



## THE UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

### THE IMPORTANCE OF SAMPLING AND ANALYSIS IN THE CHEMICAL WEAPONS CONVENTION

#### 1. Background

1.1 The Chemical Weapons Convention (hereinafter “the Convention”) makes clear provision for the use of sampling and analysis as part of the verification regime. Analysis may be carried out on-site or off-site. A network of designated laboratories (DL) has been developed which have demonstrated their proficiency in the analysis of the types of samples that may arise during OPCW inspections.

1.2 This paper re-affirms the position that sampling and analysis are essential verification tools. All States Parties are encouraged actively to support sampling and analysis as means of further enhancing the openness and transparency provided for by the verification provisions of the Convention.

2. The requirement for sampling and analysis in inspections under Article VI

2.1 For routine inspections of Schedule 2 and Schedule 3 facilities, and ‘Other Chemical Production Facilities’, the Verification Annex to the Convention “hereinafter the “Verification Annex”) provides clear obligations for the inspection team. In each case, among the inspection aims, it is stated that

*“The particular aim ..... shall be the verification of the absence of any Schedule 1 chemical, especially its production....”* (Verification Annex, Part VIII B, paragraph 17).

2.2 It is clear from the United Kingdom’s experience of receiving routine inspections of Schedule 2 and 3 facilities that physical inspection and access to records may generally be expected to provide inspectors with adequate assurance that production on a site had not involved undeclared chemicals. However, the Technical Secretariat “hereinafter “the Secretariat”) could unequivocally verify the absence of undeclared scheduled chemicals at a particular point in time and space only by performing direct analysis of appropriate samples. It is therefore important to note that the Verification Annex expressly provides for this during routine inspections. Thus, for inspections of

Schedule 2 facilities, the inspection team is obliged to carry out such analysis, according to paragraph 27 of Part VII of the Verification Annex:

*“Sampling and analysis shall be undertaken to check for the absence of undeclared scheduled chemicals”.*

- 2.3 The phrase ‘shall be undertaken to check’, which is used in the sampling and analysis paragraph of the Verification Annex relating to routine inspections of Schedule 2 sites, is important. It indicates a clear intent that sampling and analysis must be undertaken to provide evidence of the absence of undeclared scheduled chemicals even though other inspection activities, for example access to site documentation, may also have been used with the aim of verifying the absence of Schedule 1 chemicals.
- 2.4 There is no indication, explicit or implicit, in the provisions for routine inspections of Schedule 2 facilities, that sampling and analysis for undeclared scheduled chemicals should be carried out only if uncertainties requiring clarification arise. The obligation of paragraph 27 in Part VII is clear: sampling is mandatory, irrespective of any other information provided during the inspection. The only consideration should be the practical one of whether items exist which, if sampled, could provide substantial additional confidence about the absence of undeclared scheduled chemicals at the facility.
- 2.5 For Schedule 3 and ‘Other Chemical Production’ sites, the provision to check using sampling and analysis is only advisory, presumably in keeping with the less intrusive nature of such inspections. Nevertheless, there is still no requirement for the inspectors to justify any request for analysis on the basis of the need to clarify an uncertainty. Paragraph 22 of Part VIII of the Verification Annex states that

*“Sampling and on-site analysis may be undertaken to check for the absence of undeclared scheduled chemicals. ...”*

### **3. The requirement for sampling and analysis in inspections under Article IV**

There is a clear requirement for sampling and analysis during the destruction of chemical weapons in order to verify the process of destruction and the end product of destruction.

### **4. The requirement for sampling and analysis in inspections under Articles IX and X**

Sampling and analysis provides the only way of providing unequivocal proof of the presence of specific chemicals where this is alleged in the case of a challenge inspection or an investigation of alleged use.

### **5. Practical considerations**

- 5.1 Sampling and analysis has been used routinely on-site as an inspection tool during inspections at chemical weapons destruction facilities, mainly through on-site analysis conducted by the inspected State Party. This latter procedure has also been used

during some Article VI inspections. However the Secretariat's Note on the conduct of inspections under the Chemical Weapons Convention and related issues (WGRC-1/S/4, dated 12 December 2002) notes that, apart from at one chemical weapons destruction facility and during a Schedule 2 inspection, no on-site analysis using OPCW-approved analytical equipment has been undertaken since the Convention entered into force.

- 5.2 Inspection teams are equipped to carry out on-site analysis. The Secretariat has approved equipment and trained analysts whose skills are maintained by regular training. Since entry into force of the Convention, the Secretariat has developed the standard operating procedures (SOPs) and work instructions which are needed to ensure that this important verification activity is carried out to the highest standards. The United Kingdom considers that it is important in order to maintain the Convention's effectiveness that the Secretariat's analytical equipment and SOPs be used regularly to undertake on-site analysis.
- 5.3 A network of designated laboratories exists for the off-site analysis of samples collected during inspections. Designated laboratories are required to maintain their qualification by regular participation in proficiency tests.
- 5.4 Much work has been carried out by the Secretariat to resolve problems associated with the shipping of equipment and samples which is necessary for on- or off-site analysis. The most recent example is the successful off-site sample handling exercise reported by the Director General in EC-32/DG.26, dated 24 March 2003.
- 5.5 In summary, there is no practical reason why sampling and analysis should not be carried out as required by the Convention.

## **6. Cooperation of States Parties**

- 6.1 As with any verification activity, full and flexible co-operation of the inspected State Party is essential if sampling and analysis are to be carried out efficiently and effectively as required by the Convention. Further co-operation between the States Parties and the Secretariat will ensure that development of this important verification activity continues.
- 6.2 Areas which the Review Conference might consider should be given further attention include:
  - addressing any remaining technical, logistical and costs constraints to facilitate regular on-site analysis, using OPCW-approved equipment; and
  - procedures to facilitate the use of laboratory facilities within the inspected site.

**7. Conclusion**

- 7.1 Sampling and analysis are essential elements of the verification regime of the Convention.
- 7.2 The Secretariat must make full use of the provisions of the Convention for sampling and analysis, both on- and off-site.
- 7.3 The States Parties and the Secretariat are urged to continue their co-operative efforts to improve still further the operation of sampling and analysis in order to further the openness and transparency of the verification regime.

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