



**OPCW**

**Technical Secretariat**

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Verification Division  
S/1042/2012/Rev.2  
19 December 2012  
Original: ENGLISH

**NOTE BY THE DIRECTOR-GENERAL**

**SUMMARY OF VERIFICATION ACTIVITIES IN 2011**

1. The Second Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention (hereinafter “the Second Review Conference”) reaffirmed the importance of factual reporting by the Technical Secretariat (hereinafter “the Secretariat”) on verification results “in the interests of transparency and continued assurance of States Parties’ compliance” (paragraph 9.51 of RC-2/4, dated 18 April 2008). Accordingly, the Secretariat has prepared the attached OPCW Verification Summary for 2011, which reflects the verification work undertaken by the Secretariat in that year.
2. The summary provides valuable feedback on the Secretariat’s verification activities, especially to States Parties that lack representation in The Hague. In terms of public outreach, it is consistent with the OPCW Media and Public Affairs Policy (C-I/DEC.55, dated 16 May 1997) and presents pertinent information on such work to a wider audience.
3. The summary follows a structure similar to the verification summaries from previous years, and does not contain any protected information.

Annexes:

- Annex 1: OPCW Verification Summary for 2011  
Annex 2: List of Designated OPCW Laboratories



## **Annex 1**

### **OPCW VERIFICATION SUMMARY FOR 2011**

#### **1. EXECUTIVE SUMMARY**

##### **Overview**

- 1.1 As at 31 December 2011, there were 188 States Parties to the Chemical Weapons Convention (hereinafter “the Convention”).
- 1.2 Eleven States Parties had yet to submit initial declarations according to the Convention. Of these, two had submitted only Article III initial declarations, and one had submitted only an Article VI initial declaration. The Secretariat is not able to fulfil its verification tasks with regard to these States Parties.
- 1.3 There were two signatory States not Party<sup>1</sup> and six non-signatory States<sup>2</sup>, for which no verification activities could be undertaken.

##### **Verification operations**

- 1.4 With regard to the chemical demilitarisation and industry verification programmes, disarmament, and non-proliferation, the Secretariat performed 371 inspections/rotations in 2011, which accounted for 16,821 inspector days at 257 sites in 41 States Parties (compared with 18,512 in 2010). This total consists of 13,608 (81%) inspection days connected to chemical weapons demilitarisation under Articles IV and V, and 3,213 inspection days (19%) related to industry verification under Article VI. The Secretariat conducted 209 Article VI inspections in 2011, and was able to meet the mandated inspection aims at all inspections carried out in 2011. No inspections registered uncertainties. Issues requiring further attention (IRFAs) were registered in connection with eight chemical weapons-related inspections and with 15 Article VI inspections. By 31 March 2012, 30 chemical-weapons related and two industry-related inspection files remained open, because IRFAs remained unresolved.
- 1.5 No challenge inspections (CIs) or investigations of alleged use (IAUs) were requested in 2011.
- 1.6 The Secretariat continued to verify the efforts being made by States Parties with declared stockpiles of chemical weapons to meet their destruction obligations. The Secretariat verified the destruction of 6,428.722 metric tonnes (MTs) of chemical weapons and five items of Category 3 chemical weapons at 11 chemical weapons destruction facilities (CWDFs) in three of the four possessor States Parties (compared with 4,914.971 MTs in 2010). No destruction of chemical weapons took place in Iraq.

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<sup>1</sup> Israel and Myanmar

<sup>2</sup> Angola, the Democratic People's Republic of Korea, Egypt, Somalia, South Sudan, and the Syrian Arab Republic

