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Mound Laboratory - Monsanto
Central File No. 56-1-15

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January 4, 1956

Dr. J. F. Eichelberger

Reference: Large Scale Production
of Polonium

Appended is a list of reports which would be of interest should a large scale use of polonium-210 develop. These reports are listed under two headings:

- I Reactors for the production of polonium-210, and
- II Bismuth distillation for the separation of polonium-210 from irradiated bismuth.

Listings of Mound Laboratory Reports of interest are given in Central File No. 56-1-13 and 56-1-14.

Josef W. Heyd

JWH:w

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I

REACTORS

- ANL - 5045 "CP 10 Reactor Project, Final Report Design Summary" by R. K. Winkleblack, June 1953.
- MLM-867 "Mound Laboratory Specifications and Design Criteria for Facilities "F" Project No. 2-242-2010", by E. A. Rembold, June 30, 1953.
- TID-2001, "Fluid Fuel Reactors with Uranium-Bismuth", by F. T. Miles, D. W. Bareis, Q. E. Dwyer, D. H. Gurinsky, I. Kaplan, R. J. Teitel, and C. Williams, Reactor Science and Technology Volume 2, No. 1 p 7, April 1952.
- TID-2016 "A Gas Cooled Liquid Metal Reactor", H. L. Falkenberry, C. J. Raseman, W. A. Robba, T. V. Sheehan, and L. D. Stoughton, Nuclear Science and Technology Volume 1, No. 1, p. 52, February 1955.

II

BISMUTH DISTILLATION

- MLM-1046, "Apparatus for Separating Polonium from Bismuth by Distillation" by M. McEwen, March 24, 1955.
- MLM-915 "The Separation of Polonium from Bismuth by Distillation", by R. W. Endebrock and P. M. Engle, August 1, 1953.
- MLM-987 "The Vapor Liquid Equilibrium of Solutions of Polonium in Liquid Bismuth", by E. F. Joy. In Manuscript.
- MLM-978 "Diffusion of Polonium from a solid Bismuth-Polonium Mixture", by G. L. Fox, W. H. Power, and H. H. Fox, In Manuscript.
- MLM-664 "The Distillation of Polonium from Liquid Bismuth", by R. W. Moshier and S. Barth, February 1, 1952.
- MLM-619 "Fundamental Aspects of Simple Batch Distillation of Bismuth-Polonium Mixtures", by H. J. Morris, June 14, 1951.
- MLM-189 "The Vapor Pressure of Polonium", by L. S. Brooks, Sept. 13, 1948; J. Amer. Chem. Soc., 77, 3211 (1955), J-60.

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