Other Chemical Production Facilities
Inspections

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These views are those of the author, and do not necessarily reflect the views of the Australian Government or any other entity.
Outline of Presentation

• Historical – Negotiation of OCPFs in Geneva

• Experiences so far in OCPF inspections

• Evolution of Chemical Industry
  – Globalisation
  – Advances in Science and Technology

• The way ahead
Historical - Negotiation of OCPF in Geneva

• Mid-1980s – Concept of Schedule 1, 2 and 3 agreed.

• National trial inspections – late 1980s
  – Multi-purpose production plants
  – Organophosphorus pesticide plants
    • Not producing Scheduled chemicals but could be readily adapted to.

• CW-proliferation – late 1980s
  – Saddam’s Regime using MPPs and Pesticide plants

• Therefore, by 1990, a ‘verification gap’ recognised.
  – Needed to go beyond Schedules 1, 2, 3
  – “CW-capable” = Other Chemical Production Facilities.
CW Production Facility
## Selected Chemical Production Processes

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<tr>
<th>Production Process</th>
<th>CW Agents</th>
<th>Typical Commercial Products</th>
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<td>Chlorination</td>
<td>Sulphur-Mustard</td>
<td>Insecticidess</td>
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<td>Nitrogen-Mustard</td>
<td>Herbicides</td>
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<td>Solvents</td>
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<td>Fluorination</td>
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<td>Insecticides, herbicides</td>
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<td>Refrigerant gases</td>
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<td>VX</td>
<td>Petrochemicals</td>
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Historical - Negotiation of OCPFs in Geneva

• Risk Assessment
  – Schedule 1 chemicals – ‘a high risk’
  – Schedule 2 chemicals – ‘a significant risk’
  – Schedule 3 chemicals – ‘a risk’

In latter stage of negotiations, an attempt was made to consider relative risk posed by facilities producing Sch 1, 2, 3 chemicals and OCPFs.

• But too difficult for Geneva conference room
  – e.g. how to compare a small lab producing 1g/year of Sarin with a multi-purpose pesticide plant producing 1000s of tonnes of pesticide that could readily produce Sarin
  – Decision taken by negotiators to leave such risk assessment to the future Technical Secretariat, based on their experiences in conducting industry inspections.
Historical - Negotiation of OCPFs in Geneva

Final provisions of Article VI inspections

- Phased implementation
  - Schedule 1 inspections – initial inspection within 180 days
  - Schedule 2 inspections – initial inspection within 3 years
  - Schedule 3 inspections
  - OCPF inspections – no inspections before of 4th year after EIF

- Flexibility in Article VI – beyond initial inspections of Sch 1 and 2 facilities, verification procedures designed to be open to future adjustments in light of practical experiences and developments in industry, with:
  - Risk assessment by Technical Secretariat;
  - Allocation of resources to particular types of inspections by CSP

- Simplified technical change possible under Article XV
Experiences so far in OCPF inspections

• More than 500 OCPF inspections since 2000*
  – 11% of overall OPCW inspections
  – Overall OCPF inspections have gone well.

• BUT
  – In some States Parties, <1% of OCPF inspections
  – Random Selection processes – difficulty in achieving
    ‘equitable geographic distribution’
  – Not all OCPF inspection sites were ‘relevant’
    • insufficient information in declaration format (‘Main Activities’)
  – TS assessment is that ‘the level of OCPF inspections
    still does not provide adequate non-proliferation
    assurances’ (RC-2/DG.2)

[* N.B. compared with more than 800 Sch 1,2,3 inspections]
Evolution of Chemical Industry

- Increasing globalisation of chemical industry
  - Increased production at ‘non-traditional production locations’.

- Increasing flexibility in plant site design
  - multipurpose facilities.

- Advances in Science and Technology, including:
  - Better understanding of, and ability to manipulate, ‘life processes’;
  - Production of chemicals through ‘biological processes’; and
  - Microreactors
    - May lead to novel routes to Schedule 1 chemicals; and
    - Other novel toxic chemicals.
OCPFs - The way ahead (1)

• OCPF Workshop for OPCW delegates
  – Including visit to an OCPF
  – Increased awareness of OPCF issues

• Adjustment to Declaration Format
  – to include more information on ‘main activities’
    • production processes
    • dedicated or multipurpose

• Greater allocation of resources to OCPF inspections

• Improvement in OCPF selection methodology
  – for ‘equitable geographic distribution’ and ‘high risk’ facilities
OCPFs - The way ahead (2)

• Training of Inspection Teams
  – Inspectors need ‘cutting edge’ knowledge of advances in S&T.

• Sampling and Analysis for OCPF inspections
  – after further experience gained with Sch 2 S&A inspections, and
  – further development of on-site analytical capability.

• Down the track, consider whether OCPF regime needs refinement through Article XV, based on:
  – Additional inspection experiences;
  – Development and Evolution of chemical industry; and
  – Advances in S&T.