



TECHNICAL SECRETARIAT

BACKGROUND PAPER ON THE CONDUCT OF INSPECTIONS UNDER THE CHEMICAL WEAPONS CONVENTION AND RELATED ISSUES

1. Executive Summary

- 1.1 Between the entry into force (EIF) of the Chemical Weapons Convention (hereinafter the “Convention”) and 31 December 2002, the OPCW Technical Secretariat (hereinafter the “Secretariat”) conducted about 1,300 on-site inspections at facilities declared by 51 States Parties to the Convention. This number includes routine inspections of facilities in accordance with the provisions applying to scheduled chemicals, as well as rotations at operating CW destruction facilities, where OPCW inspectors conduct systematic verification through on-site inspection on a permanent basis (with each rotation counting as one inspection). This background paper was prepared to assist States Parties in their consideration of agenda item 7(c)(ii) of the Provisional Agenda of the First Review Conference. It summarises the experience gained by the Secretariat in the conduct of these on-site inspections, and identifies many important logistical matters which affect the conduct of inspections, thus complementing the consolidated unclassified Verification Implementation Report, 1997 to 2002. The paper does not analyse the conceptual aspects of the verification regime. It has been prepared to facilitate the deliberations of the open-ended working group for the preparation of the First Review Conference of the Convention. The paper is in two parts: an executive summary and a detailed annex containing a description of the experience gathered and capabilities developed by the Secretariat in the conduct of on-site inspections.
- 1.2 In essence, the paper concludes that the OPCW has established the capability to plan and conduct on-site inspections in the territory of the States Parties, as required by the Convention. This includes qualified and well-trained inspectors, approved inspection equipment that meets the requirements of on-site inspection conduct, the logistical and planning infrastructure and experience for the support of inspection missions, a capability for sampling and analysis both on-site and off-site, as well as procedures for the entire cycle, from inspection planning through reporting of inspection results and closure of inspection files.
- 1.3 OPCW inspectors have acquired considerable experience in conducting a variety of on-site inspections in procedurally sound, technically credible, and cost-effective



ways. Continuous reassessment is carried out in order to identify possible further improvements. The skills and knowledge of the inspectors are kept up-to-date, and are enhanced in various ways through study, skills training, and exercises. They receive effective support from the headquarters staff throughout the entire planning, operations, and reporting cycle.

- 1.4 Approved inspection equipment has been purchased by the OPCW, and is being used by inspection teams in accordance with the provisions of the Convention and the relevant decisions adopted by the Conference of the States Parties (hereinafter the “Conference”). However, five years after EIF of the Convention, technology has advanced, and some equipment is no longer manufactured. There is, therefore, a growing need to replace certain items of approved inspection equipment, and to modify some of the adopted technical specifications.
- 1.5 Sampling and analysis have thus far played a less prominent role in the conduct of OPCW inspections than was originally anticipated. As a matter of routine, during chemical weapons (CW) destruction operations, the declared agent is confirmed, as is the completion of the destruction, usually by sampling and analysis undertaken by the inspected State Party using its own analytical equipment, and witnessed by OPCW inspectors. At one chemical weapons destruction facility (CWDF), OPCW-approved equipment is routinely used by the inspectors. Furthermore, OPCW-approved analytical equipment was used during one inspection conducted under Article VI. On other occasions, samples were taken and analysed by the inspected State Party (ISP) using ISP equipment, at the request by, and in the presence of, OPCW inspectors. This both reflects the particular aims of initial inspections, and manifests the cost implications of sampling and analysis.
- 1.6 The OPCW is able to collect samples during on-site inspections, and either to analyse them on-site using OPCW approved equipment or equipment belonging to the inspected State Party, or to have them analysed off-site by designated laboratories. Procedures and quality control systems have been established. The OPCW Central Analytical Database (OCAD) has been created, and the data it contains has been validated. The OCAD contains analytical information on more than 1,000 scheduled chemicals, and has been made available to States Parties. Two major technical problems remain: the “procedures for inclusion in the inspection manual concerning the security, integrity and preservation of samples and for ensuring the protection of the confidentiality of samples transferred for off-site analysis” have not been agreed despite intense negotiation, and the transportation of samples remains difficult, despite the adoption by the regulatory bodies concerned of special provisions for containers for this purpose. That notwithstanding, the Secretariat can, when necessary, move samples at short notice.
- 1.7 No challenge inspection or investigation of alleged use (IAU) has been requested by any State Party. The Secretariat has put internal procedures into place, in order to be able to react swiftly and effectively, should a request for such an inspection or investigation be submitted. In relation to inspection team members, approved equipment, and logistical support, a state of readiness is maintained which would enable the Secretariat to dispatch an inspection team at short notice. Several training exercises have been conducted, in some cases with the support of States Parties. These exercises ranged from simple call-outs, to full-scale inspection trials.

To shorten the time needed to dispatch such a team, the Secretariat is continuing to assess some of the more difficult logistical aspects of challenge inspections, and of investigating alleged use (for example, how to rapidly deploy large teams with heavy loads of equipment and transporting items classified as dangerous goods).

- 1.8 Support from States Parties receiving OPCW inspections is an essential aspect of conducting on-site inspections. Their responsibilities include a variety of standing arrangements and national regulations, such as participating in the designation of OPCW inspectors; issuing two-year multiple entry visas (or their equivalent) to them; establishing and giving notification of points of entry (POE); issuing standard diplomatic clearance numbers (SDCNs) for unscheduled inspection aircraft; putting into place any procedures necessary at national level to facilitate the use by OPCW inspectors of approved equipment; and making any other arrangements on the national level so that OPCW inspection teams can be received and supported.
- 1.9 The level of implementation of these national arrangements and measures varies considerably amongst the States Parties. Particular problems have been identified in relation to the enactment of implementation legislation, the issuing of two-year multiple entry visas to OPCW inspection team members, and the maintenance of valid SDCNs for unscheduled inspection aircraft. Although these problems have had a negative effect on the conduct of OPCW inspections in only a few cases, it should be borne in mind that, so far, only systematic and routine inspections have been conducted by the OPCW. Furthermore, the need to address these deficiencies will increase, as more States Parties identify and declare inspectable facilities.
- 1.10 Based on the experience gathered by the Secretariat in the conduct of on-site inspections, the review conference may provide an opportunity:
 - (a) to review the status of national implementation of the relevant provisions of the Convention, and to urge States Parties to undertake all necessary national measures required under the Convention; and
 - (b) to discuss measures to optimise the effectiveness of the conduct of OPCW inspections.

Annex

The conduct of inspections under the Chemical Weapons Convention and related issues:
Detailed description (as of 31 December 2002)

Annex

THE CONDUCT OF INSPECTIONS UNDER THE CHEMICAL WEAPONS CONVENTION AND RELATED ISSUES DETAILED DESCRIPTION (AS OF 31 DECEMBER 2002)

1. Introduction

- 1.1 International verification of compliance with the provisions of the Convention and consultation and cooperation amongst the States Parties are primary objectives of the Organisation for the Prohibition of Chemical Weapons (OPCW).¹ A key aspect of this is the conduct by the Secretariat of on-site inspections, in accordance with the relevant provisions of the Convention.²
- 1.2 The requirement for States Parties to receive such inspections is prescribed under Article IV (paragraphs 3, 4, 5 and 16); Article V (paragraphs 3, 6, 15 and 19); and Article VI (paragraphs 2 to 6, and 9). The requirement to receive a challenge inspection for the sole purpose of clarifying and resolving any questions concerning possible non-compliance is stipulated in paragraph 8 of Article IX. Additionally, a State Party may request an IAU of chemical weapons under paragraph 9 of Article X (Assistance and Protection against Chemical Weapons).
- 1.3 The general rules governing the various types of inspections under the Convention are set out in the Verification Annex, Part II (General Rules of Verification), and Part III (General Provisions for Verification Measures pursuant to Articles IV, V and VI, paragraph 3).
- 1.4 The specific procedures for each distinct category of inspection are shown in table 1 below.

