

It soon became obvious in the presentations and the subsequent discussions that destroying chemical weapons stocks, and former production facilities as well, are tasks considerably more complex and costly than the original production activities were. This is due to a number of factors including, inter alia, occupational and environmental safety requirements. Among these factors, occupational safety considerations are paramount.

It is noted in this respect that although national standards are today available as guidance for risk assessments and the establishment of design criteria for destruction plants and operations, international harmonization of such standards would be should in the future be considered. It was argued that in setting standards, requirements should be kept within limits justified by scientific evidence rather than unrealistic "zero" settings. In this respect, chemical warfare agents do not differ from other hazardous material. Also, the "Best available technics not entailing excessive cost" and the "Best practical environmental option" principles now in use within the EEC, were mentioned as a good starting point for further consideration.

A number of technical options are, in principle, available for destruction programs. Yet, current legislation in a number of countries as well as public perception reduce the number of truly available options for destroying chemical weapons to basically two : chemical degradation and incineration.

For a number of reasons, more recent destruction activities on larger scales have favoured incineration. The advantages here are that smaller amounts of waste material are generated (about a third as compared to the destruction of a similar amount of chemical warfare agents by hydrolysis), that process control and stability are easier to achieve (better predictability of the reaction independent of the composition of tactical mixtures and the like), and that a higher throughput can be achieved. That does not exclude the use of chemical degradation techniques under other circumstances, and in fact decisions about the best approach to destroy a chemical weapons stockpile should perhaps be taken on a case by case basis taking into account the properties of the agent(s) and the ammunition(s), plant characteristics, and site characteristics.

Due account has to be given to proper safety régimes at a destruction site : air contamination monitoring, monitoring of exhaust gases (real time or near real time stack monitoring), waste analysis to rule out contamination with undestroyed agent, proper waste treatment and disposal are all important.

An issue hinted at yet often not considered in this context is the destruction of old CWA identification kits as these may contain active agents.

Time requirements for the destruction of chemical stocks are typically considerable. So are costs. One example more