A-84-019
57-9

[redacted]

1 - Hood Worthington
2 - File 1 (CHG, GDG, HW)
3 - File 2 (GDG, Technical)
4 - R. M. Evans
5 - R. M. Evans
6 - J. B. Miles
7 - H. L. Anderson [redacted]
8 - Chronological

CLASSIFICATION CANCELLED
PER DOC REVIEW JAN. 1978

September 9, 1943

MEMORANDUM

TO: H. WORTHINGTON

FROM: H. L. ANDERSON

PROJECT 58 SMX CEW

A review of the test program for Project 58-SMX CEW dated 8/10/43 was made by Wende, Drew, and Anderson. The arrangement contemplated differs in several respects from the one now being considered for Hanford. This is particularly true of the shield and water connection arrangements.

In connection with the 6-day service run, it should be noted that the temperature distribution between graphite and aluminum tube will be different than at Hanford so that some of the tests will have only an indirect bearing on actual conditions.

Additional tests which might prove valuable are:

A. Study of what happens to the aluminum tube when the shield is displaced relative to the graphite. Is the transition between the "gun barrel" and the graphite hole too sharp?

B. Measurement of heat transfer coefficients graphite to graphite and graphite to aluminum. This might be done by running hot water through some tubes, cold water through others. Some additional provision for thermocouples might be desirable.

C. In connection with test of tube withdrawal after loading, a comparison should be made between the tubes in the blocks with joints and those in the blocks without joints.

D. In the 6-day service run, the graphite displacement might be observed after several temperature [illegible]

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VERIFIED UNCLASSIFIED
PUBLICLY RELEASABLE
LANL Classification Group
M. Pautraz

[redacted]

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E. A test of tube withdrawal and general behavior under conditions of excessive water pressure might be made. In particular, this could be tried with dead soft tubes to determine practical limits of operating pressure. It should be noted that the creep of aluminum will be slow and extended periods might be required for the tests.

R. L. Anderson

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