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PROJECT

DATE

May 13, 1966

BATTELLE-NORTHWEST

RICHLAND, WASHINGTON

ISSUING

TITLE AND AUTHOR

COMPOSITION OF ENDING INVENTORY

APRIL 1966

R. O. Budd

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H. R. Freitag, Chief
Nuclear Materials Management Branch
U. S. Atomic Energy Commission
Richland Operations Office
Richland, Washington

Dear Mr. Freitag:

COMPOSITION OF ENDING INVENTORY

Submitted herewith are Source and Special Nuclear Material Composition of Ending Inventory Reports for the month of April, 1966.

Yours very truly,

ORIGINAL SIGNED BY
R. O. Budd

Manager
Nuclear Materials Management Section
ENVIRONMENTAL HEALTH AND
ENGINEERING DEPARTMENT

RO Budd:fo

MASTER

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NORMAL URANIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

Material Type Code 81

<u>Line</u>	(In Kilograms)	<u>Total</u>
35	Production Processes and Products	
70	Production Process Scrap	
71	Recoverable	<u>231</u>
74	Total Production Proc Scrap	<u>231</u>
75	Total Prod Proc and Prod	<u>231</u>
400	<u>NONPRODUCTION REACTORS AND R & D</u>	
405	<u>Inventory By Status Of Material</u>	
420	Usable, Stored for Definite Use	<u>50 987</u>
490	Total - Nonproduction Reactors and R & D	<u>50 987</u>
	Total Normal Uranium	<u>51 218</u>

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DEPLETED URANIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

<u>Line</u>	(In Kilograms)	<u>Total</u>		<u>Type Code</u>
		<u>U</u>	<u>U-235</u>	
1	Feed Material			
2	Preliminary to Processing			
4.1	In Cooling Basins	178	1	17
5	Total Preliminary to Proc	178	1	
10	Total Feed Material	178	1	
11	Material In Process			
12	In Processes			
22	Slugs - Bare - 15 Material	16 866	32	12
25	Total In Processes	16 866	32	
36	Total Material In Process	16 866	32	
62	Inactive Material			
63	Metal	182	Negl	11
71	Compounds	13	Negl	17
75	Total Inactive Material	195	Negl	
198	Total	17 239	33	
400	<u>NONPRODUCTION REACTORS AND R & D</u>			
405	<u>INVENTORY BY STATUS OF MATERIAL</u>			
420	Usable, Stored for Definite Use	2 149	6	15
		2 862	7	13
480	Irradiated Material in Storage	5 232	30	17
490	<u>Total - Nonproduction Reactors and R&D</u>	10 243	43	
	Total Depleted Uranium	27 482	76	

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ENRICHED URANIUM - LESS THAN 75 PERCENT
COMPOSITION OF ENDING INVENTORY

APRIL 1966

Line	(In Grams)	Total		Type Code
		U	U-235	
1	Material In Process			
15	Intermediate Products			
21	Slugs - Bare	423 653	4 176	22
23	UNE Solution	90 990	2 739	28
27	Total Intermediate Products	514 643	6 915	
28	Total Material in Process	514 643	6 915	
30	In Cooling Basins	324 052	2 971	22
65	Awaiting Recovery			
66	Available			
68	Miscellaneous Compounds	752 265	9 248	23
70	Turnings	43 545	662	23
71	Other Metal	31 477 396	348 732	23
77	Total Available	32 273 206	358 642	
83	Total Awaiting Recovery	32 273 206	358 642	
84	Inactive Material			
85	Metal	499	6	23
90	Total Inactive Material	499	6	
115	Total	33 112 400	368 534	
400	<u>NONPRODUCTION REACTORS AND R & D</u>			
405	<u>INVENTORY BY STATUS OF MATERIAL</u>			
420	Usable, Stored for Definite Use	2 637 521	59 350	25
450	In Miscellaneous R & D	45	1	28
470	Unirradiated Scrap Stored for Recovery	193 941	7 956	31
		1 814	52	27
480	Irradiated Material in Storage	16 860	501	28
490	<u>Total - Nonproduction Reactors and R & D</u>	2 850 181	67 860	
	Total Enriched Uranium LT 75%	35 962 581	436 394	

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ENRICHED URANIUM - MORE THAN 75 PERCENT
COMPOSITION OF ENDING INVENTORY

APRIL 1966

<u>Line</u>	(In Grams)	<u>Total</u>		<u>Type</u> <u>Code</u>
		<u>U</u>	<u>U-235</u>	
69	Awaiting Recovery			
70	Available			
72	Miscellaneous Compounds	306	285	38
75	Other Metal	4	4	38
81	Total Available	310	289	
88	Total Awaiting Recovery	310	289	
98	Total	310	289	
400	<u>NONPRODUCTION REACTORS AND R & D</u>			
405	<u>INVENTORY BY STATUS OF MATERIAL</u>			
420	Usable Stored for Definite Use	196 307	182 987	38
450	In Miscellaneous R & D	633	590	38
470	Unirradiated Scrap Stored for Recovery	59	55	38
480	Irradiated Material in Storage	76	71	38
490	<u>Total - Nonproduction Reactors and R & D</u>	<u>197 075</u>	<u>183 703</u>	
	Total Enriched Uranium MT 75%	<u>197 385</u>	<u>183 992</u>	

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PLUTONIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

