
Pu-240	0.77129	0.77059	0.80567	0.77059	0.77059	0.80567	0.80419	0.80345	0.76847	0.98220	0.98220	0.98220	0.98220	1.30380	40.98524
Pu-241	0.31052	0.31024	0.32245	0.31024	0.31024	0.32245	0.32186	0.32156	0.30938	0.38280	0.38280	0.38280	0.38280	0.48448	15.69805
Pu-242	0.43122	0.43083	0.45952	0.43083	0.43083	0.45952	0.45868	0.45826	0.42964	0.55710	0.55710	0.55710	0.55710	0.85079	25.24933
Pu-244	0.43553	0.43513	0.46172	0.43513	0.43513	0.46172	0.46088	0.46045	0.43394	0.49630	0.49630	0.49630	0.49630	0.40150	16.93284
Am-241	0.02644	0.02642	0.02746	0.02642	0.02642	0.02746	0.02741	0.02738	0.02635	0.03264	0.03264	0.03264	0.03264	0.04170	1.34500
Am-243	0.23710	0.23688	0.25776	0.23688	0.23688	0.25776	0.25728	0.25705	0.23623	0.31660	0.31660	0.31660	0.31660	0.51937	14.91259
Cm-242	0.00380	0.00380	0.00395	0.00380	0.00380	0.00395	0.00394	0.00394	0.00379	0.00470	0.00470	0.00470	0.00470	0.00602	0.19389
Cm-244	7.10092	7.09441	7.40076	7.09441	7.09441	7.40076	7.38720	7.38041	7.07491	8.92000	8.92000	8.92000	8.92000	11.59147	369.21011
Cm-245	0.16688	0.16673	0.17237	0.16673	0.16673	0.17237	0.17206	0.17190	0.16627	0.19920	0.19920	0.19920	0.19920	0.24141	8.05750
Cm-246	9.66021	9.65137	9.66838	9.65137	9.65137	9.66838	9.65067	9.64180	9.62484	10.52000	10.52000	10.52000	10.52000	9.24092	373.39014
Cm-247	0.38795	0.38760	0.38764	0.38760	0.38760	0.38764	0.38692	0.38657	0.38653	0.41970	0.41970	0.41970	0.41970	0.36309	14.82700
Cm-248	0.95881	0.95793	0.93464	0.95793	0.95793	0.93464	0.93293	0.93207	0.35530	0.99060	0.99060	0.99060	0.99060	0.73566	32.68906
Bk-249	0.00549	0.00549	0.00536	0.00549	0.00549	0.00536	0.00535	0.00534	0.00547	0.00566	0.00566	0.00566	0.00566	0.00424	0.19112
Cf-249	0.00713	0.00712	0.00695	0.00712	0.00712	0.00695	0.00694	0.00693	0.00710	0.00734	0.00734	0.00734	0.00734	0.00547	0.24737
Cf-250	0.00506	0.00506	0.00493	0.00506	0.00506	0.00493	0.00492	0.00492	0.00504	0.00521	0.00521	0.00521	0.00521	0.00888	0.18059
Cf-251	0.00173	0.00173	0.00169	0.00173	0.00173	0.00169	0.00168	0.00168	0.00172	0.00178	0.00178	0.00178	0.00178	0.00132	0.05993
Cf-252	0.01588	0.01586	0.01530	0.01586	0.01586	0.01530	0.01527	0.01526	0.01582	0.01615	0.01615	0.01615	0.01615	0.01105	0.52791
Total gms	20.53776	20.51898	20.94880	20.51898	20.51898	20.94880	20.91041	20.89119	19.86255	23.87253	23.87253	23.87253	23.87253	25.83040	915.30403
Delta	88.6622	88.5810	88.1512	88.5810	88.5810	88.1512	87.98959	87.90881	86.93745	92.52747	92.52747	92.52747	92.52747	75.36960	3232.39

gms	4	2	0	2	2	0									597
avg. delta gms															85.06305

TABLE 3. 38 Mark-18A OH Targets with the Next Highest Exposure History, **Continued**

	1	2	3	4	5	6	7	8	9	10	11	12
	FT-71-03	FT-71-04	FT-74-01	FT-75-02	FT-75-03	FT-76-01	FT-76-02	FT-76-03	FT-76-04	FT-78-01	FT-78-02	FT-78-03
	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams
Initial												
Pu-242	33.6	34.1	31.4	32.6	32.1	31.7	31.6	30.8	31.6	20.4	20.4	20.6
Final												
Pu-238	0.00557	0.00565	0.00520	0.00540	0.00532	0.00525	0.00523	0.00510	0.00523	0.00338	0.00338	0.00341
Pu-239	0.00082	0.00083	0.00077	0.00080	0.00078	0.00077	0.00077	0.00075	0.00077	0.00050	0.00050	0.00050
Pu-240	0.43288	0.43932	0.40454	0.42000	0.41356	0.40840	0.40711	0.39681	0.40711	0.26282	0.26282	0.26540
Pu-241	0.16085	0.16325	0.15032	0.15607	0.15367	0.15176	0.15128	0.14745	0.15128	0.09766	0.09766	0.09862
Pu-242	0.28248	0.28668	0.26398	0.27407	0.26987	0.26650	0.26566	0.25894	0.26566	0.17150	0.17150	0.17318
Pu-244	0.13330	0.13529	0.12458	0.12934	0.12735	0.12577	0.12537	0.12220	0.12537	0.08093	0.08093	0.08173
Am-241	0.01385	0.01405	0.01294	0.01343	0.01323	0.01306	0.01302	0.01269	0.01302	0.00841	0.00841	0.00849
Am-243	0.17244	0.17500	0.16115	0.16731	0.16474	0.16269	0.16217	0.15807	0.16217	0.10469	0.10469	0.10572
Cm-242	0.00200	0.00203	0.00187	0.00194	0.00191	0.00189	0.00188	0.00183	0.00188	0.00121	0.00121	0.00123
Cm-244	3.84855	3.90582	3.59656	3.73401	3.67674	3.63093	3.61947	3.52784	3.61947	2.33662	2.33662	2.35952
Cm-245	0.08015	0.08134	0.07490	0.07777	0.07657	0.07562	0.07538	0.07347	0.07538	0.04866	0.04866	0.04914
Cm-246	3.06813	3.11379	2.86724	2.97682	2.93116	2.89464	2.88551	2.81246	2.88551	1.86280	1.86280	1.88105
Cm-247	0.12055	0.12234	0.11266	0.11696	0.11517	0.11373	0.11338	0.11051	0.11338	0.07319	0.07319	0.07391
Cm-248	0.24425	0.24788	0.22826	0.23698	0.23335	0.23044	0.22971	0.22390	0.22971	0.14829	0.14829	0.14975
Bk-249	0.00141	0.00143	0.00132	0.00137	0.00134	0.00133	0.00132	0.00129	0.00132	0.00085	0.00085	0.00086
Cf-249	0.00182	0.00184	0.00170	0.00176	0.00173	0.00171	0.00171	0.00166	0.00171	0.00110	0.00110	0.00111
Cf-250	0.00129	0.00131	0.00120	0.00125	0.00123	0.00122	0.00121	0.00118	0.00121	0.00078	0.00078	0.00079
Cf-251	0.00044	0.00045	0.00041	0.00043	0.00042	0.00041	0.00041	0.00040	0.00041	0.00027	0.00027	0.00027
Cf-252	0.00367	0.00372	0.00343	0.00356	0.00351	0.00346	0.00345	0.00336	0.00345	0.00223	0.00223	0.00225
Total gms	8.57445	8.70202	8.01303	8.31927	8.19165	8.08958	8.06404	7.85991	8.06404	5.20589	5.20589	5.25693
Delta gms	25.02555	25.39798	23.38697	24.28073	23.90835	23.61042	23.53596	22.94009	23.53596	15.19411	15.19411	15.34307

avg. delta gms											

TABLE 4. 21 Mark-18A OH Targets with the Lowest 242Pu Loading and Exposure History

	13	14	15	16	17	18	19	20	21	
	FT-78-04	FT-79-01	FT-79-02	FT-79-03	FT-79-04	FT-80-01	FT-80-02	FT-80-03	FT-80-04	
	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	Grams	TOTAL
Initial										
Pu-242	20.5	9.8	9.6	9.6	9.7	5.9	5.8	5.2	5.7	432.7
Final										
Pu-238	0.00340	0.00162	0.00159	0.00159	0.00161	0.00098	0.00096	0.00086	0.00094	0.07167
Pu-239	0.00050	0.00024	0.00023	0.00023	0.00024	0.00014	0.00014	0.00013	0.00014	0.01055
Pu-240	0.26411	0.12626	0.12368	0.12368	0.12497	0.07601	0.07472	0.06699	0.07344	5.57463
Pu-241	0.09814	0.04692	0.04596	0.04596	0.04644	0.02824	0.02777	0.02489	0.02729	2.07148
Pu-242	0.17234	0.08239	0.08071	0.08071	0.08155	0.04960	0.04876	0.04372	0.04792	3.63772
Pu-244	0.08133	0.03888	0.03809	0.03809	0.03848	0.02341	0.02301	0.02063	0.02261	1.71669
Am-241	0.00845	0.00404	0.00396	0.00396	0.00400	0.00243	0.00239	0.00214	0.00235	0.17832
Am-243	0.10521	0.05029	0.04927	0.04927	0.04078	0.03028	0.02977	0.02669	0.02925	2.21165
Cm-242	0.00122	0.00058	0.00057	0.00057	0.00058	0.00035	0.00035	0.00031	0.00034	0.02575
Cm-244	2.34808	1.12249	1.09959	1.09959	1.11104	0.67578	0.66434	0.59561	0.65288	49.56155
Cm-245	0.04890	0.02338	0.02290	0.02290	0.02314	0.01407	0.01384	0.01240	0.01360	1.03217
Cm-246	1.87193	0.89487	0.87661	0.87661	0.88574	0.53875	0.52962	0.47483	0.52049	39.51136
Cm-247	0.07355	0.03516	0.03444	0.03444	0.03480	0.02117	0.02081	0.01866	0.02045	1.55245
Cm-248	0.14902	0.07124	0.06979	0.06979	0.07051	0.04289	0.04216	0.03780	0.04144	3.14545
Bk-249	0.00086	0.00041	0.00040	0.00040	0.00041	0.00025	0.00024	0.00022	0.00024	0.01812
Cf-249	0.00111	0.00053	0.00052	0.00052	0.00052	0.00032	0.00031	0.00028	0.00031	0.02337
Cf-250	0.00079	0.00038	0.00037	0.00037	0.00037	0.00023	0.00022	0.00020	0.00022	0.01660
Cf-251	0.00027	0.00013	0.00013	0.00013	0.00013	0.00008	0.00008	0.00007	0.00007	0.00568
Cf-252	0.00224	0.00107	0.00105	0.00105	0.00106	0.00064	0.00063	0.00057	0.00062	0.04725
Total gms	5.23145	2.50088	2.44986	2.44986	2.46637	1.50562	1.48012	1.32700	1.45460	110.41246

Delta gms	15.26855	7.29912	7.15014	7.15014	7.23363	4.39438	4.31988	3.87300	4.24540	322.28754
avg. delta gms										15.34703

TABLE 4. 21 Mark-18A OH Targets with the Lowest 242Pu Loading and Exposure History, **Continued**

The change in mass can again be used to make a rough estimate of fission products. Table 1 indicated that the initial loading was ~98% ^{242}Pu. This rough estimate will assume all ^{242}Pu, ignoring the other ~2% by weight of plutonium isotopes in the initial loading. The result shown in Table 5 is a delta in ^{242}Pu mass ranging from an average of approximately 101 grams, 85 grams, and 15 for Group I, II, and III, respectively, or an overall average loss of 64 grams per assembly. The assumed fission product yields per Ref. 1 will be used, along with the assumed half-lives in Table 5. The net result is and estimated ^{137}Cs activity ranging from 320 to 49 Ci, with an average of **200 Ci**, and a ^{90}Sr activity ranging from 51 to 7.8 Ci, with an average of **33 Ci.** This again compares to the estimate of **approximately 250 Ci of ^{137}Cs and 40 Ci of ^{90}Sr made in Ref. 1.** This is thought to provide sufficient agreement, given the crude nature of the estimate. Note that Ref. 1 indicates that the short half-line (~2 yrs) of ^{134}Cs makes this isotope very sensitive to the actual reactor irradiation history. However the fact is that any estimates of ^{134}Cs are now essentially irrelevant, as most of the material has decayed after ~24 years of basin storage. The decay attenuation factor would be on the order of $e^{-(0.33566*24)}$ = 0.0003.

	Avg 242Pu loss, gms	Atoms 242Pu	134Cs Atoms	137Cs Atoms	90Sr Atoms	134Cs Ci	137Cs Ci	90Sr Ci
Group I	101.1	2.5E+23	1.9E+22	1.6E+22	2.5E+21	5.4E+03	3.2E+02	5.1E+01
Group II	85.1	2.1E+23	1.6E+22	1.4E+22	2.1E+21	4.6E+03	2.7E+02	4.3E+01
Group III	15.3	3.8E+22	2.9E+21	2.5E+21	3.8E+20	8.2E+02	4.9E+01	7.8E+00
Avg. all Assemb.	64.0	1.6E+23	1.2E+22	1.0E+22	1.6E+21	3.4E+03	2.0E+02	3.3E+01

Constants:				
	F.P. Yield	T 1/2, yrs	λ, 1/sec	λ, 1/yr
Cs-134	0.075	2.065	1.06E-08	0.33566
Cs-137	0.065	30.17	7.28E-10	0.02297
Sr-90	0.01	29	7.57E-10	0.0239

TABLE 5. Rough Estimate of Fission Product Inventories, Ignoring Decay

Summary of Mark-18A OH Irradiation History to Estimate Neutron Fluence with Time

A more detailed calculation of fission product generation may be possible, if additional information is provided on actual core locations and neutron flux and total fluence. For that purpose, a more complete irradiation history of the Mark-18A OH targets has been extracted from historical sources. An estimate will also be provided of the neutron flux in the core for the various irradiation cycles.

Table 6 below provides the irradiation history of the Mark-18A OH targets within the core of K-Reactor, by cycle. This builds on information taken from Ref. 6, which has been updated to complete

the final irradiation histories. Total MW-days and additional core fuel data has also been added. Table 7 shows the exact historical placement of the Mark-18A OH targets within the core of K-Reactor, again by reactor cycle. The information in Ref. 6 ended with the K1 cycle in April of 1979. The assumption was made that the 6 housings in the control region at that time were returned to the blanket positions used in the K10-K11.1 cycles. The coordinates in Table 7 correspond to core locations, as shown in Figure 2.

Cycle	Start Date	End Date	MW-Days cumulative by Cycle	No. of Mk-18A OH	Location in Reactor	Assembly in OH	Driver Fuel No.	Driver Fuel Type
K1-K94	8/11/1969	11/8/1970	446,161	86	Control	Mk-18	90	MK-18
K1.1	3/12/1971	5/6/1971	80,992	86	Control	Li-Al	198	Mk-14
K1.2	5/9/1971	6/14/1971	59,774	86	Control	Li-Al	198	Mk-14
K1.3	6/18/1971	7/22/1971	58,421	83	Control	Li-Al	198	Mk-14
K2.1	8/2/1971	9/22/1971	75,703	77	Control	Li-Al	228	Mk-14
K2.2	9/26/1971	10/26/1971	53,314	77	Control	Li-Al	228	Mk-14
K2.3	10/29/1971	11/17/1971	30,399	77	Control	Li-Al	228	Mk-14
K3.1	11/27/1971	1/10/1972	70,490	71	Control	Li-Al	228	Mk-14
K3.2	1/12/1972	2/6/1972	48,326	66	Control	Li-Al	228	Mk-14
K3.3	2/9/1972	3/15/1972	44,025	66	Control	Li-Al	228	Mk-14
K4.1	3/19/1972	4/30/1972	72,006	66	Control	Li-Al	228	Mk-14
K4.2	5/3/1972	6/2/1972	52,867	66	Control	Li-Al	228	Mk-14
K4.3	6/4/1972	6/28/1972	35,279	66	Control	Li-Al	228	Mk-14
K-5	7/21/1972	12/10/1972	259,154	65	Buckle *	no flow	432	Mk-22
K6.1	12/21/1972	1/29/1973	79,392	65	Control	Li-Al	258	Mk-14
K6.2	2/1/1973	2/24/1973	50,087	65	Control	Li-Al	257	Mk-14
K7.1	3/15/1973	5/20/1973	111,765	65	Control	Li-Al	258	Mk-16
K7.2	5/24/1973	7/22/1973	102,359	65	Control	Li-Al	258	Mk-16
K7.3	7/25/1973	9/30/1973	106,222	65	Control	Li-Al	258	Mk-16
K8.1	10/7/1973	12/9/1973	114,127	65	Control	Li-Al	258	Mk-16
K8.2	12/14/1973	2/4/1974	103,782	65	Control	Li-Al	258	Mk-16
K8.3	2/8/1974	3/29/1974	91,106	65	Control	Li-Al	258	Mk-16
K-9.1	4/18/1974	9/15/1974	268,280	65	Blanket	Li-Al	430	Mk-22
K9.2	10/7/1974	1/20/1975	193,897	65	Blanket	Li-Al	430	Mk-22
K9.3	1/25/1975	3/16/1975	83,669	65	Blanket	Li-Al	430	Mk-22
K10.1	4/18/1975	6/29/1975	103,460	65	Blanket	Li-Al	258	Mk-16
K10.2	7/4/1975	9/28/1975	118,892	65	Blanket	Li-Al	258	Mk-16
K10.3	10/7/1975	11/30/1975	84,406	65	Blanket	Li-Al	258	Mk-16
K10.4	12/7/1975	1/25/1976	79,674	65	Blanket	Li-Al	258	Mk-16
K11.1	2/12/1976	4/11/1976	106,751	65	Blanket	Li-Al	258	Mk-16
K11.2	4/20/1976	6/27/1976	112,107	65	Control**	Li-Al	258	Mk-16
K11.3	7/3/1976	8/22/1976	86,529	65	Control**	Li-Al	258	Mk-16
K11.4	8/29/1976	10/17/1976	74,889	65	Control**	Li-Al	252	Mk-16
K-12.1	12/16/1976	2/7/1977	98,377	65	Control**	Li-Al	252	Mk-16
K-12.2	2/15/1977	4/18/1977	107,680	65	Control**	Li-Al	252	Mk-16
K-12.3	4/24/1977	6/28/1977	87,409	65	Control**	Li-Al	252	Mk-16
K-12.4	7/4/1977	8/22/1977	80,214	65	Control**	Li-Al	252	Mk-16
K-13.1	11/21/1977	1/17/1978	97,428	65	Control**	Li-Al	231	Mk-16
K-13.2	1/25/1978	3/27/1978	114,244	65	Control**	Li-Al	231	Mk-16
K-13.3	4/8/1978	6/4/1978	96,855	65	Control**	Li-Al	231	Mk-16
K-13.4	6/15/1978	8/13/1978	82,000	65	Control**	Li-Al	231	Mk-16
K-1.1	9/8/1978	10/31/1978	99,497	65	Control**	Li-Al	252	Mk-16
K-1.2	12/19/1978	2/11/1979	100,674	65	Control**	Li-Al	252	Mk-16
K-1.3	2/22/1979	4/20/1979	107,780	65	Blanket	Li-Al	252	Mk-16
K-1.4	4/30/1979	6/18/1979	87,166	65	Blanket	Li-Al	252	Mk-16
			4,617,629					

* - Buckle zone, next to outer row.

** - Only FT-0-63, FT-0-64, FT-0-65, FT-0-66, FT-0-67, and FT-0-69. All other assemblies were in the blanket.
*** - Monthly rather than daily records used for 1978 and 1979, with MW-days averaged over hours up.

TABLE 6. Mark-18A Outer Housing Target Irradiation History

RTR-1825 NO.	HOUSING SERIAL NO.	Cf-I	K-1 K-2	K-3 K-4	K-5	K-6 K-7 K-8	K-9 K-10 K-11.1	K-11.2 -.4 K-12 K-13 K-1.1-.2	K-1.3 K-1.4
1	FT-0-1	29-57	37-33	37-33	14-12	37-33	55-51	55-51	55-51
4	FT-0-4	24-54	16-42	16-42	47-75	16-42	01-51	01-51	01-51
5	FT-0-5	27-39	31-69	31-69	44-78	31-69	29-03	29-03	29-03
9	FT-0-11	34-60	46-60	46-60	19-87	46-60	03-33	03-33	03-33
10	FT-0-12	35-39	34-18	34-18	37-09	34-18	53-63	53-63	53-63
11	FT-0-13	38-48	23-15	23-15	05-39	25-45	18-90	18-90	18-90
12	FT-0-14	23-63	48-42	48-42	21-09	48-42	04-30	04-30	04-30
13	FT-0-15	37-45	13-69	13-69	28-90	13-69	52-66	52-66	52-66
14	FT-0-16	19-51	25-15	25-15	28-06	25-15	36-90	36-90	36-90
15	FT-0-17	21-57	20-18	20-18	22-90	20-18	20-90	20-90	20-90
16	FT-0-18	18-48	15-21	15-21	35-87	15-21	04-66	04-66	04-66
17	FT-0-19	22-36	46-36	46-36	26-06	46-36	36-06	36-06	36-06
18	FT-0-20	20-42	47-51	47-51	52-42	47-51	03-63	03-63	03-63
19	FT-0-21	23-33	21-81	21-81	51-63	21-81	20-06	20-06	20-06
20	FT-0-22	31-33	25-81	25-81	04-54	25-81	52-30	52-30	52-30
21	FT-0-23	33-33	14-72	14-72	52-48	22-72	38-90	38-90	38-90
22	FT-0-24	27-33	17-75	17-75	24-90	23-63	33-93	33-93	33-93
23	FT-0-25	29-63	40-72	40-72	21-87	40-72	23-03	23-03	23-03
24	FT-0-26	36-54	10-54	10-54	26-90	10-54	03-39	03-39	03-39
25	FT-0-27	32-60	30-78	30-78	09-21	30-78	54-42	54-42	54-42
26	FT-0-28	26-60	11-45	11-45	34-06	11-45	21-93	21-93	21-93
27	FT-0-29	28-60	41-63 06-60	06-60	52-36	13-39	25-03	25-03	25-03
31	FT-0-33	22-54	31-75	17-33	32-06	1.7-33	02-42	02-42	02-42
32	FT-0-34	34-54	40-30	26-72	30-06	26-72	02-60	02-60	02-60
34	FT-0-36	35-51	18-66	18-66	10-18	18-66	02-48	02-48	02-48
35	FT-0-37	32-36	12-36	12-36	13-15	12-36	31-03	31-03	31-03
36	FT-0-38	35-45	45-45	45-45	51-39	33-27	53-33	53-33	53-33
42	FT-0-44	33-39	42-54	42-54	12-18	42-54	54-58	54-58	54-58
43	FT-0-45	36-48	42-30	42-30	43-81	42-30	25-93	25-93	25-93
44	FT-0-46	33-57	21-75	21-75	05-57	24-54	35-03	35-03	35-03
45	FT-0-47	30-36	18-24	18-24	04-60	23-33	53-57	53-57	53-57
46	FT-0-48	23-39	35-75	35-75	35-09	35-75	31-93	31-93	31-93
48	FT-0-50	21-45	24-24	24-24	46-78	24-24	27-93	27-93	27-93
50	FT-0-52	30-54	38-48	11-57	51-33	11-57	33-03	33-03	33-03
53	FT-0-55	26-42	23-33	14-60	42-84	14-60	27-03	27-03	27-03

54	FT-0-56	30-42	23-63	14-30	16-12	22-24	29-93	29-93	29-93

TABLE 7. Mark-18A Outer Housing Historical X-Y Coordinate Placement in K-Reactor Core

RTR-1825 NO.	HOUSING SERIAL NO.	Cf-I	K-1 K-2	K-3 K-4	K-5	K-6 K-7 K-8	K-9 K-10 K-11.1	K-11.2 -.4 K-12 K-13 K-1.1-.2	K-1.3 K-1.4
55	FT-0-57	32-48	20-48	26-78	17-87	28-54	54-36	54-36	54-36
59	FT-0-63	29-51	28-54	41-69	48-72	41-69	01-45	27-39	01-45*
60	FT-0-64	27-51	24-54	41-63	39-09	41-63	54-54	33-51	54-54*
61	FT-0-65	26-48	25-45	41-39	40-84	41-39	23-93	28-54	23-93*
62	FT-0-66	27-45	33-51	29-21	07-27	29-21	53-39	31-45	53-39*
63	FT-0-67	29-45	31-45	32-18	08-24	32-18	02-54	25-45	02-54*
64	FT-0-68	25-63	13-27	13-27	30-90	13-27	38-06	38-06	38-06
65	FT-0-69	30-48	27-39	27-39 44-36	49-69	43-51	03-57	24-54	03-57*
66	CA-FT-71-3	38-54	35-81	35-81	04-48	37-57	18-06	18-06	18-06
67	CA-FT-71-4	33-63	47-57	47-57	52-54	32-60	40-06	40-06	40-06
68	CA-FT-74-1	36-36	41-21	41-21	04-42	43-45	40-90	40-90	40-90
69	CA-FT-75-2	37-57	08-42	08-42	53-45	17-75	16-06	16-06	16-06
70	CA-FT-75-3	39-51	28-12	28-12	06-30	28-30	05-27	05-27	05-27
71	CA-FT-76-1	35-63	45-27	45-27	03-45	38-24	43-87	43-87	43-87
72	CA-FT-76-2	35-33	10-66	10-66	50-66	20-48	41-87	41-87	41-87
73	CA-FT-76-3	39-45	30-84	30-84	53-51	31-45	15-09	15-09	15-09
74	CA-FT-76-4	37-39	46-66	46-66	39-87	32-36	51-69	51-69	51-69
75	CA-FT-78-1	32-30	09-63	09-63	19-09	09-63	44-84	44-84	44-84
76	CA-FT-18-2	24-30	30-12	30-12	17-09	30-12	12-12	12-12	12-12
77	CA-FT-78-3	26-30	09-33	09-33	03-51	19-57	06-24	06-24	06-24
78	CA-FT-78-4	28-30	45-69	45-69	05-33	45-69	50-72	50-72	50-72
79	CA-FT-79-1	18-42	40-78	40-78	51-57	40-30	07-21	07-21	07-21
80	CA-FT-79-2	21-33	10-24	10-24	37-87	19-27	08-18	08-18	08-18
81	CA-FT-79-3	17-45	07-51	07-51	24-06	15-51	11-15	11-15	11-15
82	CA-FT-79-4	19-39	37-15	37-15	32-90	38-48	49-75	49-75	49-75
83	CA-FT-80-1	19-57	33-09	33-09	22-06	36-66	47-81	47-81	47-81
84	CA-FT-80-2	20-60	49-33	49-33	04-36	31-75	45-81	45-81	45-81
85	CA-FT-80-3	21-63	25-87	25-87	52-60	27-39	48-78	48-78	48-78
86	CA-FT-80-4	17-51	45-75	45-75	34-90	33-51	09-15	09-15	09-15

* - The housings FT-0-63, FT-0-64, FT-0-65, FT-0-66, FT-0-67, and FT-0-69 were assumed to return to the core position used in Cycle K-11.1.

