Conditions for on-site verification activities

It is assumed that the verification activities are to be carried out by analysts from other countries (in national or international teams). National verification teams from the country, whose stocks are being verified could of course at the same time undertake the same analysis.

In principle destruction of chemical agents (in bulk or in munition, etc.) must take place at any of the following premises:

(a) at or near production plants for chemical warfare agents (including munition filling installations);

(b) at or near existing stockpiles of chemical warfare agents or weapons;

(c) at special, perhaps mobile, destruction plants or facilities.

In the present context alternatives (a) and (b) probably will not be pertinent to discuss for reasons or secrecy presented above. Alternative (c) probably is the one to calculate with. As pointed out in the Introduction it seems possible for a part, which does not wish to disclose other secrets, to choose a destruction site, where such risks do not appear and is freely available for the verification analysts.

It is assumed in the following (with one exception) that the chemical nature of the agents shall not be disclosed by the verification activity. In most circumstances this need not be a necessary condition: obviously large parts of existing stockpiles most probably will consist of well-known chemical agents.

One further reason for secrecy might be that the proportions between different stockpiled agents should not be disclosed. However, this may be of importance only in the long run, and be of less importance as long as confidence building measures are being tested.

Verification by toxicity determination - toxicological verification

Basically this method utilizes the fact that thorough destruction of a toxic substance leads to non-toxic destruction products. This is valid irrespective of the type of substance. Thus, measuring the toxicity of the (known or unknown) substance going into and coming out from the destruction process, it is possible to verify that the substance has been destroyed. The various aspects of the method are described below.

A prerequisite for the method is that the substance being destroyed really is sufficiently toxic to be of interest as a chemical warfare agent - preferably supertoxic. Even if it can be envisaged that, for the purpose of evasion, other