1. Introduction

Sweden consistently attached great importance to the negotiations at the Conference on Disarmament on a global and verifiable convention prohibiting chemical weapons. Upon the successful completion of the negotiations, in September 1992, the focus was shifted to promoting the implementation of the Chemical Weapons Convention (CWC) and especially to facilitating the destruction of chemical weapons stocks within the prescribed ten year period in order to eliminate the need for any extensions of that time frame.

With this in mind, initial Swedish-Russian contacts were taken during the autumn of 1992, resulting in a preparatory meeting in Moscow between, inter alia, representatives for the Presidential Committee on Chemical and Biological Weapons Convention Problems, the Swedish Ministry of Foreign Affairs and the National Defence Research Establishment. The Russian side presented an overview of the programme for the destruction of their chemical weapons under the CWC, and of the problems associated with the programme.

Based on this meeting, and subsequent consultations, a proposal for possible Swedish assistance was worked out and submitted to Russia in March 1993. This proposal, as well as general aspects on Swedish-Russian cooperation in the field of chemical weapons destruction under the CWC, were discussed in depth at meetings in Stockholm and Umeå at the end of April 1993. The Russian delegation was headed by Minister Anatoly Kuntsevitch and the Swedish delegation by Ambassador Sven Hirdman. The delegations came to the conclusion that a pilot cooperation project with a risk analysis for one storage facility would be of great practical importance.

2. The Pilot Project

The outcome of these meetings was a draft Memorandum of Understanding, to be approved by the Swedish and Russian governments, and a detailed plan for a first phase of Swedish-Russian cooperation. This initial phase included an analysis of the risks associated with storage and destruction activities at a lewisite storage facility at Kambarka, in the republic of Udmurtia, as well as consideration of ways of communicating the results of the risk analysis to the local population. The Swedish Government granted 1 MSEK
(approximately US$125,000) for this first phase.

The Swedish work was to be based on data communicated by the Russian side according to a very tight time-table, and was to be completed by August 1993. For various reasons it turned out to be impossible to have the input data available according to the original time-table, and thus the date for reporting on the first phase of the work had to be readjusted.

An interim report was presented in September 1993. It constituted a preliminary account of a major part of the work undertaken during the first phase, as well as a presentation of the input data on which the work was based. This report was discussed in November when a Swedish delegation visited Moscow and the storage facility at Kambarka.

The final report, "Acute Consequences of Accidental Releases of Lewisite at Kambarka" (classified information), is the result of the work at The National Defence Research Establishment in Sweden (FOA). In the report, outdoor risk distances are estimated for many scenarios which involve potential hazardous events. The work has been facilitated by good contacts on the technical level and a very informative visit at Kambarka, where the Swedish delegation was given the opportunity to discuss the problems in detail with military and civilian authorities.

As stated in the agreement for the study, the purpose of the pilot project was to cover risk assessments for three major cases:
- Storage of chemical weapons;
- Destruction of chemical weapons on site; and
- Transport of chemical agents for destruction off-site.

Discussions with representatives of the Presidential Committee on Chemical and Biological Weapons Conventions Problems and the Ministry of Defence of the Russian Federation made it clear that there was not yet any final decision on which destruction method would be used, but that transport of the chemical agents for destruction off-site was no longer on the agenda. This is reflected in the report.

Information to shape or change the public perception of risks is important for successful elimination of the lewisite stored in Kambarka. This has been discussed in parallel with more technical matters. Thus, the question of how to inform the population concerned has been more fully elaborated than it was in the agreement for the Pilot Project.

3. Risk Distances For Different Accident Scenarios

Lewisite is a chemical warfare agent classified as a "blistering agent". In cases of spills and accidents, direct exposure to the liquid may result in severe effects. People living in the town of Kambarka would mainly be affected by gas evaporated from the liquid, but would not be directly exposed to lewisite in the liquid form. Lewisite has a toxicity lower than that of nerve agents. However, chemical warfare agents always give rise to strong emotions, and the effects anticipated are mostly those associated with nerve agents. In order to give objective and relevant information to the public, it is essential that several groups make independent risk analyses of possible releases from the storage and destruction facility. This will also provide a basis for planning protection and rescue preparedness in case of an accident.