- 1.7 Destruction operations concluded at three CWDFs in the United States of America, namely, the Anniston Chemical Agent Disposal Facility (ANCDF), the Umatilla Chemical Agent Disposal facility (UMCDF), and the Pine Bluff Explosive Destruction System (PBEDS).
- 1.8 Following the destruction of almost eight MTs of chemical weapons in early 2011, verified destruction operations in Libya were interrupted for most of 2011, due to civil unrest. In November 2011, the Secretariat was able to verify that the chemical weapons stored at a temporary holding area at the Libyan CWDF (the remainder of the previously declared stockpile of sulfur mustard, as well as two types of Category 2 chemical weapons) were still accounted for. Also in November, Libya made a declaration of Category 1 and Category 3 chemical weapons, and informed States Parties of the discovery of a number of munitions that were also believed to be chemical weapons.<sup>3</sup>
- 1.9 The first chemical weapons-related inspections in Iraq were carried out in 2011. Four chemical weapons production facilities (CWPFs), as well as the Al-Muthanna chemical weapons storage facility (CWSF) were inspected by means of helicopter overflights undertaken in cooperation with the United Nations Assistance Mission in Iraq (UNAMI).
- 1.10 The Secretariat carried out seven inspections related to chemical weapons abandoned by Japan on the territory of China, including three quarterly inspections to verify ongoing operations at the Abandoned Chemical Weapons Mobile Destruction Facility (ACW-MDF) at Nanjing, China, where 25,974 chemical weapons were reported as destroyed during the year. New recovery, identification, and transfer operations related to Japanese abandoned chemical weapons (ACWs) in China were notified in 2011.

### **Year-end status**

- 1.11 The Secretariat verified the following year-end status of destruction of chemical-warfare agents at the end of the review period:
- (a) A total of 51,504.789 MTs—or 72%, of the total declared chemical weapons stockpiles of 71,195.086 MTs<sup>4</sup>—had been destroyed.<sup>5</sup>
  - (b) A State Party,<sup>6</sup> Albania, and India had completed the destruction of their entire declared stockpiles of chemical weapons. Iraq, Libya, the Russian Federation, and the United States of America had yet to complete destruction.
    - (i) Libya had destroyed 54%, the Russian Federation 60%, and the United States of America 90%, of their respective declared quantities of Category 1 chemical weapons.

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<sup>3</sup> See C-16/NAT.24, dated 29 November 2011.

<sup>4</sup> Excluding Iraq.

<sup>5</sup> Including amounts of Schedule 1 chemicals withdrawn in accordance with the Convention.

<sup>6</sup> The State Party in question has requested that its name be regarded as highly protected information; therefore, for the purpose of this report, it is hereinafter referred to as “A State Party”.

- (ii) Discussions were being pursued on the issue of destruction of declared chemical weapons in Iraq.
- (c) The Director-General had certified, for 11 of the 13 States Parties having declared CWPFs, that all their declared facilities had been either destroyed or converted (a total of 64 declared CWPFs). Four facilities in Iraq remained to be verified as destroyed; one facility each in Iraq and the Russian Federation remained to be certified as converted.<sup>7</sup>
- (d) With regard to recovered old and abandoned chemical weapons (OACWs), about 20,000 pre-1925 old chemical weapons (OCWs) and 18,000 OCWs produced between 1925 and 1946 had yet to be destroyed at the end of 2011. Approximately 12,600 chemical weapons abandoned by Japan on the territory of China were being kept at storage sites in China.
- (e) According to declared information, 80 States Parties maintained at least one declarable facility pursuant to Article VI of the Convention.

### **Optimising the verification regime**

- 1.12 The Secretariat continued to maintain a high number of sequential Article VI inspections. Such inspections remain an important efficiency measure. Sampling and analysis (S&A) was performed during eight Schedule 2 inspections in 2011. Signatures for several additional scheduled chemicals were added to the OPCW Central Analytical Database (OCAD).
- 1.13 In total, the Secretariat processed 874 incoming documents, declarations, and other verification-related documents, comprising 13,724 pages in hard copy, which had been received from States Parties in 2011. This data was received in addition to the large volume of data now being received in electronic form.
- 1.14 The ability of the Secretariat to implement its verification responsibilities effectively and efficiently continues to be adversely affected by outstanding initial declarations, by late or outstanding annual declarations, and by the continued high number of transfer discrepancies. Of particular relevance are cases of States Parties that submit no aggregate national data (AND) declarations, even though they are named as importers of scheduled chemicals in other States Parties' AND declarations. The Secretariat continued to approach States Parties in this category, notably in the context of requests for clarification (RFCs) of transfer discrepancies.

<sup>7</sup>

No deadlines had been established for destruction or conversion of CWPFs in Iraq, for which a request for conversion of a CWPF was pending at the end of the review period.

