

DEPARTMENT OF STATE

THE UNDER SECRETARY

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July 5, 1949

REVIEWED AND NOT DECLASSIFIED

MEMORANDUM FOR THE SECRETARY

By [Signature]
For the U. S. Energy Research
and Development AdministrationSUBJECT: Attached Statement on Status of USSR Atomic Energy Project 12-6-76

The following comments on the attached memorandum will be useful in understanding its purpose and significance.

1. These semi-annual estimates were requested by the Chairman of the Joint Committee on Atomic Energy and are of necessity somewhat cryptic. They are also used by our military planners, which place a premium on being "safe," and therefore assume that the Soviets will solve the many problems remaining in a reasonably expeditious manner.

2. The possible bomb yield from the amount of uranium available is "RESTRICTED DATA" within the meaning of the McMahon Act. Therefore, it is requested that the estimate and this explanatory memorandum be returned directly to this office when you have finished with it.

3. Collaboration with the U.K. in this area of intelligence is maintained by the CIA. For the reason mentioned in para 2, only the current rate of USSR uranium mining, and accumulation of ores to date, have been arrived at in collaboration with U.K. intelligence.

4. This estimate is the first one to be made by the Joint Nuclear Energy Intelligence Committee, composed of State (Joseph Chase of my office), Army, Navy, Air, AEC, and CIA members, in which positive reliable intelligence substantiates what were previously educated guesses on Soviet progress. This intelligence is:

a. Definite proof that the Soviets have embarked on a large program to produce heavy water. If they intend to use only heavy water piles for plutonium production they cannot produce enough fuel for a bomb before mid-1951, the absolutely limiting factor being the stockpile of heavy water.

b. There are not even low grade rumors of Soviet manufacture within, or acquisition outside the USSR, of pile grade graphite. A uranium-graphite pile cannot, however, be dismissed.

c. The earliest possible date for the first bomb (mid-1950) takes into account evidence indicating that a chemical extraction plant which has the earmarks of a plutonium extraction plant has been completed in the USSR. Our evidence may not be correctly

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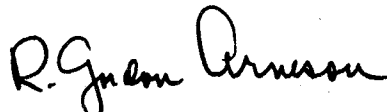
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interpreted, or it may mean that the Soviets, as we did during the war, have built a "flexible" extraction plant before they had anything to extract.

d. The estimated accumulated stocks of U_3O_8 to date is 1325-2150 tons, the lower figure being the most probable, the higher the maximum. By 1957 reserves of currently-worked mines should be exhausted, giving the USSR a total of about 2500 tons of uranium metal. The estimated annual Soviet production of U_3O_8 in tons, as of 1 July 1949 is between 570-850, with 470-700 coming from outside the USSR--Saxony (250-400), Czechoslovakia (200-250), and small quantities from Poland and Bulgaria. The USSR is hurriedly cleaning out the Saxony deposits and should exhaust them in about one year. The Czechoslovak mines should be exhausted between 1955-57 at current rates of mining.

e. The 1957 bomb stockpile is based on the total of 2500 tons of metal available by that time, and on the assumption that the USSR will extract twice the amount of plutonium that we have been extracting to date. We are now embarking on the higher rate by keeping the slugs longer in the pile, after a recalculation of the risks involved in such a procedure. The relatively short supply of uranium available to the USSR should make the Soviets more willing than we have been to take the extra risk. If they do not choose to do so, their maximum stockpile should be reduced, by as much as one-half.



R. Gordon Arneson

Attachment:

Memorandum from Admiral Hillenkoetter
re Status of USSR Atomic Energy Project,
1 July 1949.

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CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D. C.

CIA 23413

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INTELLIGENCE ASSISTANT
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OK

27 June 1949

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The Secretary
has seen

MEMORANDUM TO: ✓ Secretary of State
Secretary of Defense
Director of Intelligence,
General Staff, U. S. Army
Chief of Naval Intelligence
Director of Intelligence,
Office of Deputy Chief of Staff,
Operations, U. S. Air Force
Chairman, Atomic Energy Commission

SUBJECT : Status of the U.S.S.R. Atomic Energy Project.

Attached is a copy of the semi-annual report on the above subject that has been prepared by the Joint Nuclear Energy Intelligence Committee which is composed of representatives of the Departments of State, Army, Navy, and Air Force, the Atomic Energy Commission and the Central Intelligence Agency.

R. H. Hillenkoetter

R. H. HILLENKOETTER
Rear Admiral, USN
Director of Central
Intelligence

Encl:
As stated, dated 1 July 1949.

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JUL 1 1949

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NO. 2 OF 12 SERIES A

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CENTRAL INTELLIGENCE AGENCY

NUCLEAR ENERGY BRANCH

STATUS OF THE U.S.S.R. ATOMIC ENERGY PROJECT

1 July 1949

OSI/SR-10/49

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JUL 1 1949

This report has been prepared by the Joint Nuclear Energy
Intelligence Committee which is composed of members of the
Departments of State, Army, Navy, and Air Force, the Atomic
Energy Commission, and the Central Intelligence Agency.

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