TABLE 7. Mark-18A Outer Housing Historical Placement in K-Reactor Core, **continued**

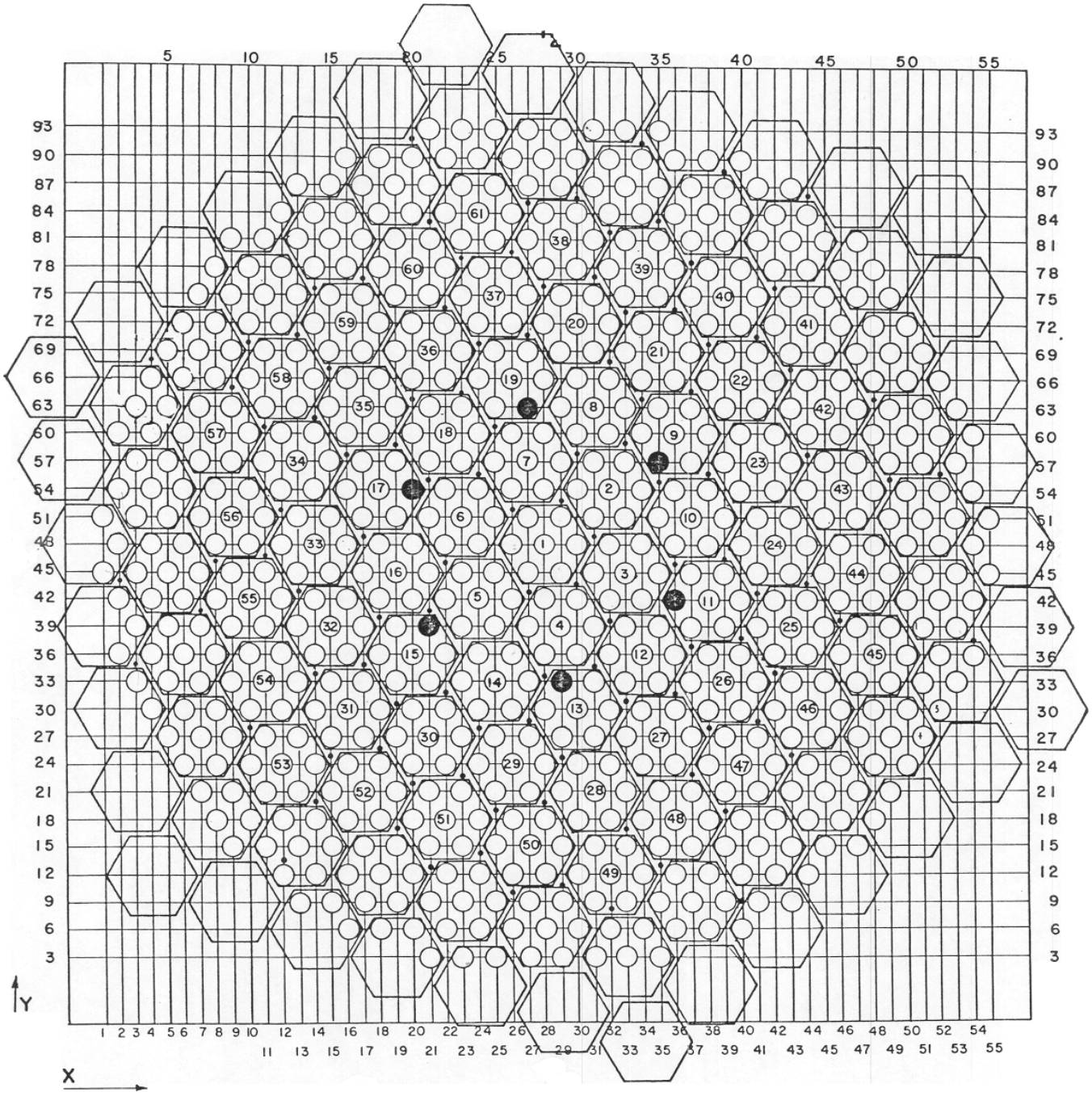

FIGURE 2. K-Reactor Reactor X-Y Coordinate Face Map

With the information provided in the above tables, it is possible to make an estimate of the average core neutron flux during the various stages of the irradiation campaign. Coupled with the irradiation times, an estimate can be made of the total neutron fluence seen by the targets at various stages in the irradiation history. The relationship between power and neutron flux is as follows:

Power (MW) = M (grams) * (1 mole/235 grams) * 6.02E23 atoms/mole
* σ_f (barns) * (1E-24 cm2/barn) * Φ (neutrons/cm^2-sec) * E (Mev/fission)
* 1.6E-13 watt-sec/Mev * 1 MW/1E6 watts.

From the records of MW-days, the neutron flux and fluence can be estimated. Using the above relationship, Reference 3, the Californium Physics Technical Manual for the campaign, provides an estimate of the neutron flux expected in the CF I campaign, and also provides additional correction factors for actual flux in the target tubes versus the fuel tubes:

	Max Driver Thermal Fission Power, MW	Φ, Fuel n/cm^2-sec	Φ, housing / Φ, fuel	Φ, 4 ft / Φ, 6 ft	Φ housing n/cm^2-sec
Beginning	18.6	2.52E+15	1.062	1.098	2.94E+15
End	16.7	4.62E+15	1.041	1.048	5.04E+15

TABLE 8. Predicted Flux Levels in the Mark-18A OH Targets for the Cf-I Core.

Ref. 3 assumed that power would initially be ~18 MW, lowering to 16.7 MW over a ~4 day cycle, for an average of 17.35 MW * 4 days = 69.4 MW-days. The U-235 burn-up would then be 69.4 MW-days * 1.25 gms U-235/MW-day = 86.75 grams U-235.

The flux levels predicted in Ref. 3 can be reproduced with an assumed an initial ^{235}U loading of 173 grams, with σ_f = 507 barns, 205 Mev/fission, and using correction factors for the flux in the target tubes. The U-235 burn-up over the ~4 day cycle is assumed to be consumed at the rate of 1.25 grams per MW-day. The net result is a predicted flux ranging from ~3E+15 to 5E+15 n/cm^2/sec over a 4 day cycle.

The above relationships have been applied to the MW-days per cycle shown in Table 6 to estimate neutron flux and total fluence. For the 94 Cf-I cycles, an average (Φ, housing/Φ, fuel) of 1.05 is assumed, and an average (Φ, 4 ft/Φ, 6 ft) of 1.073 is assumed, with an initial U-235 mass of 173 grams per tube. For the later campaigns, the following data is assumed:

1,500 grams/assembly initial U-235 per Mk-14
3,000 grams/assembly initial U-235 per Mk-16
3,400 grams/assembly initial U-235 per Mk-22
0.1 correction factor for lower flux in buckle or blanket zone.

Cycle	Days	MW-Days cumulative by Cycle	Driver Fuel No.	Driver Fuel Type	Initial U-235 per Assem gms	Avg U-235 in Cycle gms	Avg MW per Assem	Avg flux, n/cm^2-sec	Correction for tube to fuel n/cm^2-sec	fluence n/cm^2-sec	Total fluence n/cm^2
K1-K94	455	446,161	90	MK-18	173	140	10.90	1.82E+15	2.05E+15	8.07E+22	8.07E+22
K1.1	56	80,992	198	Mk-14	1,500	1244	7.30	1.38E+14	1.38E+14	6.66E+20	8.14E+22
K1.2	37	59,774	198	Mk-14	1,500	1311	8.16	1.46E+14	1.46E+14	4.66E+20	8.18E+22
K1.3	35	58,421	198	Mk-14	1,500	1316	8.43	1.50E+14	1.50E+14	4.54E+20	8.23E+22
K2.1	52	75,703	228	Mk-14	1,500	1292	6.39	1.16E+14	1.16E+14	5.20E+20	8.28E+22
K2.2	31	53,314	228	Mk-14	1,500	1354	7.54	1.31E+14	1.31E+14	3.50E+20	8.32E+22
K2.3	20	30,399	228	Mk-14	1,500	1417	6.67	1.10E+14	1.10E+14	1.91E+20	8.34E+22
K3.1	45	70,490	228	Mk-14	1,500	1307	6.87	1.23E+14	1.23E+14	4.79E+20	8.38E+22
K3.2	26	48,326	228	Mk-14	1,500	1368	8.15	1.40E+14	1.40E+14	3.14E+20	8.41E+22
K3.3	36	44,025	228	Mk-14	1,500	1379	5.36	9.12E+13	9.12E+13	2.84E+20	8.44E+22
K4.1	43	72,006	228	Mk-14	1,500	1303	7.34	1.32E+14	1.32E+14	4.91E+20	8.49E+22
K4.2	31	52,867	228	Mk-14	1,500	1355	7.48	1.29E+14	1.29E+14	3.47E+20	8.53E+22
K4.3	25	35,279	228	Mk-14	1,500	1403	6.19	1.03E+14	1.03E+14	2.23E+20	8.55E+22
K-5	143	259,154	432	Mk-22	3,400	3025	4.20	3.25E+13	3.25E+12	4.02E+19	8.55E+22
K6.1	40	79,392	258	Mk-14	1,500	1308	7.69	1.38E+14	1.38E+14	4.77E+20	8.60E+22
K6.2	24	50,087	257	Mk-14	1,500	1378	8.12	1.38E+14	1.38E+14	2.86E+20	8.63E+22
K7.1	67	111,765	258	Mk-16	3,000	2729	6.47	5.55E+13	5.55E+13	3.22E+20	8.66E+22
K7.2	60	102,359	258	Mk-16	3,000	2752	6.61	5.63E+13	5.63E+13	2.92E+20	8.69E+22
K7.3	68	106,222	258	Mk-16	3,000	2743	6.05	5.18E+13	5.18E+13	3.04E+20	8.72E+22
K8.1	64	114,127	258	Mk-16	3,000	2724	6.91	5.95E+13	5.95E+13	3.29E+20	8.75E+22
K8.2	53	103,782	258	Mk-16	3,000	2749	7.59	6.47E+13	6.47E+13	2.96E+20	8.78E+22
K8.3	50	91,106	258	Mk-16	3,000	2779	7.06	5.96E+13	5.96E+13	2.57E+20	8.81E+22
K-9.1	151	268,280	430	Mk-22	3,400	3010	4.13	3.22E+13	3.22E+12	4.20E+19	8.81E+22
K9.2	106	193,897	430	Mk-22	3,400	3118	4.25	3.20E+13	3.20E+12	2.93E+19	8.82E+22
K9.3	51	83,669	430	Mk-22	3,400	3278	3.82	2.73E+13	2.73E+12	1.20E+19	8.82E+22
K10.1	73	103,460	258	Mk-16	3,000	2749	5.49	4.68E+13	4.68E+12	2.95E+19	8.82E+22
K10.2	87	118,892	258	Mk-16	3,000	2712	5.30	4.58E+13	4.58E+12	3.44E+19	8.82E+22
K10.3	55	84,406	258	Mk-16	3,000	2796	5.95	4.99E+13	4.99E+12	2.37E+19	8.83E+22
K10.4	50	79,674	258	Mk-16	3,000	2807	6.18	5.16E+13	5.16E+12	2.23E+19	8.83E+22
K11.1	60	106,751	258	Mk-16	3,000	2741	6.90	5.90E+13	5.90E+12	3.06E+19	8.83E+22
K11.2	69	112,107	258	Mk-16	3,000	2728	6.30	5.41E+13	5.41E+13	3.23E+20	8.86E+22
K11.3	51	86,529	258	Mk-16	3,000	2790	6.58	5.53E+13	5.53E+13	2.43E+20	8.89E+22
K11.4	50	74,889	252	Mk-16	3,000	2814	5.94	4.95E+13	4.95E+13	2.14E+20	8.91E+22
K-12.1	54	98,377	252	Mk-16	3,000	2756	7.23	6.15E+13	6.15E+13	2.87E+20	8.94E+22
K-12.2	63	107,680	252	Mk-16	3,000	2733	6.78	5.82E+13	5.82E+13	3.17E+20	8.97E+22
K-12.3	66	87,409	252	Mk-16	3,000	2783	5.26	4.43E+13	4.43E+13	2.52E+20	9.00E+22
K-12.4	50	80,214	252	Mk-16	3,000	2801	6.37	5.33E+13	5.33E+13	2.30E+20	9.02E+22
K-13.1	58	99,556	231	Mk-16	3,000	2731	7.43	6.38E+13	6.38E+13	3.20E+20	9.05E+22
K-13.2	62	112,116	231	Mk-16	3,000	2697	7.83	6.81E+13	6.81E+13	3.65E+20	9.09E+22
K-13.3	58	101,767	231	Mk-16	3,000	2725	7.60	6.54E+13	6.54E+13	3.28E+20	9.12E+22
K-13.4	60	77,088	231	Mk-16	3,000	2791	5.56	4.67E+13	4.67E+13	2.42E+20	9.14E+22
K-1.1	54	99,497	252	Mk-16	3,000	2753	7.31	6.23E+13	6.23E+13	2.90E+20	9.17E+22
K-1.2	55	100,674	252	Mk-16	3,000	2750	7.26	6.19E+13	6.19E+13	2.94E+20	9.20E+22
K-1.3	58	107,780	252	Mk-16	3,000	2733	7.37	6.33E+13	6.33E+12	3.17E+19	9.21E+22

K-1.4	50	87,166	252	Mk-16	3,000	2784	6.92	5.83E+13	5.83E+12	2.52E+19	9.21E+22

TABLE 9. Estimated Neutron Fluence in the Mark-18A OH Targets

The result is an estimated total thermal neutron fluence approaching 1E+23 neutrons/cm^2. Note that the ^{242}Pu burn-up from Tables 2, 3, and 4 in terms of (final grams/initial grams) is 0.003, 0.006, and 0.008 for the three groups of targets, respectively. From Ref. 4, this atom burn-up is more consistent with a total fluence ranging from 1.4E+23 to 1.2E+23 neutrons/cm^2. The estimates in Table 9 however still provide a method of apportioning neutron fluence with time, and hence fission product generation with time. This will then allow a more accurate method of determining fission product decay by cycle over the life of the entire irradiation campaign.

Table 10 apportions the neutron fluence per cycle from Table 9, to estimate the Ci content at the end of each cycle. The values from Table 5 estimated for ^{134}Ci, ^{137}Ci, and ^{90}Sr in each of the maximum exposed targets are used. The assumed Ci content at the end of each cycle is then allowed to decay to October 1, 2003. As expected, with ~88% of the activity having been generated over 30 years ago, the results indicate that the total activity of ^{137}Ci, and ^{90}Sr are reduced by a factor of ~0.5. The

The average values of Ci per tube from Table 5 when apportioned in the same manner as Table 10 give a estimate of 8.32E-02, 9.68E+01, and 1.50E+01 Ci of ^{134}Ci, ^{137}Ci, and ^{90}Sr, respectively per tube as of September 1, 2003. For 65 target tubes, this gives an estimated total fission product content in all tubes of 5.41E+00, 6.29E+03, and 9.78E+02 Ci of ^{134}Ci, ^{137}Ci, and ^{90}Sr, respectively as of September 1, 2003.

	134 Cs	137Cs	90Sr
Group 1, 6 Assemblies			
Ci/tube	1.31E-01	1.53E+02	2.37E+01
Ci	7.88E-01	9.17E+02	1.42E+02
Group 2, 38 Assemblies			
Ci/tube	1.11E-01	1.29E+02	2.00E+01
Ci	4.20E+00	4.89E+03	7.59E+02
Group 3, 21 Assemblies			
Ci/tube	2.00E-02	2.32E+01	3.61E+00
Ci	4.19E-01	4.88E+02	7.57E+01
Average of All 65 Assemblies			
Ci/tube	8.32E-02	9.68E+01	1.50E+01
Ci	5.41E+00	6.29E+03	9.78E+02

TABLE 11. Summary of Estimated Fission Product Inventory in Mark-18A OH Targets, Accounting for Decay

Finally, the summary information on the entire irradiation campaign is reproduced in Tables 12, 13, and 14, on a yearly, monthly, and daily basis, respectively. This information is provided for historical completeness, and to support any future effort to attempt a more detailed modeling of fission and actinide product generation over the life-cycle of the Mark-18A OH targets.

Cycle	% of Fluence	End Date	134Cs Ci Produced	137Cs Ci Produced	90Sr Ci Produced	134Cs Ci, 9/1/03	137Cs Ci, 9/1/03	90Sr Ci, 9/1/03
K1-K94	87.65%	11/08/70	4.75E+03	2.82E+02	4.51E+01	7.82E-02	1.33E+02	2.06E+01
K1.1	0.72%	05/06/71	3.92E+01	2.33E+00	3.72E-01	7.61E-04	1.11E+00	1.72E-01
K1.2	0.51%	06/14/71	2.75E+01	1.63E+00	2.61E-01	5.52E-04	7.77E-01	1.21E-01
K1.3	0.49%	07/22/71	2.67E+01	1.59E+00	2.54E-01	5.57E-04	7.59E-01	1.18E-01
K2.1	0.57%	09/22/71	3.06E+01	1.82E+00	2.91E-01	6.76E-04	8.72E-01	1.36E-01
K2.2	0.38%	10/26/71	2.06E+01	1.22E+00	1.96E-01	4.69E-04	5.88E-01	9.13E-02
K2.3	0.21%	11/17/71	1.12E+01	6.66E-01	1.07E-01	2.61E-04	3.21E-01	4.98E-02
K3.1	0.52%	01/10/72	2.82E+01	1.67E+00	2.68E-01	6.88E-04	8.09E-01	1.26E-01
K3.2	0.34%	02/06/72	1.85E+01	1.10E+00	1.75E-01	4.62E-04	5.31E-01	8.25E-02
K3.3	0.31%	03/15/72	1.67E+01	9.90E-01	1.58E-01	4.32E-04	4.81E-01	7.47E-02
K4.1	0.53%	04/30/72	2.89E+01	1.71E+00	2.74E-01	7.81E-04	8.35E-01	1.30E-01
K4.2	0.38%	06/02/72	2.04E+01	1.21E+00	1.94E-01	5.68E-04	5.90E-01	9.18E-02
K4.3	0.24%	06/28/72	1.31E+01	7.80E-01	1.25E-01	3.75E-04	3.81E-01	5.93E-02
K-5	0.04%	12/10/72	2.36E+00	1.40E-01	2.25E-02	7.85E-05	6.92E-02	1.08E-02
K6.1	0.52%	01/29/73	2.81E+01	1.66E+00	2.66E-01	9.75E-04	8.24E-01	1.28E-01
K6.2	0.31%	02/24/73	1.69E+01	1.00E+00	1.60E-01	6.00E-04	4.96E-01	7.72E-02
K7.1	0.35%	05/20/73	1.89E+01	1.12E+00	1.80E-01	7.29E-04	5.60E-01	8.71E-02
K7.2	0.32%	07/22/73	1.72E+01	1.02E+00	1.63E-01	7.01E-04	5.11E-01	7.95E-02
K7.3	0.33%	09/30/73	1.79E+01	1.06E+00	1.70E-01	7.79E-04	5.34E-01	8.31E-02
K8.1	0.36%	12/09/73	1.94E+01	1.15E+00	1.84E-01	8.98E-04	5.80E-01	9.04E-02
K8.2	0.32%	02/04/74	1.75E+01	1.04E+00	1.66E-01	8.53E-04	5.25E-01	8.17E-02
K8.3	0.28%	03/29/74	1.52E+01	8.99E-01	1.44E-01	7.78E-04	4.57E-01	7.12E-02
K-9.1	0.05%	09/15/74	2.47E+00	1.47E-01	2.35E-02	1.48E-04	7.54E-02	1.17E-02
K9.2	0.03%	01/20/75	1.72E+00	1.02E-01	1.64E-02	1.16E-04	5.30E-02	8.26E-03
K9.3	0.01%	03/16/75	7.08E-01	4.20E-02	6.72E-03	5.02E-05	2.18E-02	3.40E-03
K10.1	0.03%	06/29/75	1.74E+00	1.03E-01	1.65E-02	1.36E-04	5.40E-02	8.42E-03
K10.2	0.04%	09/28/75	2.03E+00	1.20E-01	1.92E-02	1.72E-04	6.33E-02	9.87E-03
K10.3	0.03%	11/30/75	1.40E+00	8.28E-02	1.32E-02	1.26E-04	4.38E-02	6.82E-03
K10.4	0.02%	01/25/76	1.31E+00	7.78E-02	1.25E-02	1.24E-04	4.13E-02	6.44E-03
K11.1	0.03%	04/11/76	1.80E+00	1.07E-01	1.71E-02	1.83E-04	5.69E-02	8.88E-03
K11.2	0.35%	06/27/76	1.90E+01	1.13E+00	1.80E-01	2.07E-03	6.03E-01	9.42E-02
K11.3	0.26%	08/22/76	1.43E+01	8.50E-01	1.36E-01	1.65E-03	4.57E-01	7.13E-02
K11.4	0.23%	10/17/76	1.26E+01	7.47E-01	1.20E-01	1.52E-03	4.03E-01	6.29E-02
K-12.1	0.31%	02/07/77	1.69E+01	1.00E+00	1.60E-01	2.27E-03	5.44E-01	8.50E-02
K-12.2	0.34%	04/18/77	1.86E+01	1.11E+00	1.77E-01	2.67E-03	6.03E-01	9.42E-02
K-12.3	0.27%	06/28/77	1.49E+01	8.82E-01	1.41E-01	2.27E-03	4.83E-01	7.55E-02
K-12.4	0.25%	08/22/77	1.36E+01	8.04E-01	1.29E-01	2.18E-03	4.42E-01	6.91E-02
K-13.1	0.35%	01/17/78	1.88E+01	1.12E+00	1.79E-01	3.46E-03	6.20E-01	9.69E-02
K-13.2	0.40%	03/27/78	2.15E+01	1.27E+00	2.04E-01	4.21E-03	7.10E-01	1.11E-01
K-13.3	0.36%	06/04/78	1.93E+01	1.14E+00	1.83E-01	4.03E-03	6.40E-01	1.00E-01