Table 1: Specific procedures for inspections

Category of Inspection	Reference
Chemical weapon destruction	Verification Annex, Part IV (A), Section D
Old and abandoned chemical weapons	Verification Annex, Part IV (B)
Destruction of chemical weapon production facilities	Verification Annex, Part V, Section C
Schedule 1 chemicals and related facilities	Verification Annex, Part VI, Section E
Schedule 2 chemicals and related facilities	Verification Annex, Part VII, Section B
Schedule 3 chemicals and related facilities	Verification Annex, Part VIII, Section B
Other chemical production facilities	Verification Annex, Part IX, Section B
Challenge inspections	Verification Annex, Part X
Investigations in cases of alleged use of chemical weapons	Verification Annex, Part XI

¹ Paragraph 1 of Article VIII

² Inter alia, paragraphs 5, 6, and 46 of Article VIII; Articles IV, V, VI and IX; the Verification Annex and the Annex on Confidentiality

- 1.5 Important criteria for the assessment of the Organisation's ability to conduct on-site inspections in accordance with the provisions of the Convention include, inter alia:
- (a) compliance with the relevant provisions of the Convention, and their consistent implementation in all inspected States Parties;
 - (b) timeliness;
 - (c) effectiveness;
 - (d) technical and procedural credibility; and
 - (e) protection of confidentiality.
- 1.6 This background paper identifies issues that have an important bearing on the effectiveness and technical credibility of OPCW inspections.
- 1.7 The ability of the OPCW to conduct on-site inspections effectively rests on a number of factors. These include, inter alia:
- (a) qualified and trained inspection team personnel;
 - (b) adequate, approved inspection equipment, and the necessary technical support structure to maintain, store, ship, use, certify, and calibrate the equipment;
 - (c) the necessary infrastructure for inspection planning, mission support and reporting, including planning staff, a fully-equipped operations and planning centre, and sampling and chemical analysis capabilities;
 - (d) adequate procedures for all stages of the inspection process;
 - (e) adequate budgetary provisions for the conduct of on-site inspections; and
 - (f) the national implementation measures required to support on-site inspections, as required by the Convention.
- 1.8 This background paper presents an overview of the developments in these areas since EIF of the Convention, and focuses on current capabilities and problems.

2. General overview

- 2.1 The purpose of routine inspections is to verify the accuracy of the information provided by inspected States Parties in declarations relating to a particular facility, and to confirm that activities at the declared facility are in accordance with the provisions of the Convention. The active involvement of the inspected State Party (ISP) in the demonstration of its compliance with the various provisions of the Convention is an important feature of a successful inspection. Inspection teams (ITs) are instructed to be open-minded and flexible with regard to the proposals that the ISP may have to implement in terms of the inspection mandate and the provisions of the Convention.

- 2.2 The general approach taken during inspections is that of impartial fact finding, with every effort being made to find cooperative solutions, should any issues arise. All inspections are carried out under the remit of an inspection mandate issued to the inspection team leader by the Director-General. Each inspection mandate clearly identifies the goals of the inspection as set out in the relevant section of the Convention, and also provides specific operational instructions relevant to the unique requirements of the facility to be inspected.
- 2.3 Inspections are carried out as professionally and expeditiously as possible, minimising the intrusion and inconvenience to the inspected facility. Particular care is taken to protect both militarily and commercially sensitive information by strict adherence to the provisions of the Annex on the Protection of Confidential Information (Confidentiality Annex) of the Convention; the Confidentiality Policy of the OPCW, adopted by the Conference at its First Session (C-I/DEC.13, dated 16 May 1997, and Corr.1, dated 20 March 2000); and the Manual of Confidentiality Procedures, promulgated by the Director-General, in accordance with paragraph 2 of the Confidentiality Annex.
- 2.4 The Secretariat, as of 31 December 2002, had carried out inspections in a total of 51 States Parties; 18 States Parties have had CW-related facilities inspected, and 49 States Parties have had industrial facilities inspected. The total number of conducted inspections were 1,327 (including inspection team rotations at CW destruction facilities). A more detailed overview of the verification activities of the Secretariat can be found in the consolidated unclassified Verification Implementation Report, 1997 - 2002. The number of inspections actually conducted differed from those approved in the decisions by the Conference in the programme of work and budget for the respective years under review. The main reasons for these differences were planning uncertainties before EIF of the Convention; delays in the submission of declarations (particularly under Article VI); delays in, and changes to, CW destruction operations as compared to destruction plans and budgetary assumptions, and budget shortfalls (evident since the year 2000). Since verification of destruction of chemical weapons accounted for the largest allocation of resources (measured in inspector days) within the Inspectorate, and since there were limitations on the degree to which inspectors could be redirected to other programmed inspection activities, any unavoidable delays in CW destruction activity inevitably had a significant impact on the overall relationship between actual versus programmed inspection activity.

3. Inspection team personnel

Recruitment and initial training

- 3.1 Before EIF, as part of the concluding work of the Preparatory Commission for the OPCW, Training Group A of future inspectors underwent five months of training at 24 locations in 14 member countries of the Preparatory Commission. As a result, the OPCW had, at the beginning of its operations, 111 suitably qualified and well-trained inspectors available for the initial inspection campaign. These included 42 chemical production technologists/industrial chemists; 29 CW-munitions specialists; 17 analytical chemists; 14 chemical production logisticians; five paramedics; and four medical specialists.

- 3.2 Training Group B underwent very similar training from January to May of 1998. By the end of 1998, 205 inspectors were on the staff of the Secretariat.
- 3.3 In addition to the inspectors trained in groups A and B, a number of qualified headquarters staff, mostly from the Verification Division, are designated as OPCW inspectors and inspection assistants. In doing so, the Secretariat was able to include some of the Secretariat staff most experienced in conducting verification activities in its pool of designated inspectors. This is particularly important for the conduct of technical visits, and for other “non-routine” inspections.
- 3.4 As of 31 December 2002, the Secretariat’s inspection personnel included 173 full-time inspectors. The OPCW has no inspection assistants, although these are provided for by the Convention, for example for medical, security, and administrative support, and interpretation services. The functions prescribed by the Convention for inspection assistants are either carried out as secondary assignments by the inspectors, or provided or arranged for by the inspected States Parties as necessary amenities for the IT. Table 2 gives a breakdown of the inspectors currently on the staff of the OPCW’s Inspectorate Division.

Table 2: Breakdown by category of the inspectors on the staff of the OPCW as of 1 June 2002

Category	Number of Staff Members
Chemical production technologists/ industrial Chemists	69
Chemical production logisticians	25
Chemical weapons munitions Specialists	50
Analytical chemists	20
Paramedics/medical specialists	9
Total no. of inspectors	173

4. Designation of OPCW inspectors

- 4.1 The Convention established procedures for designating OPCW inspectors in Section A of Part II of the Verification Annex. In accordance with these procedures, the initial list of inspectors proposed for designation was submitted to all States Parties on 19 May 1997, and this is updated as required. There is no compartmentalisation of staff in the Inspectorate Division, neither in relation to industry versus CW-types of inspections, nor in relation to geographical regions or individual countries. Consequently, all inspectors are included in the list submitted to States Parties for their consideration and possible designation.

4.2 Many States Parties have exercised their right not to accept individual inspectors. Although Member States need not say why they do not accept an individual inspector, the reasons for non-acceptance appear to fall into categories: the exclusion of nationals who come from certain States Parties which would pose problems to the receiving State Party; the exclusion of a State Party's own nationals (because they could not be granted privileges and immunities in their own country of citizenship); and exclusions focused on individual inspectors. Two States Parties, when informed by the Secretariat that the reduced number of designated inspectors could cause operational problems, took appropriate corrective measures.

5. Skill maintenance and enhancement training

5.1 Inspectors undergo regular standardised training to maintain and enhance the technical skills relevant to conducting inspections. During periods of lower-than-average inspection activity, the Inspectorate has increased the amount of training given to inspectors. Resources for such training have been provided by the OPCW, or through generous offers by some States Parties, or indeed from private companies within the host country.