## 2. INSPECTIONS

### Overview

- 2.1 As mentioned above, during 2011, the Secretariat conducted 371 inspections/rotations, which accounted for 16,821 inspector days at 257 sites in 41 States Parties. On average, 1,402 inspector days were undertaken each month (compared with 1,542 in 2010). Table 1 lists the number and types of inspections or rotations completed in 2011 and other summary statistics on inspection activities. Overall, the Secretariat carried out 4,722 inspections/rotations in 84 States Parties between the entry into force (EIF) of the Convention and 31 December 2011.

**TABLE 1: INSPECTIONS COMPLETED IN 2011**

|                                             | No. of Facilities <sup>8</sup> | No. of Inspections/ Rotations Completed | No. of Facilities or Sites Inspected | No. of Inspector Days |
|---------------------------------------------|--------------------------------|-----------------------------------------|--------------------------------------|-----------------------|
| <b>Chemical Weapons-Related Inspections</b> |                                |                                         |                                      |                       |
| CWDF                                        | 9                              | 112                                     | 10                                   | 12,278                |
| CWSF                                        | 12                             | 20                                      | 12                                   | 620                   |
| CWPF                                        | 27                             | 12                                      | 11                                   | 160                   |
| OCW                                         | 6                              | 7                                       | 7                                    | 83                    |
| ACW                                         | 34                             | 7                                       | 7                                    | 188                   |
| ACWD <sup>9</sup>                           | 1                              | 3                                       | 1                                    | 104                   |
| DHCW <sup>10</sup>                          | n/a                            | 1                                       | n/a                                  | 175                   |
| <b>Subtotal</b>                             |                                | <b>162</b>                              | <b>48</b>                            | <b>13,608</b>         |
| <b>Article VI (Industry Inspections)</b>    |                                |                                         |                                      |                       |
| Schedule 1                                  | 27                             | 11                                      | 11                                   | 182                   |
| Schedule 2                                  | 179                            | 42                                      | 42                                   | 998                   |
| Schedule 3                                  | 421                            | 29                                      | 29                                   | 473                   |
| OCPF                                        | 4,228                          | 127                                     | 127                                  | 1,560                 |
| <b>Subtotal</b>                             | <b>4,855</b>                   | <b>209</b>                              | <b>209</b>                           | <b>3,213</b>          |
| <b>Combined total</b>                       |                                | <b>371</b>                              | <b>257</b>                           | <b>16,821</b>         |

### Distribution of inspections

- 2.2 Thirty-nine States Parties received Article VI inspections in 2011. As can be seen in Table 2, a relatively small number of States Parties have been receiving such inspections in the past few years. One reason for this is the limited number of States Parties that have either Schedule 3 plant sites or other chemical production facilities (OCPFs) subject to initial inspection (this has been caused, in part, by the site-selection methodology that was applied before 2008). Another reason for this is given by the OCPF site-selection mechanism introduced in 2008,<sup>11</sup> which had a strong focus on States Parties with large numbers of declared OCPFs.

<sup>8</sup> For CWDFs and ACWDs: number of operational facilities in 2011; for CWSFs and CWPFs: inspectable as at 1 January 2011; for OACW and Article VI facilities: inspectable as at 31 December 2011

<sup>9</sup> ACWD = abandoned chemical weapons destruction facility

<sup>10</sup> DHCW = destruction of hazardous chemical weapons

<sup>11</sup> See S/641/2007, dated 25 May 2007 and Corr.1, dated 4 June 2007.

**TABLE 2: DISTRIBUTION OF ARTICLE VI INSPECTIONS**

|                                                      | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|------------------------------------------------------|------|------|------|------|------|------|------|
| Inspections                                          | 162  | 180  | 200  | 200  | 208  | 208  | 209  |
| States Parties hosting inspections                   | 53   | 54   | 58   | 40   | 38   | 38   | 39   |
| States Parties accounting for 50% of the inspections | 9    | 11   | 13   | 6    | 6    | 6    | 7    |

2.3 Following consultations in the Industry Cluster in 2011, the Director-General announced the introduction of a new, interim site-selection methodology for OCPFs,<sup>12</sup> which is designed to target high-relevance OCPFs to a greater extent. The new methodology is being introduced for inspections that will be conducted in 2012.