K-13.4	0.26%	08/13/78	1.43E+01	8.46E-01	1.35E-01	3.18E-03	4.76E-01	7.44E-02
K-1.1	0.32%	10/31/78	1.71E+01	1.01E+00	1.62E-01	4.10E-03	5.73E-01	8.97E-02
K-1.2	0.32%	02/11/79	1.73E+01	1.03E+00	1.64E-01	4.56E-03	5.84E-01	9.14E-02
K-1.3	0.03%	04/20/79	1.87E+00	1.11E-01	1.77E-02	5.23E-04	6.32E-02	9.90E-03
K-1.4	0.03%	06/18/79	1.48E+00	8.79E-02	1.41E-02	4.39E-04	5.04E-02	7.89E-03
	1.00E+00		5.42E+03	3.22E+02	5.15E+01	1.31E-01	1.53E+02	2.37E+01

TABLE 10. Estimated ^{134}Ci, ^{137}Ci, and ^{90}Sr Activity in Per Tube in 6 Mark-18A OH Targets with the Highest Exposure

YEAR	MW-Days to end of Year	Hrs Up	Hrs Down	Hrs total	Avg MW while Up
1969	138,247	2655.9	752.1	3408	1249.267
1970	307,914	6042	2718	8760	1223.094
1971	410,621	5654	3106	8760	1742.997
1972	547,651	7038.2	1745.8	8784	1867.47
1973	579,686	7505.7	1254.3	8760	1853.586
1974	586,784	7333.1	1426.9	8760	1920.445
1975	467,172	6402.6	2357.4	8760	1751.184
1976	445,319	6272.3	2511.7	8784	1703.945
1977	410,620	5447.1	3312.9	8760	1809.198
1978	445,237	5742.9	3017.1	8760	1860.678
1979	278,378	3363.8	692.2	4056	1986.168
TOTAL	4,617,629				

TABLE 12. Yearly Summary of Mark-18A OH Irradiation History

End Month Date	MW-Days to end of Month	Avg Power, when up MW	hrs up	hrs down	hrs total	days	Comments
08/31/69	9913	852.7	279.0	201.0	480	20	8/11/69, start CF I core, 90 Mk-18 fuel drivers, 86 Mark-18A OH Targets
09/30/69	25830	1088.9	569.3	150.7	720	30	"
10/31/69	31394	1174.0	641.8	102.2	744	31	"
11/30/69	35274	1425.7	593.8	126.2	720	30	"
12/31/69	35836	1503.6	572.0	172.0	744	31	"
01/31/70	33658	1352.4	597.3	146.7	744	31	"
02/28/70	29511	1253.6	565.0	107	672	28	"
03/31/70	28946	1299.2	534.7	209.3	744	31	"
04/30/70	30559	1246.2	588.5	131.5	720	30	"
05/31/70	28271	1206.9	562.2	181.8	744	31	"
06/30/70	30037	1200.7	600.4	119.6	720	30	"
07/31/70	30814	1202.5	615.0	129	744	31	"
08/31/70	31245	1181.1	634.9	109.1	744	31	"
09/30/70	28327	1180.7	575.8	144.2	720	30	"
10/31/70	28763	1153.0	598.7	145.3	744	31	"
11/30/70	7783	1102.0	169.5	550.5	720	30	11/8/70, end of K-94 cycle
12/31/70	0	0.0	0.0	744	744	31	
01/31/71	0	0	0.0	744	744	31	
02/28/71	0	0	0.0	672	672	28	CF-1 to ED conversion, 2-6-71 to 3-12-71
03/31/71	24040	1452.2	397.3	346.7	744	31	3/12/71, start of K-1.1 cycle with ED charge, OH targets with lithium inserts moved to the control zone for K-1 through K-4.
04/30/71	47659	1707.2	670	50	720	30	all OH targets in control zone
05/31/71	44805	1723.8	623.8	120.2	744	31	"
06/30/71	40876	1781.4	550.7	169.3	720	30	"
07/31/71	41807	1973.6	508.4	235.6	744	31	"
08/31/71	36827	1536.9	575.1	168.9	744	31	"
09/30/71	46390	1742.9	638.8	81.2	720	30	"
10/31/71	48874	1869.6	627.4	116.6	744	31	"
11/30/71	31941	1779.9	430.7	289.3	720	30	"
12/31/71	47402	1800.6	631.8	112.2	744	31	"
01/31/72	54853	2039.5	645.5	98.5	744	31	"
02/29/72	31151	1912.6	390.9	305.1	696	29	"
03/31/72	43771	1730.6	607	137	744	31	"
04/30/72	53054	1828.1	696.5	23.5	720	30	"
05/31/72	50403	1739.5	695.4	48.6	744	31	"
06/30/72	37743	1715.9	527.9	192.1	720	30	6/28/72 end of K-4.3 cycle
07/31/72	12845	1525.4	202.1	541.9	744	31	7/23/72, K-5 cycle starts with housings moved to the buckle zone K-5 (next to outer row)
08/31/72	68056	2195.4	744	0	744	31	all OH targets in buckle zone
09/30/72	59578	2112.1	677	43	720	30	"
10/31/72	47272	1741.4	651.5	92.5	744	31	"
11/30/72	53998	1799.9	720	0	720	30	"
12/31/72	34927	1744.9	480.4	263.6	744	31	12/10/72, end K-5 cycle, at 17,405 MW Month-to-date. 12/21/72, start K-6.1 cycle with housings moved back to the control zone for K-6 through K-8. Final 17,522 MW in December with housings in control zone.

TABLE 13. Monthly Summary of Mark-18A OH Irradiation History

End Month Date	MW-Days to end of Month	Avg Power, when up MW	hrs up	hrs down	hrs total	days	Comments
01/31/73	61870	2207.3	672.7	71.3	744	31	all OH targets in control zone
02/28/73	50087	2225.3	540.2	131.8	672	28	"
03/31/73	17725	1315.4	323.4	420.6	744	31	"
04/30/73	56259	1941.1	695.6	24.4	720	30	"
05/31/73	49263	1839.0	642.9	101.1	744	31	"
06/30/73	49214	1779.6	663.7	56.3	720	30	"
07/31/73	46783	1733.5	647.7	96.3	744	31	"
08/31/73	48155	1600.9	721.9	22.1	744	31	"
09/30/73	52947	1769.1	718.3	1.7	720	30	"
10/31/73	35277	1579.0	536.2	207.8	744	31	"
11/30/73	60059	2002.0	720	0	720	30	"
12/31/73	52047	2004.7	623.1	120.9	744	31	"
01/31/74	62727	2081.6	723.2	20.8	744	31	"
02/28/74	42364	1845.9	550.8	121.2	672	28	"
03/31/74	56541	2016.9	672.8	71.2	744	31	3/29/74, end K-8 cycle.
04/30/74	18457	1579.8	280.4	439.6	720	30	4/18/74, start K-9.1 cycle with housings charged to the blanket, where they remained until April 1976.
05/31/74	66039	2182.2	726.3	17.7	744	31	all OH targets in blanket
06/30/74	60981	2116.2	691.6	28.4	720	30	"
07/31/74	55145	2123.3	623.3	120.7	744	31	"
08/31/74	44642	1603.9	668	76	744	31	"
09/30/74	23016	1625.1	339.9	380.1	720	30	"
10/31/74	40918	1656.6	592.8	151.2	744	31	"
11/30/74	55286	1842.9	720	0	720	30	"
12/31/74	60668	1957.0	744	0	744	31	"
01/31/75	46521	1815.2	615.1	128.9	744	31	"
02/28/75	47936	1867.0	616.2	55.8	672	28	"
03/31/75	26237	1856.4	339.2	404.8	744	31	"
04/30/75	13310	1223.0	261.2	458.8	720	30	"
05/31/75	48908	1821.5	644.4	99.6	744	31	"
06/30/75	41242	1914.2	517.1	202.9	720	30	"
07/31/75	11414	1131.0	242.2	501.8	744	31	"
08/31/75	54269	1750.6	744	0	744	31	"
09/30/75	53209	1934.6	660.1	59.9	720	30	"
10/31/75	37809	1623.9	558.8	185.2	744	31	"
11/30/75	46597	1829.7	611.2	108.8	720	30	"
12/31/75	39720	1607.3	593.1	150.9	744	31	"
01/31/76	39954	1701.4	563.6	180.4	744	31	"
02/29/76	27912	1633.5	410.1	285.9	696	29	"
03/31/76	56410	1872.0	723.2	20.8	744	31	"
04/30/76	34710	1760.1	473.3	246.7	720	30	4/11/76, end K-11.1 cycle, at 22,429 MW-days Month-to-date. 4/20/76 start K-11.2 cycle with 6 housings (FT-0-63, FT-0-64, FT-0-65, FT-0-66, FT-0-67, and FT-0-69) relocated to the control zone. 12,281 MW-days for rest of April in this configuration. Remained there until start of K-1.3 in February of 1979.
05/31/76	55945	1858.6	722.4	21.6	744	31	6 OH targets in control zone.
06/30/76	43881	1733.6	607.5	112.5	720	30	"
07/31/76	47132	1626.2	695.6	48.4	744	31	"
08/31/76	40840	1654.0	592.6	151.4	744	31	"
09/30/76	46296	1543.2	720	0	720	30	"

TABLE 13. Monthly Summary of Mark-18A OH Irradiation History, continued

End Month Date	MW-Days to end of Month	Avg Power, when up MW	hrs up	hrs down	hrs total	days	Comments
10/31/76	27150	1616.9	403	341	744	31	"
11/30/76	0	0.0	0	720	720	30	"
12/31/76	25089	1668.0	361	383	744	31	"
01/31/77	58537	1954.2	718.9	25.1	744	31	"
02/28/77	31746	1815.4	419.7	252.3	672	28	"
03/31/77	56406	1980.0	683.7	60.3	744	31	"
04/30/77	44228	1910.5	555.6	164.4	720	30	"
05/31/77	48522	1819.9	639.9	104.1	744	31	"
06/30/77	28938	1562.5	444.5	275.5	720	30	"
07/31/77	46031	1661.8	664.8	79.2	744	31	"
08/31/77	34183	1725.7	475.4	268.6	744	31	"
09/30/77	0	0.0	0	720	720	30	"
10/31/77	0	0.0	0	744	744	31	"
11/30/77	14555	1510.2	231.3	488.7	720	30	"
12/31/77	47474	1857.8	613.3	130.7	744	31	"
01/31/78	39564	2068.7	459	285	744	31	"
02/28/78	52469	1934.3	651	21	672	28	"
03/31/78	57610	2157.3	640.9	103.1	744	31	"
04/30/78	34957	1646.3	509.6	210.4	720	30	"
05/31/78	59172	1966.7	722.1	21.9	744	31	"
06/30/78	17717	1393.7	305.1	414.9	720	30	"
07/31/78	42634	1666.2	614.1	129.9	744	31	"
08/31/78	24375	1919.9	304.7	439.3	744	31	"
09/30/78	39818	1735.3	550.7	169.3	720	30	"
10/31/78	59679	2020.2	709	35	744	31	"
11/30/78	0	0.0	0	720	720	30	"
12/31/78	17242	1495.5	276.7	467.3	744	31	"
01/31/79	65753	2121.1	744	0	744	31	"
02/28/79	25536	1970.0	311.1	360.9	672	28	2/11/79 end of K-1.2, at estimated 17,679 MW-days Month-to-date. 2/22/79, start of K-1.3 cycle with all OH targets in the blanket region. 7,857 MW-days for rest of February in this configuration.
03/31/79	62179	2005.8	744	0	744	31	all OH targets in blanket
04/30/79	37744	2005.9	451.6	268.4	720	30	"
05/31/79	57347	1849.9	744	0	744	31	"
06/18/79	29819	1938.9	369.1	62.9	432	18	all OH Target irradiation ended 6/18/79.
	4,617,629						

TABLE 13. Monthly Summary of Mark-18A OH Irradiation History, continued

TABLE 14. Daily Summary of Mark-18A OH Irradiation History

Date	Cycle	MW-days
8/1/1969		
8/2/1969		
8/3/1969		
8/4/1969		
8/5/1969		
8/6/1969		
8/7/1969		
8/8/1969		
8/9/1969		
8/10/1969		
8/11/1969	K-1	0
8/12/1969	K-1	25
8/13/1969	K-1	560
8/14/1969	K-1	719
8/15/1969	K-1	0
8/16/1969	K-1	0
8/17/1969	K-1	0
8/18/1969	K-1	0
8/19/1969	K-1	436
8/20/1969	K-1	973
8/21/1969	K-1	1,078
8/22/1969	K-1	418
8/23/1969	K-2	51
8/24/1969	K-2	972
8/25/1969	K-2	1,094
8/26/1969	K-2	1,119
8/27/1969	K-2	1,075
8/28/1969	K-2	764
8/29/1969		0
8/30/1969		0
8/31/1969	K-3	629
9/1/1969	K-3	1,124
9/2/1969	K-3	1,124
9/3/1969	K-3	1,103
9/4/1969	K-3	790
9/5/1969	K-4	133
9/6/1969	K-4	1,054
9/7/1969	K-4	1,131
9/8/1969	K-4	1,130
9/9/1969	K-4	1,086
9/10/1969	K-4	85
9/10/1969	K-5	145
9/11/1969	K-5	1,058
9/12/1969	K-5	1,135
9/13/1969	K-5	1,112
9/14/1969	K-5	1,081
9/15/1969	K-6	340
9/16/1969	K-6	319
9/17/1969	K-6	0
9/18/1969	K-6	104
9/19/1969	K-6	1,133
9/20/1969	K-6	1,178
9/21/1969	K-6	1,167
9/22/1969	K-6	697
9/23/1969	K-7	496
9/24/1969	K-7	1,161
9/25/1969	K-7	1,150
9/26/1969	K-7	1,211
9/27/1969	K-7	1,166
9/28/1969	K-7	346
9/29/1969	K-8	920
9/30/1969	K-8	1,151
10/1/1969	K-8	1,209
10/2/1969	K-8	1,170
10/3/1969	K-8	576
10/4/1969	K-9	853
10/5/1969	K-9	1,149
10/6/1969	K-9	1,199
10/7/1969	K-9	1,188
10/8/1969	K-9	1,176
10/9/1969	K-10	366
10/10/1969	K-10	1,154
10/11/1969	K-10	1,183
10/12/1969	K-10	1,168
10/13/1969	K-10	1,115
10/14/1969	K-11	352
10/15/1969	K-11	1,144
10/16/1969	K-11	1,193
10/17/1969	K-11	1,195
10/18/1969	K-11	1,220
10/19/1969	K-11	466
10/19/1969	K-12	56
10/20/1969	K-12	1,127
10/21/1969	K-12	1,264
10/22/1969	K-12	1,284
10/23/1969	K-12	1,283
10/24/1969	K-12	537
10/24/1969	K-13	26
10/25/1969	K-13	1,191
10/26/1969	K-13	1,350
10/27/1969	K-13	1,315
10/28/1969	K-13	1,283
10/29/1969	K-13	403
10/30/1969	K-14	92
10/31/1969	K-14	1,107
11/1/1969	K-14	1,386
11/2/1969	K-14	1,467
11/3/1969	K-14	1,412
11/4/1969	K-15	303
11/5/1969	K-15	1,485
11/6/1969	K-15	1,584
11/7/1969	K-15	1,575
11/8/1969	K-15	506
11/9/1969	K-16	1,266
11/10/1969	K-16	1,510
11/11/1969	K-16	236
11/11/1969	K-17	29
11/12/1969	K-17	1,325
11/13/1969	K-17	1,494
11/14/1969	K-17	1,519
11/15/1969	K-17	708
11/16/1969	K-18	827
11/17/1969	K-18	1,516
11/18/1969	K-18	1,536
11/19/1969	K-18	1,257
11/20/1969	K-19	510
11/21/1969	K-19	541
11/21/1969	K-20	60
11/22/1969	K-20	1,350
11/23/1969	K-20	1,485
11/24/1969	K-20	1,515
11/25/1969	K-20	803
11/26/1969	K-21	1,040
11/27/1969	K-21	1,641
11/28/1969	K-21	1,642
11/29/1969	K-21	1,309
11/30/1969	K-22	437
12/1/1969	K-22	1,585
12/2/1969	K-22	1,665
12/3/1969	K-22	1,633
12/4/1969	K-23	206
12/5/1969	K-23	0
12/6/1969	K-23	0
12/7/1969	K-23	916
12/8/1969	K-23	1,637
12/9/1969	K-23	1,663
12/10/1969	K-23	1,002
12/11/1969	K-24	465
12/12/1969	K-24	1,614
12/13/1969	K-24	1,676
12/14/1969	K-24	1,654
12/15/1969	K-24	188
12/15/1969	K-25	51
12/16/1969	K-25	1,516
12/17/1969	K-25	1,583
12/18/1969	K-25	1,576
12/19/1969	K-25	786
12/20/1969	K-26	1,029
12/21/1969	K-26	1,568
12/22/1969	K-26	1,603
12/23/1969	K-26	1,365
12/24/1969	K-27	602
12/25/1969	K-27	1,541
12/26/1969	K-27	1,059
12/27/1969	K-28	742
12/28/1969	K-28	1,399
12/29/1969	K-28	1,531
12/30/1969	K-28	1,568
12/31/1969	K-28	413
12/31/1969	K-29	0
1/1/1970	K-29	1,198
1/2/1970	K-29	1,439
1/3/1970	K-29	1,455
1/4/1970	K-29	1,094
1/5/1970	K-30	20
1/6/1970	K-30	1,298
1/7/1970	K-30	1,486
1/8/1970	K-30	1,501

1/9/1970	K-30	875
1/10/1970	K-31	914
1/11/1970	K-31	1,476
1/12/1970	K-31	1,508
1/13/1970	K-31	1,396
1/14/1970	K-32	118
1/15/1970	K-32	1,269
1/16/1970	K-32	1,389
1/17/1970	K-32	1,388
1/18/1970	K-32	1,108
1/19/1970	K-33	0
1/20/1970	K-33	1,189
1/21/1970	K-33	1,424
1/22/1970	K-33	1,470
1/23/1970	K-33	1,165
1/24/1970	K-34	468
1/25/1970	K-34	1,491
1/26/1970	K-34	1,405
1/27/1970	K-35	220
1/28/1970	K-36	809
1/29/1970	K-36	1,525
1/30/1970	K-37	700
1/31/1970	K-37	860
2/1/1970	K-37	1,340
2/2/1970	K-37	1,353
2/3/1970	K-37	1,346
2/4/1970	K-37	752
2/5/1970	K-38	786
2/6/1970	K-38	1,320
2/7/1970	K-38	1,359
2/8/1970	K-38	1,380
2/9/1970	K-38	868
2/10/1970	K-39	777
2/11/1970	K-39	1,315
2/12/1970	K-39	1,355
2/13/1970	K-39	1,364
2/14/1970	K-39	881
2/15/1970	K-40	150
2/16/1970	K-40	1,174
2/17/1970	K-40	1,234
2/18/1970	K-40	1,238
2/19/1970	K-40	1,237
2/20/1970	K-41	257
2/21/1970	K-41	1,164
2/22/1970	K-41	1,232
2/23/1970	K-41	1,239
2/24/1970	K-41	1,179
2/25/1970		0
2/26/1970	K-42	594
2/27/1970	K-42	1,283
2/28/1970	K-42	1,334
3/1/1970	K-42	1,325
3/2/1970	K-42	1,073
3/3/1970		0
3/4/1970		0
3/5/1970		0
3/6/1970		0
3/7/1970	K-43	7
3/8/1970	K-43	1,167
3/9/1970	K-43	1,649
3/10/1970	K-43	1,369
3/11/1970	K-44	0
3/12/1970	K-44	852
3/13/1970	K-44	1,323
3/14/1970	K-44	1,347
3/15/1970	K-44	1,363
3/16/1970	K-44	422
3/17/1970	K-45	1,046
3/18/1970	K-45	1,372
3/19/1970	K-45	1,376
3/20/1970	K-45	1,358
3/21/1970	K-45	127
3/21/1970	K-46	224
3/22/1970	K-46	1,311
3/23/1970	K-46	1,329
3/24/1970	K-46	1,373
3/25/1970	K-46	1,163
3/26/1970	K-47	584
3/27/1970	K-47	1,311
3/28/1970	K-47	1,361
3/29/1970	K-47	1,360
3/30/1970	K-47	583
3/31/1970	K-48	1,171
4/1/1970	K-48	1,362
4/2/1970	K-48	1,380
4/3/1970	K-48	1,336
4/4/1970	K-48	122
4/5/1970	K-49	498
4/6/1970	K-49	1,295
4/7/1970	K-49	1,344
4/8/1970	K-49	1,340
4/9/1970	K-49	773
4/10/1970	K-50	671
4/11/1970	K-50	1,308
4/12/1970	K-50	1,331
4/13/1970	K-50	1,328
4/14/1970	K-50	529
4/15/1970	K-51	1,015
4/16/1970	K-52	149
4/17/1970	K-52	1,242
4/18/1970	K-52	1,324
4/19/1970	K-52	1,316
4/20/1970	K-52	1,109
4/21/1970	K-53	22
4/22/1970	K-53	1,200
4/23/1970	K-53	1,292
4/24/1970	K-53	1,308
4/25/1970	K-53	1,228
4/26/1970	K-54	0
4/27/1970	K-54	1,160
4/28/1970	K-54	1,306
4/29/1970	K-54	1,302
4/30/1970	K-54	969
5/1/1970	K-55	219
5/2/1970	K-55	1,262
5/3/1970	K-55	1,307
5/4/1970	K-55	1,312
5/5/1970	K-55	644
5/6/1970	K-56	1,025
5/7/1970	K-56	1,312
5/8/1970	K-56	1,303
5/9/1970	K-56	1,233
5/10/1970	K-57	419
5/11/1970	K-57	1,273
5/12/1970	K-57	1,302
5/13/1970	K-57	1,301
5/14/1970	K-57	619
5/15/1970	K-58	694
5/16/1970	K-58	1,204
5/17/1970	K-58	1,287
5/18/1970	K-58	1,296
5/19/1970	K-58	433
5/20/1970	K-59	857
5/21/1970	K-59	1,271
5/22/1970	K-59	1,058
5/23/1970		0
5/24/1970	K-60	772
5/25/1970	K-61	325
5/26/1970	K-61	0
5/27/1970	K-61	0
5/28/1970	K-61	732
5/29/1970	K-61	1,271
5/30/1970	K-61	1,295
5/31/1970	K-61	1,245
6/1/1970	K-61	26
6/1/1970	K-62	52
6/2/1970	K-62	1,173
6/3/1970	K-62	1,266
6/4/1970	K-62	1,291
6/5/1970	K-62	1,127
6/6/1970	K-63	289
6/7/1970	K-63	1,240
6/8/1970	K-63	1,280
6/9/1970	K-63	1,264
6/10/1970	K-63	868
6/11/1970	K-64	711
6/12/1970	K-64	1,276
6/13/1970	K-64	1,280
6/14/1970	K-64	1,228
6/15/1970	K-64	426
6/15/1970	K-65	5
6/16/1970	K-65	1,206
6/17/1970	K-65	1,287
6/18/1970	K-65	1,298
6/19/1970	K-65	1,229
6/20/1970	K-65	40
6/20/1970	K-66	248
6/21/1970	K-66	1,221
6/22/1970	K-66	1,261
6/23/1970	K-66	1,244
6/24/1970	K-66	960
6/25/1970	K-67	58
6/26/1970	K-67	1,209
6/27/1970	K-67	1,288