5.2 All inspectors receive generic refresher training in the preparation for, and conduct of, inspections. In addition, the Inspectorate continues to organise classes and seminars of specific interest to the various professional specialities. Some CW-munitions specialists, for example, have received training, which has led to radiation certification through the American Society of Non-Destructive Technicians. This qualifies them safely to handle the OPCW's approved equipment for performing non-destructive evaluation. The only other internationally recognised training provided to inspectors is in first aid.

6. Health and safety issues

6.1 Health and safety are major concerns in the conduct of on-site inspections. The Convention requires that inspectors observe the safety regulations established at the inspection site, including those for the protection of controlled environments within a facility and for personal safety (paragraph 43 of Part II of the Verification Annex). The OPCW's approach to health and safety, including the safe conduct of inspections, is prescribed by the OPCW Health and Safety Policy and OPCW Health and Safety Regulations, as approved at the First Conference (C-I/DEC.8, dated 14 May 1997).

6.2 Mandatory regular refresher training and skills maintenance activities are an important part of the Secretariat's health and safety programme. In addition, all inspectors are subject to an annual medical examination and fitness testing, to ensure their ongoing ability to meet the often challenging demands of their work. These annual examinations are supplemented by a thorough review of their medical files and of the health status of all the team members before they leave for an inspection. This allows day-to-day changes in their physical condition to be considered when decisions about deploying or assigning inspectors are taken. Accurate, current medical documentation is included in the health and safety package that accompanies all

teams. The OPCW's excellent safety record during its first five years of inspection activity is detailed in subparagraphs 12.6 - 12.10 below.

7. Summary on inspection personnel

To sum up, the OPCW has at its disposal well-trained and well-qualified inspectors with ample experience in the conduct of on-site inspections. The number of inspectors is adequate for the current (2003) inspection tasks. This background paper does not examine future trends in recruiting inspectors.

8. Procedures for the planning and conduct of on-site inspections

8.1 As stated in paragraph 42 of Part II of the Verification Annex to the Convention, detailed procedures for the conduct of inspections were to be adopted by the Conference, for inclusion in the Secretariat's Inspection Manual. The First Session of the Conference adopted the following decisions in regard to this (other lists of activities in different types of inspections that had been developed by the different expert groups of the Preparatory Commission were never formally adopted):

- (a) guidelines on detailed procedures for verification, and for the conduct of inspections at chemical weapons destruction facilities, in accordance with Part II, paragraph 42, of the Verification Annex (C-I/DEC.6, dated 14 May 1997);
- (b) procedures for the inspection of equipment, in accordance with the provisions of Part II, paragraph 29, of the Verification Annex (Paris Resolution, subparagraph 12(f) (C-I/DEC.7, dated 14 May 1997);
- (c) procedures for implementing the safety requirements for activities of inspectors and inspection assistants, in accordance with paragraph 43 of Part II of the Verification Annex (C-I/DEC.8, dated 14 May 1997);
- (d) verification activities at a temporary holding area within a CW destruction facility (C-I/DEC.19, dated 16 May 1997);
- (e) sampling and analysis during investigations of alleged use (C-I/DEC.47, dated 16 May 1997);
- (f) the use of approved equipment during on-site inspections (C-I/DEC.50, dated 16 May 1997);
- (g) measures in relation to approved equipment following completion of inspection activities (C-I/DEC.51, dated 16 May 1997); and
- (h) additional decisions taken by the Conference and the Council, which form part of the official record of the OPCW, and provide further guidance to ITs as part of the documentation that they take with them on inspections.

8.2 In 1997, the Secretariat issued a training manual which was based on these decisions, and the results of the earlier work undertaken by the expert groups of the Preparatory

Commission. This training manual was based on the results of the work of the Commission's expert groups. In particular, it contained the different lists of inspection activities that had been developed by these expert groups. In the year 2000, based on the practical experience gathered since EIF, the Secretariat undertook an internal review of the training manual, and developed its inspection manual on this basis. The OPCW Inspection Manual was formally approved by the Director-General, and subsequently distributed in January 2001 within the Secretariat as a Quality Control Document. Copies have been provided to those States Parties who have so requested.

- 8.3 Complementing the procedures in the inspection manual, standard operating procedures (SOPs) and work instructions (WIs) were developed by the Inspectorate and Verification Divisions. These documents describe in detail what is to be done to achieve the desired results, the steps to be taken, and the controls to be applied during the conduct of inspection-related activities. These SOPs and WIs were developed in conformity with the OPCW Quality Management System (QMS). The Inspectorate and the Verification Divisions and others continue to develop SOPs and WIs as required, in order to ensure effectiveness, safety, uniformity, and confidentiality in the conduct of inspection-related activities.

9. Inspection equipment

List of approved equipment

- 9.1 A list of approved equipment – along with their operational requirements, technical specifications and common acceptance criteria – was approved at the first session of the Conference in May of 1997 (C-I/DEC.71 and Corr.1, both dated 23 May 1997). This list provided the Secretariat with a basis for purchasing equipment for inspections. There have been no additions to this list in the intervening five years.
- 9.2 The decision by the Conference on the list of approved equipment included provision for States Parties to familiarise themselves with the approved equipment. To facilitate this, the Secretariat has invited States Parties which are interested in doing so, to send technical experts to the OPCW's Equipment Store in Rijswijk. On average, three to four States Parties per year take the opportunity to familiarise themselves with items of inspection equipment. Furthermore, the Secretariat has issued an information package on CD-ROM containing technical and supplier information on equipment which it has actually purchased for conducting inspections.
- 9.3 There are still adequate stocks of approved inspection equipment to carry out scheduled inspection activities. As yet, no mission has ever had to be postponed or cancelled due to the unavailability of equipment. That is not to say that the stock is sufficient for all eventualities, and there is a growing need to replace ageing and worn-out equipment. If a request for an IAU or a challenge inspection were to occur during heavy routine mission activities, the Secretariat could find itself having to prioritise the allocation of equipment.
- 9.4 On the occasions when the Secretariat has been unable to procure either whole items of approved equipment or any of their individual components, it has so far been able

to find acceptable alternatives. In such cases, the Secretariat has informed the States Parties of the substitution and the reason for it. The States Parties have then had thirty days to familiarise themselves with the equipment, either by acquiring it themselves, or by visiting the OPCW's Equipment Store, before the items have been used on inspections. This method of substitution and subsequent revision of the technical specifications of items has proven to be a practical solution to procurement problems. There were, however, cases when States Parties did not take up the offer of familiarisation and, subsequently, excluded the equipment at the POE.

Issues related to the use of approved inspection equipment

Maintenance and replacement of approved equipment

- 9.5 The general maintenance of all inspection equipment is conducted continuously in accordance with the manufacturer's recommendations. Several items of inspection equipment are periodically returned to the manufacturers for mandatory checks and/or calibration, if required. Initial, in-house maintenance of items returned after inspections has resulted in the lowering of overall maintenance and replacement costs.
- 9.6 In recent years, inspection equipment procured in 1997 and 1998 has needed more and more maintenance. Much of this equipment actually needs to be replaced, as it is either beyond repair, or uneconomic to maintain (because suppliers no longer support these items). Due to financial constraints, however, replacement has not been possible.

Individual protective equipment

- 9.7 At this time, there are no unresolved areas of discussion between the Secretariat and any State Party concerning the use by inspectors of their individual protective equipment (IPE). In accordance with the OPCW's Health and Safety Policy, and at the request of ISPs, the Secretariat has often approved the use of ISP-supplied IPE, if this equipment meets the requirements of the OPCW, or for use in case of emergencies. While this might be an acceptable solution in certain specific circumstances, the use of OPCW IPE is preferable whenever possible, as the inspectors are more familiar with it, the equipment fits properly, and integrates with working procedures.

