

Stoertz cautions against relying on published estimates of Soviet military production in US and other Western sources. Many of these estimates are derived indirectly from information about testing and deployment so they are subject to the same limitations in detection capabilities faced by national technical means.

After discussing American monitoring capabilities in general, the author proceeds to consider the monitoring implications of the House freeze resolution. NTMs would permit verification with only low confidence in the following areas: monitoring the production of missiles of all sizes and of the launchers of smaller systems such as short-range missiles, air defence and anti-submarine weapons; monitoring the deployment of smaller, short-range systems and cruise missiles; detecting the conversion of dual capable systems from conventional to nuclear missions; and distinguishing allowed safety modifications from prohibited performance improvements.

The CTB proposed in the resolution could be monitored with high confidence by a network of seismic stations in each country and an exchange of seismological data. A freeze on the production and deployment of nuclear weapons could be accomplished by shutting down large and easily identified weapons production facilities. IAEA safeguards could ensure that materials are not diverted from civilian nuclear power facilities to weapons production. Even with such safeguards, however, nuclear weapons could be produced clandestinely so that monitoring the production and stockpiling of more nuclear weapons could be accomplished with low confidence only.

On-site inspection is often proposed to solve difficult verification problems. Indeed, inspections on demand would yield high confidence in verifying a CTB and could contribute to confidence in monitoring large, long-range systems. However, on-site inspections would not detect weapons production in concealed alternative facilities and would have difficulty in monitoring small, short-range systems with nuclear warheads. Furthermore, there are other problems with on-site inspections: suspicious activities which warrant inspection-on-demand would have to be detected first by other means; the Soviets could delay demand inspections and thereby remove evidence of cheating prior to the inspection; and, in some instances, inspection may not be able to differentiate between prohibited activity and permitted activity (safety modifications, for example). Soviet reluctance to accept challenge inspections is another obstacle. For these reasons, reliance on on-site inspections as a supplement to NTMs is not a realistic possibility.

Rules and procedures agreed to in SALT negotiations would assist monitoring. These include: definitions and counting rules to distinguish delivery systems; procedures for dismantling, destruction and replacement which permit observation by NTMs; non-interference with NTMs; elimination or modification of ambiguous systems; and the exchange of information concerning the testing and introduction of new systems. An exchange of information including declarations of all ships carrying long-range cruise missiles by type and number could also facilitate verification of extra long-range cruise missiles with sea-based launchers.