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

6/28/1970	K-67	1,274
6/29/1970	K-67	1,056
6/30/1970	K-68	356
7/1/1970	K-68	1,257
7/2/1970	K-68	1,260
7/3/1970	K-68	975
7/4/1970	K-69	555
7/5/1970	K-69	1,250
7/6/1970	K-69	1,268
7/7/1970	K-69	1,257
7/8/1970	K-69	460
7/8/1970	K-70	7
7/9/1970	K-70	1,130
7/10/1970	K-70	1,276
7/11/1970	K-70	1,260
7/12/1970	K-70	1,194
7/13/1970	K-71	256
7/14/1970	K-71	1,248
7/15/1970	K-71	1,270
7/16/1970	K-71	1,263
7/17/1970	K-71	810
7/18/1970		0
7/19/1970	K-72	989
7/20/1970	K-72	1,266
7/21/1970	K-72	1,272
7/22/1970	K-72	1,212
7/23/1970		0
7/24/1970	K-73	750
7/25/1970	K-73	1,252
7/26/1970	K-73	1,262
7/27/1970	K-73	1,195
7/28/1970	K-73	264
7/29/1970	K-74	808
7/30/1970	K-74	1,269
7/31/1970	K-74	1,279
8/1/1970	K-74	1,222
8/2/1970	K-74	171
8/2/1970	K-75	66
8/3/1970	K-75	1,179
8/4/1970	K-75	1,255
8/5/1970	K-75	1,257
8/6/1970	K-75	1,000
8/7/1970	K-76	183
8/8/1970	K-76	1,256
8/9/1970	K-76	1,301
8/10/1970	K-76	1,268
8/11/1970	K-76	687
8/12/1970	K-77	733
8/13/1970	K-77	1,274
8/14/1970	K-77	1,278
8/15/1970	K-77	1,242
8/16/1970	K-77	197
8/16/1970	K-78	13
8/17/1970	K-78	838
8/18/1970	K-78	1,208
8/19/1970	K-78	1,248
8/20/1970	K-78	1,226
8/21/1970	K-78	171

8/21/1970	K-79	279
8/22/1970	K-79	1,258
8/23/1970	K-79	1,271
8/24/1970	K-79	1,255
8/25/1970	K-79	687
8/26/1970	K-80	826
8/27/1970	K-80	1,255
8/28/1970	K-80	1,259
8/29/1970	K-80	1,246
8/30/1970	K-80	267
8/30/1970	K-81	150
8/31/1970	K-81	1,219
9/1/1970	K-81	1,258
9/2/1970	K-81	1,242
9/3/1970	K-81	921
9/4/1970	K-82	579
9/5/1970	K-82	1,242
9/6/1970	K-82	1,246
9/7/1970	K-82	1,219
9/8/1970	K-82	526
9/9/1970	K-83	948
9/10/1970	K-83	1,253
9/11/1970	K-83	1,254
9/12/1970	K-83	1,159
9/13/1970	K-84	396
9/14/1970	K-84	1,248
9/15/1970	K-84	1,278
9/16/1970	K-84	1,251
9/17/1970	K-84	578
9/18/1970	K-85	958
9/19/1970	K-85	1,222
9/20/1970	K-85	1,228
9/21/1970	K-85	1,194
9/22/1970	K-85	130
9/23/1970		0
9/24/1970	K-86	921
9/25/1970	K-86	1,234
9/26/1970	K-86	1,237
9/27/1970	K-86	1,201
9/28/1970	K-86	134
9/29/1970	K-87	91
9/30/1970	K-87	1,179
10/1/1970	K-87	1,274
10/2/1970	K-87	1,268
10/3/1970	K-87	934
10/4/1970	K-88	592
10/5/1970	K-88	1,200
10/6/1970	K-88	1,275
10/7/1970	K-88	1,238
10/8/1970	K-88	367
10/8/1970	K-89	20
10/9/1970	K-89	742
10/10/1970	K-89	0
10/11/1970	K-89	0
10/12/1970	K-89	628
10/13/1970	K-89	1,263
10/14/1970	K-89	1,256
10/15/1970	K-89	878

10/16/1970	K-90	587
10/17/1970	K-90	1,214
10/18/1970	K-90	1,248
10/19/1970	K-90	1,241
10/20/1970	K-90	501
10/20/1970	K-91	33
10/21/1970	K-91	1,164
10/22/1970	K-91	1,258
10/23/1970	K-91	1,259
10/24/1970	K-91	1,049
10/25/1970	K-92	541
10/26/1970	K-92	1,247
10/27/1970	K-92	1,246
10/28/1970	K-92	1,206
10/29/1970	K-92	348
10/30/1970	K-93	652
10/31/1970	K-93	1,034
11/1/1970	K-93	1,035
11/2/1970	K-93	1,028
11/3/1970	K-93	974
11/4/1970	K-93	162
11/4/1970	K-94	12
11/5/1970	K-94	1,094
11/6/1970	K-94	1,242
11/7/1970	K-94	1,204
11/8/1970	K-94	1,032
11/9/1970		0
11/10/1970		0
11/11/1970		0
11/12/1970		0
11/13/1970		0
11/14/1970		0
11/15/1970		0
11/16/1970		0
11/17/1970		0
11/18/1970		0
11/19/1970		0
11/20/1970		0
11/21/1970		0
11/22/1970		0
11/23/1970		0
11/24/1970		0
11/25/1970		0
11/26/1970		0
11/27/1970		0
11/28/1970		0
11/29/1970		0
11/30/1970		0
12/1/1970		0
12/2/1970		0
12/3/1970		0
12/4/1970		0
12/5/1970		0
12/6/1970		0
12/7/1970		0
12/8/1970		0
12/9/1970		0
12/10/1970		0

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

12/11/1970		0
12/12/1970		0
12/13/1970		0
12/14/1970		0
12/15/1970		0
12/16/1970		0
12/17/1970		0
12/18/1970		0
12/19/1970		0
12/20/1970		0
12/21/1970		0
12/22/1970		0
12/23/1970		0
12/24/1970		0
12/25/1970		0
12/26/1970		0
12/27/1970		0
12/28/1970		0
12/29/1970		0
12/30/1970		0
12/31/1970		0
1/1/1971		0
1/2/1971		0
1/3/1971		0
1/4/1971		0
1/5/1971		0
1/6/1971		0
1/7/1971		0
1/8/1971		0
1/9/1971		0
1/10/1971		0
1/11/1971		0
1/12/1971		0
1/13/1971		0
1/14/1971		0
1/15/1971		0
1/16/1971		0
1/17/1971		0
1/18/1971		0
1/19/1971		0
1/20/1971		0
1/21/1971		0
1/22/1971		0
1/23/1971		0
1/24/1971		0
1/25/1971		0
1/26/1971		0
1/27/1971		0
1/28/1971		0
1/29/1971		0
1/30/1971		0
1/31/1971		0
2/1/1971		0
2/2/1971		0
2/3/1971		0
2/4/1971		0
2/5/1971		0
2/6/1971		0

2/7/1971		0
2/8/1971		0
2/9/1971		0
2/10/1971		0
2/11/1971		0
2/12/1971		0
2/13/1971		0
2/14/1971		0
2/15/1971		0
2/16/1971		0
2/17/1971		0
2/18/1971		0
2/19/1971		0
2/20/1971		0
2/21/1971		0
2/22/1971		0
2/23/1971		0
2/24/1971		0
2/25/1971		0
2/26/1971		0
2/27/1971		0
2/28/1971		0
3/1/1971		0
3/2/1971		0
3/3/1971		0
3/4/1971		0
3/5/1971		0
3/6/1971		0
3/7/1971		0
3/8/1971		0
3/9/1971		0
3/10/1971		0
3/11/1971		0
3/12/1971	K1.1	5
3/13/1971	K1.1	53
3/14/1971	K1.1	1,025
3/15/1971	K1.1	1,345
3/16/1971	K1.1	79
3/17/1971	K1.1	438
3/18/1971	K1.1	436
3/19/1971	K1.1	313
3/20/1971	K1.1	1,376
3/21/1971	K1.1	1,618
3/22/1971	K1.1	1,650
3/23/1971	K1.1	1,700
3/24/1971	K1.1	1,676
3/25/1971	K1.1	1,691
3/26/1971	K1.1	1,727
3/27/1971	K1.1	1,748
3/28/1971	K1.1	1,772
3/29/1971	K1.1	1,793
3/30/1971	K1.1	1,789
3/31/1971	K1.1	1,806
4/1/1971	K1.1	1,779
4/2/1971	K1.1	1,804
4/3/1971	K1.1	1,828
4/4/1971	K1.1	1,810
4/5/1971	K1.1	1,804

4/6/1971	K1.1	1,788
4/7/1971	K1.1	1,830
4/8/1971	K1.1	1,831
4/9/1971	K1.1	1,823
4/10/1971	K1.1	1,803
4/11/1971	K1.1	1,790
4/12/1971	K1.1	1,796
4/13/1971	K1.1	1,792
4/14/1971	K1.1	1,797
4/15/1971	K1.1	1,806
4/16/1971	K1.1	1,800
4/17/1971	K1.1	1,818
4/18/1971	K1.1	1,818
4/19/1971	K1.1	1,806
4/20/1971	K1.1	1,796
4/21/1971	K1.1	1,779
4/22/1971	K1.1	1,797
4/23/1971	K1.1	1,398
4/24/1971	K1.1	0
4/25/1971	K1.1	0
4/26/1971	K1.1	96
4/27/1971	K1.1	1,327
4/28/1971	K1.1	1,565
4/29/1971	K1.1	1,681
4/30/1971	K1.1	1,897
5/1/1971	K1.1	1,925
5/2/1971	K1.1	1,925
5/3/1971	K1.1	1,927
5/4/1971	K1.1	1,601
5/5/1971	K1.1	1,893
5/6/1971	K1.1	22
5/7/1971		0
5/8/1971		0
5/9/1971	K1.2	25
5/10/1971	K1.2	559
5/11/1971	K1.2	1,297
5/12/1971	K1.2	1,711
5/13/1971	K1.2	1,738
5/14/1971	K1.2	1,759
5/15/1971	K1.2	1,764
5/16/1971	K1.2	1,874
5/17/1971	K1.2	1,874
5/18/1971	K1.2	1,869
5/19/1971	K1.2	1,873
5/20/1971	K1.2	1,881
5/21/1971	K1.2	1,941
5/22/1971	K1.2	1,929
5/23/1971	K1.2	1,981
5/24/1971	K1.2	1,957
5/25/1971	K1.2	1,981
5/26/1971	K1.2	2,000
5/27/1971	K1.2	2,015
5/28/1971	K1.2	743
5/29/1971	K1.2	4
5/30/1971	K1.2	795
5/31/1971	K1.2	1,942
6/1/1971	K1.2	1,982
6/2/1971	K1.2	1,992

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

6/3/1971	K1.2	2,017
6/4/1971	K1.2	2,029
6/5/1971	K1.2	2,040
6/6/1971	K1.2	2,026
6/7/1971	K1.2	2,030
6/8/1971	K1.2	1,286
6/9/1971	K1.2	0
6/10/1971	K1.2	662
6/11/1971	K1.2	2,026
6/12/1971	K1.2	2,061
6/13/1971	K1.2	2,061
6/14/1971	K1.2	2,050
6/15/1971		0
6/16/1971		0
6/17/1971		0
6/18/1971	K1.3	19
6/19/1971	K1.3	795
6/20/1971	K1.3	1,575
6/21/1971	K1.3	1,740
6/22/1971	K1.3	1,794
6/23/1971	K1.3	1,840
6/24/1971	K1.3	1,879
6/25/1971	K1.3	1,889
6/26/1971	K1.3	539
6/27/1971	K1.3	0
6/28/1971	K1.3	860
6/29/1971	K1.3	1,830
6/30/1971	K1.3	1,854
7/1/1971	K1.3	1,874
7/2/1971	K1.3	1,912
7/3/1971	K1.3	1,933
7/4/1971	K1.3	1,936
7/5/1971	K1.3	1,940
7/6/1971	K1.3	1,954
7/7/1971	K1.3	1,956
7/8/1971	K1.3	1,955
7/9/1971	K1.3	1,963
7/10/1971	K1.3	1,967
7/11/1971	K1.3	1,973
7/12/1971	K1.3	1,982
7/13/1971	K1.3	1,995
7/14/1971	K1.3	1,995
7/15/1971	K1.3	1,997
7/16/1971	K1.3	2,031
7/17/1971	K1.3	2,045
7/18/1971	K1.3	2,045
7/19/1971	K1.3	2,021
7/20/1971	K1.3	1,999
7/21/1971	K1.3	1,986
7/22/1971	K1.3	348
7/23/1971		0
7/24/1971		0
7/25/1971		0
7/26/1971		0
7/27/1971		0
7/28/1971		0
7/29/1971		0
7/30/1971		0

7/31/1971		0
8/1/1971		0
8/2/1971	K2.1	111
8/3/1971	K2.1	1,178
8/4/1971	K2.1	1,403
8/5/1971	K2.1	1,386
8/6/1971	K2.1	1,403
8/7/1971	K2.1	1,400
8/8/1971	K2.1	1,399
8/9/1971	K2.1	1,478
8/10/1971	K2.1	957
8/11/1971	K2.1	0
8/12/1971	K2.1	0
8/13/1971	K2.1	0
8/14/1971	K2.1	0
8/15/1971	K2.1	872
8/16/1971	K2.1	1,587
8/17/1971	K2.1	1,693
8/18/1971	K2.1	1,739
8/19/1971	K2.1	1,743
8/20/1971	K2.1	1,677
8/21/1971	K2.1	1,659
8/22/1971	K2.1	1,660
8/23/1971	K2.1	1,659
8/24/1971	K2.1	1,668
8/25/1971	K2.1	1,707
8/26/1971	K2.1	1,709
8/27/1971	K2.1	1,706
8/28/1971	K2.1	1,764
8/29/1971	K2.1	1,795
8/30/1971	K2.1	1,474
8/31/1971	K2.1	0
9/1/1971	K2.1	668
9/2/1971	K2.1	1,760
9/3/1971	K2.1	1,792
9/4/1971	K2.1	1,806
9/5/1971	K2.1	1,831
9/6/1971	K2.1	1,837
9/7/1971	K2.1	1,842
9/8/1971	K2.1	1,861
9/9/1971	K2.1	1,854
9/10/1971	K2.1	1,868
9/11/1971	K2.1	1,869
9/12/1971	K2.1	1,876
9/13/1971	K2.1	1,881
9/14/1971	K2.1	1,894
9/15/1971	K2.1	1,868
9/16/1971	K2.1	1,723
9/17/1971	K2.1	1,791
9/18/1971	K2.1	1,862
9/19/1971	K2.1	1,880
9/20/1971	K2.1	1,856
9/21/1971	K2.1	1,847
9/22/1971	K2.1	1,410
9/23/1971		0
9/24/1971		0
9/25/1971		0
9/26/1971	K2.2	414

9/27/1971	K2.2	1,297
9/28/1971	K2.2	1,934
9/29/1971	K2.2	1,941
9/30/1971	K2.2	1,928
10/1/1971	K2.2	1,919
10/2/1971	K2.2	1,926
10/3/1971	K2.2	1,929
10/4/1971	K2.2	1,934
10/5/1971	K2.2	1,938
10/6/1971	K2.2	645
10/7/1971	K2.2	0
10/8/1971	K2.2	320
10/9/1971	K2.2	1,929
10/10/1971	K2.2	2,005
10/11/1971	K2.2	2,047
10/12/1971	K2.2	2,013
10/13/1971	K2.2	2,007
10/14/1971	K2.2	2,034
10/15/1971	K2.2	2,018
10/16/1971	K2.2	2,005
10/17/1971	K2.2	2,000
10/18/1971	K2.2	1,997
10/19/1971	K2.2	1,978
10/20/1971	K2.2	1,951
10/21/1971	K2.2	1,933
10/22/1971	K2.2	1,919
10/23/1971	K2.2	1,930
10/24/1971	K2.2	1,904
10/25/1971	K2.2	1,913
10/26/1971	K2.2	1,606
10/27/1971		0
10/28/1971		0
10/29/1971	K2.3	67
10/30/1971	K2.3	1,147
10/31/1971	K2.3	1,860
11/1/1971	K2.3	1,952
11/2/1971	K2.3	1,946
11/3/1971	K2.3	1,943
11/4/1971	K2.3	1,956
11/5/1971	K2.3	1,982
11/6/1971	K2.3	2,000
11/7/1971	K2.3	2,014
11/8/1971	K2.3	1,089
11/9/1971	K2.3	0
11/10/1971	K2.3	3
11/11/1971	K2.3	655
11/12/1971	K2.3	2,047
11/13/1971	K2.3	2,101
11/14/1971	K2.3	2,099
11/15/1971	K2.3	2,055
11/16/1971	K2.3	2,061
11/17/1971	K2.3	1,422
11/18/1971		0
11/19/1971		0
11/20/1971		0
11/21/1971		0
11/22/1971		0
11/23/1971		0

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

11/24/1971		0
11/25/1971		0
11/26/1971		0
11/27/1971	K3.1	104
11/28/1971	K3.1	1,105
11/29/1971	K3.1	1,649
11/30/1971	K3.1	1,758
12/1/1971	K3.1	1,800
12/2/1971	K3.1	1,859
12/3/1971	K3.1	1,724
12/4/1971	K3.1	37
12/5/1971	K3.1	92
12/6/1971	K3.1	1,410
12/7/1971	K3.1	1,740
12/8/1971	K3.1	1,842
12/9/1971	K3.1	1,824
12/10/1971	K3.1	1,895
12/11/1971	K3.1	1,937
12/12/1971	K3.1	1,903
12/13/1971	K3.1	1,904
12/14/1971	K3.1	1,942
12/15/1971	K3.1	1,917
12/16/1971	K3.1	1,971
12/17/1971	K3.1	1,969
12/18/1971	K3.1	1,923
12/19/1971	K3.1	1,954
12/20/1971	K3.1	1,156
12/21/1971	K3.1	0
12/22/1971	K3.1	784
12/23/1971	K3.1	1,950
12/24/1971	K3.1	2,000
12/25/1971	K3.1	2,002
12/26/1971	K3.1	1,981
12/27/1971	K3.1	1,968
12/28/1971	K3.1	2,017
12/29/1971	K3.1	1,137
12/30/1971	K3.1	0
12/31/1971	K3.1	764
1/1/1972	K3.1	1,974
1/2/1972	K3.1	2,038
1/3/1972	K3.1	2,060
1/4/1972	K3.1	2,108
1/5/1972	K3.1	2,101
1/6/1972	K3.1	2,099
1/7/1972	K3.1	2,077
1/8/1972	K3.1	1,985
1/9/1972	K3.1	2,001
1/10/1972	K3.1	29
1/11/1972		0
1/12/1972	K3.2	157
1/13/1972	K3.2	1,340
1/14/1972	K3.2	2,031
1/15/1972	K3.2	2,033
1/16/1972	K3.2	2,123
1/17/1972	K3.2	317
1/18/1972	K3.2	172
1/19/1972	K3.2	1,607
1/20/1972	K3.2	2,175
1/21/1972	K3.2	2,209
1/22/1972	K3.2	2,200
1/23/1972	K3.2	2,194
1/24/1972	K3.2	2,113
1/25/1972	K3.2	2,212
1/26/1972	K3.2	2,207
1/27/1972	K3.2	2,262
1/28/1972	K3.2	2,252
1/29/1972	K3.2	2,272
1/30/1972	K3.2	2,271
1/31/1972	K3.2	2,234
2/1/1972	K3.2	2,256
2/2/1972	K3.2	2,231
2/3/1972	K3.2	2,180
2/4/1972	K3.2	2,089
2/5/1972	K3.2	2,052
2/6/1972	K3.2	1,137
2/7/1972		0
2/8/1972		0
2/9/1972	K3.3	441
2/10/1972	K3.3	1,827
2/11/1972	K3.3	1,701
2/12/1972	K3.3	0
2/13/1972	K3.3	0
2/14/1972	K3.3	0
2/15/1972	K3.3	0
2/16/1972	K3.3	0
2/17/1972	K3.3	0
2/18/1972	K3.3	27
2/19/1972	K3.3	491
2/20/1972	K3.3	132
2/21/1972	K3.3	1,516
2/22/1972	K3.3	2,139
2/23/1972	K3.3	2,202
2/24/1972	K3.3	2,168
2/25/1972	K3.3	2,151
2/26/1972	K3.3	2,143
2/27/1972	K3.3	2,089
2/28/1972	K3.3	0
2/29/1972	K3.3	179
3/1/1972	K3.3	1,870
3/2/1972	K3.3	2,115
3/3/1972	K3.3	2,124
3/4/1972	K3.3	2,129
3/5/1972	K3.3	2,152
3/6/1972	K3.3	1,173
3/7/1972	K3.3	0
3/8/1972	K3.3	416
3/9/1972	K3.3	1,829
3/10/1972	K3.3	2,187
3/11/1972	K3.3	2,194
3/12/1972	K3.3	2,199
3/13/1972	K3.3	2,200
3/14/1972	K3.3	2,201
3/15/1972	K3.3	30
3/16/1972		0
3/17/1972		0
3/18/1972		0
3/19/1972	K4.1	54
3/20/1972	K4.1	868
3/21/1972	K4.1	1,291
3/22/1972	K4.1	1,537
3/23/1972	K4.1	1,642
3/24/1972	K4.1	1,673
3/25/1972	K4.1	1,699
3/26/1972	K4.1	1,723
3/27/1972	K4.1	1,633
3/28/1972	K4.1	1,598
3/29/1972	K4.1	1,742
3/30/1972	K4.1	1,737
3/31/1972	K4.1	1,755
4/1/1972	K4.1	1,783
4/2/1972	K4.1	1,782
4/3/1972	K4.1	1,763
4/4/1972	K4.1	1,710
4/5/1972	K4.1	1,705
4/6/1972	K4.1	1,767
4/7/1972	K4.1	1,776
4/8/1972	K4.1	1,782
4/9/1972	K4.1	1,820
4/10/1972	K4.1	1,840
4/11/1972	K4.1	1,843
4/12/1972	K4.1	1,827
4/13/1972	K4.1	1,820
4/14/1972	K4.1	1,815
4/15/1972	K4.1	1,794
4/16/1972	K4.1	1,797
4/17/1972	K4.1	1,800
4/18/1972	K4.1	1,832
4/19/1972	K4.1	1,845
4/20/1972	K4.1	1,848
4/21/1972	K4.1	1,852
4/22/1972	K4.1	1,875
4/23/1972	K4.1	1,886
4/24/1972	K4.1	1,897
4/25/1972	K4.1	1,904
4/26/1972	K4.1	1,905
4/27/1972	K4.1	1,911
4/28/1972	K4.1	1,927
4/29/1972	K4.1	1,904
4/30/1972	K4.1	44
5/1/1972		0
5/2/1972		0
5/3/1972	K4.2	345
5/4/1972	K4.2	1,052
5/5/1972	K4.2	1,418
5/6/1972	K4.2	1,674
5/7/1972	K4.2	1,356
5/8/1972	K4.2	1,772
5/9/1972	K4.2	1,772
5/10/1972	K4.2	1,790
5/11/1972	K4.2	1,798
5/12/1972	K4.2	1,815
5/13/1972	K4.2	1,819
5/14/1972	K4.2	1,833
5/15/1972	K4.2	1,828

