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LOS ALAMOS SCIENTIFIC LABORATORY
UNIVERSITY OF CALIFORNIA
LOS ALAMOS, NEW MEXICO

OFFICE MEMORANDUM

TO : Paul McConnell

DATE: September 21, 1959

FROM : R. E. Schreiber

SUBJECT: BERYLLIUM REQUIREMENTS FY 1960 AND 1961

SYMBOL : N-912

Destroyed, CD # ____

(Signature & Date)

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LANL Classification Group
P. Lang 8-5-98

The purpose of this memorandum is to record our current thinking regarding the ever-changing beryllium situation. I understand that the latest word you have is from Rod Spence and is to the effect that you should include $300K in FY 1960 and $300K in FY 1961 for Kiwi-B and the corresponding Zepo assembly. I went over the situation with N-1 and N-2 last Friday and conclude that the dollar values are correct but the uses are slightly different. We believe that the $300K in FY 1960 will cover both the Zepo requirements and one set of parts for Kiwi-B. We wish to retain the $300K item in FY 1961 for a second Kiwi-B set to be used both as spares and as a capability for a second reactor. According to our current schedule, the usage of the FY 1960 allocation will occur about as follows: The Kiwi-B Zepo components will be ordered about 1 November, 1959, and may amount to 500-1000 pounds. We are hoping to use existing bar and slab stock for most of the Zepo assembly but probably need to supplement this with special pieces. The Kiwi-B reactor order probably will not be placed until February or March of 1960 and delivery probably will not be completed until August, 1960. This leads us into the uncertainties of committing versus costing.

We now have on hand (at Brush) from a FY 1959 purchase approximately 3000 lb. of "new" beryllium stock at a cost of $187K. This is mixed 50/50 with beryllium scrap to make blanks for fabrication. We do not own any scrap beryllium and do not know its cost exactly. If it is $30/lb, we need to spend $90K to provide 6000 lb. of blank parts. We also do not know machining costs or machining losses. The finished weight of the Kiwi-B reflector components is 2500 lb, of which one piece weighs roughly 900 lb. In addition, we need about 700 lb for Zepo parts. We thus have a known requirement for 3200 lb in finished weight. At a machining cost of $50/lb, this requires $160K. The ratio of 6000 lb of raw material to 3200 lb of finished parts gives almost a factor of two for casting and machining losses. This would be excessive if it were not for the single large piece. A flaw in this piece requiring replacement would quickly eat into our reserve. Some of the reserve might also be required if Dumbo-A is reinstated in time to require Zepo mockup work in FY 1960.

The allowance of 300K for a second Kiwi-B assembly in FY 1961 appears to be about as close as we can estimate until we get more precise scrap losses and machining costs. In the FY 1961 estimates submitted in

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N-739, dated February 16, 1959, we also had an item of $450K for Dumbo-A beryllium. At the present time, the plans for Dumbo are still indeterminate but if it is rescheduled or if an alternate test reactor is started in this period, we will probably need this material, so it is recommended that the item be retained.

To summarize: In FY 1960, we wish to reinstate an item of $300K for beryllium stock and machining; in FY 1961, the total is $750K.

R. E. Schreiber
N-Division Leader

RES/jg

cc: D. P. MacMillan
J. D. Orndoff
F. P. Durham
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