SUBJECT: Recent National Intelligence Estimates on Soviet ICBM Capabilities

1. This memorandum summarizes revisions made since November 1957 to national intelligence estimates on: (a) the date at which the USSR would have a "first operational capability" with ICBMs, and (b) the date at which the USSR could have an operational capability with 500 ICBMs.

2. As used in national intelligence estimates, a "first operational capability" with ICBMs means that one launching facility has been completed, operating personnel have been trained and assigned to it, logistic and other support has been established, and the facility has been equipped with ICBMs which are reasonably certain to meet design specifications. We have assumed that the facility will be equipped with 10 ICBMs. Establishment of a "first operational capability" means that research and development, including test firing of missiles, has created and proved out a satisfactory weapon system.

3. Our estimates recognize that for reasons of urgency, particularly because of the potential political and psychological gains but also because of certain training and other benefits, it is possible that a "limited ICBM capability" might be established. Provided that launching facility, crew, and logistics had been made ready, missiles could be supplied to an operational unit before the weapon system had been fully proved out. Hence, we refer to a "limited capability with comparatively unproven ICBMs."

4. When a satisfactory weapon system has been created and proved out, a program to acquire substantial operational capabilities can proceed. Although major decisions and preparations would have been made considerably earlier, we date the beginning of this buildup from "first operational capability date." In the absence of evidence on Soviet intentions, we have arbitrarily selected operational capabilities with 100 and 500 ICBMs as yardsticks by which to measure the rate at which the USSR could produce and deploy ICBMs.

5. As used in our estimates, an "operational capability with 500 ICBMs" means that launching facilities have been completed, personnel have been trained and assigned, logistic and other support has been
established, and the facilities have been equipped with a total of 500 ICBMs. This requires the production of considerably more than 500 missiles, to allow for rejects, further research and development testing, quality control testing, troop training, etc. It should be noted, however, that even with this allowance the production of the missiles themselves is only a fraction of the effort involved in building a substantial operational capability.

6. In order to simplify a complicated subject somewhat, the time required for the USSR to build to an operational capability with 100 ICBMs is not treated specifically in this memorandum. In general, we have estimated that such a buildup would require about half the time required for a buildup to 500 ICBMs. This apparent discrepancy is accounted for by the length of time required to reach peak rates after the initiation of the production and deployment program.

7. Five national intelligence estimates treating Soviet ICBM capabilities (among other things, in some cases) have been published since November 1957. These estimates were distributed to the White House, the National Security Council, the Department of State, the Department of Defense, the Operations Coordination Board, the Atomic Energy Commission, and other authorized recipients. Their conclusions have been included in briefings given to committees of the Congress on 11 occasions during this period. Within the Executive Branch, distribution of either the complete estimate or its conclusions normally occurs within a few days of the official date of the estimate, which is the date of final action by the United States Intelligence Board. The estimate dated 25 November 1958, referred to below, was distributed 1 December 1958.

8. On 22–27 November 1957, the Preparedness Investigating Subcommittee, Senate Armed Services Committee, was given the following estimate:

First operational capability: latter half of 1958 to early 1960.

The Committee was told that these dates encompassed various views within the intelligence community, that CIA favored the earlier dates, but that the problem was under urgent review.

9. On 10 December 1957 the USIB approved a special estimate devoted solely to the Soviet ICBM program. This estimate, made in the light of two successful Soviet ICBM and two earth satellite launchings since August 1957, had been in preparation during November. It concluded:
First operational capability: Mid-1958 to mid-1959.

500 operational capability: Two or at most three years thereafter (mid-1960 to mid-1961, or at the latest mid-1962).

In this estimate, all agencies agreed that the date of first operational capability could not be pinned down to less than a one-year time-span on the basis of the available evidence. The earlier portion of the time-span given to the Preparedness Investigating Subcommittee was accepted by all agencies. It was agreed that a two to three year buildup to an operational capability with 500 ICBMs was feasible, and the emphasis was placed on two years.