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

5/16/1972	K4.2	1,798
5/17/1972	K4.2	1,736
5/18/1972	K4.2	1,725
5/19/1972	K4.2	1,905
5/20/1972	K4.2	1,917
5/21/1972	K4.2	1,914
5/22/1972	K4.2	1,910
5/23/1972	K4.2	1,874
5/24/1972	K4.2	1,920
5/25/1972	K4.2	1,940
5/26/1972	K4.2	1,955
5/27/1972	K4.2	1,960
5/28/1972	K4.2	1,972
5/29/1972	K4.2	1,725
5/30/1972	K4.2	1,924
5/31/1972	K4.2	1,956
6/1/1972	K4.2	1,950
6/2/1972	K4.2	514
6/3/1972		0
6/4/1972	K4.3	7
6/5/1972	K4.3	47
6/6/1972	K4.3	349
6/7/1972	K4.3	1,036
6/8/1972	K4.3	1,568
6/9/1972	K4.3	1,817
6/10/1972	K4.3	1,835
6/11/1972	K4.3	1,855
6/12/1972	K4.3	1,866
6/13/1972	K4.3	1,868
6/14/1972	K4.3	1,865
6/15/1972	K4.3	1,875
6/16/1972	K4.3	1,933
6/17/1972	K4.3	1,939
6/18/1972	K4.3	1,948
6/19/1972	K4.3	1,962
6/20/1972	K4.3	1,968
6/21/1972	K4.3	1,973
6/22/1972	K4.3	129
6/23/1972	K4.3	0
6/24/1972	K4.3	374
6/25/1972	K4.3	1,508
6/26/1972	K4.3	1,979
6/27/1972	K4.3	1,990
6/28/1972	K4.3	1,588
6/29/1972		0
6/30/1972		0
7/1/1972		0
7/2/1972		0
7/3/1972		0
7/4/1972		0
7/5/1972		0
7/6/1972		0
7/7/1972		0
7/8/1972		0
7/9/1972		0
7/10/1972		0
7/11/1972		0
7/12/1972		0
7/13/1972		0
7/14/1972		0
7/15/1972		0
7/16/1972		0
7/17/1972		0
7/18/1972		0
7/19/1972		0
7/20/1972		0
7/21/1972	K-5	1
7/22/1972	K-5	0
7/23/1972	K-5	30
7/24/1972	K-5	1,012
7/25/1972	K-5	1,200
7/26/1972	K-5	1,200
7/27/1972	K-5	1,499
7/28/1972	K-5	1,839
7/29/1972	K-5	2,019
7/30/1972	K-5	2,019
7/31/1972	K-5	2,026
8/1/1972	K-5	2,120
8/2/1972	K-5	2,180
8/3/1972	K-5	2,131
8/4/1972	K-5	2,161
8/5/1972	K-5	2,180
8/6/1972	K-5	2,185
8/7/1972	K-5	2,201
8/8/1972	K-5	2,189
8/9/1972	K-5	2,198
8/10/1972	K-5	2,199
8/11/1972	K-5	2,199
8/12/1972	K-5	2,210
8/13/1972	K-5	2,227
8/14/1972	K-5	2,206
8/15/1972	K-5	2,202
8/16/1972	K-5	2,189
8/17/1972	K-5	2,214
8/18/1972	K-5	2,213
8/19/1972	K-5	2,221
8/20/1972	K-5	2,208
8/21/1972	K-5	2,201
8/22/1972	K-5	2,205
8/23/1972	K-5	2,202
8/24/1972	K-5	2,179
8/25/1972	K-5	2,187
8/26/1972	K-5	2,202
8/27/1972	K-5	2,202
8/28/1972	K-5	2,203
8/29/1972	K-5	2,208
8/30/1972	K-5	2,211
8/31/1972	K-5	2,223
9/1/1972	K-5	2,240
9/2/1972	K-5	2,184
9/3/1972	K-5	2,105
9/4/1972	K-5	2,193
9/5/1972	K-5	2,226
9/6/1972	K-5	2,243
9/7/1972	K-5	2,259
9/8/1972	K-5	2,262
9/9/1972	K-5	2,246
9/10/1972	K-5	2,238
9/11/1972	K-5	2,242
9/12/1972	K-5	2,243
9/13/1972	K-5	2,246
9/14/1972	K-5	2,231
9/15/1972	K-5	2,227
9/16/1972	K-5	2,217
9/17/1972	K-5	2,214
9/18/1972	K-5	2,215
9/19/1972	K-5	2,219
9/20/1972	K-5	2,211
9/21/1972	K-5	2,144
9/22/1972	K-5	1,803
9/23/1972	K-5	1,800
9/24/1972	K-5	1,800
9/25/1972	K-5	1,800
9/26/1972	K-5	1,800
9/27/1972	K-5	1,800
9/28/1972	K-5	1,800
9/29/1972	K-5	370
9/30/1972	K-5	0
10/1/1972	K-5	0
10/2/1972	K-5	349
10/3/1972	K-5	238
10/4/1972	K-5	1,619
10/5/1972	K-5	1,239
10/6/1972	K-5	0
10/7/1972	K-5	624
10/8/1972	K-5	1,789
10/9/1972	K-5	1,783
10/10/1972	K-5	1,764
10/11/1972	K-5	1,800
10/12/1972	K-5	1,801
10/13/1972	K-5	1,796
10/14/1972	K-5	1,800
10/15/1972	K-5	1,800
10/16/1972	K-5	1,800
10/17/1972	K-5	1,800
10/18/1972	K-5	1,801
10/19/1972	K-5	1,800
10/20/1972	K-5	1,800
10/21/1972	K-5	1,800
10/22/1972	K-5	1,800
10/23/1972	K-5	1,800
10/24/1972	K-5	1,801
10/25/1972	K-5	1,801
10/26/1972	K-5	1,800
10/27/1972	K-5	1,800
10/28/1972	K-5	1,800
10/29/1972	K-5	1,875
10/30/1972	K-5	1,793
10/31/1972	K-5	1,799
11/1/1972	K-5	1,798
11/2/1972	K-5	1,800
11/3/1972	K-5	1,800
11/4/1972	K-5	1,800
11/5/1972	K-5	1,800

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

11/6/1972	K-5	1,800
11/7/1972	K-5	1,800
11/8/1972	K-5	1,800
11/9/1972	K-5	1,800
11/10/1972	K-5	1,800
11/11/1972	K-5	1,800
11/12/1972	K-5	1,800
11/13/1972	K-5	1,800
11/14/1972	K-5	1,800
11/15/1972	K-5	1,800
11/16/1972	K-5	1,800
11/17/1972	K-5	1,800
11/18/1972	K-5	1,800
11/19/1972	K-5	1,800
11/20/1972	K-5	1,800
11/21/1972	K-5	1,800
11/22/1972	K-5	1,800
11/23/1972	K-5	1,800
11/24/1972	K-5	1,800
11/25/1972	K-5	1,800
11/26/1972	K-5	1,800
11/27/1972	K-5	1,800
11/28/1972	K-5	1,800
11/29/1972	K-5	1,800
11/30/1972	K-5	1,800
12/1/1972	K-5	1,800
12/2/1972	K-5	1,800
12/3/1972	K-5	1,800
12/4/1972	K-5	1,800
12/5/1972	K-5	1,800
12/6/1972	K-5	1,800
12/7/1972	K-5	1,800
12/8/1972	K-5	1,800
12/9/1972	K-5	1,798
12/10/1972	K-5	1,207
12/11/1972		0
12/12/1972		0
12/13/1972		0
12/14/1972		0
12/15/1972		0
12/16/1972		0
12/17/1972		0
12/18/1972		0
12/19/1972		0
12/20/1972		0
12/21/1972	K6.1	17
12/22/1972	K6.1	642
12/23/1972	K6.1	1,357
12/24/1972	K6.1	1,603
12/25/1972	K6.1	1,714
12/26/1972	K6.1	1,901
12/27/1972	K6.1	1,977
12/28/1972	K6.1	2,055
12/29/1972	K6.1	2,079
12/30/1972	K6.1	2,089
12/31/1972	K6.1	2,088
1/1/1973	K6.1	2,085
1/2/1973	K6.1	2,068
1/3/1973	K6.1	2,077
1/4/1973	K6.1	1,980
1/5/1973	K6.1	2,119
1/6/1973	K6.1	2,147
1/7/1973	K6.1	2,150
1/8/1973	K6.1	2,139
1/9/1973	K6.1	2,205
1/10/1973	K6.1	2,214
1/11/1973	K6.1	2,260
1/12/1973	K6.1	2,251
1/13/1973	K6.1	2,270
1/14/1973	K6.1	2,298
1/15/1973	K6.1	2,305
1/16/1973	K6.1	2,277
1/17/1973	K6.1	2,252
1/18/1973	K6.1	2,219
1/19/1973	K6.1	2,237
1/20/1973	K6.1	2,261
1/21/1973	K6.1	2,256
1/22/1973	K6.1	2,244
1/23/1973	K6.1	2,230
1/24/1973	K6.1	2,243
1/25/1973	K6.1	2,254
1/26/1973	K6.1	2,260
1/27/1973	K6.1	2,259
1/28/1973	K6.1	2,264
1/29/1973	K6.1	46
1/30/1973		0
1/31/1973		0
2/1/1973	K6.2	205
2/2/1973	K6.2	1,577
2/3/1973	K6.2	2,120
2/4/1973	K6.2	2,162
2/5/1973	K6.2	2,175
2/6/1973	K6.2	2,196
2/7/1973	K6.2	2,178
2/8/1973	K6.2	2,232
2/9/1973	K6.2	2,246
2/10/1973	K6.2	2,309
2/11/1973	K6.2	2,353
2/12/1973	K6.2	2,362
2/13/1973	K6.2	2,374
2/14/1973	K6.2	2,371
2/15/1973	K6.2	2,370
2/16/1973	K6.2	2,372
2/17/1973	K6.2	2,375
2/18/1973	K6.2	2,388
2/19/1973	K6.2	2,240
2/20/1973	K6.2	2,301
2/21/1973	K6.2	2,383
2/22/1973	K6.2	2,375
2/23/1973	K6.2	2,379
2/24/1973	K6.2	44
2/25/1973		0
2/26/1973		0
2/27/1973		0
2/28/1973		0
3/1/1973		0
3/2/1973		0
3/3/1973		0
3/4/1973		0
3/5/1973		0
3/6/1973		0
3/7/1973		0
3/8/1973		0
3/9/1973		0
3/10/1973		0
3/11/1973		0
3/12/1973		0
3/13/1973		0
3/14/1973		0
3/15/1973	K7.1	452
3/16/1973	K7.1	1,262
3/17/1973	K7.1	1,495
3/18/1973	K7.1	13
3/19/1973	K7.1	1,029
3/20/1973	K7.1	89
3/21/1973	K7.1	1,486
3/22/1973	K7.1	691
3/23/1973	K7.1	134
3/24/1973	K7.1	1,166
3/25/1973	K7.1	1,375
3/26/1973	K7.1	1,680
3/27/1973	K7.1	1,864
3/28/1973	K7.1	1,958
3/29/1973	K7.1	1,566
3/30/1973	K7.1	80
3/31/1973	K7.1	1,385
4/1/1973	K7.1	1,965
4/2/1973	K7.1	1,909
4/3/1973	K7.1	1,891
4/4/1973	K7.1	1,913
4/5/1973	K7.1	1,921
4/6/1973	K7.1	1,932
4/7/1973	K7.1	1,933
4/8/1973	K7.1	1,940
4/9/1973	K7.1	1,938
4/10/1973	K7.1	1,080
4/11/1973	K7.1	228
4/12/1973	K7.1	1,707
4/13/1973	K7.1	2,000
4/14/1973	K7.1	2,006
4/15/1973	K7.1	1,996
4/16/1973	K7.1	1,959
4/17/1973	K7.1	1,969
4/18/1973	K7.1	2,012
4/19/1973	K7.1	1,993
4/20/1973	K7.1	2,013
4/21/1973	K7.1	2,014
4/22/1973	K7.1	2,004
4/23/1973	K7.1	2,009
4/24/1973	K7.1	2,004
4/25/1973	K7.1	2,000
4/26/1973	K7.1	2,001
4/27/1973	K7.1	1,976
4/28/1973	K7.1	2,005

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

4/29/1973	K7.1	1,933
4/30/1973	K7.1	2,008
5/1/1973	K7.1	2,000
5/2/1973	K7.1	2,003
5/3/1973	K7.1	2,048
5/4/1973	K7.1	1,994
5/5/1973	K7.1	2,049
5/6/1973	K7.1	2,060
5/7/1973	K7.1	2,055
5/8/1973	K7.1	1,909
5/9/1973	K7.1	1,018
5/10/1973	K7.1	1,077
5/11/1973	K7.1	1,787
5/12/1973	K7.1	1,884
5/13/1973	K7.1	2,006
5/14/1973	K7.1	2,027
5/15/1973	K7.1	2,030
5/16/1973	K7.1	2,037
5/17/1973	K7.1	2,043
5/18/1973	K7.1	2,053
5/19/1973	K7.1	2,056
5/20/1973	K7.1	1,645
5/21/1973		0
5/22/1973		0
5/23/1973		0
5/24/1973	K7.2	14
5/25/1973	K7.2	879
5/26/1973	K7.2	1,674
5/27/1973	K7.2	1,736
5/28/1973	K7.2	1,761
5/29/1973	K7.2	1,759
5/30/1973	K7.2	1,827
5/31/1973	K7.2	1,832
6/1/1973	K7.2	1,814
6/2/1973	K7.2	1,764
6/3/1973	K7.2	1,837
6/4/1973	K7.2	1,857
6/5/1973	K7.2	1,849
6/6/1973	K7.2	1,892
6/7/1973	K7.2	1,900
6/8/1973	K7.2	1,888
6/9/1973	K7.2	1,887
6/10/1973	K7.2	1,888
6/11/1973	K7.2	1,852
6/12/1973	K7.2	1,820
6/13/1973	K7.2	1,861
6/14/1973	K7.2	1,858
6/15/1973	K7.2	1,889
6/16/1973	K7.2	827
6/17/1973	K7.2	520
6/18/1973	K7.2	1,623
6/19/1973	K7.2	1,861
6/20/1973	K7.2	1,927
6/21/1973	K7.2	1,927
6/22/1973	K7.2	1,928
6/23/1973	K7.2	1,916
6/24/1973	K7.2	1,912
6/25/1973	K7.2	1,892
6/26/1973	K7.2	1,865
6/27/1973	K7.2	1,788
6/28/1973	K7.2	0
6/29/1973	K7.2	230
6/30/1973	K7.2	1,142
7/1/1973	K7.2	1,832
7/2/1973	K7.2	1,860
7/3/1973	K7.2	1,853
7/4/1973	K7.2	1,852
7/5/1973	K7.2	1,882
7/6/1973	K7.2	1,893
7/7/1973	K7.2	1,910
7/8/1973	K7.2	1,917
7/9/1973	K7.2	1,910
7/10/1973	K7.2	1,870
7/11/1973	K7.2	1,896
7/12/1973	K7.2	1,907
7/13/1973	K7.2	1,926
7/14/1973	K7.2	1,925
7/15/1973	K7.2	1,915
7/16/1973	K7.2	1,910
7/17/1973	K7.2	1,922
7/18/1973	K7.2	1,934
7/19/1973	K7.2	1,932
7/20/1973	K7.2	1,931
7/21/1973	K7.2	1,931
7/22/1973	K7.2	1,755
7/23/1973		0
7/24/1973		0
7/25/1973	K7.3	3
7/26/1973	K7.3	341
7/27/1973	K7.3	1,160
7/28/1973	K7.3	1,443
7/29/1973	K7.3	584
7/30/1973	K7.3	206
7/31/1973	K7.3	1,383
8/1/1973	K7.3	1,471
8/2/1973	K7.3	1,512
8/3/1973	K7.3	1,558
8/4/1973	K7.3	1,574
8/5/1973	K7.3	1,579
8/6/1973	K7.3	1,572
8/7/1973	K7.3	1,538
8/8/1973	K7.3	1,548
8/9/1973	K7.3	1,590
8/10/1973	K7.3	1,616
8/11/1973	K7.3	1,593
8/12/1973	K7.3	1,605
8/13/1973	K7.3	669
8/14/1973	K7.3	367
8/15/1973	K7.3	1,554
8/16/1973	K7.3	1,588
8/17/1973	K7.3	1,645
8/18/1973	K7.3	1,650
8/19/1973	K7.3	1,661
8/20/1973	K7.3	1,660
8/21/1973	K7.3	1,662
8/22/1973	K7.3	1,666
8/23/1973	K7.3	1,647
8/24/1973	K7.3	1,682
8/25/1973	K7.3	1,711
8/26/1973	K7.3	1,710
8/27/1973	K7.3	1,708
8/28/1973	K7.3	1,701
8/29/1973	K7.3	1,698
8/30/1973	K7.3	1,702
8/31/1973	K7.3	1,718
9/1/1973	K7.3	1,721
9/2/1973	K7.3	1,714
9/3/1973	K7.3	1,716
9/4/1973	K7.3	1,722
9/5/1973	K7.3	1,722
9/6/1973	K7.3	1,728
9/7/1973	K7.3	1,734
9/8/1973	K7.3	1,734
9/9/1973	K7.3	1,732
9/10/1973	K7.3	1,711
9/11/1973	K7.3	1,752
9/12/1973	K7.3	1,761
9/13/1973	K7.3	1,757
9/14/1973	K7.3	1,767
9/15/1973	K7.3	1,769
9/16/1973	K7.3	1,774
9/17/1973	K7.3	1,775
9/18/1973	K7.3	1,765
9/19/1973	K7.3	1,792
9/20/1973	K7.3	1,796
9/21/1973	K7.3	1,799
9/22/1973	K7.3	1,799
9/23/1973	K7.3	1,799
9/24/1973	K7.3	1,804
9/25/1973	K7.3	1,810
9/26/1973	K7.3	1,825
9/27/1973	K7.3	1,786
9/28/1973	K7.3	1,849
9/29/1973	K7.3	1,847
9/30/1973	K7.3	1,687
10/1/1973		0
10/2/1973		0
10/3/1973		0
10/4/1973		0
10/5/1973		0
10/6/1973		0
10/7/1973	K8.1	60
10/8/1973	K8.1	962
10/9/1973	K8.1	1,534
10/10/1973	K8.1	1,713
10/11/1973	K8.1	1,765
10/12/1973	K8.1	1,770
10/13/1973	K8.1	1,791
10/14/1973	K8.1	1,802
10/15/1973	K8.1	1,792
10/16/1973	K8.1	1,812
10/17/1973	K8.1	1,780
10/18/1973	K8.1	1,794
10/19/1973	K8.1	1,876

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

10/20/1973	K8.1	1,875
10/21/1973	K8.1	1,881
10/22/1973	K8.1	1,433
10/23/1973	K8.1	7
10/24/1973	K8.1	0
10/25/1973	K8.1	32
10/26/1973	K8.1	653
10/27/1973	K8.1	1,380
10/28/1973	K8.1	1,890
10/29/1973	K8.1	1,832
10/30/1973	K8.1	1,893
10/31/1973	K8.1	1,950
11/1/1973	K8.1	1,954
11/2/1973	K8.1	1,936
11/3/1973	K8.1	1,966
11/4/1973	K8.1	1,936
11/5/1973	K8.1	1,945
11/6/1973	K8.1	1,902
11/7/1973	K8.1	1,905
11/8/1973	K8.1	1,944
11/9/1973	K8.1	1,960
11/10/1973	K8.1	1,978
11/11/1973	K8.1	2,005
11/12/1973	K8.1	2,016
11/13/1973	K8.1	2,016
11/14/1973	K8.1	2,057
11/15/1973	K8.1	2,047
11/16/1973	K8.1	2,006
11/17/1973	K8.1	1,996
11/18/1973	K8.1	2,032
11/19/1973	K8.1	2,024
11/20/1973	K8.1	2,040
11/21/1973	K8.1	2,037
11/22/1973	K8.1	2,047
11/23/1973	K8.1	2,040
11/24/1973	K8.1	2,048
11/25/1973	K8.1	2,047
11/26/1973	K8.1	2,027
11/27/1973	K8.1	1,951
11/28/1973	K8.1	2,027
11/29/1973	K8.1	2,069
11/30/1973	K8.1	2,101
12/1/1973	K8.1	2,128
12/2/1973	K8.1	2,140
12/3/1973	K8.1	2,140
12/4/1973	K8.1	2,137
12/5/1973	K8.1	2,130
12/6/1973	K8.1	2,137
12/7/1973	K8.1	2,147
12/8/1973	K8.1	2,157
12/9/1973	K8.1	1,675
12/10/1973		0
12/11/1973		0
12/12/1973		0
12/13/1973		0
12/14/1973	K8.2	8
12/15/1973	K8.2	1,053
12/16/1973	K8.2	1,830
12/17/1973	K8.2	1,900
12/18/1973	K8.2	1,978
12/19/1973	K8.2	2,024
12/20/1973	K8.2	2,029
12/21/1973	K8.2	2,037
12/22/1973	K8.2	2,048
12/23/1973	K8.2	1,969
12/24/1973	K8.2	2,052
12/25/1973	K8.2	2,039
12/26/1973	K8.2	2,016
12/27/1973	K8.2	2,006
12/28/1973	K8.2	2,056
12/29/1973	K8.2	2,069
12/30/1973	K8.2	2,073
12/31/1973	K8.2	2,069
1/1/1974	K8.2	1,940
1/2/1974	K8.2	2,006
1/3/1974	K8.2	2,092
1/4/1974	K8.2	2,094
1/5/1974	K8.2	2,102
1/6/1974	K8.2	2,014
1/7/1974	K8.2	2,103
1/8/1974	K8.2	2,103
1/9/1974	K8.2	2,110
1/10/1974	K8.2	2,131
1/11/1974	K8.2	2,110
1/12/1974	K8.2	2,078
1/13/1974	K8.2	2,098
1/14/1974	K8.2	2,090
1/15/1974	K8.2	2,161
1/16/1974	K8.2	2,154
1/17/1974	K8.2	2,150
1/18/1974	K8.2	2,147
1/19/1974	K8.2	2,151
1/20/1974	K8.2	2,164
1/21/1974	K8.2	2,161
1/22/1974	K8.2	2,160
1/23/1974	K8.2	2,140
1/24/1974	K8.2	2,177
1/25/1974	K8.2	1,759
1/26/1974	K8.2	78
1/27/1974	K8.2	1,462
1/28/1974	K8.2	2,207
1/29/1974	K8.2	2,193
1/30/1974	K8.2	2,192
1/31/1974	K8.2	2,200
2/1/1974	K8.2	2,193
2/2/1974	K8.2	2,213
2/3/1974	K8.2	2,217
2/4/1974	K8.2	1,176
2/5/1974		0
2/6/1974		0
2/7/1974		0
2/8/1974	K8.3	108
2/9/1974	K8.3	1,199
2/10/1974	K8.3	1,779
2/11/1974	K8.3	1,771
2/12/1974	K8.3	1,888
2/13/1974	K8.3	1,899
2/14/1974	K8.3	1,882
2/15/1974	K8.3	1,864
2/16/1974	K8.3	1,823
2/17/1974	K8.3	1,886
2/18/1974	K8.3	1,913
2/19/1974	K8.3	1,928
2/20/1974	K8.3	1,894
2/21/1974	K8.3	1,891
2/22/1974	K8.3	1,904
2/23/1974	K8.3	1,883
2/24/1974	K8.3	1,951
2/25/1974	K8.3	1,963
2/26/1974	K8.3	1,993
2/27/1974	K8.3	938
2/28/1974	K8.3	208
3/1/1974	K8.3	1,798
3/2/1974	K8.3	2,000
3/3/1974	K8.3	1,992
3/4/1974	K8.3	1,985
3/5/1974	K8.3	1,976
3/6/1974	K8.3	1,947
3/7/1974	K8.3	1,913
3/8/1974	K8.3	1,986
3/9/1974	K8.3	1,990
3/10/1974	K8.3	1,986
3/11/1974	K8.3	1,990
3/12/1974	K8.3	1,999
3/13/1974	K8.3	2,003
3/14/1974	K8.3	2,029
3/15/1974	K8.3	2,038
3/16/1974	K8.3	2,026
3/17/1974	K8.3	2,044
3/18/1974	K8.3	2,062
3/19/1974	K8.3	2,066
3/20/1974	K8.3	2,054
3/21/1974	K8.3	2,038
3/22/1974	K8.3	2,049
3/23/1974	K8.3	2,058
3/24/1974	K8.3	2,070
3/25/1974	K8.3	2,085
3/26/1974	K8.3	2,113
3/27/1974	K8.3	2,114
3/28/1974	K8.3	2,091
3/29/1974	K8.3	39
3/30/1974		0
3/31/1974		0
4/1/1974		0
4/2/1974		0
4/3/1974		0
4/4/1974		0
4/5/1974		0
4/6/1974		0
4/7/1974		0
4/8/1974		0
4/9/1974		0
4/10/1974		0
4/11/1974		0