2.4 Table 3 shows the regional distribution of industry inspections during 2011.

**TABLE 3: INDUSTRY INSPECTIONS BY REGION**

| Regional Group                     | No. of Industry Inspections | Percentage of Total |
|------------------------------------|-----------------------------|---------------------|
| Africa                             | 4                           | 2%                  |
| Asia                               | 78                          | 37%                 |
| Eastern Europe                     | 18                          | 9%                  |
| Latin America and the Caribbean    | 18                          | 9%                  |
| Western Europe and Other Countries | 91                          | 43%                 |

### **Challenge inspections and investigations of alleged use**

2.5 As in previous years, no CIs were requested in 2011, and there were no requests for IAUs. The Secretariat continued to maintain readiness to conduct a CI or IAU, as requested by the States Parties.<sup>13</sup>

2.6 From 27 October to 10 November 2011, the Secretariat conducted a major CI exercise, concurrently at an industrial plant site in Thailand and at OPCW Headquarters. The field segment was co-organised with Thailand, which acted as the “inspected State Party”, with the contribution of Australia, which played the role of the “requesting State Party”. This was the first time that a CI field exercise had been co-organised with and conducted in a State Party in Asia.

2.7 The overall objective of the exercise was to test the preparedness of the Secretariat to conduct a CI under Article IX of the Convention, and to identify key areas for improvement. The exercise consisted of Headquarters activities, the deployment of an inspection team, and the conduct of field activities, as well as the development of a preliminary inspection report. The exact timing of the launch of the exercise at OPCW Headquarters was unknown to staff, so that internal procedures could be tested on as a realistic basis as possible.

2.8 Following the delivery by the requesting State Party of a mock CI request to the Director-General on 27 October 2011, and the determination that the request was in

<sup>12</sup> S/962/2011, dated 8 September 2011

<sup>13</sup> See paragraphs 7.91 and 7.100 of RC-1/5, dated 9 May 2003; and paragraphs 9.90 and 9.105 of RC-2/4, dated 18 April 2008.

conformity with the Convention, a team of 25 inspectors was deployed to the exercise site in Thailand. Other Secretariat staff participated in the exercise at OPCW Headquarters by assuming their assigned roles in case of a CI or by acting as exercise planners or evaluators. The presentation to the Director-General of the preliminary inspection report, on 10 November 2011, marked the end-point of the exercise. The Secretariat's performance in the field was assessed by a team of independent evaluators and an evaluation report was submitted to the Director-General for follow-up analysis and action. A summary of the exercise and the lessons to be learned was circulated to States Parties.<sup>14</sup>

- 2.9 During the 2011 CI exercise, the exercise planners also incorporated a mock request by the Secretary-General of the United Nations, seeking OPCW support in connection with an IAU in a State not Party.<sup>15</sup> It was the first time that the response to such a request had been the subject of an exercise. Areas requiring attention were identified.
- 2.10 Following on from the third OPCW Field Exercise on Assistance and Protection (ASSISTEX 3)—held in Tunisia in 2010—and taking into consideration recommendations contained in the evaluation of that exercise, inspectors completed several training courses designed to ensure their readiness to conduct an IAU. The courses included table-top exercises in team leadership, together with field training and exercises in reconnaissance and sampling, command-and-control operations, decontamination, reconnaissance, and non-destructive evaluation (NDE). All of these IAU-related courses were conducted in the Netherlands.

### **Inspector training**

- 2.11 During 2011, almost 5,000 inspector days were spent on the training of new and existing inspectors. This training was supported by Belgium, the Czech Republic, France, Germany, Italy, Jordan, the Netherlands, Serbia, Slovakia, Switzerland, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.
- 2.12 For existing inspectors, ongoing training was provided to all speciality groups, and consisted of the delivery of 123 training courses throughout the year. In preparation for the CI exercise in Thailand, inspectors attended several training courses, involving such areas as command-and-control, exit monitoring, managed access in the field, investigative interview skills, risk communication, CI report writing, and planning and negotiating.
- 2.13 Nine professionals from the Group L of inspectors from nine States Parties joined the OPCW Inspectorate in 2011. Eight of these completed the training course for new inspectors successfully, while one left the Secretariat before completing all of the elements. The training programme included lectures by experts on verification policy, chemical demilitarisation, and industry verification. Case studies and table-top exercises ensured that the inspectors acquired familiarity with on-site inspection procedures, and field training enabled them to become proficient in the use of

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<sup>14</sup> S/973/2011, dated 28 November 2011

<sup>15</sup> See paragraph 27 of Part XI of the Verification Annex to the Chemical Weapons Convention (hereinafter “the Verification Annex”).

approved OPCW inspection equipment and procedures. The trainees were able to acquire knowledge of procedures for the identification of a wide range of OCWs, and training was also provided on the usability criteria applied by the Secretariat. Along with existing analytical-chemist inspectors, three such inspectors from Group L were trained by the OPCW Laboratory in OPCW S&A procedures and chemical weapons analysis.

