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RESEARCH MATERIALS INVENTORY

June 30, 1973

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(USAEC)

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URANIUM - PLUTONIUM - THORIUM

RESEARCH MATERIALS INVENTORY
June 30, 1973

Batch Number	% ^{232}U	% ^{233}U	% ^{234}U	% ^{235}U	% ^{236}U	% ^{238}U	Quantity (g U)	Form
URANIUM-233:								
U-233-240A	0.6 ppb	99.9986	3 ppm	0.4 ppm	3 ppm	0.8 ppm	2.8056	U_3O_8
JH-1	~5.0 ppm	99.77	0.019	0.008	<0.001	0.208	1.4350	U_3O_8
U-233-MIT-1	0.47 ppm	99.92	0.018	0.0015	0.0002	0.056	2.3760	U_3O_8
U-233-SR-1	0.8 ppm	99.54	0.184	0.062	0.013	0.203	13.2950	U_3O_8
U-233-SR-1-M	0.8 ppm	99.54	0.184	0.062	0.013	0.203	12.9280	Metal
U-233-SR-1-R	0.8 ppm	99.54	0.184	0.062	0.013	0.203	37.4100	U_3O_8
U-233-SR-2-R	0.8 ppm	99.47	0.166	0.064	0.015	0.282	130.2810	U_3O_8
R-1	25.6 ppm	98.26	1.37	0.06		0.31	1.2820	U_3O_8
CT-1	5.0 ppm	98.22	1.111	0.039	0.002	0.624	64.9440	UO_2
PAD-SIC		97.84	<0.05	<0.05		2.16	0.1641	U_3O_8
PAD-SIC-1		97.84	<0.05	<0.05		2.16	0.0052	NO_3 Solution
SNM-4033		97.95					18.5790	Metal
							285.5049	
URANIUM-234:								
U-234-M-12	24 ppm	<0.0005	99.840	0.098	0.052	0.009	3.3650	U_3O_8
U-234-A		0.007	99.39	0.348	0.091	0.166	0.1770	U_3O_8
U-234-B		0.022	94.09	0.100	0.046	5.740	3.2360	U_3O_8
U-234-263A		<0.001	25.15	73.49	0.255	1.100	19.8220	U_3O_8
U-234-C		0.014	14.50	52.48	3.320	29.680	36.9450	U_3O_8
							63.5450	
URANIUM-235:								
U-235-179A			<0.0002	99.999	0.0004	0.0008	0.0030	U_3O_8
U-235-264B		<1 ppm	0.029	99.912	0.016	0.0414	6.7156	U_3O_8
U-235-BR-1		<1 ppm	0.029	99.912	0.016	0.0414	0.1694	U_3O_8
U-235-264C		<0.0005	0.036	99.887	0.027	0.050	171.0460[1]	U_3O_8
U-235-264CM		<0.0005	0.036	99.887	0.027	0.050	49.5330	Metal
U-235-264D		<0.0005	0.062	99.83	0.037	0.069	125.7830	U_3O_8
VS-2R			0.064	99.744	0.070	0.122	1.1550	U_3O_8

[1] Reserved for dosimetry program on December 10, 1971.

