

NUCLEAR METALS, INC.

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MA.89-2

155 MASSACHUSETTS AVENUE
CAMBRIDGE 39, MASSACHUSETTS
TELEPHONE UNIVERSITY 4-5200

October 11, 1956

Mr. Saul Strauch
Technical Liason Division
United States Atomic Energy Commission
New York Operations Office
70 Columbus Avenue
New York 23, New York

MATERIALS 13

SUBJECT: Program for Uranium Recovery
(Ref: S. Strauch to A. R. Kaufmann, 8/30/56)

Dear Mr. Strauch:

With reference to Mr. K. E. Field's confidential memorandum of August 22, 1956, this is to advise that Nuclear Metals, Inc., has no facilities for scrap recovery. Also, our reply to Section III of the memorandum must be based on our operations during the fiscal year recently ended.

During that period, normal uranium scrap materials were returned to the National Lead Company of Ohio, and enriched scrap materials to the Y-12 plant of Carbide and Carbon, periodically and as soon as possible after their generation.

We are enclosing two lists of scrap materials shipped to those two installations during the period July 1, 1955 to and including June 30, 1956. These data were obtained by summarizing information previously furnished on SSShipping Forms covering the various consignments of scrap.

No attempt has been made at this site to determine economic aspects of discarding versus storing marginal grades of scrap.

MATERIALS 12-1
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NUCLEAR METALS, INC.

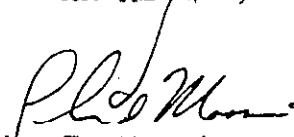
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We estimate that storage and return of normal uranium scrap costs about twenty-five cents per pound of contained uranium. This does not include the cost of labor necessary to salvage and pack the scrap. We have no estimate at present of the cost of returning enriched scrap materials, but know that these would be considerably higher, since containers cost more and the quantities are much less than with other types of scrap.

We hope that the information supplied, although delayed, will be useful.

Very truly yours,
NUCLEAR METALS, INC.


John T. Morris

NUCLEAR METALS, INC.

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October 4, 1956

ENRICHED URANIUM SCRAP GENERATED

Fiscal 1956 7/1/55 tai 6/30/56

Cat.	total net Lbs.	Impurities	Grams	
			U	
43 Scrap E. R. Metal > 75	0.41	None	186.	<u>235</u> 173.
49 Scrap Solutions (Less Than 75)	1456.21	0.5 gr. Zr° Th 27. gr. Zr 35. gr. Al° 1160. gr.	391.6	365.
49 Scrap Solutions (More Than 75)	6.06	0.5 gr. Zr°	26.	3.
50 Good Alloy	0.09	Zr 39.4 gr.	3.	2.8
53 Scrap Alloy (Less Than 75)	0.62	Cu° 0.62 lbs.		
(More Than 75)	64.39	Al° 51.03	= 6058.	5648.
(More Than 75)	81.23	Th° 46.8 Lbs. Cu° 2.15 Lbs. C 31.4 Lbs.	434.	40.4
(More Than 75)	12.59	Zr.=9.4 Cu°=1.5	394.	367.
(More Than 75)	4.00	Zr.=0.9 Cu°=.25 B = Traces	82.	76.
(More Than 75)	17.00	Zr=13.	898.5	837.

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<u>Cat.</u>	<u>Total Net Lbs.</u>	<u>Impurities</u>	<u>Grams</u>	
			<u>U</u>	<u>235</u>
54 Combustible Wastes & Residues (Less than 75%)	1.19	Cloth		
(More Than 75.)	210.6	Al ^o =211.1 gr.	70.4	65.6
(More Than 75.)	8.4	of Be. Paper, Cloth & Steel		
(More Than 75.)	25.5	Zr.=6.3grams B=trace	0.4	0.4
(More Than 75.)	41.8	Zr.=12. grams	1.14	1.07
55 Waste Liquid, Coolants w/ abrasive Grits, etc.				
(Less Than 75.)	197.6	^{Zr} Zr 0.2 gram	4.7	0.6
(More Than 75.)	181.5	Al=174.3 gram	58.	54.
(More Than 75.)	387.	Th=279. grams	5.7	4.5
(More Than 75.)	81.	Zr=27. grams	2.3	2.1

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155 MASSACHUSETTS AVENUE
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October 4, 1956

NORMAL URANIUM SCRAP GENERATED

Fiscal 1956 7/1/55 tai 6/30/56

<u>Cat.</u>		<u>Net Wt.</u>	<u>Net U Content</u>
77-1-1	Clean U Chips, SRO	14,417.76	14,128.90
77-1-2	U Hacksaw Chips, SRO	773.21	734.60
77-1-3	Contaminated U Chips	633.60	565.76
77-1-4	Contaminated U-Zr Alloy Chips	344.86	266.56
77-1-5	Clean U-Zr Alloy Chips	161.94	127.41
77-1-6	U-Si Alloy Chips	49.56	47.30
77-1-7	U-Mo Alloy Chips	20.17	17.60
77-1-9	U-Al Alloy Chips	180.59	36.97
77-2-1	Clean U Scrap, Solid(SRO)	10,287.09	10,287.09
77-2-2	Contam. U Scrap, Solid(SRO)	5,477.74	4,342.27
77-2-3	U-Mo Alloy Scrap, Solid(SRO)	29.81	26.23
77-2-4	Mixed U Alloys, Scrap	412.31	327.87
77-2-8	U-Al Solid Scrap	2,296.59	445.93
88-4-1	Waste U Oxides	90.19	71.16
		<u>35,175.42</u>	<u>31,425.65</u>
		NET WEIGHT	U CONTENT