Gas chromatograph/mass-spectrometers (GC/MS)

- 9.8 There are five analytical gas chromatograph/mass spectrometers that have been in operation since 1996/1997, which will soon reach the end of their useful lives. The Secretariat has budgeted for the replacement of these five instruments beginning in 2003, with completion scheduled for 2005. In anticipation of this, the OPCW Laboratory has started to look at possible replacements.
- 9.9 Two suitable instruments from different vendors are currently under evaluation. The new equipment would need to be integrated into the current quality system of the OPCW Laboratory, as both the existing and the replacement instruments will have to be operated in parallel, until such time as the new equipment is ready to be fielded, and all the old instruments have been replaced.

Neutron induced prompt photon spectrometer (NIPPS)

- 9.10 The NIPPS, which could not be used properly, was eventually returned to the manufacturer. The Secretariat continues to monitor and evaluate suitable replacement technologies that use neutron generators rather than neutron sources, and do not need cryogenic cooling.

Hydrogen concentration measurement equipment

- 9.11 This item of approved equipment, which is used for non-destructive evaluation, contains a radioactive source at a strength which imposes special requirements for transportation and storage. Moving it around has proved to be problematic, and the Secretariat is exploring possible solutions to this problem.

Agent monitoring at CWDFs for health and safety

- 9.12 The Secretariat does not have the appropriate approved equipment to monitoring CW agents on-site for health and safety purposes. It has tried to use approved items of equipment (hand-held CW detectors) to meet this need, but without much success. The Secretariat is in search of suitable instruments, and appropriate measures will need to be taken by the OPCW to approve this type of equipment, once it has been located.

Changes to the approved list and new items of approved equipment

- 9.13 It was the view of the Secretariat that there existed a need for a formal procedure for revising the list of approved equipment, as was explained in a Secretariat Note (EC-29/S/1, dated 7 May 2002). In pursuit of the above, the Conference approved procedures for updating the list of approved equipment (C-7/DEC.20, dated 11 October 2002).
- 9.14 Furthermore, the Secretariat sees a need to revise certain aspects of the technical specifications of the approved equipment, and the Secretariat began informal discussions with States Parties with a view to resolving this issue. The original specifications were part of the Conference decision on the list of approved equipment. As a result of these consultations, the Secretariat proposed a draft decision for procedures for revising the technical specifications for on-site inspection equipment (EC-28/DEC/CRP.4, dated 15 February 2002), and issued a background information paper (EC-29/S/2, dated 7 May 2002) giving the reasons why these revisions are necessary, namely, changes in technology, or vendors discontinuing the manufacture of items or equipment, the operating characteristics of which fall within the existing specifications. To this end, the Council approved procedures for revising the technical specifications for approved equipment (EC-31/DEC.8, dated 12 December 2002).

10. Sampling and analysis

- 10.1 Paragraphs 52 through 58 of Part II of the Verification Annex establish the general procedure for sampling and analysis during on-site inspections. Key provisions are that, in the normal course of events, samples be taken by a representative of the ISP or

the inspected facility; that, where possible, the analysis of samples be performed on-site, either by the IT using its approved equipment or (at the request of the IT) in its presence by the ISP; and that off-site analysis be performed by designated laboratories certified by the Director-General and selected for a particular inspection. To implement these provisions, the Secretariat and the States Parties had to build up an appropriate analytical database, develop and test procedures for sampling and analysis, establish a quality system for the OPCW Laboratory, and introduce a system of proficiency testing for the designation of laboratories of States Parties.

OPCW Central Analytical Database

- 10.2 The OPCW Central Analytical Database (OCAD) is maintained in two versions, a hard-copy version and an electronic version. The hard-copy version was originally a paper copy of analytical data: mass spectra (MS), nuclear magnetic resonance spectra (NMR), infrared spectra (IR), and gas chromatography retention indices (GCRI). In 2000, the OCAD was for the first time issued to States Parties on CD-ROM. The electronic version of the OCAD at present contains only MS data, and allows the analytical data to be searched as a library for use, together with an analytical instrument, such as the Secretariat's GC/MS inspection equipment. The first full electronic version was issued in 2001 on CD-ROM.
- 10.3 In line with the use of information technology for the presentation of the OCAD, the Validation Group is gradually moving from a paper copy validation of the data to an electronic validation, simplifying the validation process and reducing the possibility of errors.
- 10.4 To make the OCAD easier to use for verification purposes, a comparison of chemicals declared with the data on chemicals available in the OCAD is needed, the aim being to include data on chemicals declared, but which currently is not present in the OCAD. This will assure that the inspection team has the right tools to confirm the declared chemicals during on-site analysis.
- 10.5 The Secretariat will continue to release regular updates to the OCAD, as long as new data is submitted by States Parties. In particular, States Parties' laboratories participating in the official proficiency tests have shown a keen interest in the OCAD, because of its importance for identifying scheduled compounds.
- 10.6 The Secretariat released a new version of the OCAD, which was approved by the Council at the end of 2002. Its contents are shown in table 3 below.

Table 3: Contents of the OPCW Central Analytical Database

	1997	1998	1999	2000	2001	2002
MS	529	712	904	1169	1495	2138
IR	209	265	329	422	670	670
NMR	864	936	966	1058	1255	1305
GC(RI)	87	155	175	805	2011	2598

- 10.7 The Validation Group established rules for naming the chemicals to be included in the OCAD, and laboratories were requested to follow these rules (specified in S/196/2000, dated 15 June 2000) when submitting new analytical data. It is important to note that these rules are under constant revision by the Validation Group at its meetings, and summaries of its meetings report any changes.

Procedures and equipment for on-site analysis

- 10.8 The Secretariat's analytical standard operating procedures (SOPs) for on-site use were made available to the States Parties which requested them (S/119/99, dated 11 June 1999). The purpose of these documents was to establish OPCW procedures for collecting, preparing, and analysing samples on-site. Since 1999, some procedures have been revised, and new procedures have been added. They remain available to States Parties, if they make a request to the Director of Verification.
- 10.9 OPCW on-site analysis equipment and procedures have been in use by inspection teams at a CWDF in India since the year 2000, and were used successfully during a Schedule 2 industry mission in March 2001.
- 10.10 OPCW on-site analysis equipment and procedures were used successfully during the exercises conducted by the Secretariat, e.g. the IAUs in 1999 in the Czech Republic, in Poland in 2000, and for a challenge inspection exercise in Brazil in 1999. In each case, the inspection team collected and analysed the samples using approved equipment and procedures within the short time available.
- 10.11 Requesting the use of blinded software, which limits the use of databases to on-site databases derived from the OCAD, may not always be in the best interest of the ISP, because the instrument will scan only a limited library of spectra in search of a reasonable match. The certainty level of the analysis may thus decrease, or in rare cases, false-positive results may be obtained. By comparing the spectra obtained to commercial databases, which are available only if the GC/MS system is operated in open mode, the instrument can distinguish between specific compounds with a greater degree of certainty. Another issue which has to be decided during on-site negotiations between IT and ISP are the "security levels" of AMDIS³, which limit the amount of information that is revealed by the software. At the highest security level of AMDIS (level four), only the number of compounds matching a spectra in the OCAD is presented, and the identity of a particular compound is not revealed.

Procedures and capabilities for off-site analysis

Designated laboratories, proficiency testing

- 10.12 Eleven official proficiency tests were conducted by the Secretariat in the period between EIF of the Convention and December 2002, to certify laboratories designated to perform analysis of authentic samples, in accordance with the criteria for

³ AMDIS is the mass spectral data post-processing software of the GC/MS. It stands for "Automated Mass Spectral Deconvolution and Identification System", and was developed by the United States Department of Commerce, National Institute of Standards and Technology (NIST).

designation approved by the Conference at its First Session (C-I/DEC.60 and C-I/DEC.61, both dated 22 May 1997) and the Council on its Twentieth Session (EC-XX/DEC.3, dated 28 June 2000). As a result, 13 laboratories have been designated out of approximately 40 participants from States Parties world-wide. Three designated laboratories were temporarily suspended after the sixth test in accordance with the Council's decision on the guidelines on the designations of laboratories for the analysis of authentic samples (EC-XX/DEC.3, dated 28 June 2000). One of these performed successfully in the following three tests and, therefore, regained its full status after the ninth test in 2001. One additional designated laboratory was temporarily suspended after the tenth test in 2001. At the end of 2002, from the 13 designated laboratories, three remained suspended.

