

**ENGELHARD INDUSTRIES, INC.****BAKER PLATINUM DIVISION**112 ASTOR STREET  
NEWARK 2, N. J.  
BIGELOW 3-0020

January 14, 1958

Mr. Lyall Johnson  
U. S. Atomic Energy Commission  
Division of Civilian Application  
Washington 25, D. C.Subject: Spectrographic Standards Requirements  
Docket No. 70-90

Dear Mr. Johnson:

We have come to the point in the operation of our cold enriched uranium plant where we have an early need for a series of spectrographic standards for both isotopic analysis as well as for analysis of product purity.

We have recently installed a new spectrograph purchased from Applied Research. The unit is a two meter spectrograph equipped with 24,000 and 36,000 line gratings. On this machine we propose to run both the isotopic analyses and product purity.

We have recently been in contact with Mr. Walter Scheib who has advised us that standards of this type have previously been made available to industry at a reasonable cost. We would, therefore, like to arrange for the purchase of the following standard samples. Material which might be designated "well analyzed", will suit our purpose.

1. Isotopic standards. The following enrichments should be approximated: 1%, 2%, 3%, 5%, 16%, 18%, 20%, 22%, 25%, 27%, 30%, 80%, 85%, 90%, 93%.
2. Spectrographic standard. One sample, preferably depleted or normal uranium, as close as possible to the following specifications, (above or below is not material), we are required to meet in returning recovered  $U_3O_8$  to the Commission for the accounts of licensees:

Particle Size: Less than 200 mesh

Quality : Uranium weight  $\pm$  2% of stoichiometric  $U_3O_8$ 

Maximum Uranium Concentrations (parts per million or uranium):

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Be	0.5	Al	50
B	2.0	Cd	10
Li	5	Si	300
Co	10	Ca	500

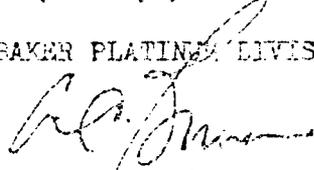
Total other cations - 1000

With regard to quantity, we would like to have approximately 5 grams each of the enriched uranium standards. With regard to the purity standard, approximately 500 grams would meet our needs.

We would appreciate your assistance in arranging for the purchase of these analyzed materials which we require for control and to establish the quality of our recovered products.

Very truly yours,

BAKER PLATINUM DIVISION



Lawrence O. Hurman

ICB:mb

cc: Mr. Walter Scheib