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

4/12/1974		0
4/13/1974		0
4/14/1974		0
4/15/1974		0
4/16/1974		0
4/17/1974		0
4/18/1974	K-9.1	49
4/19/1974	K-9.1	1,132
4/20/1974	K-9.1	1,128
4/21/1974	K-9.1	1,129
4/22/1974	K-9.1	744
4/23/1974	K-9.1	243
4/24/1974	K-9.1	1,498
4/25/1974	K-9.1	2,032
4/26/1974	K-9.1	2,107
4/27/1974	K-9.1	2,090
4/28/1974	K-9.1	2,090
4/29/1974	K-9.1	2,102
4/30/1974	K-9.1	2,113
5/1/1974	K-9.1	148
5/2/1974	K-9.1	1,251
5/3/1974	K-9.1	2,100
5/4/1974	K-9.1	2,104
5/5/1974	K-9.1	2,110
5/6/1974	K-9.1	2,133
5/7/1974	K-9.1	2,137
5/8/1974	K-9.1	2,268
5/9/1974	K-9.1	2,327
5/10/1974	K-9.1	2,306
5/11/1974	K-9.1	2,283
5/12/1974	K-9.1	2,270
5/13/1974	K-9.1	2,277
5/14/1974	K-9.1	2,263
5/15/1974	K-9.1	2,253
5/16/1974	K-9.1	2,248
5/17/1974	K-9.1	2,248
5/18/1974	K-9.1	2,192
5/19/1974	K-9.1	2,026
5/20/1974	K-9.1	2,215
5/21/1974	K-9.1	2,224
5/22/1974	K-9.1	2,219
5/23/1974	K-9.1	2,255
5/24/1974	K-9.1	2,257
5/25/1974	K-9.1	2,272
5/26/1974	K-9.1	2,278
5/27/1974	K-9.1	2,274
5/28/1974	K-9.1	2,286
5/29/1974	K-9.1	2,288
5/30/1974	K-9.1	2,267
5/31/1974	K-9.1	2,260
6/1/1974	K-9.1	2,227
6/2/1974	K-9.1	2,226
6/3/1974	K-9.1	2,236
6/4/1974	K-9.1	2,229
6/5/1974	K-9.1	2,213
6/6/1974	K-9.1	2,191
6/7/1974	K-9.1	2,209
6/8/1974	K-9.1	2,202
6/9/1974	K-9.1	2,201
6/10/1974	K-9.1	2,183
6/11/1974	K-9.1	2,174
6/12/1974	K-9.1	2,162
6/13/1974	K-9.1	2,172
6/14/1974	K-9.1	2,049
6/15/1974	K-9.1	37
6/16/1974	K-9.1	775
6/17/1974	K-9.1	1,277
6/18/1974	K-9.1	2,168
6/19/1974	K-9.1	2,180
6/20/1974	K-9.1	2,177
6/21/1974	K-9.1	2,179
6/22/1974	K-9.1	2,175
6/23/1974	K-9.1	2,071
6/24/1974	K-9.1	2,162
6/25/1974	K-9.1	2,164
6/26/1974	K-9.1	2,164
6/27/1974	K-9.1	2,195
6/28/1974	K-9.1	2,210
6/29/1974	K-9.1	2,192
6/30/1974	K-9.1	2,181
7/1/1974	K-9.1	2,186
7/2/1974	K-9.1	2,168
7/3/1974	K-9.1	2,154
7/4/1974	K-9.1	2,167
7/5/1974	K-9.1	2,194
7/6/1974	K-9.1	2,127
7/7/1974	K-9.1	2,164
7/8/1974	K-9.1	2,161
7/9/1974	K-9.1	2,152
7/10/1974	K-9.1	238
7/11/1974	K-9.1	886
7/12/1974	K-9.1	2,121
7/13/1974	K-9.1	2,160
7/14/1974	K-9.1	2,165
7/15/1974	K-9.1	2,170
7/16/1974	K-9.1	2,160
7/17/1974	K-9.1	2,139
7/18/1974	K-9.1	2,156
7/19/1974	K-9.1	2,161
7/20/1974	K-9.1	2,155
7/21/1974	K-9.1	2,147
7/22/1974	K-9.1	2,156
7/23/1974	K-9.1	2,170
7/24/1974	K-9.1	2,164
7/25/1974	K-9.1	2,172
7/26/1974	K-9.1	2,176
7/27/1974	K-9.1	2,171
7/28/1974	K-9.1	5
7/29/1974	K-9.1	0
7/30/1974	K-9.1	0
7/31/1974	K-9.1	0
8/1/1974	K-9.1	0
8/2/1974	K-9.1	0
8/3/1974	K-9.1	45
8/4/1974	K-9.1	946
8/5/1974	K-9.1	935
8/6/1974	K-9.1	899
8/7/1974	K-9.1	1,654
8/8/1974	K-9.1	1,675
8/9/1974	K-9.1	1,682
8/10/1974	K-9.1	1,681
8/11/1974	K-9.1	1,687
8/12/1974	K-9.1	1,678
8/13/1974	K-9.1	1,678
8/14/1974	K-9.1	1,691
8/15/1974	K-9.1	1,704
8/16/1974	K-9.1	1,700
8/17/1974	K-9.1	1,695
8/18/1974	K-9.1	1,687
8/19/1974	K-9.1	1,676
8/20/1974	K-9.1	1,658
8/21/1974	K-9.1	1,657
8/22/1974	K-9.1	1,685
8/23/1974	K-9.1	1,630
8/24/1974	K-9.1	1,681
8/25/1974	K-9.1	1,673
8/26/1974	K-9.1	1,660
8/27/1974	K-9.1	1,657
8/28/1974	K-9.1	1,644
8/29/1974	K-9.1	1,659
8/30/1974	K-9.1	1,669
8/31/1974	K-9.1	1,656
9/1/1974	K-9.1	1,647
9/2/1974	K-9.1	1,651
9/3/1974	K-9.1	1,642
9/4/1974	K-9.1	1,648
9/5/1974	K-9.1	1,672
9/6/1974	K-9.1	1,696
9/7/1974	K-9.1	1,715
9/8/1974	K-9.1	1,742
9/9/1974	K-9.1	1,728
9/10/1974	K-9.1	1,710
9/11/1974	K-9.1	1,693
9/12/1974	K-9.1	932
9/13/1974	K-9.1	1,010
9/14/1974	K-9.1	1,662
9/15/1974	K-9.1	868
9/16/1974		0
9/17/1974		0
9/18/1974		0
9/19/1974		0
9/20/1974		0
9/21/1974		0
9/22/1974		0
9/23/1974		0
9/24/1974		0
9/25/1974		0
9/26/1974		0
9/27/1974		0
9/28/1974		0
9/29/1974		0
9/30/1974		0
10/1/1974		0
10/2/1974		0

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

10/3/1974		0
10/4/1974		0
10/5/1974		0
10/6/1974		0
10/7/1974	K9.2	32
10/8/1974	K9.2	758
10/9/1974	K9.2	1,115
10/10/1974	K9.2	1,658
10/11/1974	K9.2	1,693
10/12/1974	K9.2	1,639
10/13/1974	K9.2	1,723
10/14/1974	K9.2	1,747
10/15/1974	K9.2	1,744
10/16/1974	K9.2	1,738
10/17/1974	K9.2	1,740
10/18/1974	K9.2	1,738
10/19/1974	K9.2	1,754
10/20/1974	K9.2	1,780
10/21/1974	K9.2	1,800
10/22/1974	K9.2	1,824
10/23/1974	K9.2	1,839
10/24/1974	K9.2	1,845
10/25/1974	K9.2	1,842
10/26/1974	K9.2	1,837
10/27/1974	K9.2	1,896
10/28/1974	K9.2	1,811
10/29/1974	K9.2	1,800
10/30/1974	K9.2	1,786
10/31/1974	K9.2	1,779
11/1/1974	K9.2	1,786
11/2/1974	K9.2	1,785
11/3/1974	K9.2	1,785
11/4/1974	K9.2	1,776
11/5/1974	K9.2	1,724
11/6/1974	K9.2	1,753
11/7/1974	K9.2	1,793
11/8/1974	K9.2	1,809
11/9/1974	K9.2	1,832
11/10/1974	K9.2	1,842
11/11/1974	K9.2	1,840
11/12/1974	K9.2	1,828
11/13/1974	K9.2	1,840
11/14/1974	K9.2	1,853
11/15/1974	K9.2	1,862
11/16/1974	K9.2	1,874
11/17/1974	K9.2	1,863
11/18/1974	K9.2	1,846
11/19/1974	K9.2	1,842
11/20/1974	K9.2	1,836
11/21/1974	K9.2	1,857
11/22/1974	K9.2	1,849
11/23/1974	K9.2	1,875
11/24/1974	K9.2	1,883
11/25/1974	K9.2	1,873
11/26/1974	K9.2	1,894
11/27/1974	K9.2	1,910
11/28/1974	K9.2	1,921
11/29/1974	K9.2	1,932
11/30/1974	K9.2	1,923
12/1/1974	K9.2	1,923
12/2/1974	K9.2	1,954
12/3/1974	K9.2	1,971
12/4/1974	K9.2	1,975
12/5/1974	K9.2	1,978
12/6/1974	K9.2	1,943
12/7/1974	K9.2	1,916
12/8/1974	K9.2	1,910
12/9/1974	K9.2	1,921
12/10/1974	K9.2	1,949
12/11/1974	K9.2	1,958
12/12/1974	K9.2	1,956
12/13/1974	K9.2	1,959
12/14/1974	K9.2	1,959
12/15/1974	K9.2	1,959
12/16/1974	K9.2	1,934
12/17/1974	K9.2	1,952
12/18/1974	K9.2	1,994
12/19/1974	K9.2	2,014
12/20/1974	K9.2	1,981
12/21/1974	K9.2	1,990
12/22/1974	K9.2	1,987
12/23/1974	K9.2	1,981
12/24/1974	K9.2	1,981
12/25/1974	K9.2	1,961
12/26/1974	K9.2	1,952
12/27/1974	K9.2	1,954
12/28/1974	K9.2	1,950
12/29/1974	K9.2	1,952
12/30/1974	K9.2	1,940
12/31/1974	K9.2	1,914
1/1/1975	K9.2	1,914
1/2/1975	K9.2	1,930
1/3/1975	K9.2	1,949
1/4/1975	K9.2	1,940
1/5/1975	K9.2	1,962
1/6/1975	K9.2	1,955
1/7/1975	K9.2	1,968
1/8/1975	K9.2	1,974
1/9/1975	K9.2	1,955
1/10/1975	K9.2	1,968
1/11/1975	K9.2	1,945
1/12/1975	K9.2	1,928
1/13/1975	K9.2	1,916
1/14/1975	K9.2	1,933
1/15/1975	K9.2	1,954
1/16/1975	K9.2	1,907
1/17/1975	K9.2	1,886
1/18/1975	K9.2	1,881
1/19/1975	K9.2	1,867
1/20/1975	K9.2	293
1/21/1975		0
1/22/1975		0
1/23/1975		0
1/24/1975		0
1/25/1975	K9.3	74
1/26/1975	K9.3	1,013
1/27/1975	K9.3	1,369
1/28/1975	K9.3	1,848
1/29/1975	K9.3	1,794
1/30/1975	K9.3	1,629
1/31/1975	K9.3	1,769
2/1/1975	K9.3	1,898
2/2/1975	K9.3	1,894
2/3/1975	K9.3	1,884
2/4/1975	K9.3	1,911
2/5/1975	K9.3	1,959
2/6/1975	K9.3	1,988
2/7/1975	K9.3	1,994
2/8/1975	K9.3	1,990
2/9/1975	K9.3	1,990
2/10/1975	K9.3	2,003
2/11/1975	K9.3	2,002
2/12/1975	K9.3	1,985
2/13/1975	K9.3	1,980
2/14/1975	K9.3	698
2/15/1975	K9.3	175
2/16/1975	K9.3	1,499
2/17/1975	K9.3	1,953
2/18/1975	K9.3	1,948
2/19/1975	K9.3	1,937
2/20/1975	K9.3	1,960
2/21/1975	K9.3	1,952
2/22/1975	K9.3	1,810
2/23/1975	K9.3	0
2/24/1975	K9.3	677
2/25/1975	K9.3	1,933
2/26/1975	K9.3	1,975
2/27/1975	K9.3	1,968
2/28/1975	K9.3	1,973
3/1/1975	K9.3	1,970
3/2/1975	K9.3	1,969
3/3/1975	K9.3	212
3/4/1975	K9.3	333
3/5/1975	K9.3	1,715
3/6/1975	K9.3	1,988
3/7/1975	K9.3	1,967
3/8/1975	K9.3	1,954
3/9/1975	K9.3	1,959
3/10/1975	K9.3	1,957
3/11/1975	K9.3	1,851
3/12/1975	K9.3	1,948
3/13/1975	K9.3	1,937
3/14/1975	K9.3	1,922
3/15/1975	K9.3	1,932
3/16/1975	K9.3	623
3/17/1975		0
3/18/1975		0
3/19/1975		0
3/20/1975		0
3/21/1975		0
3/22/1975		0
3/23/1975		0
3/24/1975		0
3/25/1975		0

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

3/26/1975		0
3/27/1975		0
3/28/1975		0
3/29/1975		0
3/30/1975		0
3/31/1975		0
4/1/1975		0
4/2/1975		0
4/3/1975		0
4/4/1975		0
4/5/1975		0
4/6/1975		0
4/7/1975		0
4/8/1975		0
4/9/1975		0
4/10/1975		0
4/11/1975		0
4/12/1975		0
4/13/1975		0
4/14/1975		0
4/15/1975		0
4/16/1975		0
4/17/1975		0
4/18/1975	K10.1	280
4/19/1975	K10.1	1,026
4/20/1975	K10.1	1,028
4/21/1975	K10.1	1,211
4/22/1975	K10.1	1,117
4/23/1975	K10.1	61
4/24/1975	K10.1	1,027
4/25/1975	K10.1	1,502
4/26/1975	K10.1	1,421
4/27/1975	K10.1	71
4/28/1975	K10.1	1,095
4/29/1975	K10.1	1,738
4/30/1975	K10.1	1,733
5/1/1975	K10.1	1,743
5/2/1975	K10.1	1,749
5/3/1975	K10.1	1,748
5/4/1975	K10.1	558
5/5/1975	K10.1	0
5/6/1975	K10.1	0
5/7/1975	K10.1	0
5/8/1975	K10.1	398
5/9/1975	K10.1	1,264
5/10/1975	K10.1	1,774
5/11/1975	K10.1	1,774
5/12/1975	K10.1	1,835
5/13/1975	K10.1	1,851
5/14/1975	K10.1	1,855
5/15/1975	K10.1	1,876
5/16/1975	K10.1	1,896
5/17/1975	K10.1	1,901
5/18/1975	K10.1	1,914
5/19/1975	K10.1	1,898
5/20/1975	K10.1	1,859
5/21/1975	K10.1	1,871
5/22/1975	K10.1	1,899
5/23/1975	K10.1	1,916
5/24/1975	K10.1	1,924
5/25/1975	K10.1	1,926
5/26/1975	K10.1	1,892
5/27/1975	K10.1	1,901
5/28/1975	K10.1	1,887
5/29/1975	K10.1	1,900
5/30/1975	K10.1	1,951
5/31/1975	K10.1	1,948
6/1/1975	K10.1	1,949
6/2/1975	K10.1	1,939
6/3/1975	K10.1	1,953
6/4/1975	K10.1	1,949
6/5/1975	K10.1	1,952
6/6/1975	K10.1	721
6/7/1975	K10.1	0
6/8/1975	K10.1	0
6/9/1975	K10.1	30
6/10/1975	K10.1	1,105
6/11/1975	K10.1	1,957
6/12/1975	K10.1	1,976
6/13/1975	K10.1	1,975
6/14/1975	K10.1	1,977
6/15/1975	K10.1	1,980
6/16/1975	K10.1	1,984
6/17/1975	K10.1	1,976
6/18/1975	K10.1	1,957
6/19/1975	K10.1	1,976
6/20/1975	K10.1	1,989
6/21/1975	K10.1	1,985
6/22/1975	K10.1	1,988
6/23/1975	K10.1	1,992
6/24/1975	K10.1	1,997
6/25/1975	K10.1	1,930
6/26/1975	K10.1	0
6/27/1975	K10.1	0
6/28/1975	K10.1	2
6/29/1975	K10.1	3
6/30/1975		0
7/1/1975		0
7/2/1975		0
7/3/1975		0
7/4/1975	K10.2	48
7/5/1975	K10.2	331
7/6/1975	K10.2	978
7/7/1975	K10.2	987
7/8/1975	K10.2	1,631
7/9/1975	K10.2	1,672
7/10/1975	K10.2	797
7/11/1975	K10.2	0
7/12/1975	K10.2	0
7/13/1975	K10.2	0
7/14/1975	K10.2	0
7/15/1975	K10.2	0
7/16/1975	K10.2	0
7/17/1975	K10.2	0
7/18/1975	K10.2	0
7/19/1975	K10.2	0
7/20/1975	K10.2	0
7/21/1975	K10.2	0
7/22/1975	K10.2	0
7/23/1975	K10.2	0
7/24/1975	K10.2	0
7/25/1975	K10.2	0
7/26/1975	K10.2	0
7/27/1975	K10.2	0
7/28/1975	K10.2	554
7/29/1975	K10.2	1,119
7/30/1975	K10.2	1,618
7/31/1975	K10.2	1,679
8/1/1975	K10.2	1,686
8/2/1975	K10.2	1,689
8/3/1975	K10.2	1,690
8/4/1975	K10.2	1,679
8/5/1975	K10.2	1,674
8/6/1975	K10.2	1,700
8/7/1975	K10.2	1,714
8/8/1975	K10.2	1,739
8/9/1975	K10.2	1,755
8/10/1975	K10.2	1,757
8/11/1975	K10.2	1,712
8/12/1975	K10.2	1,721
8/13/1975	K10.2	1,726
8/14/1975	K10.2	1,727
8/15/1975	K10.2	1,729
8/16/1975	K10.2	1,732
8/17/1975	K10.2	1,730
8/18/1975	K10.2	1,734
8/19/1975	K10.2	1,734
8/20/1975	K10.2	1,736
8/21/1975	K10.2	1,723
8/22/1975	K10.2	1,772
8/23/1975	K10.2	1,810
8/24/1975	K10.2	1,812
8/25/1975	K10.2	1,815
8/26/1975	K10.2	1,809
8/27/1975	K10.2	1,775
8/28/1975	K10.2	1,833
8/29/1975	K10.2	1,851
8/30/1975	K10.2	1,854
8/31/1975	K10.2	1,851
9/1/1975	K10.2	1,847
9/2/1975	K10.2	1,843
9/3/1975	K10.2	1,848
9/4/1975	K10.2	1,853
9/5/1975	K10.2	1,864
9/6/1975	K10.2	1,882
9/7/1975	K10.2	1,890
9/8/1975	K10.2	1,895
9/9/1975	K10.2	1,895
9/10/1975	K10.2	1,875
9/11/1975	K10.2	1,908
9/12/1975	K10.2	1,927
9/13/1975	K10.2	1,933
9/14/1975	K10.2	1,962
9/15/1975	K10.2	1,984