Batch Number	% ^{232}U	% ^{233}U	% ^{234}U	% ^{235}U	% ^{236}U	% ^{238}U	Quantity (g U)	Form
URANIUM-235 (continued)								
U-235-KC-1		0.018	0.035	99.680	0.178	0.089	7.6130	UO_2
U-235-120A			0.047	99.564	0.311	0.078	7.5250	U_3O_8
U-235-120AR		<0.0002	0.044	99.57	0.312	0.070	0.9060	U_3O_8
U-235-120AR2			0.047	99.564	0.311	0.078	8.0000	U_3O_8
U-235-120B			0.040	99.432	0.471	0.057	1.4060	U_3O_8
RT-1		<0.0003	0.390	99.33	0.030	0.246	0.5006	U_3O_8
U-235-120D			0.059	98.636	1.216	0.089	4.4040	U_3O_8
U-235-120DR		<0.0002	0.057	98.64	1.22	0.085	18.4600	U_3O_8
U-235-120F			0.260	98.208	0.937	0.595	152.5100	U_3O_8
U-235-9768		<0.01	1.20	97.68	0.15		45.6000	Metal
U-235-F-1			1.57	97.52	0.08	0.83	70.0000	UO_3
U-235-47-61A			1.10	93.34		5.55	1,000.0000	Metal
U-235-VR			1.09	93.34	<0.03	5.54	60.5170	U_3O_8
U-235-1-mil foil		<0.001	0.927	93.32	0.301	5.45	93.9194	Metal Foil
U-235-WH-1				93.26			274.4800	Metal Foil
PL-1			1.06	93.16	0.48	5.30	0.8533	UO_2
U-235-KZA-2				93.00			18.9300	Metal (plastic-coated strips)
U-235-FMR				93.00			1.0000	Metal Foil
U-235-HG-1				92.00			35.6900	Metal Foil
							2,156.7193	
URANIUM-236:								
U-236-201AA		<2 ppm	<2 ppm	25 ppm	99.996	10 ppm	0.0950	U_3O_8
U-236-201BB		<5 ppm	<5 ppm	0.0057	99.992	0.0020	0.0118	U_3O_8
U-236-176AR			0.0015	0.192	99.760	0.043	0.0720	U_3O_8
U-236-201T		0.082	0.0017	0.205	99.68	0.034	0.0820	U_3O_8
U-236-201TR-2		0.077	0.001	0.208	99.68	0.035	0.2720	U_3O_8
U-236-162A		<1 ppm	9 ppm	0.399	99.589	0.0114	0.0245	U_3O_8
U-236-201TR		0.002	0.004	0.460	99.43	0.108	0.1800	U_3O_8
U-236-201DM		<0.002	0.116	9.20	89.38	1.306	2.7030	Metal
U-236-201DR		<0.001	0.119	9.29	89.29	1.32	28.7410	U_3O_8
U-236-201DM-R		0.001	0.122	9.35	89.20	1.33	2.0210	U_3O_8
U-236-176A-3			0.009	0.961	80.66	18.37	2.2190	U_3O_8
FU-236-6		0.08	1.87	40.90	42.29	14.86	961.4800	U_3O_8
							997.9013	

Batch Number	% ^{232}U	% ^{233}U	% ^{234}U	% ^{235}U	% ^{236}U	% ^{238}U	Quantity (g U)	Form
URANIUM-238:								
Q-505			0.2 ppm	0.5 ppm		99.9999	0.0083	U_3O_8
U-238-250-A			<0.5 ppm	2.4 ppm	<0.5 ppm	99.999	9.0090	U_3O_8
U-238-271B		<1 ppm	<1 ppm	6 ppm	<1 ppm	99.999	194.3820	U_3O_8
U-ES-Z		<1 ppm	<1 ppm	11 ppm	<1 ppm	99.999	823.4010	U_3O_8
U-ES-ZM		<1 ppm	<1 ppm	11 ppm	<1 ppm	99.999	64.0000	Metal
U-238-105CR		<1 ppm	<1 ppm	22 ppm	<1 ppm	99.9975	94.6950	U_3O_8
U-238-169CR		2 ppm	1 ppm	60 ppm	1 ppm	99.993	13.4000	U_3O_8
U-238-271D		<1 ppm	<1 ppm	87 ppm	<1 ppm	99.991	6.9210	U_3O_8
U-238-105BRM			<10 ppm	<10 ppm	~90 ppm	99.99	88.9500	Metal Foil
U-238-105BR-2			<10 ppm	<10 ppm	~90 ppm	99.989	12.2970	Metal Foil
FU-238-1MR		<0.001	1 ppm	0.0170	1 ppm	99.98	240.4860	U_3O_8
U-238-SK			6 ppm	0.0170	2 ppm	99.9824	96.2000	U_3O_8
BQ-41				0.019		99.981	18.1360	Metal
CAO-9				0.0192		99.9808	40.7420	U_3O_8
BQ-40-15 D-32				0.0196		99.9804	183.3800	UCl_3
BQ-40-6				0.0196		99.9804	19.1900	UF_4
U-238-A		<1 ppm	2 ppm	0.0198	<1 ppm	99.980	1,986.7500	U_3O_8
D-33 BQ-39				0.021		99.979	198.2870	UCl_4
CAO-7				0.0262		99.9738	1,732.0000	U_3O_8
U-238-1Z		<1 ppm	3 ppm	0.0268	3 ppm	99.973	191.9000	10-mil Foil
U-238-AS		<1 ppm	2 ppm	0.0274	2 ppm	99.972	175.9630	Scrap Metal
U-238-B		<2 ppm	5 ppm	0.0270	9 ppm	99.972	3,810.0000	U_3O_8
CAO-8				0.0291		99.9709	750.0000	U_3O_8
Q-1D				0.03		99.97	62.7304	UF_4
U-238-C		1 ppm	4 ppm	0.0322	1 ppm	99.9673	13,585.0000	U_3O_8
U-238-G		<1 ppm	3 ppm	0.0345	1 ppm	99.9652	69,094.0000	U_3O_8
BQ-39-3 D-26				0.035		99.965	40.1118	Threshold Foils
CAR-2				0.035		99.965	473.3500	Rod, 1/8 in.
U-238-E		<1 ppm	3 ppm	0.0356	<1 ppm	99.9641	40,560.0000	U_3O_8
Q-1				0.036		99.964	18.6210	UO_3
CAO-3				0.036		99.964	2,163.3400	U_3O_8
CAO-10		<5 ppm	<5 ppm	0.036	<3 ppm	99.964	1,668.0000	U_3O_8
U-238-F		<1 ppm	3 ppm	0.0358	<1 ppm	99.9639	46,108.0000	U_3O_8
U-238-K		<1 ppm	4 ppm	0.0361	3 ppm	99.9632	8,806.0000	U_3O_8
U-238-H		1 ppm	3 ppm	0.0364	1 ppm	99.9633	4,400.0000	U_3O_8
Q-4A		<1 ppm	3 ppm	0.0364	1 ppm	99.963	24,618.0000	U_3O_8
D-7 (50104)		<1 ppm	4 ppm	0.040	1 ppm	99.959	5,008.0000	U_3O_8
CAF-6				0.040		99.960	256.6860	Foil
U-238-M		<1 ppm	4 ppm	0.0347	<1 ppm	99.96	26,420.0000	U_3O_8
FU-238-4R		<2 ppm	3 ppm	0.0380	<2 ppm	99.96	8,565.0000	U_3O_8

