

~~SECRET~~

*Master Copy*  
*[Signature]*  
*2*  
*0560*

PROBABLE SOVIET POSITION ON A CONTROLLED "CUT-OFF" OF  
FISSIONABLE MATERIAL PRODUCTION FOR WEAPONS PURPOSES

I. PROBLEM

To assess (a) the probable Soviet position on a "cut-off" of fissionable materials production and the relative weight of weapons requirements and other considerations in determining it; and (b) the likelihood of evasion if the Soviets accepted, including an estimate of the minimum likely annual quantity (or "threshold") of diverted or clandestinely produced fissionable material for which the Soviets might risk violation of an agreed cut-off. For estimating purposes we assume a cut-off date of 1 January 1963.

II. DISCUSSION

A. Military Factors

1. How much fissionable material will the Soviets probably have accumulated as of 1 January 1963?
2. To what extent will this meet estimated Soviet military requirements for the period 1963-70?
3. If more fissionable material will probably be required by the Soviets for military purposes after 1963, how much? When? How vital will these requirements

~~SECRET~~

~~SECRET~~

appear to be under varying circumstances?

4. What military limitations would the Soviets have to accept if a cut-off were enforced as of 1963? To what extent would Soviets regard these as offset by military advantages of stopping production of fissionable material in other countries?

5. What is the likely Soviet view on the US-proposed transfer of fissionable material already produced from weapons purposes to peaceful uses? What would their view be on linking this transfer to an agreement on controlled cut-off?

**B. Political Factors**

6. What are the political advantages and disadvantages of a "cut-off" from a Soviet point of view? What are the pro's and cons from their point of view of negotiating a separate agreement on a "cut-off"?

7. What is their likely view on the concurrent declaration of size and location of existing stockpiles, and how honest would any such declaration be?

~~SECRET~~

~~SECRET~~

8. What is their likely view on the gradual destruction of weapons stockpiles or their transfer to an international custodian? What would be their concept of parity in such a plan?

9. How would the Soviets evaluate the political risks of attempting illegal production of fissionable materials?

C. Technical Factors

10. What is the estimated capability of a cut-off control system?

a. How much fissionable material will the Soviets need to produce per year with or without transfer to peaceful uses of a proportion of their stockpiles: (1) for domestic uses; (2) for international aid programs? How many plants would need to be engaged in such production?

b. Assuming that all plants not needed for a above are closed under inspection, and that plants remaining open will produce for only the period required

~~SECRET~~

~~SECRET~~

each year to meet a above, about how much weapons material could be diverted from an operating plant under inspection per year:

- (1) with the benefit of complete past production records
- (2) with the benefit of only current production records.

c. What is the likelihood the Soviets will have, in being, by 1963 production facilities of varying sizes or capacity for plutonium and U-235 that are not known *or suspect* to us? What is the likelihood the Soviets will believe they can operate one or more of these facilities without detection for a period of one or more years?

d. How accurately could we assess the validity of any Soviet declaration of existing stockpiles?  
(Para. 7 above)

### III. KEY CONCLUSIONS

11. On the basis of aforementioned military, political and technical (i.e., feasibility of inspection

~~SECRET~~

~~SECRET~~

**factors:**

a. Would the Soviets be likely to accept a cut-off on 1 January 1963? With or without a concurrent transfer to peaceful uses? With what degree of inspection?

b. Assuming a positive answer to a above, to what extent would the Soviets consider that the potential gains from evasion would outweigh the risks?

c. If the answer to a above is positive, how far would the Soviets be likely to think they could go in evasion before the risks began to outweigh the gains?  
(How much illegal material might they attempt to produce?)

d. How might these Soviet views change over time?  
(1962-1970?)

~~SECRET~~