

preserved. Furthermore, sealing of storage and production facilities and preservation of identity during transportation from storage to destruction is needed.

Tags preserve the verified identity of declared items for authentication from application when the treaty goes into effect through until destruction. Even the simplest tags require time to apply, are manpower intensive and because of the size of the stockpiles, require an enormous data base. A candidate system employs a paint with reflective particles in random orientation that can be uniquely identified by an inexpensive reader. The tag is sufficiently difficult to characterize and a counterfeiting methods are understood well enough to ensure integrity. The statistical strategy for stockpile tagging may be accomplished by either passive or active electronic identification. Even after tagging a substantial effort would be required to construct and implement an accounting and inventory control system for maintaining an updated databasis. These methods also indicate tampering and in the case of the active systems can communicate intrusion attempts in real time to a remote location.

Seals, containment and surveillance measures exploit natural boundaries such as walls or pipes, and afford continuity of knowledge by optical surveillance or motion detection either with or without communication. The principal applications are to provide unattended assurance of stockpile integrity by recording movement and by insuring the integrity of other analytical systems of the inspectorate. Closed circuit video systems are capable either of operating unattended for protracted periods with subsequent review of recorded "snapshots" of a protected scene or of remote image transmission. Portable units with similar but shorter operation capabilities, fiberoptic seals and data authentication systems also are available for the protection of aggregate stockpile or production units.

H. Sampling and transportation of samples

Different views were expressed on the desirability of the inspectors performing sampling. General agreement, however, prevailed that in cases of alleged use environmental samples have to be collected by the inspectors.

Detailed instructions concerning the packaging of the samples whenever they are transported should be given by the Technical Secretariat.