Such public anxieties go well beyond the operation to destroy chemical weapons. It has to be very clear from the outset that the plant will not after completion of its task be converted to other tasks such as hazardous waste disposal unrelated to chemical weapons. While, in the Canadian case, technical design features were helpful to convince the public, in other countries such as the USA legal requirements have served the same end.

Under construction since 1985, the first full-scale CW destruction plant in operation, the USA's JACADS on Johnston Atoll, started test runs with live CW ammunition in June 1990 using the M55 GB rocket as the first sample (5). Further tests with M55 VX rockets and mustard gas projectiles are imminent. The technology used is ammunition-specific as far as disassembling is concerned, but incineration is the basic technical principle for decontaminating residual ammunition parts, and for destroying the chemical warfare agents themselves. Further tests for different ammunition types are under way and were described. In real life, the test runs demonstrated an ability to destroy about 13 rockets per hour (on average) - less than the original goal of 24 rockets per hour. Further tests and plant modifications are expected to increase that figure further. As for the liquid incinerator used to destroy the actual agent, the bottleneck was not the waste treatment system but the incinerator unit itself, due to the nature of the items to be treated.

The JACADS concept was described to be the technological basis for other, still to be built US destruction plants. Its overall cost was about US-$ 811 million.

At present, it is difficult to give precise figures on costs of destruction per CW agent tonnes. Canadian experience, although gathered in a slightly different context, amounts to about US-$ 4000 per tonne.

As a concept emerging from use in the civilian field (destruction of hazardous wastes), controlled explosion of CW ammunition in an environmentally sealed firing pool (aqueous solution with hydrolysing properties) was suggested as an alternative destruction techniques (6). In principle, several environmental limitations relevant for incineration process such as exhaust gas treatment could thus be overcome in a cost-effective manner. So far, that technology has been tested and in fact used with non-CW hazardous waste materials in France. Feasibility studies for destroying chemical weapons are under way. Assuming that these would turn out positively, this technology might under certain circumstances provide a cost-effective alternative to incineration.

The main technological aspects of the destruction of chemical weapons were also clearly summarized (7).

In USSR, the KUASI complex is designed for the destruction in the field conditions of faulty chemical munitions