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

9/16/1975	K10.2	1,997
9/17/1975	K10.2	2,000
9/18/1975	K10.2	2,001
9/19/1975	K10.2	1,996
9/20/1975	K10.2	1,987
9/21/1975	K10.2	1,980
9/22/1975	K10.2	1,980
9/23/1975	K10.2	1,943
9/24/1975	K10.2	1,955
9/25/1975	K10.2	1,975
9/26/1975	K10.2	1,990
9/27/1975	K10.2	2,004
9/28/1975	K10.2	995
9/29/1975		0
9/30/1975		0
10/1/1975		0
10/2/1975		0
10/3/1975		0
10/4/1975		0
10/5/1975		0
10/6/1975		0
10/7/1975	K10.3	43
10/8/1975	K10.3	818
10/9/1975	K10.3	1,110
10/10/1975	K10.3	1,627
10/11/1975	K10.3	1,690
10/12/1975	K10.3	1,732
10/13/1975	K10.3	1,722
10/14/1975	K10.3	1,729
10/15/1975	K10.3	1,020
10/16/1975	K10.3	13
10/17/1975	K10.3	807
10/18/1975	K10.3	1,246
10/19/1975	K10.3	1,778
10/20/1975	K10.3	1,814
10/21/1975	K10.3	1,824
10/22/1975	K10.3	1,816
10/23/1975	K10.3	1,819
10/24/1975	K10.3	1,873
10/25/1975	K10.3	1,877
10/26/1975	K10.3	1,965
10/27/1975	K10.3	1,888
10/28/1975	K10.3	1,890
10/29/1975	K10.3	1,870
10/30/1975	K10.3	1,908
10/31/1975	K10.3	1,930
11/1/1975	K10.3	1,955
11/2/1975	K10.3	1,974
11/3/1975	K10.3	1,975
11/4/1975	K10.3	1,971
11/5/1975	K10.3	1,965
11/6/1975	K10.3	1,973
11/7/1975	K10.3	1,982
11/8/1975	K10.3	1,988
11/9/1975	K10.3	1,993
11/10/1975	K10.3	1,992
11/11/1975	K10.3	2,004
11/12/1975	K10.3	315
11/13/1975	K10.3	0
11/14/1975	K10.3	0
11/15/1975	K10.3	0
11/16/1975	K10.3	36
11/17/1975	K10.3	516
11/18/1975	K10.3	1,210
11/19/1975	K10.3	1,705
11/20/1975	K10.3	1,897
11/21/1975	K10.3	1,916
11/22/1975	K10.3	1,904
11/23/1975	K10.3	1,941
11/24/1975	K10.3	1,961
11/25/1975	K10.3	1,967
11/26/1975	K10.3	1,968
11/27/1975	K10.3	1,970
11/28/1975	K10.3	1,978
11/29/1975	K10.3	1,980
11/30/1975	K10.3	1,561
12/1/1975		0
12/2/1975		0
12/3/1975		0
12/4/1975		0
12/5/1975		0
12/6/1975		0
12/7/1975	K10.4	362
12/8/1975	K10.4	915
12/9/1975	K10.4	1,105
12/10/1975	K10.4	1,387
12/11/1975	K10.4	1,585
12/12/1975	K10.4	1,617
12/13/1975	K10.4	1,622
12/14/1975	K10.4	1,623
12/15/1975	K10.4	1,628
12/16/1975	K10.4	1,646
12/17/1975	K10.4	1,664
12/18/1975	K10.4	1,630
12/19/1975	K10.4	1,582
12/20/1975	K10.4	1,659
12/21/1975	K10.4	1,649
12/22/1975	K10.4	1,648
12/23/1975	K10.4	1,656
12/24/1975	K10.4	1,806
12/25/1975	K10.4	1,833
12/26/1975	K10.4	1,839
12/27/1975	K10.4	1,846
12/28/1975	K10.4	1,862
12/29/1975	K10.4	1,876
12/30/1975	K10.4	1,857
12/31/1975	K10.4	1,823
1/1/1976	K10.4	1,844
1/2/1976	K10.4	1,852
1/3/1976	K10.4	1,800
1/4/1976	K10.4	1,800
1/5/1976	K10.4	1,819
1/6/1976	K10.4	1,766
1/7/1976	K10.4	1,821
1/8/1976	K10.4	1,226
1/9/1976	K10.4	1
1/10/1976	K10.4	812
1/11/1976	K10.4	1,308
1/12/1976	K10.4	1,789
1/13/1976	K10.4	1,837
1/14/1976	K10.4	1,807
1/15/1976	K10.4	1,800
1/16/1976	K10.4	1,753
1/17/1976	K10.4	1,726
1/18/1976	K10.4	1,728
1/19/1976	K10.4	1,719
1/20/1976	K10.4	1,707
1/21/1976	K10.4	1,702
1/22/1976	K10.4	1,690
1/23/1976	K10.4	1,679
1/24/1976	K10.4	1,672
1/25/1976	K10.4	1,296
1/26/1976		0
1/27/1976		0
1/28/1976		0
1/29/1976		0
1/30/1976		0
1/31/1976		0
2/1/1976		0
2/2/1976		0
2/3/1976		0
2/4/1976		0
2/5/1976		0
2/6/1976		0
2/7/1976		0
2/8/1976		0
2/9/1976		0
2/10/1976		0
2/11/1976		0
2/12/1976	K11.1	651
2/13/1976	K11.1	1,105
2/14/1976	K11.1	1,501
2/15/1976	K11.1	1,562
2/16/1976	K11.1	1,610
2/17/1976	K11.1	1,594
2/18/1976	K11.1	1,591
2/19/1976	K11.1	1,663
2/20/1976	K11.1	1,690
2/21/1976	K11.1	1,819
2/22/1976	K11.1	1,835
2/23/1976	K11.1	1,854
2/24/1976	K11.1	1,848
2/25/1976	K11.1	1,817
2/26/1976	K11.1	1,838
2/27/1976	K11.1	1,860
2/28/1976	K11.1	1,869
2/29/1976	K11.1	205
3/1/1976	K11.1	810
3/2/1976	K11.1	1,869
3/3/1976	K11.1	1,834
3/4/1976	K11.1	1,784
3/5/1976	K11.1	1,833
3/6/1976	K11.1	1,840
3/7/1976	K11.1	1,882

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

3/8/1976	K11.1	1,870
3/9/1976	K11.1	1,887
3/10/1976	K11.1	1,921
3/11/1976	K11.1	1,932
3/12/1976	K11.1	1,938
3/13/1976	K11.1	1,933
3/14/1976	K11.1	1,937
3/15/1976	K11.1	1,961
3/16/1976	K11.1	1,958
3/17/1976	K11.1	1,912
3/18/1976	K11.1	45
3/19/1976	K11.1	1,186
3/20/1976	K11.1	1,972
3/21/1976	K11.1	1,988
3/22/1976	K11.1	1,998
3/23/1976	K11.1	2,014
3/24/1976	K11.1	2,007
3/25/1976	K11.1	1,998
3/26/1976	K11.1	1,979
3/27/1976	K11.1	2,002
3/28/1976	K11.1	2,002
3/29/1976	K11.1	2,002
3/30/1976	K11.1	2,050
3/31/1976	K11.1	2,066
4/1/1976	K11.1	2,071
4/2/1976	K11.1	2,078
4/3/1976	K11.1	2,077
4/4/1976	K11.1	2,078
4/5/1976	K11.1	2,082
4/6/1976	K11.1	2,089
4/7/1976	K11.1	2,098
4/8/1976	K11.1	2,100
4/9/1976	K11.1	2,100
4/10/1976	K11.1	2,100
4/11/1976	K11.1	1,556
4/12/1976		0
4/13/1976		0
4/14/1976		0
4/15/1976		0
4/16/1976		0
4/17/1976		0
4/18/1976		0
4/19/1976		0
4/20/1976	K11.2	2
4/21/1976	K11.2	427
4/22/1976	K11.2	1,015
4/23/1976	K11.2	1,576
4/24/1976	K11.2	1,733
4/25/1976	K11.2	1,675
4/26/1976	K11.2	1,756
4/27/1976	K11.2	38
4/28/1976	K11.2	658
4/29/1976	K11.2	1,590
4/30/1976	K11.2	1,811
5/1/1976	K11.2	1,830
5/2/1976	K11.2	1,840
5/3/1976	K11.2	1,842
5/4/1976	K11.2	1,842
5/5/1976	K11.2	1,828
5/6/1976	K11.2	1,816
5/7/1976	K11.2	1,832
5/8/1976	K11.2	1,838
5/9/1976	K11.2	1,856
5/10/1976	K11.2	1,827
5/11/1976	K11.2	1,862
5/12/1976	K11.2	1,856
5/13/1976	K11.2	1,864
5/14/1976	K11.2	1,864
5/15/1976	K11.2	1,870
5/16/1976	K11.2	1,867
5/17/1976	K11.2	1,862
5/18/1976	K11.2	1,833
5/19/1976	K11.2	1,939
5/20/1976	K11.2	1,946
5/21/1976	K11.2	1,954
5/22/1976	K11.2	1,361
5/23/1976	K11.2	199
5/24/1976	K11.2	1,525
5/25/1976	K11.2	1,929
5/26/1976	K11.2	1,944
5/27/1976	K11.2	1,983
5/28/1976	K11.2	1,985
5/29/1976	K11.2	1,988
5/30/1976	K11.2	1,987
5/31/1976	K11.2	1,976
6/1/1976	K11.2	1,973
6/2/1976	K11.2	1,996
6/3/1976	K11.2	1,997
6/4/1976	K11.2	2,003
6/5/1976	K11.2	2,020
6/6/1976	K11.2	2,029
6/7/1976	K11.2	2,016
6/8/1976	K11.2	2,011
6/9/1976	K11.2	2,005
6/10/1976	K11.2	1,979
6/11/1976	K11.2	2,007
6/12/1976	K11.2	2,007
6/13/1976	K11.2	28
6/14/1976	K11.2	935
6/15/1976	K11.2	1,124
6/16/1976	K11.2	1,124
6/17/1976	K11.2	1,175
6/18/1976	K11.2	1,996
6/19/1976	K11.2	1,984
6/20/1976	K11.2	1,971
6/21/1976	K11.2	1,726
6/22/1976	K11.2	1,276
6/23/1976	K11.2	259
6/24/1976	K11.2	1,487
6/25/1976	K11.2	1,714
6/26/1976	K11.2	1,716
6/27/1976	K11.2	1,323
6/28/1976		0
6/29/1976		0
6/30/1976		0
7/1/1976		0
7/2/1976		0
7/3/1976	K11.3	74
7/4/1976	K11.3	342
7/5/1976	K11.3	1,245
7/6/1976	K11.3	1,667
7/7/1976	K11.3	1,714
7/8/1976	K11.3	1,720
7/9/1976	K11.3	1,708
7/10/1976	K11.3	1,713
7/11/1976	K11.3	1,714
7/12/1976	K11.3	1,713
7/13/1976	K11.3	1,705
7/14/1976	K11.3	1,735
7/15/1976	K11.3	1,745
7/16/1976	K11.3	1,742
7/17/1976	K11.3	1,755
7/18/1976	K11.3	1,762
7/19/1976	K11.3	1,768
7/20/1976	K11.3	1,748
7/21/1976	K11.3	1,756
7/22/1976	K11.3	1,770
7/23/1976	K11.3	1,785
7/24/1976	K11.3	1,785
7/25/1976	K11.3	1,786
7/26/1976	K11.3	1,788
7/27/1976	K11.3	1,773
7/28/1976	K11.3	1,781
7/29/1976	K11.3	1,770
7/30/1976	K11.3	1,776
7/31/1976	K11.3	1,792
8/1/1976	K11.3	1,790
8/2/1976	K11.3	1,791
8/3/1976	K11.3	1,802
8/4/1976	K11.3	1,810
8/5/1976	K11.3	1,826
8/6/1976	K11.3	1,839
8/7/1976	K11.3	1,836
8/8/1976	K11.3	1,839
8/9/1976	K11.3	1,843
8/10/1976	K11.3	1,844
8/11/1976	K11.3	1,836
8/12/1976	K11.3	1,835
8/13/1976	K11.3	1,848
8/14/1976	K11.3	1,848
8/15/1976	K11.3	1,847
8/16/1976	K11.3	1,723
8/17/1976	K11.3	1,739
8/18/1976	K11.3	1,731
8/19/1976	K11.3	1,764
8/20/1976	K11.3	1,782
8/21/1976	K11.3	1,806
8/22/1976	K11.3	1,418
8/23/1976		0
8/24/1976		0
8/25/1976		0
8/26/1976		0
8/27/1976		0
8/28/1976		0

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

8/29/1976	K11.4	65
8/30/1976	K11.4	579
8/31/1976	K11.4	799
9/1/1976	K11.4	886
9/2/1976	K11.4	1,087
9/3/1976	K11.4	1,280
9/4/1976	K11.4	1,371
9/5/1976	K11.4	1,397
9/6/1976	K11.4	1,412
9/7/1976	K11.4	1,425
9/8/1976	K11.4	1,448
9/9/1976	K11.4	1,496
9/10/1976	K11.4	1,528
9/11/1976	K11.4	1,542
9/12/1976	K11.4	1,562
9/13/1976	K11.4	1,583
9/14/1976	K11.4	1,602
9/15/1976	K11.4	1,620
9/16/1976	K11.4	1,637
9/17/1976	K11.4	1,645
9/18/1976	K11.4	1,639
9/19/1976	K11.4	1,634
9/20/1976	K11.4	1,648
9/21/1976	K11.4	1,653
9/22/1976	K11.4	1,666
9/23/1976	K11.4	1,682
9/24/1976	K11.4	1,688
9/25/1976	K11.4	1,697
9/26/1976	K11.4	1,701
9/27/1976	K11.4	1,692
9/28/1976	K11.4	1,685
9/29/1976	K11.4	1,686
9/30/1976	K11.4	1,704
10/1/1976	K11.4	1,722
10/2/1976	K11.4	1,734
10/3/1976	K11.4	1,744
10/4/1976	K11.4	1,747
10/5/1976	K11.4	1,732
10/6/1976	K11.4	1,728
10/7/1976	K11.4	1,735
10/8/1976	K11.4	1,745
10/9/1976	K11.4	1,757
10/10/1976	K11.4	1,784
10/11/1976	K11.4	1,762
10/12/1976	K11.4	1,404
10/13/1976	K11.4	1,379
10/14/1976	K11.4	1,372
10/15/1976	K11.4	1,356
10/16/1976	K11.4	1,348
10/17/1976	K11.4	1,101
10/18/1976		0
10/19/1976		0
10/20/1976		0
10/21/1976		0
10/22/1976		0
10/23/1976		0
10/24/1976		0
10/25/1976		0

10/26/1976		0
10/27/1976		0
10/28/1976		0
10/29/1976		0
10/30/1976		0
10/31/1976		0
11/1/1976		0
11/2/1976		0
11/3/1976		0
11/4/1976		0
11/5/1976		0
11/6/1976		0
11/7/1976		0
11/8/1976		0
11/9/1976		0
11/10/1976		0
11/11/1976		0
11/12/1976		0
11/13/1976		0
11/14/1976		0
11/15/1976		0
11/16/1976		0
11/17/1976		0
11/18/1976		0
11/19/1976		0
11/20/1976		0
11/21/1976		0
11/22/1976		0
11/23/1976		0
11/24/1976		0
11/25/1976		0
11/26/1976		0
11/27/1976		0
11/28/1976		0
11/29/1976		0
11/30/1976		0
12/1/1976		0
12/2/1976		0
12/3/1976		0
12/4/1976		0
12/5/1976		0
12/6/1976		0
12/7/1976		0
12/8/1976		0
12/9/1976		0
12/10/1976		0
12/11/1976		0
12/12/1976		0
12/13/1976		0
12/14/1976		0
12/15/1976		0
12/16/1976	K12.1	205
12/17/1976	K12.1	1,031
12/18/1976	K12.1	1,527
12/19/1976	K12.1	1,662
12/20/1976	K12.1	1,678
12/21/1976	K12.1	1,782
12/22/1976	K12.1	1,855

12/23/1976	K12.1	1,856
12/24/1976	K12.1	1,866
12/25/1976	K12.1	1,867
12/26/1976	K12.1	1,872
12/27/1976	K12.1	1,846
12/28/1976	K12.1	1,849
12/29/1976	K12.1	1,818
12/30/1976	K12.1	1,886
12/31/1976	K12.1	489
1/1/1977	K-12.1	524
1/2/1977	K-12.1	1,837
1/3/1977	K-12.1	1,910
1/4/1977	K-12.1	345
1/5/1977	K-12.1	729
1/6/1977	K-12.1	1,870
1/7/1977	K-12.1	1,904
1/8/1977	K-12.1	1,918
1/9/1977	K-12.1	1,937
1/10/1977	K-12.1	1,945
1/11/1977	K-12.1	1,974
1/12/1977	K-12.1	2,046
1/13/1977	K-12.1	2,055
1/14/1977	K-12.1	2,017
1/15/1977	K-12.1	2,021
1/16/1977	K-12.1	2,030
1/17/1977	K-12.1	2,034
1/18/1977	K-12.1	2,023
1/19/1977	K-12.1	2,055
1/20/1977	K-12.1	2,062
1/21/1977	K-12.1	2,067
1/22/1977	K-12.1	2,072
1/23/1977	K-12.1	2,072
1/24/1977	K-12.1	2,072
1/25/1977	K-12.1	2,128
1/26/1977	K-12.1	2,125
1/27/1977	K-12.1	2,131
1/28/1977	K-12.1	2,145
1/29/1977	K-12.1	2,152
1/30/1977	K-12.1	2,163
1/31/1977	K-12.1	2,174
2/1/1977	K-12.1	2,172
2/2/1977	K-12.1	2,158
2/3/1977	K-12.1	2,184
2/4/1977	K-12.1	2,184
2/5/1977	K-12.1	2,185
2/6/1977	K-12.1	2,188
2/7/1977	K-12.1	1,680
2/8/1977		0
2/9/1977		0
2/10/1977		0
2/11/1977		0
2/12/1977		0
2/13/1977		0
2/14/1977		0
2/15/1977	K-12.2	680
2/16/1977	K-12.2	1,338
2/17/1977	K-12.2	1,765
2/18/1977	K-12.2	1,840

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

2/19/1977	K-12.2	1,900
2/20/1977	K-12.2	1,901
2/21/1977	K-12.2	1,911
2/22/1977	K-12.2	1,883
2/23/1977	K-12.2	850
2/24/1977	K-12.2	0
2/25/1977	K-12.2	0
2/26/1977	K-12.2	57
2/27/1977	K-12.2	1,013
2/28/1977	K-12.2	1,857
3/1/1977	K-12.2	1,883
3/2/1977	K-12.2	1,968
3/3/1977	K-12.2	1,966
3/4/1977	K-12.2	1,959
3/5/1977	K-12.2	1,970
3/6/1977	K-12.2	1,981
3/7/1977	K-12.2	1,987
3/8/1977	K-12.2	1,997
3/9/1977	K-12.2	1,978
3/10/1977	K-12.2	1,995
3/11/1977	K-12.2	2,006
3/12/1977	K-12.2	2,003
3/13/1977	K-12.2	1,992
3/14/1977	K-12.2	1,989
3/15/1977	K-12.2	1,919
3/16/1977	K-12.2	0
3/17/1977	K-12.2	0
3/18/1977	K-12.2	217
3/19/1977	K-12.2	1,533
3/20/1977	K-12.2	2,051
3/21/1977	K-12.2	2,057
3/22/1977	K-12.2	2,070
3/23/1977	K-12.2	2,085
3/24/1977	K-12.2	2,100
3/25/1977	K-12.2	2,095
3/26/1977	K-12.2	2,097
3/27/1977	K-12.2	2,106
3/28/1977	K-12.2	2,100
3/29/1977	K-12.2	2,072
3/30/1977	K-12.2	2,114
3/31/1977	K-12.2	2,116
4/1/1977	K-12.2	2,107
4/2/1977	K-12.2	1,729
4/3/1977	K-12.2	153
4/4/1977	K-12.2	1,576
4/5/1977	K-12.2	2,104
4/6/1977	K-12.2	2,150
4/7/1977	K-12.2	2,154
4/8/1977	K-12.2	2,147
4/9/1977	K-12.2	2,144
4/10/1977	K-12.2	2,154
4/11/1977	K-12.2	2,155
4/12/1977	K-12.2	2,155
4/13/1977	K-12.2	2,154
4/14/1977	K-12.2	2,155
4/15/1977	K-12.2	2,156
4/16/1977	K-12.2	2,155
4/17/1977	K-12.2	2,155
4/18/1977	K-12.2	776
4/19/1977		0
4/20/1977		0
4/21/1977		0
4/22/1977		0
4/23/1977		0
4/24/1977	K-12.3	120
4/25/1977	K-12.3	1,272
4/26/1977	K-12.3	1,587
4/27/1977	K-12.3	1,720
4/28/1977	K-12.3	1,770
4/29/1977	K-12.3	1,744
4/30/1977	K-12.3	1,736
5/1/1977	K-12.3	1,806
5/2/1977	K-12.3	1,773
5/3/1977	K-12.3	1,763
5/4/1977	K-12.3	1,825
5/5/1977	K-12.3	1,845
5/6/1977	K-12.3	1,807
5/7/1977	K-12.3	1,819
5/8/1977	K-12.3	1,850
5/9/1977	K-12.3	1,852
5/10/1977	K-12.3	1,820
5/11/1977	K-12.3	1,883
5/12/1977	K-12.3	1,921
5/13/1977	K-12.3	1,943
5/14/1977	K-12.3	1,945
5/15/1977	K-12.3	1,906
5/16/1977	K-12.3	1,927
5/17/1977	K-12.3	1,928
5/18/1977	K-12.3	1,202
5/19/1977	K-12.3	4
5/20/1977	K-12.3	703
5/21/1977	K-12.3	1,772
5/22/1977	K-12.3	1,875
5/23/1977	K-12.3	1,880
5/24/1977	K-12.3	1,876
5/25/1977	K-12.3	1,908
5/26/1977	K-12.3	1,914
5/27/1977	K-12.3	1,924
5/28/1977	K-12.3	1,851
5/29/1977	K-12.3	0
5/30/1977	K-12.3	0
5/31/1977	K-12.3	0
6/1/1977	K-12.3	0
6/2/1977	K-12.3	0
6/3/1977	K-12.3	0
6/4/1977	K-12.3	0
6/5/1977	K-12.3	765
6/6/1977	K-12.3	1,630
6/7/1977	K-12.3	1,876
6/8/1977	K-12.3	1,918
6/9/1977	K-12.3	1,932
6/10/1977	K-12.3	1,923
6/11/1977	K-12.3	1,976
6/12/1977	K-12.3	1,977
6/13/1977	K-12.3	1,943
6/14/1977	K-12.3	1,945
6/15/1977	K-12.3	1,927
6/16/1977	K-12.3	1,941
6/17/1977	K-12.3	1,730
6/18/1977	K-12.3	211
6/19/1977	K-12.3	693
6/20/1977	K-12.3	423
6/21/1977	K-12.3	0
6/22/1977	K-12.3	0
6/23/1977	K-12.3	0
6/24/1977	K-12.3	12
6/25/1977	K-12.3	836
6/26/1977	K-12.3	1,151
6/27/1977	K-12.3	1,293
6/28/1977	K-12.3	836
6/29/1977		0
6/30/1977		0
7/1/1977		0
7/2/1977		0
7/3/1977		0
7/4/1977	K-12.4	160
7/5/1977	K-12.4	943
7/6/1977	K-12.4	1,557
7/7/1977	K-12.4	1,622
7/8/1977	K-12.4	1,645
7/9/1977	K-12.4	1,649
7/10/1977	K-12.4	1,649
7/11/1977	K-12.4	1,643
7/12/1977	K-12.4	1,675
7/13/1977	K-12.4	1,672
7/14/1977	K-12.4	1,690
7/15/1977	K-12.4	1,715
7/16/1977	K-12.4	1,721
7/17/1977	K-12.4	1,730
7/18/1977	K-12.4	1,724
7/19/1977	K-12.4	1,751
7/20/1977	K-12.4	1,745
7/21/1977	K-12.4	1,723
7/22/1977	K-12.4	1,780
7/23/1977	K-12.4	1,784
7/24/1977	K-12.4	1,799
7/25/1977	K-12.4	1,802
7/26/1977	K-12.4	1,779
7/27/1977	K-12.4	1,777
7/28/1977	K-12.4	1,796
7/29/1977	K-12.4	1,833
7/30/1977	K-12.4	1,818
7/31/1977	K-12.4	1,849
8/1/1977	K-12.4	1,839
8/2/1977	K-12.4	1,813
8/3/1977	K-12.4	1,855
8/4/1977	K-12.4	1,851
8/5/1977	K-12.4	1,877
8/6/1977	K-12.4	1,868
8/7/1977	K-12.4	1,847
8/8/1977	K-12.4	1,858
8/9/1977	K-12.4	1,852
8/10/1977	K-12.4	1,855
8/11/1977	K-12.4	1,868

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

8/12/1977	K-12.4	1,875
8/13/1977	K-12.4	1,882
8/14/1977	K-12.4	1,890
8/15/1977	K-12.4	1,093
8/16/1977	K-12.4	48
8/17/1977	K-12.4	859
8/18/1977	K-12.4	1,246
8/19/1977	K-12.4	1,488
8/20/1977	K-12.4	1,658
8/21/1977	K-12.4	1,697
8/22/1977	K-12.4	64
8/23/1977		0
8/24/1977		0
8/25/1977		0
8/26/1977		0
8/27/1977		0
8/28/1977		0
8/29/1977		0
8/30/1977		0
8/31/1977		0
9/1/1977		0
9/2/1977		0
9/3/1977		0
9/4/1977		0
9/5/1977		0
9/6/1977		0
9/7/1977		0
9/8/1977		0
9/9/1977		0
9/10/1977		0
9/11/1977		0
9/12/1977		0
9/13/1977		0
9/14/1977		0
9/15/1977		0
9/16/1977		0
9/17/1977		0
9/18/1977		0
9/19/1977		0
9/20/1977		0
9/21/1977		0
9/22/1977		0
9/23/1977		0
9/24/1977		0
9/25/1977		0
9/26/1977		0
9/27/1977		0
9/28/1977		0
9/29/1977		0
9/30/1977		0
10/1/1977		0
10/2/1977		0
10/3/1977		0
10/4/1977		0
10/5/1977		0
10/6/1977		0
10/7/1977		0
10/8/1977		0

