Obtaining a satisfactory material balance and confirming that process equipment capacity has properly been declared are necessary measures, but they are insufficient in themselves. These measures could be circumvented simply by not recording in the permanent books of the facility those production activities that lead to "excess" Schedule [2] chemical. In other words, the production would be "off the books". Facility records would falsely indicate that the equipment was either idle or being used for production of a non-Schedule [2] chemical that is not subject to monitoring.

The trial inspection also demonstrated that equipment inspection, records audit and sample analysis are all essential components of an effective inspection régime.

4. Equipment inspection

Visual examination of equipment and review of its operating and design specifications were found to be particularly useful in assessing whether the declared facility was capable of producing Schedule [1] or other extremely toxic chemicals. (Visual examination alone is not sufficient to determine whether such chemicals have been produced in the past.) Further attention is necessary to develop methods for determining quickly what materials of construction are used for the process equipment. Material of construction is an important factor in determining the potential for conversion to other Schedule [2] or Schedule [1] chemicals.

Examination of the equipment, together with the records audit is required to determine the production capacity of the facility. This should be based on the maximum possible use of the equipment dedicated to the Schedule [2] chemical production.

To assist inspectors in looking for evidence of Schedule [1] chemical production, a diagram showing possible production routes involving the declared Schedule [2] chemical should be available to the inspection team. This diagram could also be associated with types of process equipment required by the alternative production methods. The existence of such equipment could then be assessed during the inspection.

5. Records audit

The trial inspection showed that modern chemical production practices generate a multitude of interlocking records that can be usefully audited as a means of monitoring declared chemical production. The limitations of records audits must be recognized, however. It would be possible, although involved, to keep two complete sets of records for a chemical production facility - one real and one false. It would in many cases be relatively simple to conduct operations that are entirely "off the books". Thus, other techniques must be used in conjunction with the records audit.

The records audit proved to be the most time-consuming aspect of the trial inspection, even though the auditing task at this facility was relatively simple. The processes involved were simple, high-yield chemical conversions. Only three products were produced from the key feedstock. Also, there were no significant wastes or by-products to account for. Considerably more time and effort would be needed for more complex operations with more steps or continuous operations with multiple feed or discharge systems at each step of the process.