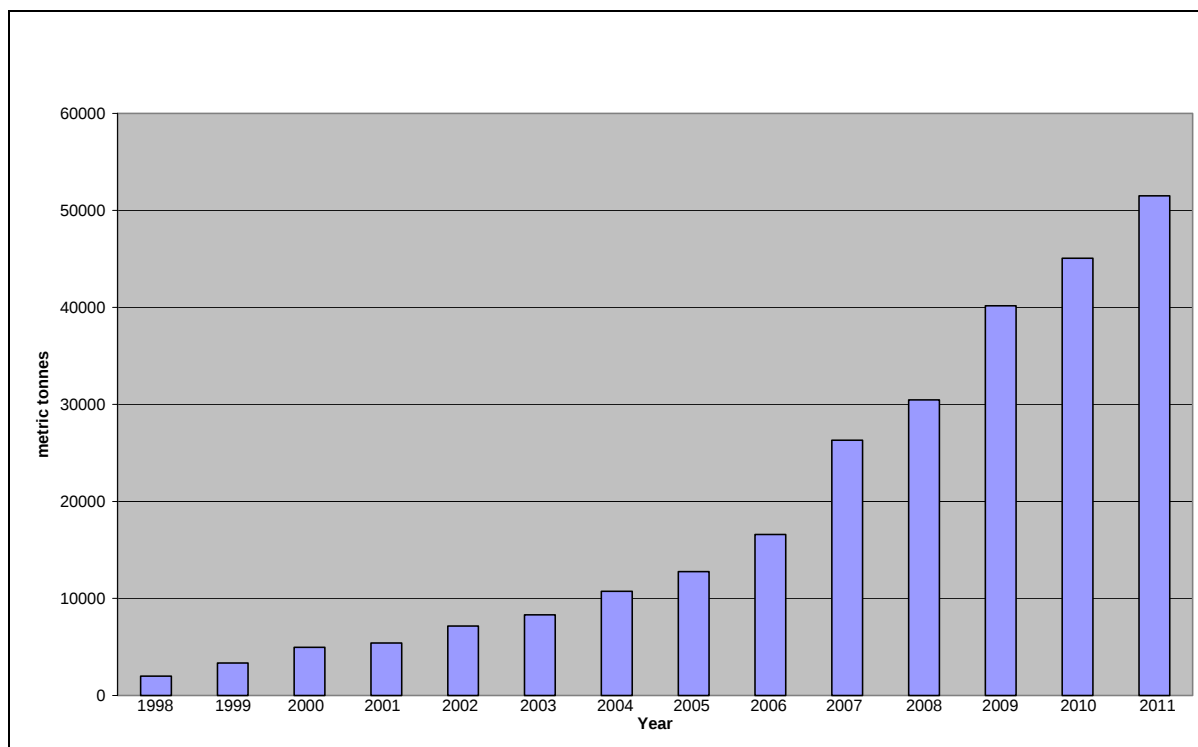
- 2.14 Field training was designed to familiarise the new inspectors with personal protection, detection, decontamination, and safe working procedures in connection with entries into toxic environments; the training involved the use of live chemical-warfare agents. One of the core elements of the training of new inspectors was the mock-inspection training at two declared facilities, an exercise that took place with the support of the States Parties involved.