Batch Number	% ^{232}U	% ^{233}U	% ^{234}U	% ^{235}U	% ^{236}U	% ^{238}U	Quantity (g U)	Form
URANIUM-238 (continued)								
DP-1 Foil				0.0400		99.96	4,686.1090	Metal Foil
U-238-N		<1 ppm	<6 ppm	0.04	<1 ppm	99.958	870.0000	Metal Pellets
U-238-O		<3 ppm	6 ppm	0.042	<5 ppm	99.957	701.0000	U_3O_8
$CAUF_4$-1				0.0234		99.9566	644.9000	UF_4
Q-1A D-37				0.049		99.951	34.2565	Metal
U-238-L		<1 ppm	5 ppm	0.0514	<1 ppm	99.95	53,772.0000	U_3O_8
U-238-DP-1R			0.0005	0.045	0.0002	99.95	6,635.0000	U_3O_8
D-39		<2 ppm	8 ppm	0.0715	0.0002	99.927	2,057.2826	U_3O_8
D-41				0.20		99.80	207.0000	Metal
D-41R				0.20		99.80	286.2750	Metal Disk
HYA-3				0.22		99.780	6,000.0000	Metal Foil Strips
							338,490.7596	
PLUTONIUM-238:	% ^{238}Pu	% ^{239}Pu	% ^{240}Pu	% ^{241}Pu	% ^{242}Pu	% ^{244}Pu	(g Pu)	
Pu-238143A	99.48	0.464	0.036	0.016	0.002		0.0057	PuO_2
Pu-238-97	97.38	1.67	0.887	<0.04	0.022	<0.001	1.3320	PuO_2
88RP	90.37	9.02	0.567	0.029	0.008		2.8457	PuO_2
Pu-238-SR-1M	79.53	17.06	2.97	0.333	0.108		15.8310	Metal Foil[1]
Pu-238-S-1	64.04	32.45	2.98	0.45	0.08		(~21,506 μCi)	Nitrate Solution
Pu-238-S-2	64.04	32.45	2.98	0.45	0.08		(9.2 μCi)	Nitrate Solution
							20.0144	
PLUTONIUM-239:								
277-AA	<1.2 ppm	99.998	12.6 ppm	0.9 ppm	1.4 ppm		2.8779	PuO_2
277-A	<0.0002	99.978	0.021	0.0005	0.0005		59.7660	PuO_2
ST-101		99.973	0.027	0.0001	0.0001		0.0200	PuO_2
ST-101R		99.973	0.027	0.0001	0.0001		0.0800	PuO_2
277-B	<3 ppm	99.955	0.041	0.002	0.002	<0.0003	99.9100	PuO_2
P-5-49B		99.18	0.81	0.01	<0.01		0.0998	NO_3 Solution
454A		99.12	0.875	0.014			0.9914	PuO_2
454A-M		99.12	0.875	0.014			0.0900	Metal
453B Oxide	<2 ppm	99.107	0.877	0.011	0.005	<0.0005	83.3710	Oxide
453B Metal		99.11	0.880	0.012			101.8960[2]	Metal
455A		99.10	0.888	0.014			3.8130	PuO_2
FP-22R	10 ppm	97.61	1.706	0.237	0.451	<0.001	219.2000	PuO_2
							572.1151	

[1] Alloyed with 1% Al.
[2] Reserved for dosimetry program on December 10, 1971.