Accreditation of the OPCW laboratory

- 10.13 In close cooperation with the Netherlands Organisation for Applied Scientific Research (TNO), the OPCW Laboratory undertook a project to define the scope of its accreditation. The following three items were identified and agreed upon by the Quality Steering Committee in 1999 for the first phase of the Laboratory's accreditation process under ILAC Guide 13 and ISO 17025:
- (a) the organisation of proficiency testing for designated laboratories and laboratories seeking designation by the OPCW;
 - (b) the organisation of the OCAD, and the transfer of data from it to on-site databases; and
 - (c) the testing of OPCW GC/MS inspection equipment.
- 10.14 The OPCW Laboratory applied for accreditation to the Dutch Accreditation Council (RvA), and received an initial assessment visit in December 2000. The OPCW Laboratory resolved the minor non-compliance issues remaining from the initial assessment, and was granted accreditation on 28 March 2001. This accreditation was in accordance with ILAC G13:2000: "ILAC Guidelines for the Requirements for the Competence of Providers of Proficiency Testing Schemes", and the criteria described in ISO/IEC 17025:1999. The two accreditation numbers issued by RvA are R011 and L338.
- 10.15 The OPCW Laboratory receives regular internal and external audits of its quality system. RvA conducts yearly external audits. The Office of Internal Oversight (OIO), supported by internal technical experts, conducts three to four internal audits annually.
- 10.16 The next phase of accreditation for the OPCW Laboratory, as directed by the Quality Steering Committee, relates to the handling of authentic samples for off-site analysis, covering the process of preparation and analysis of control samples.

Procedures for the transfer of samples off-site

- 10.17 Since EIF of the Convention, States Parties have been conducting informal consultations on a draft decision on procedures in relation to the security, integrity,

and preservation of samples, and for ensuring the protection of the confidentiality of samples transferred for off-site analysis.

- 10.18 The OPCW Laboratory drafted a set of SOPs relating to the handling and transfer of samples for off-site analysis, based on the results of those consultations. The procedures have been tested internally, and could be applied by the Secretariat, if the need arises.
- 10.19 Problems with the timely transport of samples have arisen in trial exercises. In one case, a sample remained at the POE of the host country for over 15 months – clearly, an unacceptable delay in urgent cases. The Secretariat has exerted much effort since then to address the problem of the timely transportation of samples. An exercise to test the newly developed process was successfully completed during January and February 2003. The Secretariat accompanied the samples in transit to and from the Organisation, as would be done for off-site analysis of original verification samples. The entire cycle – all transport, preparation of control samples at the OPCW laboratory, analysis by, and receipt of, the results from two designated laboratories – was completed, however, in more than the twenty day period that had been hoped for.

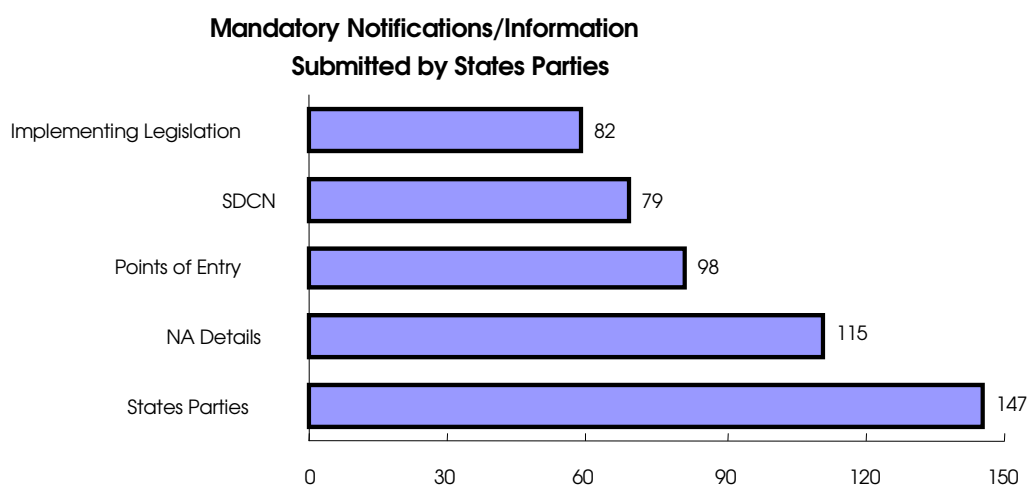
Preparation of control samples

- 10.20 The informal consultations mentioned above in subparagraphs 10.19 - 10.21 recommend that authentic samples for off-site analysis be accompanied by spiked control samples and matrix blanks.
- 10.21 The consultations further recommend that such control samples and the matrix blanks be prepared and analysed by the OPCW Laboratory. In anticipation of adoption of the above-mentioned draft decision, and in order to prepare for off-site analysis, the OPCW Laboratory has continued its activities in relation to the preparation and analysis of the control samples.
- 10.22 Following an assessment of resource requirements, designated laboratories were invited in December 2000 to participate in stability studies of potential spiking chemicals for future control samples. Five designated laboratories volunteered to assist the Secretariat. These studies, which are currently being conducted, will yield a list of sufficiently stable spiking chemicals from which the OPCW Laboratory may select compounds to prepare control samples in cases where off-site analysis is necessary. Until these studies are completed, the OPCW Laboratory is maintaining a set of control samples for contingency purposes.
- 10.23 The OPCW Laboratory evaluated several suitable LC/MS (liquid chromatography/mass-spectrometer) systems for use in analysing control samples. An appropriate system was procured and installed at the end of 2002.

11. Standing arrangements

Overview

- 11.1 The Convention expects the States Parties to make certain arrangements and take certain measures in support of OPCW inspections; these are contained in Parts II and III of the Verification Annex.
- 11.2 As of 31 December 2002, the Secretariat had received the following mandatory notifications required to be submitted within 30 days after EIF: notifications of POEs for inspection teams – from 98 States Parties, or 67%; and notifications concerning SDCNs for non-scheduled aircraft – from 79 States Parties, or 54%. By the same date 115, or 78%, of all States Parties had provided details concerning their National Authorities, and 82, or 56%, of all States Parties had submitted information on their national implementing legislation.
- 11.3 These figures, for the period from EIF until 31 December 2002, are given in the chart below:



Visas and United Nations Laissez Passer (UNLPs)

- 11.4 Paragraph 10 of Part II of the Verification Annex requires each State Party to issue, no later than 30 days after acknowledging receipt of the list of designated inspectors, two-year multiple entry/exit visas and/or transit visas, and any other documents required to enable each inspector (or inspection assistant) to enter, and to remain on, its territory for the purpose of carrying out inspection activities. This provision has, in many cases, proved difficult to implement, as the Secretariat has reported to the Council and to the States Parties on several occasions.
- 11.5 As of 31 March 2003, of the 151 States Parties, 100 have indicated that they were in a position to comply fully with the requirement contained in Part II, paragraph 10 of the Verification Annex, namely, to provide the required documentation, valid for at least two years, to allow inspection team members to enter or cross their territory in order to carry out inspection activities. Of the 100 States Parties concerned, 42 do not

require visas. Inspection teams can enter and leave those States Parties using national passports or identity cards in combination with their United Nations Laissez Passer (UNLPs). The remaining 58 States Parties have issued, or agreed to issue, two-year multiple entry visas for designated inspectors. In some cases, States Parties, on their own initiative, have provided every designated inspector with a two-year visa; in the case of other States Parties, where the formalities for issuing visas take a long time to complete, the Secretariat has asked them to provide such a visa.