### **3. CHEMICAL WEAPONS**

#### **Overview**

- 3.1 The Secretariat verifies the destruction of chemical weapons by maintaining a continuous presence at all operating CWDFs, which allows for the monitoring of ongoing declared activities, either by direct physical observation or through the use of on-site instruments, including equipment specifically dedicated for the use of inspectors. For the purpose of verification, inspectors are granted access, so that they can monitor process parameters and review relevant documentation. Furthermore, S&A allows the Secretariat to verify the type of chemical-warfare agent being destroyed. By observing the process of destruction and by means of the S&A of generated waste products and, where applicable, the mutilation of drained and decontaminated munitions bodies, the Secretariat can verify that declared quantities of chemical weapons have been completely destroyed. Inspections are also carried out at CWSFs to ensure that no undetected removal of chemical weapons takes place, except in accordance with the Convention.
- 3.2 Inspections at CWDFs amounted to 12,278 inspector days during 2011 (14,567 in 2010), while inspection efforts at CWSFs totalled 620 inspector days (635 in 2010).
- 3.3 In 2011, the Secretariat verified the destruction of 6,428.722 MTs of chemical weapons. This was an increase compared to 2010, when total destruction amounted to 4,914.971 MTs. Variations in the overall quantity destroyed on a yearly basis may be triggered by a number of factors, including the number of destruction facilities operating during the year, the destruction technologies in use, the type of chemical weapons subject to destruction during the respective yearly campaigns (whether artillery or aerial munitions, or agent in bulk containers), and the length of planned or unplanned periods of maintenance and servicing.
- 3.4 On 31 December 2011, the Secretariat had verified the destruction of a total of 51,504.789 MTs of chemical weapons in A State Party, Albania, India, Libya, the Russian Federation, and the United States of America (see Figure 1). This amounted to 72.34% of the declared chemical weapons.

**FIGURE 1: VERIFIED DESTRUCTION OF CHEMICAL WEAPONS:  
CUMULATIVE FROM 1998 TO 2011**



- 3.5 In 2011, nine CWDFs (11 in 2010) were involved in the destruction of Category 1 chemical weapons: One in Libya, four in the Russian Federation, and four in the United States of America (see Table 4). Design and construction of additional units continued at four already operational facilities in the Russian Federation, while three other CWDFs (one in the Russian Federation and two in the United States of America) were, as at the end of 2011, in different phases of construction.

**TABLE 4: CHEMICAL WEAPONS DESTRUCTION FACILITIES IN SERVICE OR UNDER CONSTRUCTION IN 2011**

| <b>Chemical Weapons Destruction Facilities by State Party</b>                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Libya</b>                                                                                                                                                                                                                                                                                                                                     |
| Ruwagha Chemicals Reloading System and Rabta Toxic Chemical Disposal Facility (RCRS-RTCDF) <sup>16</sup>                                                                                                                                                                                                                                         |
| <b>Russian Federation</b>                                                                                                                                                                                                                                                                                                                        |
| Leonidovka CWDF<br>Maradykovsky CWDF<br>Shchuchye CWDF<br>Pochep CWDF<br>Kizner CWDF*                                                                                                                                                                                                                                                            |
| <b>United States of America<sup>17</sup></b>                                                                                                                                                                                                                                                                                                     |
| Anniston Chemical Agent Disposal Facility (ANCDF)<br>Prototype Detonation Test and Destruction Facility (PDTDF)<br>Tooele Chemical Agent Disposal Facility (TOCDF)<br>Umatilla Chemical Agent Disposal Facility (UMCDF)<br>Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP)*<br>Pueblo Chemical Agent Destruction Pilot Plant (PCAPP)* |

\* Facility under construction as at the end of 2011

- 3.6 Construction operations were concluded in 2011 at the ANCDF, the PBEDS, and the UMCDF in the United States of America.
- 3.7 Three CWSFs in the United States of America were closed, namely, the Anniston CWSF, the Pine Bluff Chemical Activity Bond Road Exclusion Area CWSF, and the Umatilla CWSF. Final inspections were conducted, during which the Secretariat verified that all chemical weapons previously stored at these CWSFs had either been transferred to a CWDF for destruction or withdrawn from chemical weapons stocks, in accordance with the Convention. Overall, the OPCW conducted 20 CWSF inspections in 2011: one in Iraq, nine in the Russian Federation and 10 in the United States of America. At the end of the review period, 10 out of a total of 35 declared CWSFs still contained chemical weapons.
- 3.8 At the end of the review period, there remained four States Parties with declared chemical weapons that had yet to be completely destroyed—Iraq, Libya, the Russian Federation, and the United States of America.

### **Progress in meeting destruction obligations**

#### Overall progress in meeting destruction obligations

- 3.9 At the end of the review period, A State Party, Albania, India, Libya, the Russian Federation, and the United States of America had declared a total of 71,195.086 MTs<sup>18</sup> of chemical weapons (69,429.003 MTs of Category 1 and 1,766.083 MTs of

<sup>16</sup> The RCRS-RTCDF was operational until 8 February 2011.

