

MONSANTO RESEARCH CORPORATION

MOUND LABORATORY

MIAMISBURG, OHIO

U. S. GOVERNMENT CONTRACT NO. AT-33-1-GEN-53

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June 17, 1966

AREA CODE 513
866-3311

MOUND LABORATORY-MONSANTO
CENTRAL FILE NO. 66-6-3480

Mr. W. B. Creamer, Area Manager
U. S. Atomic Energy Commission
P. O. Box 66
Miamisburg, Ohio 45342

Dear Mr. Creamer:

Enclosed are two copies of a trip report covering the June 9, 1966, visit to AEC Headquarters by L. B. Gnagey and R. E. Vallée. One of these copies may be forwarded to Mr. Werner Kern.

As I discussed with Mr. Walker, we are not normally in favor of distributing trip reports outside the Laboratory. However, we feel that an exception can be made in this case so that the understanding that Monsanto has of the quantities and timing discussed at that meeting is clear to DAO and DID.

Very truly yours,



L. B. Gnagey, Director
Development Department

LBG:blw
Enc. (2)
cc: Mr. W. B. Creamer (2)
bc: D. L. Scott ←
G. R. Grove
F. D. Lonadier
R. E. Vallée

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MONSANTO RESEARCH CORPORATION

Inter-Office Correspondence

From LOCATION Mound Laboratory, Miamisburg, Ohio

cc:

DATE June 17, 1966

THIS DOCUMENT CONSIST OF 3 PAGES

THIS IS COPY 1 OF 12 SERIES A

SUBJECT Trip Report to AEC Headquarters

June 9, 1966

REFERENCE :

MOUND LABORATORY-MONSANTO
66-6-318

TO :D. L. Scott

At the request of the Division of Isotope Development, L. B. Gnagey and R. E. Vallée visited the AEC headquarters, Germantown, Maryland, on June 9, 1966, to discuss ²³⁸PuO₂ microsphere production. E. A. Walker, DAO and S. A. Upson, ALO were also present during the discussions. The DID was represented by J. A. Powers, Werner Kern, W. K. Eister, J. S. Griffo, and George Jordy.

The meeting was prompted by a recent request for the DID to furnish five additional SNAP-19B fuel capsules. Three of the capsules are for the Dodge M (DOD) and two for Gemini (NASA). Both of these programs, if approved by Seaborg, are expected to have a higher priority than the current approved 19B's scheduled to be used for NIMBUS. The Dodge M will probably have the highest priority of all existing scheduled non-weapon uses.

The desired schedule for SNAP Sources is as follows:

No.	Type	Use	User	Number	Approx. Pu ²³⁸ Content	Date *
1	SNAP-19B**	Nimbus	NASA	2	2.0 Kg.	7/66
2	SNAP-19B**	Nimbus	NASA	2	2.0 Kg.	9/66
3	SNAP-19B***	Dodge M	DOD	2	2.0 Kg.	12/66
				1	1.0 Kg.	3/67
4	SNAP-19B***	Gemini	NASA	2	2.0 Kg.	2/67
5	SNAP-27**	ALSEP	NASA	1	2.7 Kg.	12/66
				1	2.7 Kg.	2/67
				2	5.4 Kg.	6/67
				1	2.7 Kg.	8/67
				1	2.7 Kg.	12/67
				1	2.7 Kg.	3/68

* These dates are not firm and shuffling of dates & programs will probably occur.

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Handwritten scribble

D. L. Scott

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June 17, 1966

** These are currently scheduled (see Master Nuclear Schedule CXXX 2742).

*** These are the recently requested additional capsules.

Other DID projected requirements are ~5.0 Kg. according to the current approved Master Nuclear Schedule CXXX-2742 or ~6.0 according to what they are now requesting. All of the above listed SNAP sources and ~1 Kg. of the other DID requirements are planned for PuO₂ microspheres.

Assuming that ²³⁸PuO₂ microspheres for five (5) SNAP-27's, for nine (9) SNAP-19's and an additional 0.7 Kg. for miscellaneous DID programs are approved, then 23.2 Kg. of Pu-238 as oxide microspheres would be required. With a production capacity of 14.0 Kg. during FY 1967 (this does not include the quantity of fuel available this fiscal year or any production from the "F" Lines) this would result in a shortage of 9.2 Kg. The following exercise was then made by J. A. Powers.

		<u>Production Capacity Deficiency (Excess)</u>
Case I	As above	9.2 Kg.
Case II	Case I, except produce all SNAP 27's except first two in "F" Line	1.1 Kg.
Case III	Case I, except do not produce 2 of the 19B Nimbus sources	7.2 Kg.
Case II & III		(0.9 Kg)

The balance of microspheres on hand July 1, 1967 was not considered in the above calculations.

A material balance shows that requirements are 5 to 7.5 Kg. greater than the material available during FY 1967 if all of

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the additional 19B's are required. The 5 Kg. is based on shipments totaling 13.2 Kg. from SRP during FY 1967. There is a recent shipping schedule from SRP (not at Mound at the time of the meeting) indicating shipments of only 10.5 Kg. during FY 1967. It is our understanding that the 10.5 Kg. quantity will be increased to about the original quantity of 13.2 Kg. These shortages are only approximate since projected recovery rates were based on production of only 4 SNAP-19B capsules. Another factor which could affect the material requirements is the efficiency of the microsphere production which at this time is only an estimate.

The additional requirements as well as the existing scheduled requirements are being reviewed at AEC headquarters. No time was established for a decision on which program(s) would be given priority.

L. B. Gnagey
L. B. Gnagey

R. E. Vallée
R. E. Vallée

LBG:REV:blw

- Copy 1A - D. L. Scott
- 2A - G. R. Grove
- 3A - L. B. Gnagey
- 4A - L. V. Jones
- 5A - F. D. Lonadier
- 6A - J. E. Bradley
- 7A - F. M. Huddleston
- 8A - D. P. Kelly
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- 11A - W. B. Creamer, DAO/AEC
- 12A - W. B. Creamer, DAO/AEC