MEMORANDUM FOR: Director of Central Intelligence

SUBJECT: Operational ICBM Sites

1. Although Mr. Khrushchev claims that the Soviet Union has missiles that can hit a target any place in the world with a nuclear warhead, and we have a great deal of firm evidence on the Soviet missile development program, and although we estimate that the Soviet Union now has an initial operational capability to fire these missiles against targets in the US, we do not know the location of a single operational site from which the Soviet Union is prepared to fire these missiles. This means:

   a. We do not actually know if there is any substance in Mr. Khrushchev's boasts at the present time.

   b. If the Soviet Union does have an initial operational capability to fire missiles against the US we do not know the number of missiles now ready, the rate at which missiles are being added to this capability, or whether the Soviet's operational concept involves hard sites, soft sites, a partially mobile system or an all mobile system.

   c. In spite of the great power of the Strategic Air Command, SAC has no means of protecting the US against Soviet
ICBMs because we are unable to provide them with the necessary target information concerning these weapons.

2. Although the Soviets claim that the world power balance has shifted, and we are entering into a critical period of negotiation in which relative power will have considerable weight, we are unable to provide the President and the Secretary of State with the hard facts about Soviet ICBMs to support our evaluation of the true Soviet power position. This cannot help but harm their ability to carry forward these negotiations.

3. The problem of ICBM deployment has had a top priority in the intelligence community for over a year. The Critical Collection Problems Committee has devoted great effort to the problem. A wide range of collection systems have been considered and all of any likely value have been tried or are now being carried forward. On the recommendation of the CCFC, as approved by the NSIB, NSA has greatly increased the resources devoted to the collection and exploitation of COMINT and ELINT that might produce information on ICBM deployment. The problem has been given the highest priority in the clandestine field.

4. Another major recommendation of the CCFC, also endorsed by the NSIB, was to employ the CHALICE program vigorously in an
attempt to find operational ICBM launch sites. Since that time there have been two CHALICE missions. Although both missions turned up a great deal of useful information, particularly that relating to Soviet defenses against SAC, neither mission revealed an operational ICBM launch site (as distinct from the R & D site at Tyura Tam).

5. The intelligence community obviously will continue to push for information on this problem through all likely avenues of attack and some useful information may be collected.

6. The only way, however, in which we can be reasonably sure that we will eventually find evidence on the Soviet operational missile site program will be through aerial photography. It has been widely accepted in the intelligence community that with aerial photography of the right area in the Soviet Union we have an excellent chance of identifying soft sites at any time and hard missile sites during the construction stage. Once a hard site has been completed, however, our chances of detecting it will be much less. We have, in general, two prospective sources of aerial photography, the CHALICE program and various satellite systems. The photography produced by the satellite systems during the next two or three most critical years will probably be of such a quality that we cannot count on finding missile sites on the film. Aside from exceptional good luck in this regard the best that we can count on is being able to determine suspicious areas which will require confirmation by other means. The CHALICE program is the only system likely to produce
photography of sufficient quality to assure us that we can find missile sites.

6. Throughout the life of the CRALICE program we have had considerable success in guiding the vehicle to the right areas for the collection of intelligence because we had good leads from other forms of intelligence. In the case of operational ICBM sites, however, we have no firm leads. The missions carried out during 1959 were directed to the areas selected by deducing suitable locations for Soviet ICBMs and reinforced by small amounts of questionable information. We are still in this unfortunate situation. The Ad Hoc Requirements Committee has agreed on a series of highest priority missions to be conducted in the future. These missions are also based in large part on logic and not upon firm information concerning the location of operational ICBM sites.

7. The only logical solution to the problem is to engage in a systematic search program of those areas in the Soviet Union most suitable for the location of ICBM sites. Because of the size of ICBMs and because of the emphasis on rail facilities at Kyura Tum, we believe that the Soviets will have either a rail-mobile or a rail-served ICBM system. This means that potential launch sites will probably be associated with the Soviet rail net, and the intelligence community is now engaged in a detailed study of that net to eliminate unsuitable areas and focus on areas of highest probability. We believe that, in the absence of good leads, the
only way to give us an answer concerning the present state of the 
Soviet ICBM program, with any high degree of assurance, is to search 
systematically a large proportion of the most likely portions of the 
Soviet rail net. This of course would give us coverage of other 
important targets in addition to ICBM launch sites. Most of the 
missions recommended by the Ad Hoc Requirements Committee at the 
present time are designed to cover part of the search area selected 
as well as those areas for which there is any shred of suspicious 
information. We will need several missions beyond those currently 
recommended by the ARC, however, if we are to adequately carry out 
our search for Soviet launch sites.

8. The progressive coverage of successive CHALICE missions will 
give us information on the location or absence of Soviet ICBM sites. 
The CHALICE missions are our best hope, and every CHALICE mission 
covering new territory in the Soviet Union makes it more likely 
that we will be able to solve this problem. At the very least, we 
will be able to eliminate broad areas of the Soviet Union from 
consideration, permitting us to focus all intelligence resources 
on a smaller and more strategic area. In addition, the accumulation 
of negative evidence should help us to strengthen our estimates 
concerning the maximum size of the Soviet ICBM program at this time.

9. A picture of one or more ICBM sites will provide essential 
information on operational concepts being employed and will provide 
significant leads with which to guide other collection efforts,
10. In view of the situation described above, it is recommended that we seek permission for an expanded use of the CHALICE system on a most urgent basis.

ROBERT AMORY, JR.
Chairman,
Critical Collection Problems Committee