10. On 30 May 1958 a revision to the 10 December 1957 estimate concluded:

First operational capability: Probably 1959. Possibility of limited ICBM capability in latter part of 1958 should not be disregarded.

500 operational capability: Two or at most three years after first operational capability (1961 or at the latest 1962).

This revision moved back by six months the probable date of first operational capability, because the rate of test firing to 3,500 n.m. since December 1957 had not been as high as expected. (There had been only three additional successful firings, plus one additional earth satellite.) This resulted automatically moved back by six months the time period for 500 ICBMs.

11. On 19 August 1958 the USIB approved an annual estimate on all Soviet missile and space programs. No lengthy re-analysis of the ICBM program was undertaken, and the estimate of 20 May 1958 was carried forward without change.

12. On 25 November 1958 a revision to the 19 August 1958 estimate concluded:


500 operational capability: Probably three years after first operational capability, but might be as little as two years (probably 1962, possibly as early as 1961).
The additional successful firings to 3,500 n.m. had occurred since late
May 1958. A complete re-examination of the entire Soviet ICBM program
was therefore undertaken by the intelligence community, with the assist-
ance of outside consultants.

The former first operational capability date was left un-
changed despite the lack of firings, because of: (a) the demonstrated
success of those ICBMs and earth satellite launches which had occurred;
(b) the known Soviet experience and ability in shorter-range missiles,
components, etc., and (c) a growing suspicion that the Soviet ICBM test-
ing philosophy was quite different from that which we had expected. How-
ever, the small number of firings was thought to downgrade still further
the possibility of even a limited capability in 1958, which was drawing
to a close.

A concurrent re-examination of the problems of missile produc-
tion and especially of launching facility construction, troop training,
and establishment of logistic and other support resulted in shifting from
two to three the probable time period required by the USSR to build
from a first operational capability to an operational capability with
500 ICBMs. A three-year buildup was retained as possibly within the USSR's
capacity.

13. On 22 December 1958 the USID approved an annual estimate on
the USSR, including its capabilities and policies in the political, eco-

demic, scientific, and military fields. With respect to the ICBM, it
concluded:

First operational capability: Probably 1959. Limited capa-
bility in 1958 possible but unlikely. Noted that a con-
siderable present operational capability could not be
ruled out as impossible if the USSR had adopted a very
risky test philosophy, involving fewer long-range tests
and greater reliance on component testing than we think
likely. The Soviets may have believed the political and
psychological value of ICBMs so great as to justify ex-
treme measures to attain a substantial and early deployment.

500 operational capability: Probably three years after
first operational capability, but might be as little
as two years (probably 1962, possibly as early as 1961).

After further consideration by the USID, taking into account statements
of Soviet officials at Geneva conference and elsewhere,
our evaluation of the possibility of a limited ICBM capability in 1958 was revised from "extremely unlikely" to "unlikely," and an explanatory note was added calling attention to our uncertainty about the Soviet test philosophy.

14. Among the revisions listed in the preceding paragraphs, the principal ones were: (a) on 20 May 1958 the probable date of the Soviet first operational capability with ICBMs was moved back six months from mid-1958 to late 1959 to some time during 1959, because the rate of test firing to 5,500 n.m. had not been as high as expected; (b) on 25 November 1958 the emphasis in the time-span estimated as probably required for the USAF to build from a first operational capability to an operational capability with 500 ICBMs was shifted from two years to three years, following a thorough re-examination of the magnitude of the tasks involved.

15. CIA has concurred in these revisions, and has viewed them as modifications to a basic estimate which is still generally valid and still points to a rapidly-emerging Soviet ICBM capability.

16. The 19 December 1958 estimate is our current estimate. We are continuing to review it in the light of all available evidence of Soviet ICBM testing, production, and deployment. We will revise it whenever additional facts or re-analysis warrants such revision.