

Preparing for a Ban on Chemical Weapons: Trial Inspections in Canada

During the past two years, various countries, including Canada, have carried out "trial" verification inspections in their civilian chemical industry or at government facilities. Conducted on a national basis, these trial or mock inspections aim to test the procedures for verification of the Chemical Weapons Convention (CWC) currently under negotiation at the Conference on Disarmament in Geneva. The majority of trials have involved routine — as opposed to challenge — inspection procedures. These procedures are designed to provide confidence that chemicals are not diverted to the manufacture of chemical weapons.

The draft CW Convention deals with three "schedules" of toxic chemicals: Schedule 1 comprises agents that have no application other than as chemical weapons; Schedule 2 comprises chemicals that could serve as key precursors to the manufacture of chemical weapons, but have legitimate commercial applications; Schedule 3 contains toxic chemicals that are widely used in the chemical industry but could be modified to produce the chemical weapons listed in Schedule 1. Under the Convention, Schedule 1 chemicals will be banned. Schedule 2 and 3 chemicals will be monitored through a variety of routine inspection procedures.

Inspection of DRE Suffield

The draft CWC recognizes a requirement for research into defence and protective measures against the effects of chemical weapons. Thus, even though states joining a CWC will have forsworn the development, production, stockpiling, possession and use of chemical weapons, they will still retain the right to conduct research into and develop equipment for defence against possible CW attack. All states represented in the Ad Hoc Committee on Chemical Weapons at the CD regard this right as

a prudent and necessary aspect of CW disarmament.

As a result, each state, if it so desires, will be permitted to retain a single, small-scale facility (SSSF) at which limited amounts of Schedule 1 chemicals could be synthesized and used in experimental work in the area of protective research and development. Each SSSF will be under close scrutiny by the international inspectorate, the body established by the CW Convention to monitor and verify compliance with its provisions. Through routine visits to the facility, the inspectorate will establish whether:

- declarations made by the state with respect to the SSSF and activities carried out there are consistent with obligations assumed under the CWC;
- quantities of Schedule 1 chemicals produced, stored, transferred, or consumed are within the national limits prescribed by the CWC (i.e., one metric ton);
- reaction vessels used in the facility are limited in size and not designed for continuous operation (i.e., that the facility does not have the capacity to produce quantities of Schedule 1 materials in excess of the one metric ton limit).

Canada does not possess any production facilities for chemicals currently listed in Schedule 1. Nevertheless, as a contribution to the development of inspection procedures under negotiation at the CD, in November 1989 Canada carried out a trial inspection at a simulated SSSF. The facility selected for the trial was located at Defence Research Establishment Suffield (DRES) in Alberta.

Small amounts of Schedule 1 chemicals have occasionally been prepared at DRES as part of ongoing research into protective measures against the effects

of chemical weapons. If and when such chemicals are needed, they are prepared in a standard organic synthesis laboratory of the type found at many universities and research institutes.

The research lab at DRES does not have any large reactors or permanently-installed processing equipment. Its capacity is limited to bench-scale synthesis. It is therefore not comparable to the kind of dedicated SSSF envisioned in the draft CW Convention, and the procedures for routine inspection outlined in the draft CWC had to be adapted accordingly for the DRES inspection.

Suffield trial demonstrates feasibility of carrying out routine inspections at an SSSF.

The Canadian trial simulated a routine, periodic (annual) inspection of an SSSF at which Schedule 1 chemicals could be produced. Having defined DRES as a simulated SSSF, the aims of the inspection were to:

- evaluate the approach to verification at an SSSF as outlined in the then-current version of the draft CWC (CD/952);
- determine the problems such verification procedures might create for the facility's normal operations;
- assess, in general, the routine verification provisions envisioned in CD/952 for an SSSF.

As part of the trial inspection, officials at DRES provided an "initial declaration" along the lines of that which would be required under the CWC for all states possessing an SSSF. The declaration included: a statement of the location and detailed technical description of the facility; a statement of the quantities of Schedule 1 chemicals possessed as of the date of the Convention's entry