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November 3, 1955

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FROM: M. S. BLOOMSBURG

WEEKLY REPORT - OCT. 28 - NOV. 3, 1955
300-M AREA - SAVANNAH RIVER PLANT

I. ITEMS REQUESTED OF ENGINEERING1. Extended Surface Natural Uranium Elements

Engineering has been requested to expedite design and construction of a Mark III element production facility in the 300-M Area in effort to attain a goal started July 1, 1957. They have also been requested to prepare the Order-of-Magnitude estimate for two cases:

1. Production of Mark III plates on a 5-shift per week basis for one reactor operating at a power level of 1800 megawatts.
2. Production of Mark III plates on a 21-shift per week basis for a total of approximately 8,000 megawatts of reactor power.

2. Extended Surface Enriched Uranium Tubes

A revision to the original Scope-of-Work sent to Engineering for design of an enriched fuel tube production facility (in conjunction with the thorium program) is being prepared. The revised basis will provide for manufacture of Mark VI fuel tubes on a 15-shift per week basis for four reactors operated at a total power level of 6400 megawatts with a lithium-aluminum target. Goal startup date for this facility will also be July 1, 1957.

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II. ITEMS OF INTEREST

Hollow Uranium Slugs

Approximately 200 spire cap-to-can welds have been made on hot press bonded hollow slugs at SRP to date. Experience with more recent SEP pieces has shown considerable improvement over the 10% rejects experienced on the initial lot. No more spire bottom welds have been made at the plant as yet.

Sylvania recently prepared two mandrels for checking bore tolerances and forwarded one to SRP for use in initial inspections. Application of this test at SRP has resulted in rejection of some 75% of the most recent shipments received from SEP. The difficulty is apparently due to warping and is currently under investigation.

Shipments from Sylvania are running behind schedule. To date 626 large diameter pieces have been received at SRP. It now appears likely that we will not have the desired 1050 acceptable pieces available by November 15 for the R-8 loading.

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