<sup>17</sup> At the PBEDS, the Secretariat conducted a final inspection in 2011, although no destruction operations were conducted during the year.

<sup>18</sup> This total does not include amounts declared by Iraq; nor do the figures declared by the Russian Federation include the weight of thickening agents.

Category 2), contained in 8,263,554 munitions and containers. Approximately 72.34% of these chemical weapons—or a total of 51,501.876 MTs (50,581.945 MTs in Category 1 and 919.931 MTs in Category 2)—had been verified as destroyed. In addition, 2,913 MTs of Schedule 1 chemicals had been withdrawn from Category 1 chemical weapons stockpiles in A State Party, the Russian Federation, and the United States of America, for purposes not prohibited under the Convention.<sup>19</sup> The possessor States Parties had also declared 416,525 items of Category 3 chemical weapons. All those items, with the exception of 207 items declared by Libya in 2011, had been destroyed at the end of the review period. More specifically, the OPCW had verified the destruction of the following quantities of chemical weapons in these six States Parties:

- (a) Category 1 chemical weapons: The Secretariat had verified the destruction of 50,581.945 MTs of this category of chemical weapons, 49,361.983 MTs of which were unitary chemical weapons (6,428.722 MTs in 2011), including lewisite, sarin (GB), sulfur mustard (including H, HT, and HD), and tabun (GA), tabun with UCON, viscous soman (GD), VX and Vx, and unknown agent, contained in 4,188,028 munitions and containers (454,665 in 2011), as well as in other storage vessels that had a volume of less than 2m<sup>3</sup> and in larger volume storage tanks, from which the chemical-warfare agent had been drained. Another 1,219.962 MTs were binary chemical weapons, which included the following: 489.416 MTs of the key binary components DF and QL, as well as 730.546 MTs of another binary component (OPA). Overall, the Secretariat verified the destruction of 785,066 binary items, including 415,108 artillery projectiles, 369,958 separately declared DF and OPA canisters, and 306 other containers for binary components.
- (b) Category 2 chemical weapons: The Secretariat had verified the destruction of 919.931 MTs of Category 2 chemical weapons (no destruction of Category 2 chemical weapons took place in 2011): CNS, thiodiglycol (TDG), 2-chloroethanol (2-CE), phosgene, sodium sulphide, sodium fluoride, chloroacetophenone (CN), phosphorous trichloride, and adamsite (DM), as well as 3,847 artillery projectiles.
- (c) Category 3 chemical weapons: As at the end of 2011, the Secretariat had verified the destruction of 416,318 items of Category 3 chemical weapons declared to the OPCW (five were destroyed in 2011). The destruction of 207 Category 3 items, which were declared by Libya in 2011, was still pending at the end of the reporting period.

## **Iraq**

- 3.10 A destruction deadline has yet to be established for Iraq, which acceded to the Convention in 2009.
- 3.11 Iraq's initial declarations referred to chemical weapons stored in a CWSF consisting of two bunkers. According to the declarations, the listing of chemical weapons is based on available information from the United Nations Special Commission

<sup>19</sup>

See subparagraph 2(d) of Part VI of the Verification Annex.

(UNSCOM), as it was not possible for Iraq to conduct a detailed on-site inventory, due to the hazardous conditions within the bunkers.

- 3.12 In 2011, the Secretariat, by means of helicopter overflights in cooperation with UNAMI, was able to conduct initial inspections at the Al-Muthanna CWSF in Iraq. The Secretariat continued to provide assistance to Iraq in relation to clarifying remaining matters regarding this State Party's declarations, and worked together with Iraq and other interested delegations to identify suitable methods for the assessment of the contents of the bunkers, in order to proceed at a later stage with their disposal.
- 3.13 Consultations between the Secretariat and Iraq continued in 2011, with a view to clarifying some aspects related to Iraq's initial declarations that would have a bearing on the finalisation of a general plan for destruction. One such aspect is the condition of the chemical weapons stored in the CWSF declared by Iraq. Once these issues have been clarified further, the Secretariat will be able to consider verification measures for the declared chemical weapons and their destruction.