- 11.6 The remaining States Parties fall into two categories: those that can issue visas for less than two years or single entry visa (21), and those from which the Secretariat has received an incomplete or no reply to its requests for information (30).
- 11.7 The Secretariat has negotiated the terms for acquiring additional UNLPs – enough to ensure that no mission would be placed in jeopardy simply for the lack of space to affix a visa. As in preceding years, the budget for 2003 will again contain a line item for these additional UNLPs. With two current UNLPs in his/her possession, each inspector could travel on inspection business to about 64 States Parties. In the few States Parties where UNLPs are not recognised, visas have been affixed to the personal passports of the IT members.
- 11.8 To date, only one mission has had to be postponed because of delays in issuing visas. The instance was taken up and resolved prior to the Fifteenth Meeting of the Council in November 2001.

Standing diplomatic clearance numbers for non-scheduled inspection aircraft

- 11.9 The Convention permits the use of non-scheduled flights for Article IX inspections, or in cases where the use of scheduled commercial aircraft would result in delays. States Parties are, in such cases, required to provide clearance for overflight by, and landing of, such aircraft within the time limits established by the Convention. To ensure this, each State Party is required to issue a SDCN for non-scheduled aircraft transporting inspection teams and their equipment (paragraphs 22 to 25 of Part II of the Verification Annex).
- 11.10 The SDCN has caused problems for a significant number of States Parties. The Secretariat has on several occasions approached States Parties with a view to reminding them of their obligations in this respect, and has reported to the Council and the States Parties on this situation.
- 11.11 Fifty-two States Parties have not responded positively to the Secretariat's request for notification of their SDCNs for non-scheduled aircraft. This number includes States Parties which do not have an international airport within their territory. Furthermore, five require advance notification of between two to 15 days; one prohibits the transport of dangerous goods, and the SDCNs from seven States Parties have expired.

Communications with National Authorities, including inspection notifications

Contact points in National Authorities

- 11.12 In Article VII (paragraph 4), the Convention sets out that each State Party, in order to fulfil its obligations under the Convention, shall designate or establish a National Authority to serve as the national focal point for effective liaison with the Organisation and other States Parties. Each year, the Secretariat sends out a request to each State Party for confirmation of its National Authority's contact information and, each year, the Secretariat is unable to establish phone or fax contact with about five States Parties. In such cases, the request for an update is sent through the post.
- 11.13 Almost one quarter of the States Parties (32) have not as yet designated a National Authority. In these cases, the Secretariat channels all information and requests through the Permanent Representative of that State Party to the OPCW. It should be noted that, for inspection notification purposes, this procedure may not always be adequate.

Inspection notifications

- 11.14 Notification of an impending inspection is sent by the Secretariat to the ISP, in accordance with the deadlines specified in the Convention. In the majority of cases, acknowledgements from National Authorities to the Secretariat's notifications of inspections are received within the period of one hour specified in the Convention. Delays, when they occur, are generally from infrequently inspected States Parties, which may be unprepared to issue such a rapid response .
- 11.15 On those occasions when no acknowledgement has been received, the Secretariat has had to persist until a written or verbal acknowledgement has been made. This has entailed sending out duplicate notifications, making telephone calls to the nearest embassy or consulate, and contacting the ISP's Foreign Ministry.
- 11.16 In some cases, States Parties have specified periods when they would have difficulty in receiving inspections. The causes have ranged from natural disasters, to the participation of National Authority representatives in a conference. The Secretariat has taken due account of the circumstances when planning missions, while maintaining the principle that, in accordance with the provisions of the Convention, the inspected State Party, which has been notified of the arrival of the inspection team, shall ensure its immediate entry into the inspected State Party's territory. In two exceptional cases, individual missions had to be postponed after a notification had been sent.
- 11.17 On a number of occasions, States Parties have informed the Secretariat that the facilities to be inspected were declared in error, or were no longer in business. In such cases, the IT size and/or the mandate may have been adapted to the circumstances, but the ITs arrived as scheduled in the original notification.

Points of entry (POEs) and related procedures

- 11.18 Each State Party is required to designate one or more POEs for the passage of OPCW ITs into their territory, in such a way that any inspection site within the State Party's territory can be reached from at least one POE within 12 hours (paragraph 16 of Part II of the Verification Annex).
- 11.19 Ninety-eight States Parties (67%) have designated at least one POE. On several occasions, after receiving notification of an impending inspection, the Secretariat has been notified of the designation of an additional POE, one closer to the inspection site. When possible, the Secretariat has made travel arrangements to accommodate such requests, even though the requisite 30 days' notice had not been provided.
- 11.20 On one occasion, the IT was flown to the capital of the State Party concerned, which had not previously designated a POE. There remain 49 States Parties which have still not designated any POE..
- 11.21 At the POE, the representative of the ISP has the right to check the inspection equipment in the presence of the IT. Few problems have been encountered when the equipment was properly packed and accompanied by the appropriate documentation. Some States Parties consistently reject certain pieces of approved equipment; the global positioning system (GPS) is the item most frequently rejected at POEs. They did, however, consistently offer alternative means of verifying the location of the facility to be inspected, and it was thus possible to implement the inspection mandates. One State Party has continued to refuse pieces of approved equipment well after the 30 days' notification period offered for familiarisation, essentially because it had not familiarised itself with the equipment. Also, ITs have experienced circumstances where the ISP refused the use of approved equipment at the inspection site (for reasons other than safety), even though they had not turned it back at the POE.

12. Conduct of inspections

General

- 12.1 Since EIF of the Convention, the Secretariat has performed over 1,300 inspections. Sixty-two percent of the inspections performed (involving 85% of inspector days expended) were conducted in relation to chemical weapons or related facilities. The remainder were conducted with respect to facilities declared under Article VI of the Convention.
- 12.2 The performance of the ITs during the conduct of inspections has been recognised as being technically proficient and highly professional, with the ITs strictly following the inspection mandate and the provisions of the Convention. No incident of breach of confidentiality has ever occurred during an on-site inspection.

Transportation

- 12.3 The Convention provides a period of twelve hours for the IT to reach the inspection site from the POE. In some cases, agreements have been reached between the

Secretariat and States Parties which allow for, inter alia, recovery time for the IT after long flights, and which thus extend the time-limit beyond the 12 hours. Notwithstanding this, instances where internal travel time alone significantly exceeds 12 hours continue to occur. This is particularly true in some of the larger countries, where all inspections are routed through a single designated POE.

- 12.4 Several items of approved inspection equipment (or components thereof) are classified under transport regulations as “dangerous goods”. The Secretariat is generally able to transport dangerous goods to and from POEs. Significant problems are still encountered with the onward transport of such items from the POE to the inspection site. Due to internal transportation restrictions regarding dangerous goods, the Secretariat has often been unable to have its approved equipment delivered in time to be used during inspections. The Secretariat is searching for alternatives to items of equipment which contain components that are classified as dangerous goods.

Communications

- 12.5 Paragraph 44 of Part II of the Verification Annex stipulates that ITs shall have the right to communicate with their headquarters throughout their stay in a State Party; that they may use their own, duly certified, approved equipment; and that they may request the ISP to provide them with access to other telecommunications. Furthermore, ITs have the right to use their own two-way system of radio communications between personnel patrolling the perimeter and other IT members. By and large, the effective conduct of inspections has not been impaired by problems involving IT communications with headquarters.

Health and safety during on-site inspections

- 12.6 The OPCW has established an excellent safety record during its first five years of inspection activity. In October 2000, the Organisation's inspectors completed 50,000 inspection days free of serious injuries or accidents causing lost time since the commencement of inspection activities. The Director-General has characterised this as a significant accomplishment, and has paid tribute to the commitment of the States Parties towards the safe conduct of inspections.
- 12.7 ITs have been able to fulfil their mandates, while observing the requirements of the OPCW Health and Safety Policy, as well as the national requirements of States Parties and those specific to particular sites. This has been achieved by diligent adherence to policies and procedures, and by close cooperation with State Party personnel. In some cases, concerns over health and safety matters have meant finding alternative means of verifying compliance.
- 12.8 There have been instances of potential exposure of inspectors to CW agents. Once alerted to the accidental release of agent, the inspectors were able to take immediate action, which included masking up and evacuation. In no case were symptoms of any exposure noted.
- 12.9 No injuries or medical evacuations have been caused by chemical exposure. During the few medical emergencies due to illness that have required further treatment at an ISP hospital, ITs have all reported maximum assistance and cooperation from ISPs.