Line	(In Grams)	Total	Type Code		
			51	52	53
1	Material in Process				
2	In Processes				
4.1	In Cooling Basins	301		301	
4.3	In Cooling Basins-LT 75	393	14	379	
20	Total In Processes	694	14	680	
34	Total Material in Process	694	14	680	
84	Inactive Material				
85	Metal	2 303	2 303		
86	Compounds	710	710		
87	Solutions	65	65		
90	Total Inactive Material	3 078	3 078		
93	Total	3 772	3 092	680	-0-
100	<u>NONPRODUCTION REACTORS AND R & D</u>				
105	<u>INVENTORY BY STATUS OF MATERIAL</u>				
120	Usable, Stored for Definite Use	464 911	422 959	24 861	17 091
150	In Miscellaneous R & D	1 287	1 279	8	
170	Unirradiated Scrap Stored for Recovery	12	7	5	
180	Irradiated Material in Storage	40 862	12	38 968	1 882
190	Total - Nonproduction Reactors & R & D	507 072	424 257	63 842	18 973
	Total Plutonium	510 844	427 349	64 522	18 973

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THORIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

(Material Type Code 88)

<u>Line</u>	(In Kilograms)	<u>Total</u>
400	<u>NONPRODUCTION REACTORS AND R & D</u>	
405	<u>INVENTORY BY STATUS OF MATERIAL</u>	
420	Usable, Stored for Definite Use	5 355
480	Irradiated Material in Storage	18
490	<u>Total - Nonproduction Reactors and R & D</u>	<u>5 373</u>
	Total Thorium	<u>5 373</u>

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URANIUM-233
COMPOSITION OF ENDING INVENTORY

APRIL 1966

Line	(In Grams)	Total		Type Code			
		U	U-233	71		73	
				U	U-233	U	U-233
1	Material In Process						
2	In Processes						
4	In Cooling Basins	22	22	22	22		
18	Total In Processes	22	22				
32	Total Material In Process	22	22	22	22		
80	Inactive Material						
83	Solution	21	19	1	1	20	18
86	Total Inactive Material	21	19	1	1	20	18
89	Total	43	41	23	23	20	18
100	<u>NONPRODUCTION REACTORS AND R & D</u>						
105	<u>INVENTORY BY STATUS OF MATERIAL</u>						
120	Usable, Stored for Definite Use	294	281	294	281		
190	Total - Nonproduction Reactors & R & D	294	281	294	281		
	Total Uranium Enriched with U-233	337	322	317	304	20	18

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DEUTERIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

(Material Type Code 86)

<u>Line</u>	(In Kilograms)	<u>Total</u>	
		<u>Heavy Water</u>	<u>Deuterium</u>
100	<u>NONPRODUCTION REACTORS AND R & D</u>		
105	<u>INVENTORY BY STATUS OF MATERIAL</u>		
120	Usable, Stored for Definite Use	16 099.7	3 236.0
140	In Reactors or Critical Assemblies	36 435.1	7 323.4
170	Unirradiated Scrap Stored for Recovery	8 213.1	1 650.9
190	<u>Total - Nonproduction Reactors and R & D</u>	<u>60 747.9</u>	<u>12 210.3</u>
	Total Deuterium	<u>60 747.9</u>	<u>12 210.3</u>

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ENRICHED LITHIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

(Material Type Code 61)

<u>Line</u>	(In Kilograms)	<u>Total</u>	
		<u>Lithium</u>	<u>Lithium⁶</u>
100	<u>NONPRODUCTION REACTORS AND R & D</u>		
105	<u>INVENTORY BY STATUS OF MATERIAL</u>		
120	Usable, Stored for Definite Use	<u>5</u>	<u>2</u>
190	<u>Total-Nonproduction Reactors and R & D</u>	<u>5</u>	<u>2</u>
	Total Enriched Lithium	<u>5</u>	<u>2</u>

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NEPTUNIUM-237
COMPOSITION OF ENDING INVENTORY

APRIL 1966

(Material Type Code 82)

<u>Line</u>	(In Grams)	<u>Total</u>
100	<u>NONPRODUCTION REACTORS AND R & D</u>	
105	<u>INVENTORY BY STATUS OF MATERIAL</u>	
150	In Miscellaneous R & D	3 669
190	<u>Total - Nonproduction Reactors and R & D</u>	<u>3 669</u>
	Total Neptunium-237	<u>3 669</u>

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PLUTONIUM-238
COMPOSITION OF ENDING INVENTORY

APRIL 1966

(Material Type Code 83)

<u>Line</u>	(In Grams)	<u>Total</u>	
		<u>Pu</u>	<u>Pu-238</u>
100	<u>NONPRODUCTION REACTORS AND R & D</u>		
105	<u>INVENTORY BY STATUS OF MATERIAL</u>		
150	In Miscellaneous R & D	<u>1.6</u>	<u>1.3</u>
190	<u>Total - Nonproduction Reactors and R & D</u>	<u>1.6</u>	<u>1.3</u>
	Total Plutonium-238	<u>1.6</u>	<u>1.3</u>

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TRITIUM
COMPOSITION OF ENDING INVENTORY

APRIL 1966

(Material Type Code 87)

<u>Line</u>	(In Grams)	<u>Total</u>
1	Material in Process	
2	In Processes	
4	In Cooling Basins	<u>1.11</u>
9	Total in Processes	<u>1.11</u>
17	Total Material in Process	<u>1.11</u>
67	Total Tritium	<u>1.11</u>

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