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Files (THRU: V. L. Parsegian, Director, Research Division)

November 2, 1953

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M. C. Kells, Research Division

Special Rereview
Final Determination
Unclassified
By: K. A. Walter
Date: 1980
P. F. Brown

COOPER VISIT CONCERNING BORON AND THORIUM

AT(30-1)1561

SYMBOL: RD:MCK

On the afternoon of October 27, 1953, Mr. J. Ciuzio and I visited the Cleveland offices of Cooper Metallurgical Associates. (See memorandum from J. Ciuzio to D. C. Moore, subject: "BMP Project - Visit to Cooper Metallurgical Associates" dated October 29, 1953.) The boron program was discussed in detail. The important features of this discussion were:

1. The $35-40,000 cost asked by Cooper for further development results from the necessity of consistently obtaining less than 0.3% Fe which is not ordinary Cooper practice. I had indicated our feeling that this cost was excessive since we were not asking Cooper to deviate significantly from his ordinary boron practice.

2. When I questioned them directly, Mr. Cooper and Mr. Weil agreed that our specifications could be met by using Mo cathodes since there was no Mo specification other than the overall requirement of 98% B.

3. Mr. Cooper and Mr. Weil agreed that it would take less work to meet our specifications by using a cathode other than iron. (They expressed surprise that we would have more tolerance for a cathode other than iron - however, they had been informed of this previously both by us and by our Cleveland office.)

Regarding thorium, Mr. Cooper stated that they had been making metal since 1918 by an electrochemical process. They apparently have no patents on the process but are unwilling to divulge the details. Their starting material is C.P. oxide or oxalate and Mr. Cooper stated that the process is amenable to continuous operation. He figures that they have made about 100 pounds of

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metal all totalled. We saw a sample of powder which was labelled 99.2% thorium. Mr. Cooper said the principal impurity is oxygen. He also showed us a thin sheet of metal made from the powder. I asked him if he would be willing to let us have a sample for our analysis. He agreed, but said he would prefer to make up a fresh batch so that the oxygen content would be minimized.

Cooper - 1561

CC: B. Sparks, Manager, Cleveland Area
D. C. Moore, Engineering & Constr.
F. Huke, Production
NYOO Reading (2)
RD File
RD Reading

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