All such incidents were satisfactorily dealt with, and resulted in a full return to health by the inspectors involved. In some instances, emergency family matters arose during the conduct of a mission (e.g. the serious illness of a child). Without exception, States Parties reacted with understanding and cooperation, giving full assistance in arranging the urgent departure of the inspector. Safety concerns during transit of ITs have been brought to the attention of several States Parties. Again, the States Parties involved have been cooperative and willing to address and resolve such issues.

- 12.10 On-site risk assessment and management cannot occur without the correct equipment for detecting and monitoring the potential chemical hazards to which inspectors might be exposed. It is important that both the OPCW and States Parties establish and maintain a capability to provide near real-time detection and monitoring of hazardous chemicals in order to minimise the risks of exposure. It is also important that the OPCW continue to keep abreast of and use new technology, antidotes, and skills to maintain a healthy and safe working environment.

Sampling and analysis

- 12.11 Sampling and analysis have thus far had little or no role in the conduct of routine inspections, other than those at CWDFs. In March of 2001, on-site analysis to verify the absence of Schedule 1 compounds and their decomposition products was undertaken during a subsequent Schedule 2 inspection. At present, OPCW approved analytical equipment is routinely used at one CW destruction facility. On no other occasion had sufficient manpower and equipment been brought on an inspection to allow for on-site analysis using OPCW approved analytical equipment. This was partly a reflection of the requirements for initial inspections, and partly of technical, logistical and cost constraints. On a number of occasions, ITs have requested that sampling and on-site analysis be conducted by the ISP, and witnessed by the IT. This is standard procedure at most CW destruction facilities, and has also been used during Article VI inspections.

Debriefing

- 12.12 In accordance with paragraph 60 of Part II of the Verification Annex, ITs present to the representative of the ISP their preliminary findings in written form, according to a standardised format, together with a list of any samples and other material to be taken away from the site.
- 12.13 Since early 1998, following consideration by the Council, copies of the inspectors' notebooks have been provided to the ISP when the inspection has been completed, if the ISP so requested.

Final inspection reports

- 12.14 The Secretariat attempts to send the final inspection reports (FIRs) to the ISPs within the 10-day period laid down by the Convention. This deadline has not always been met. Reasons for delay include the length of time between completion of inspection and return to headquarters, and preparing several FIRs simultaneously when sequential inspections have been performed. Translations into official (OPCW)

languages other than English are completed later, as resources allow, and are sent separately to the ISP.

- 12.15 Only one FIR has ever been issued for a CWDF. The FIR for the Johnston Atoll Chemical Agent Destruction System (USA) was issued within the Convention's timeline. There have been no problems regarding the timelines of interim reports at CWDFs. Normally, they are given to the ISP within three days after the end of the reporting period.

Financial aspects of on-site inspection conduct

- 12.16 The principle of "possessor pays" is set out in paragraph 16 of Article IV and paragraph 19 of Article V of the Convention, and decisions on this matter were taken by the Conference (C-I/DEC.74*, dated 23 May 1997, and subparagraph 2(c) of decision C-II/DEC.17*, dated 5 December 1997; C-III/DEC.8, dated 17 November 1998; and C-IV/DEC.5, dated 29 June 1999). The costs of Article VI inspections are met from the Organisation's general operating budget. Paragraph 26 of Part II of the Verification Annex allows for the inspected State Party to be reimbursed for amenities requested by the Secretariat and provided to the inspection team during the course of an inspection. The procedures for this have been communicated to all States Parties with facilities subject to inspection (NV/ODDG/47320/01, dated 14 June 2001).
- 12.17 The mechanism for the payment of the cost of verification under Articles IV and V (i.e. during the same year in which such inspections have been conducted) has now been established, and measures are being taken to effectively implement it.
- 12.18 General improvements in the cost-effectiveness of the inspection regime have been introduced since the initial inspections of 1997. Measures implemented by the Secretariat have included the conduct of sequential inspections (a concept not explicitly provided for in the Convention); the consecutive inspection of facilities of the same type in more than one State Party when this would cut down travel time and costs; and the reduction of the size of teams and the duration of inspections, and other cost-saving measures. The expenses incurred per inspection today are considerably lower than was originally anticipated when the Convention was getting under way, and lower than those incurred during inspections during the early years of OPCW activity.
- 12.19 The Secretariat has noted wide variation in the amounts invoiced by States Parties for services provided during industrial inspections. The cost per translator-day runs from 140 to 1100 euros; and the cost for commuting between the inspectors' accommodation and the inspection site from 200 to 825 euros per day. In cases where costs have been extraordinarily high, the Secretariat has initiated consultations with the State Party to find a way of reducing them or, in exceptional cases, attempted to arrange its own services (e.g. the use of a taxi to transport a team between the inspection site and the hotel). The Secretariat has requested (NV/ODDG/47320/01 of 14 June 2001) that the National Authorities produce copies of the original invoices from the contracted parties who provide the services. However, these are not always received, leaving the Secretariat with no means of substantiating the claims.

13. Challenge inspection

Overview

- 13.1 No challenge inspection has so far been undertaken by the OPCW. The focus of attention since the formation of the Organisation has been to develop procedures and working instructions, and to train staff in their use. Exercises have been undertaken with the assistance of various States Parties in order to test and improve procedures and systems.

Designation of inspectors for challenge inspections

- 13.2 Paragraph 1 of Part X of the Verification Annex sets out that a challenge inspection shall be carried out only by inspectors and inspection assistants specially designated for this function. This paragraph further sets out that these inspectors and inspection assistants should be selected from amongst the inspectors and inspection assistants designated for routine inspections. The designation of these inspectors should follow the procedures provided for in Part II, Section A of the Verification Annex.
- 13.3 The list of designated inspectors is currently in the process of being updated; the original list was selected in 1999. Some specific shortages exist because staff members who had received specialised training (such as non-destructive evaluation (NDE) qualified CWMS personnel) have left the OPCW. This issue is receiving particular attention at the moment.

Inspection equipment

- 13.4 The Secretariat maintains a single list of approved equipment that may be used for all inspections. Equipment is selected from the list in accordance with the nature of the duties to be carried out.
- 13.5 Based on the experience of routine inspections and the challenge inspection exercises, a representative equipment selection for a challenge inspection has been made by the Secretariat's Operations and Planning Branch, and the OPCW Equipment Store has set this equipment aside. Equipment in the required quantity can be prepared in less than 24 hours.

Mission support

- 13.6 Procedures have been established for the immediate actions to be undertaken upon the receipt of the request for a challenge inspection. The first action to be taken upon the receipt and acknowledgement of a challenge inspection request is the assembly of a Mission Support Group (MSG). This is a body composed of the senior management and other key staff necessary for the planning and coordination of a challenge inspection. It remains on duty throughout the entire planning and inspection phases of the challenge inspection, and has the power to call upon additional staff, as and when necessary.
- 13.7 The MSG serves as the liaison between the IT and rest of the Secretariat. All communications to and from the team go through the MSG, which provides

guidance to the team in the field and, in turn, relays information concerning its progress to the Director-General.

- 13.8 The MSG would carry out the initial planning of the challenge inspection. After the Director-General has selected the inspection team leader, the latter would be incorporated into the MSG before being sent into the field. Significant challenges may be encountered during the planning of inspections, including the selection of the IT members and inspection equipment, due to the provisions of paragraph 6 of Part X of the Verification Annex. This provision requires the requesting State Party to specify the actual location of the inspection site in due time, so as to allow the Director-General to pass on that information to the ISP 12 hours prior to the arrival of the team. Theoretically, a team could actually be en route at the time that this information is provided by the requesting State Party.