10/9/1977		0
10/10/1977		0
10/11/1977		0
10/12/1977		0
10/13/1977		0
10/14/1977		0
10/15/1977		0
10/16/1977		0
10/17/1977		0
10/18/1977		0
10/19/1977		0
10/20/1977		0
10/21/1977		0
10/22/1977		0
10/23/1977		0
10/24/1977		0
10/25/1977		0
10/26/1977		0
10/27/1977		0
10/28/1977		0
10/29/1977		0
10/30/1977		0
10/31/1977		0
11/1/1977		0
11/2/1977		0
11/3/1977		0
11/4/1977		0
11/5/1977		0
11/6/1977		0
11/7/1977		0
11/8/1977		0
11/9/1977		0
11/10/1977		0
11/11/1977		0
11/12/1977		0
11/13/1977		0
11/14/1977		0
11/15/1977		0
11/16/1977		0
11/17/1977		0
11/18/1977		0
11/19/1977		0
11/20/1977		0
11/21/1977	K-13.1	215
11/22/1977	K-13.1	1,047
11/23/1977	K-13.1	1,376
11/24/1977	K-13.1	1,481
11/25/1977	K-13.1	1,490
11/26/1977	K-13.1	1,655
11/27/1977	K-13.1	1,794
11/28/1977	K-13.1	1,858
11/29/1977	K-13.1	1,815
11/30/1977	K-13.1	1,824
12/1/1977	K-13.1	1,821
12/2/1977	K-13.1	1,822
12/3/1977	K-13.1	1,880
12/4/1977	K-13.1	1,952
12/5/1977	K-13.1	1,274

12/6/1977	K-13.1	0
12/7/1977	K-13.1	0
12/8/1977	K-13.1	177
12/9/1977	K-13.1	1,511
12/10/1977	K-13.1	2,021
12/11/1977	K-13.1	2,037
12/12/1977	K-13.1	1,963
12/13/1977	K-13.1	2,023
12/14/1977	K-13.1	1,998
12/15/1977	K-13.1	2,029
12/16/1977	K-13.1	2,084
12/17/1977	K-13.1	2,094
12/18/1977	K-13.1	2,099
12/19/1977	K-13.1	2,114
12/20/1977	K-13.1	2,126
12/21/1977	K-13.1	2,131
12/22/1977	K-13.1	2,137
12/23/1977	K-13.1	2,175
12/24/1977	K-13.1	2,170
12/25/1977	K-13.1	264
12/26/1977	K-13.1	98
12/27/1977	K-13.1	975
12/28/1977	K-13.1	1,559
12/29/1977	K-13.1	1,362
12/30/1977	K-13.1	95
12/31/1977	K-13.1	1,483
1/1/1978	K-13.1	2,065
1/2/1978	K-13.1	2,177
1/3/1978	K-13.1	2,171
1/4/1978	K-13.1	2,211
1/5/1978	K-13.1	2,206
1/6/1978	K-13.1	2,232
1/7/1978	K-13.1	2,234
1/8/1978	K-13.1	2,155
1/9/1978	K-13.1	2,267
1/10/1978	K-13.1	2,230
1/11/1978	K-13.1	2,306
1/12/1978	K-13.1	2,310
1/13/1978	K-13.1	2,303
1/14/1978	K-13.1	2,313
1/15/1978	K-13.1	2,333
1/16/1978	K-13.1	2,356
1/17/1978	K-13.1	1,658
1/18/1978		0
1/19/1978		0
1/20/1978		0
1/21/1978		0
1/22/1978		0
1/23/1978		0
1/24/1978		0
1/25/1978	K-13.2	137
1/26/1978	K-13.2	1,046
1/27/1978	K-13.2	716
1/28/1978	K-13.2	0
1/29/1978	K-13.2	0
1/30/1978	K-13.2	0
1/31/1978	K-13.2	138
2/1/1978	K-13.2	1,381

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

2/2/1978	K-13.2	1,842
2/3/1978	K-13.2	1,876
2/4/1978	K-13.2	1,905
2/5/1978	K-13.2	1,923
2/6/1978	K-13.2	1,959
2/7/1978	K-13.2	1,997
2/8/1978	K-13.2	2,001
2/9/1978	K-13.2	2,031
2/10/1978	K-13.2	2,016
2/11/1978	K-13.2	2,012
2/12/1978	K-13.2	2,021
2/13/1978	K-13.2	2,009
2/14/1978	K-13.2	2,001
2/15/1978	K-13.2	2,020
2/16/1978	K-13.2	2,060
2/17/1978	K-13.2	1,456
2/18/1978	K-13.2	129
2/19/1978	K-13.2	1,071
2/20/1978	K-13.2	1,913
2/21/1978	K-13.2	2,107
2/22/1978	K-13.2	2,113
2/23/1978	K-13.2	2,135
2/24/1978	K-13.2	2,142
2/25/1978	K-13.2	2,047
2/26/1978	K-13.2	2,115
2/27/1978	K-13.2	2,083
2/28/1978	K-13.2	2,104
3/1/1978	K-13.2	2,090
3/2/1978	K-13.2	2,088
3/3/1978	K-13.2	2,150
3/4/1978	K-13.2	2,150
3/5/1978	K-13.2	2,185
3/6/1978	K-13.2	2,097
3/7/1978	K-13.2	2,066
3/8/1978	K-13.2	2,124
3/9/1978	K-13.2	2,182
3/10/1978	K-13.2	2,193
3/11/1978	K-13.2	2,187
3/12/1978	K-13.2	2,182
3/13/1978	K-13.2	2,181
3/14/1978	K-13.2	2,053
3/15/1978	K-13.2	2,136
3/16/1978	K-13.2	2,161
3/17/1978	K-13.2	2,174
3/18/1978	K-13.2	2,193
3/19/1978	K-13.2	2,200
3/20/1978	K-13.2	2,200
3/21/1978	K-13.2	2,196
3/22/1978	K-13.2	2,181
3/23/1978	K-13.2	2,180
3/24/1978	K-13.2	2,180
3/25/1978	K-13.2	2,180
3/26/1978	K-13.2	2,188
3/27/1978	K-13.2	1,513
3/28/1978		0
3/29/1978		0
3/30/1978		0
3/31/1978		0

4/1/1978		0
4/2/1978		0
4/3/1978		0
4/4/1978		0
4/5/1978		0
4/6/1978		0
4/7/1978		0
4/8/1978	K-13.3	391
4/9/1978	K-13.3	1,020
4/10/1978	K-13.3	1,497
4/11/1978	K-13.3	1,230
4/12/1978	K-13.3	1,561
4/13/1978	K-13.3	1,119
4/14/1978	K-13.3	0
4/15/1978	K-13.3	813
4/16/1978	K-13.3	1,366
4/17/1978	K-13.3	1,600
4/18/1978	K-13.3	1,795
4/19/1978	K-13.3	1,810
4/20/1978	K-13.3	1,829
4/21/1978	K-13.3	1,866
4/22/1978	K-13.3	1,873
4/23/1978	K-13.3	1,884
4/24/1978	K-13.3	1,889
4/25/1978	K-13.3	1,879
4/26/1978	K-13.3	1,891
4/27/1978	K-13.3	1,928
4/28/1978	K-13.3	1,943
4/29/1978	K-13.3	1,942
4/30/1978	K-13.3	1,831
5/1/1978	K-13.3	1,925
5/2/1978	K-13.3	1,944
5/3/1978	K-13.3	1,947
5/4/1978	K-13.3	1,953
5/5/1978	K-13.3	1,956
5/6/1978	K-13.3	1,971
5/7/1978	K-13.3	1,982
5/8/1978	K-13.3	1,948
5/9/1978	K-13.3	670
5/10/1978	K-13.3	465
5/11/1978	K-13.3	1,449
5/12/1978	K-13.3	1,866
5/13/1978	K-13.3	2,007
5/14/1978	K-13.3	2,013
5/15/1978	K-13.3	2,014
5/16/1978	K-13.3	2,049
5/17/1978	K-13.3	2,064
5/18/1978	K-13.3	2,034
5/19/1978	K-13.3	2,070
5/20/1978	K-13.3	2,063
5/21/1978	K-13.3	2,050
5/22/1978	K-13.3	2,043
5/23/1978	K-13.3	2,039
5/24/1978	K-13.3	2,063
5/25/1978	K-13.3	2,086
5/26/1978	K-13.3	2,084
5/27/1978	K-13.3	2,087
5/28/1978	K-13.3	2,081

5/29/1978	K-13.3	2,088
5/30/1978	K-13.3	2,084
5/31/1978	K-13.3	2,077
6/1/1978	K-13.3	2,065
6/2/1978	K-13.3	2,059
6/3/1978	K-13.3	2,066
6/4/1978	K-13.3	1,448
6/5/1978		0
6/6/1978		0
6/7/1978		0
6/8/1978		0
6/9/1978		0
6/10/1978		0
6/11/1978		0
6/12/1978		0
6/13/1978		0
6/14/1978		0
6/15/1978	K-13.4	35
6/16/1978	K-13.4	128
6/17/1978	K-13.4	0
6/18/1978	K-13.4	357
6/19/1978	K-13.4	25
6/20/1978	K-13.4	0
6/21/1978	K-13.4	5
6/22/1978	K-13.4	805
6/23/1978	K-13.4	1,343
6/24/1978	K-13.4	1,530
6/25/1978	K-13.4	1,588
6/26/1978	K-13.4	650
6/27/1978	K-13.4	14
6/28/1978	K-13.4	729
6/29/1978	K-13.4	1,284
6/30/1978	K-13.4	1,586
7/1/1978	K-13.4	1,650
7/2/1978	K-13.4	1,650
7/3/1978	K-13.4	1,658
7/4/1978	K-13.4	1,682
7/5/1978	K-13.4	1,680
7/6/1978	K-13.4	1,699
7/7/1978	K-13.4	1,727
7/8/1978	K-13.4	1,738
7/9/1978	K-13.4	272
7/10/1978	K-13.4	0
7/11/1978	K-13.4	3
7/12/1978	K-13.4	931
7/13/1978	K-13.4	1,667
7/14/1978	K-13.4	1,743
7/15/1978	K-13.4	1,747
7/16/1978	K-13.4	1,762
7/17/1978	K-13.4	1,760
7/18/1978	K-13.4	1,784
7/19/1978	K-13.4	0
7/20/1978	K-13.4	0
7/21/1978	K-13.4	126
7/22/1978	K-13.4	1,109
7/23/1978	K-13.4	1,652
7/24/1978	K-13.4	1,707
7/25/1978	K-13.4	1,798

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

7/26/1978	K-13.4	1,825
7/27/1978	K-13.4	1,815
7/28/1978	K-13.4	1,846
7/29/1978	K-13.4	1,866
7/30/1978	K-13.4	1,873
7/31/1978	K-13.4	1,864
8/1/1978	K-13.4	1,863
8/2/1978	K-13.4	1,859
8/3/1978	K-13.4	1,869
8/4/1978	K-13.4	1,904
8/5/1978	K-13.4	1,911
8/6/1978	K-13.4	1,931
8/7/1978	K-13.4	1,945
8/8/1978	K-13.4	1,960
8/9/1978	K-13.4	1,946
8/10/1978	K-13.4	1,946
8/11/1978	K-13.4	1,957
8/12/1978	K-13.4	1,944
8/13/1978	K-13.4	1,340
8/14/1978		0
8/15/1978		0
8/16/1978		0
8/17/1978		0
8/18/1978		0
8/19/1978		0
8/20/1978		0
8/21/1978		0
8/22/1978		0
8/23/1978		0
8/24/1978		0
8/25/1978		0
8/26/1978		0
8/27/1978		0
8/28/1978		0
8/29/1978		0
8/30/1978		0
8/31/1978		0
9/1/1978*		0
9/2/1978		0
9/3/1978		0
9/4/1978		0
9/5/1978		0
9/6/1978		0
9/7/1978		0
9/8/1978	K-1.1	1,731
9/9/1978	K-1.1	1,731
9/10/1978	K-1.1	1,731
9/11/1978	K-1.1	1,731
9/12/1978	K-1.1	1,731
9/13/1978	K-1.1	1,731
9/14/1978	K-1.1	1,731
9/15/1978	K-1.1	1,731
9/16/1978	K-1.1	1,731
9/17/1978	K-1.1	1,731
9/18/1978	K-1.1	1,731
9/19/1978	K-1.1	1,731
9/20/1978	K-1.1	1,731
9/21/1978	K-1.1	1,731
9/22/1978	K-1.1	1,731
9/23/1978	K-1.1	1,731
9/24/1978	K-1.1	1,731
9/25/1978	K-1.1	1,731
9/26/1978	K-1.1	1,731
9/27/1978	K-1.1	1,731
9/28/1978	K-1.1	1,731
9/29/1978	K-1.1	1,731
9/30/1978	K-1.1	1,731
10/1/1978	K-1.1	1,989
10/2/1978	K-1.1	1,989
10/3/1978	K-1.1	1,989
10/4/1978	K-1.1	1,989
10/5/1978	K-1.1	1,989
10/6/1978	K-1.1	1,989
10/7/1978	K-1.1	1,989
10/8/1978	K-1.1	1,989
10/9/1978	K-1.1	1,989
10/10/1978	K-1.1	1,989
10/11/1978	K-1.1	1,989
10/12/1978	K-1.1	1,989
10/13/1978	K-1.1	1,989
10/14/1978	K-1.1	1,989
10/15/1978	K-1.1	1,989
10/16/1978	K-1.1	1,989
10/17/1978	K-1.1	1,989
10/18/1978	K-1.1	1,989
10/19/1978	K-1.1	1,989
10/20/1978	K-1.1	1,989
10/21/1978	K-1.1	1,989
10/22/1978	K-1.1	1,989
10/23/1978	K-1.1	1,989
10/24/1978	K-1.1	1,989
10/25/1978	K-1.1	1,989
10/26/1978	K-1.1	1,989
10/27/1978	K-1.1	1,989
10/28/1978	K-1.1	1,989
10/29/1978	K-1.1	1,989
10/30/1978	K-1.1	1,989
10/31/1978	K-1.1	0
11/1/1978		0
11/2/1978		0
11/3/1978		0
11/4/1978		0
11/5/1978		0
11/6/1978		0
11/7/1978		0
11/8/1978		0
11/9/1978		0
11/10/1978		0
11/11/1978		0
11/12/1978		0
11/13/1978		0
11/14/1978		0
11/15/1978		0
11/16/1978		0
11/17/1978		0
11/18/1978		0
11/19/1978		0
11/20/1978		0
11/21/1978		0
11/22/1978		0
11/23/1978		0
11/24/1978		0
11/25/1978		0
11/26/1978		0
11/27/1978		0
11/28/1978		0
11/29/1978		0
11/30/1978		0
12/1/1978		0
12/2/1978		0
12/3/1978		0
12/4/1978		0
12/5/1978		0
12/6/1978		0
12/7/1978		0
12/8/1978		0
12/9/1978		0
12/10/1978		0
12/11/1978		0
12/12/1978		0
12/13/1978		0
12/14/1978		0
12/15/1978		0
12/16/1978		0
12/17/1978		0
12/18/1978		0
12/19/1978	K-1.2	0
12/20/1978	K-1.2	1,437
12/21/1978	K-1.2	1,437
12/22/1978	K-1.2	1,437
12/23/1978	K-1.2	1,437
12/24/1978	K-1.2	1,437
12/25/1978	K-1.2	1,437
12/26/1978	K-1.2	1,437
12/27/1978	K-1.2	1,437
12/28/1978	K-1.2	1,437
12/29/1978	K-1.2	1,437
12/30/1978	K-1.2	1,437
12/31/1978	K-1.2	1,437
1/1/1979	K-1.2	2,121
1/2/1979	K-1.2	2,121
1/3/1979	K-1.2	2,121
1/4/1979	K-1.2	2,121
1/5/1979	K-1.2	2,121
1/6/1979	K-1.2	2,121
1/7/1979	K-1.2	2,121
1/8/1979	K-1.2	2,121
1/9/1979	K-1.2	2,121
1/10/1979	K-1.2	2,121
1/11/1979	K-1.2	2,121
1/12/1979	K-1.2	2,121
1/13/1979	K-1.2	2,121
1/14/1979	K-1.2	2,121
1/15/1979	K-1.2	2,121

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

1/16/1979	K-1.2	2,121
1/17/1979	K-1.2	2,121
1/18/1979	K-1.2	2,121
1/19/1979	K-1.2	2,121
1/20/1979	K-1.2	2,121
1/21/1979	K-1.2	2,121
1/22/1979	K-1.2	2,121
1/23/1979	K-1.2	2,121
1/24/1979	K-1.2	2,121
1/25/1979	K-1.2	2,121
1/26/1979	K-1.2	2,121
1/27/1979	K-1.2	2,121
1/28/1979	K-1.2	2,121
1/29/1979	K-1.2	2,121
1/30/1979	K-1.2	2,121
1/31/1979	K-1.2	2,121
2/1/1979	K-1.2	1,964
2/2/1979	K-1.2	1,964
2/3/1979	K-1.2	1,964
2/4/1979	K-1.2	1,964
2/5/1979	K-1.2	1,964
2/6/1979	K-1.2	1,964
2/7/1979	K-1.2	1,964
2/8/1979	K-1.2	1,964
2/9/1979	K-1.2	1,964
2/10/1979	K-1.2	0
2/11/1979	K-1.2	0
2/12/1979		0
2/13/1979		0
2/14/1979		0
2/15/1979		0
2/16/1979		0
2/17/1979		0
2/18/1979		0
2/19/1979		0
2/20/1979		0
2/21/1979		0
2/22/1979	K-1.3	0
2/23/1979	K-1.3	0
2/24/1979	K-1.3	0
2/25/1979	K-1.3	1,964
2/26/1979	K-1.3	1,964
2/27/1979	K-1.3	1,964
2/28/1979	K-1.3	1,964
3/1/1979	K-1.3	2,006
3/2/1979	K-1.3	2,006
3/3/1979	K-1.3	2,006
3/4/1979	K-1.3	2,006
3/5/1979	K-1.3	2,006
3/6/1979	K-1.3	2,006
3/7/1979	K-1.3	2,006
3/8/1979	K-1.3	2,006
3/9/1979	K-1.3	2,006
3/10/1979	K-1.3	2,006
3/11/1979	K-1.3	2,006
3/12/1979	K-1.3	2,006
3/13/1979	K-1.3	2,006
3/14/1979	K-1.3	2,006
3/15/1979	K-1.3	2,006
3/16/1979	K-1.3	2,006
3/17/1979	K-1.3	2,006
3/18/1979	K-1.3	2,006
3/19/1979	K-1.3	2,006
3/20/1979	K-1.3	2,006
3/21/1979	K-1.3	2,006
3/22/1979	K-1.3	2,006
3/23/1979	K-1.3	2,006
3/24/1979	K-1.3	2,006
3/25/1979	K-1.3	2,006
3/26/1979	K-1.3	2,006
3/27/1979	K-1.3	2,006
3/28/1979	K-1.3	2,006
3/29/1979	K-1.3	2,006
3/30/1979	K-1.3	2,006
3/31/1979	K-1.3	2,006
4/1/1979	K-1.3	1,987
4/2/1979	K-1.3	1,987
4/3/1979	K-1.3	1,987
4/4/1979	K-1.3	1,987
4/5/1979	K-1.3	1,987
4/6/1979	K-1.3	1,987
4/7/1979	K-1.3	1,987
4/8/1979	K-1.3	1,987
4/9/1979	K-1.3	1,987
4/10/1979	K-1.3	1,987
4/11/1979	K-1.3	1,987
4/12/1979	K-1.3	1,987
4/13/1979	K-1.3	1,987
4/14/1979	K-1.3	1,987
4/15/1979	K-1.3	1,987
4/16/1979	K-1.3	1,987
4/17/1979	K-1.3	1,987
4/18/1979	K-1.3	1,987
4/19/1979	K-1.3	1,987
4/20/1979	K-1.3	0
4/21/1979		0
4/22/1979		0
4/23/1979		0
4/24/1979		0
4/25/1979		0
4/26/1979		0
4/27/1979		0
4/28/1979		0
4/29/1979		0
4/30/1979	K-1.4	0
5/1/1979	K-1.4	1,850
5/2/1979	K-1.4	1,850
5/3/1979	K-1.4	1,850
5/4/1979	K-1.4	1,850
5/5/1979	K-1.4	1,850
5/6/1979	K-1.4	1,850
5/7/1979	K-1.4	1,850
5/8/1979	K-1.4	1,850
5/9/1979	K-1.4	1,850
5/10/1979	K-1.4	1,850
5/11/1979	K-1.4	1,850
5/12/1979	K-1.4	1,850
5/13/1979	K-1.4	1,850
5/14/1979	K-1.4	1,850
5/15/1979	K-1.4	1,850
5/16/1979	K-1.4	1,850
5/17/1979	K-1.4	1,850
5/18/1979	K-1.4	1,850
5/19/1979	K-1.4	1,850
5/20/1979	K-1.4	1,850
5/21/1979	K-1.4	1,850
5/22/1979	K-1.4	1,850
5/23/1979	K-1.4	1,850
5/24/1979	K-1.4	1,850
5/25/1979	K-1.4	1,850
5/26/1979	K-1.4	1,850
5/27/1979	K-1.4	1,850
5/28/1979	K-1.4	1,850
5/29/1979	K-1.4	1,850
5/30/1979	K-1.4	1,850
5/31/1979	K-1.4	1,850
6/1/1979	K-1.4	1,988
6/2/1979	K-1.4	1,988
6/3/1979	K-1.4	1,988
6/4/1979	K-1.4	1,988
6/5/1979	K-1.4	1,988
6/6/1979	K-1.4	1,988
6/7/1979	K-1.4	1,988
6/8/1979	K-1.4	1,988
6/9/1979	K-1.4	1,988
6/10/1979	K-1.4	1,988
6/11/1979	K-1.4	1,988
6/12/1979	K-1.4	1,988
6/13/1979	K-1.4	1,988
6/14/1979	K-1.4	1,988
6/15/1979	K-1.4	1,988
6/16/1979	K-1.4	0
6/17/1979	K-1.4	0
6/18/1979	K-1.4	0
6/19/1979		0
6/20/1979		0
6/21/1979		0
6/22/1979		0
6/23/1979		0
6/24/1979		0
6/25/1979		0
6/26/1979		0
6/27/1979		0
6/28/1979		0
6/29/1979		0
6/30/1979		0

* - FY79 data based monthly totals, averaging over days operational per month.

TABLE 14. Daily Summary of Mark-18A OH Irradiation History, continued

REFERENCES

Ref. 1. N.P. Baumann to M.M. Anderson, Estimates of 134Cs, 137Cs, and 90Sr in Mk-18 Targets, DPST-79-481, August 30, 1979, Savannah River Laboratory, Aiken, SC

Ref. 2. DPSOP-134, SRP Reactor Assemblies, page 2204, Mark 18A, Savannah River Laboratory, Aiken, SC

Ref. 3. DPSTM-18-51-P, Technical Manual Californium Physics, 7/1/69, Savannah River Laboratory, Aiken, SC

Ref. 4. R.G. Baxter, Actinide Properties and Methods of Production, DP-1269, December 1972. Savannah River Laboratory, Aiken, SC

Ref. 5. D.A. Ward to L. Hibbard, Actinide Content of Mark 18 Outer Housings, RTM-4269, August 14, 1979. Savannah River Laboratory, Aiken, SC

Ref. 6. J.T. Berry to D.A. Ward, Actinide Content of Mark 18 Outer Housings, RTR-1825, Page 14-16, March 2, 1979, Savannah River Laboratory, Aiken, SC