Batch Number	%^{238}Pu	%^{239}Pu	%^{240}Pu	%^{241}Pu	%^{242}Pu	%^{244}Pu	Quantity (g Pu)	Form
PLUTONIUM-240:								
Pu-240-235C	<0.001	0.053	99.86	0.053	0.029	<0.0001	0.0888	PuO_2
Pu-240-157A	0.002	0.762	98.30	0.764	0.171		0.1320	PuO_2
Pu-240-274A	0.009	0.729	98.30	0.677	0.280	<0.001	141.0760	PuO_2
Pu-240-FP-19R	0.016	0.955	93.76	0.699	4.56	0.009	7.4500	PuO_2
							148.7468	
PLUTONIUM-241:								
185AR	<0.0011	<0.0001	0.0006	>99.9989	0.0005	0.0001	0.0500	PuO_2
185CR	<0.001	0.552	0.134	99.25	0.061	<0.001	0.0792	PuO_2
185CR-2	<0.0004	1.169	0.202	98.55	0.075	<0.0003	2.0220	PuO_2
185CR-3	<0.0005	0.070	0.131	99.72	0.077	<0.0005	3.0397	PuO_2
275AM	<0.02	0.6	3.0	93.7	2.7	<0.001	13.3670	Metal
102AR	-	1.11	4.74	93.27	0.88	-	0.2810	PuO_2
210B	<0.2	4.06	8.74	85.17	2.03	<0.04	0.5552	PuO_2
275B	<0.016	1.343	15.89	81.12	1.639	<0.001	0.9870	PuO_2
							20.3811	
PLUTONIUM-242:								
207AR	0.003	0.029	0.084	0.086	99.80	<0.0005	0.0087	PuO_2
290A	0.006	0.008	0.106	0.136	99.744	<0.0005	146.6700	PuO_2
136A	<0.006	0.010	0.115	0.138	99.736		0.0344	PuO_2
290B	0.052	0.047	0.420	0.543	98.94	0.001	4.3140	PuO_2
SR-3	0.165	0.041	1.276	0.124	98.26	0.189	0.3200	PuO_2
FP-16R	0.180	0.162	1.375	0.166	97.93	0.191	1.8000[1]	PuO_2
Pu-242-211AR-1M	0.022	1.49	2.90	3.04	92.55	0.002	5.2350	Metal
103A		1.96	3.96	2.61	91.47		0.0267	PuO_2
276B	<0.12	5.20	6.49	6.45	81.85	0.002	0.4560	PuO_2
FP-14R	0.525	3.55	11.960	6.800	77.16	0.015	30.8000	PuO_2
							189.6648	
PLUTONIUM-244:								
Pu-244-297A	<0.0009	0.005	0.242	0.063	0.911	98.78	1.2370	PuO_2

[1] Includes 200 mg reserved on March 22, 1973 for China.

Batch Number	Quantity (g U)	Form
NORMAL URANIUM:		
N-4	133.0000	Solution
N-5	123.8000	U_3O_8
N-6	2,212.1655	U_3O_8
N-7	121.7250	Metal
N-8	81.0000	UF_4
N-10	147.3000	UO_3
350	147.0000	U_3O_8
832	1,038.0000	UF_4
	4,003.9905	

THORIUM:	$\%^{228}Th$	$\%^{229}Th$	$\%^{230}Th$	$\%^{231}Th$	$\%^{232}Th$	(g Th)	
Th-1					100.0	900.000	Metal Powder
Th-2					100.0	525.0000	Metal Rod
Th-3					100.0	16.0000	Metal Wire
Th-4					100.0	373.0000	Metal Bar, Trimming
101					100.0	559.8480	ThO_2
Th-30-35					100.0	77.5424	Metal
BS-Th-1					99+	15.5390	ThO_2 [1]
Th-LAW-6	5 ppm	2 ppm	4 ppm	5 ppm	99.998	7,175.0070	Metal Foil
229-CR-1B	0.546	15.75	0.19		83.50	(14.40 μg)	Solution
229-ANL-R1						0.0003	On Nickel Foil
232-M-1						440.7162	5-mil Foil
232-M-3						462.6570	10-mil Foil
Th-230-272A		<0.001	99.89		0.11	0.0050	ThO_2
Th-230-272B			99.58		0.42	0.0025	ThO_2
Th-230-256A		<0.001	89.46		10.54	0.8220	ThO_2
Th-230-256B		<0.002	84.47		15.53	1.5410	ThO_2
F-Th-1R		<0.001	9.04		90.96	438.3970	ThO_2
						10,986.0774	

[1] Forty to fifty-year-old normal ThO_2.