Movement of the challenge inspection team, including its equipment

- 13.9 Movement of the IT to the POE for a challenge inspection will, no doubt, present a considerable challenge. Routine and systematic inspections (Articles IV, V, and VI) involve the pre-planned transport of small ITs with varying quantities of equipment to the POE. Larger quantities of equipment are dispatched by air freight prior to the departure of the IT. In the case of a challenge inspection (and an IAU), the requirement is to transport up to 50 inspectors and inspection assistants within short notice to locations that may have limited transport facilities.
- 13.10 The whole IT would probably be unable to travel on regular commercial air transport, due to the difficulty in obtaining sufficient seats at short notice. Another and possibly more serious problem is the transport of the IT equipment, which for a challenge inspection can be expected to run to several tonnes. It may also contain dangerous goods, such as radiation sources which, for legal reasons, may be difficult to transport.
- 13.11 Alternatives that have been explored to date include the chartering of an aircraft through a local broker, and transporting the team and its equipment together. A further possibility is to use aircraft leased from the United Nations. One suggestion advanced to ease the above problems is to send a lightly equipped advance team to the POE, to be followed by the main body of the IT, once the requirements have been more accurately defined. However, the very specific timelines imposed in the Convention may cause difficulties here. The Convention does not explicitly address this situation.

Conduct of inspections

- 13.12 Part X of the Verification Annex describes in detail the intricate process for determining the inspection site perimeter during a challenge inspection. As the Secretariat's experience of challenge inspections is limited to exercises, it is too soon to assess the operational implications of such elaborate provisions. The text of the Convention attempts to strike a balance amongst the requesting State Party's (RSP's) request, the facts observed at the site, and the practicalities of securing the perimeter while the negotiations are completed within a reasonable time period. Due regard for

the ISP's rights and obligations as set out in Article IX of the Convention and Part X of the Verification Annex must be given.

13.13 Within 12 hours after its arrival at the inspection site, the IT should begin securing the site. This activity may precede the start of the inspection proper by a period of up to 60 hours.

13.14 Sampling and analysis could be important components of any challenge inspection, and have been considered elsewhere in this report.

Experience from training exercises for challenge inspection

13.15 In addition to general inspector training, which covers most of the skills required for a challenge inspection, specific training on the challenge regime was incorporated into module 1 of both group A's and group B's initial inspector training courses. A challenge inspection seminar was held for all inspectors in 1999, and a challenge inspection refresher course was held in 2001. This training has continued in 2002.

13.16 Since 1998, several challenge inspection exercises have been held at various locations, using different scenarios; they are summarised in table 4 below.

Table 4: Challenge inspection exercises

Location	Type of exercise	Dates	Observation
United Kingdom – RAF Valley	Mock challenge inspection	February 1998	10 inspectors
United Kingdom at the Royal School of Artillery – Larkhill	Mock challenge inspection	June 1999	Three participants from the OPCW (one inspector and two observers)
OPCW – The Hague	Call out exercise	Year 1999	Total of 154 inspectors and staff members involved
The Netherlands – Wassenaar	Mock challenge inspection	September 1999	42 inspectors – military field exercise
Brazil – São Paulo	Mock challenge inspection	October 1999	10 inspectors Industry plant
United Kingdom – Culdrose Royal Navy Air Base	Mock challenge inspection	June 2000	Three inspectors
United Kingdom – RAF Stafford	Mock challenge inspection	June 2001	Three inspectors and one staff member
United States – Washington	Table-top exercise	April 2001	Four inspectors

Location	Type of exercise	Dates	Observation
United States – Naval Weapons Centre in Maryland	Naval Surface Warfare Centre	July 2001	10 inspectors
OPCW Headquarters	Call out exercise	Year 2001	30 inspectors
United Kingdom – Marchwood Military Storage Depot	Mock challenge inspection	June 2002	3 inspectors
The Netherlands – Coevorden	Joint NL-UK mock challenge inspection	October 2002	29 inspectors

Conclusion

- 13.17 While a request for a challenge inspection would place considerable strain on its resources, the Secretariat has developed the ability to respond effectively to such requests. Once at the inspection site, the Secretariat is confident that it can fulfil the mandated aims of any challenge inspection.

14. Investigation of alleged use of chemical weapons

Overview

- 14.1 An IAU of chemical weapons can be initiated under either Article IX (Consultations, Cooperation and Fact-Finding) or Article X (Assistance and Protection against Chemical Weapons). IAUs are governed by the provisions of Part XI of the Verification Annex. Due to the broad range of possible scenarios, planning for such investigations is difficult. Implementation could involve a significant use of resources.

Receipt of a request for an investigation of alleged use of chemical weapons

- 14.2 A request for an IAU under Article X would probably be accompanied by a request for assistance and protection under paragraph 8 of Article X. The procedures to be followed immediately upon the receipt of a request for an IAU are broadly similar to those set up for a challenge inspection. In both cases, an MSG would prepare and coordinate the IT from the Secretariat.

Designation of inspection team members

- 14.3 Inspectors are selected for an IAU inspection from the list of inspectors designated for a challenge inspection. In addition, in the case of a possible request for an IAU, the Director-General is required to maintain a list of suitably qualified experts (Verification Annex, Part XI, paragraph 7). This list currently contains 77 names.

Inspection equipment

- 14.4 As in the case of a challenge inspection, a representative list of equipment has been prepared by the Operations and Planning Branch for an IAU, and equipment has been

set aside by the OPCW Equipment Store. The equipment preparation time, as for a challenge inspection, is envisaged to be in the order of 24 hours.

Inspection team movements

- 14.5 Considerations similar to those which apply to the movements of ITs and their approved equipment during a challenge inspection may also apply in the case of an IAU. An additional factor that needs to be taken into account is the possible involvement of qualified experts not stationed in The Hague, who would have to join up with the rest of the inspection team before the investigation began.

Sampling and analysis

- 14.6 Sampling and analysis would be important components of any IAU, and have been considered elsewhere in this report.
- 14.7 The Convention makes additional provision, in the case of an IAU, for the taking and analysing of biomedical samples. These are not the same as environmental samples, so analysing them may involve enzyme activity assays or detecting DNA adducts or CW metabolites. The Secretariat has neither the expertise nor the equipment to perform such analyses. In response to a questionnaire, 14 States Parties have indicated both some ability to analyse biomedical samples, and a willingness to assist the OPCW in this regard. The issue of the analysis of biomedical samples is currently under review by the Scientific Advisory Board.

Investigations of Alleged Use Training/Exercises

- 14.8 In addition to general inspector training and annual refresher training, which cover some of the skills required for an IAU, specific training has been arranged to increase the preparedness of the inspectors most likely to participate in an IAU. Training for this has taken the form of courses run both in-house and externally, and which cover such areas as:
- (a) interview techniques;
 - (b) decontamination;
 - (c) certification of a number of specialists in the operation of non-destructive evaluation (NDE) equipment;
 - (d) live agent training exercises organised by State Parties;
 - (e) an explosive ordinance reconnaissance course developed in-house; and
 - (f) various seminars.
- 14.9 No formal training has been organised for the listed experts offered by some States Parties. Some initial thought has been given to a short course that could be provided to the listed experts, so that they would be able to conduct an IAU effectively.

Team integration is a potential area of concern. Resources have not been available for this kind of training.

14.10 Two IAU exercises have been held; they are summarised in table 5 below:

Table 5: Investigation of Alleged Use Exercises

Location	Type of exercise	Dates	Observation
Czech Republic	Simulated CW attack on a State Party	October 1999	23 Inspectors + Three Experts
Poland – Slubowo	Simulated CW attack on a State Party	June 2000	22 Inspectors

Conclusion

14.11 While a request for an IAU would, like one for a CI, place considerable strain on the resources of the Secretariat, the Secretariat has developed the ability to respond effectively to such requests.

--- 0 ---