### **Libya**

- 3.14 Following a request by Libya, the Conference of the States Parties (hereinafter "the Conference"), at its Sixteenth Session, amended its previous decision<sup>20</sup> and granted an extension to 29 April 2012 of the deadline by which Libya must destroy all of its Category 1 chemical weapons stockpiles.<sup>21</sup> The Conference also called upon Libya to complete the destruction of all its Category 2 chemical weapons as soon as possible, but in any case, by no later than 29 April 2012.
- 3.15 Following the destruction of almost eight MTs of chemical weapons in early 2011, verified destruction operations in Libya were halted at the CWDF in Libya on 8 February 2011, due to the damage and severe corrosion of the water-heating unit in the disposal station, which needed to be replaced. Because of the outbreak of unrest in Libya, the unit could not be replaced and no further chemical weapons could be destroyed in this State Party in 2011. In November 2011, the Secretariat conducted an inspection that confirmed that the chemical weapons that were stored at the temporary holding area at the Libyan CWDF<sup>22</sup> were still accounted for. In addition, in November, Libya made a declaration of Category 1 and Category 3 chemical weapons, and informed States Parties of the discovery of a number of munitions that were also believed to be chemical weapons.<sup>23</sup>
- 3.16 By the end of the reporting period, Libya had destroyed 13.475 MTs of sulfur mustard (of which 7.949 MTs were destroyed in 2011), or 53.87 % of its declared Category 1 chemical weapons. No destruction of Category 2 chemical weapons took place in Libya during the review period; the total quantity of destroyed Category 2 chemical weapons remained unchanged at 555.706 MTs (246.625 MTs of sodium sulphide, 304.725 MTs of sodium fluoride, and 4.356 MTs of phosphorus trichloride), or

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<sup>20</sup> C-14/DEC.3, dated 2 December 2009

<sup>21</sup> C-16/DEC.3, dated 29 November 2011

<sup>22</sup> Sulfur mustard and two chemical weapons precursors stored at Ruwagha Hydrolysis and Neutralisation System 1

<sup>23</sup> See C-16/NAT.24, dated 29 November 2011.

39.64% of its declared Category 2 chemical weapons. All of the Category 3 items declared by Libya prior to 2011 (3,563 items) had been destroyed in accordance with the Convention.

- 3.17 In November 2011, Libya informed the Secretariat that it would not be able to meet the final extended destruction deadline of 29 April 2012.

### **Russian Federation**

- 3.18 The Conference established 29 April 2012 as the final extended destruction deadline for Category 1 chemical weapons in the Russian Federation.<sup>24</sup>
- 3.19 In 2011, the Secretariat verified the destruction by the Russian Federation of 4,425.194 MTs of Category 1 chemical weapons (1,244.520 MTs in 2010) at four destruction facilities located at Leonidovka, Maradykovsky, Pochep, and Shchuchye.
- 3.20 As at 31 December 2011, the Russian Federation had destroyed 23,988.220 MTs, or 60.02% of its declared stockpile of Category 1 chemical weapons. The Russian Federation has destroyed all of its declared Category 2 chemical weapons (10.616 MTs) and Category 3 chemical weapons (330,024 items).

### **United States of America**

- 3.21 The Conference established 29 April 2012 as the final extended destruction deadline for Category 1 chemical weapons in the United States of America.<sup>25</sup>
- 3.22 In 2011, the United States of America destroyed 1,995.579 MTs of chemical weapons (3,660.569 MTs in 2010) using four of its CWDFs located at Anniston, Tooele, Umatilla, and the PDTDF at Aberdeen. Destruction operations having been completed, the inspection files were closed for the CWDFs at Anniston and Umatilla as well as for the Pine Bluff Explosive Destruction System (PBEDS).
- 3.23 As at 31 December 2011, the United States of America had destroyed 24,914.865 MTs, or 89.72%, of its declared stockpile of Category 1 chemical weapons. This State Party had also completed the destruction of its declared Category 2 chemical weapons (0.010 MTs), and had destroyed all 80,973 items of declared Category 3 chemical weapons. This included the destruction, in 2011, of four Category 3 items declared in 2010 and one item added in 2011.
- 3.24 In 2011, pursuant to a recommendation of the Executive Council (hereinafter “the Council”) at its Thirty-First Meeting, the Conference adopted a decision regarding the final extended deadline of 29 April 2012.<sup>26</sup>

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<sup>24</sup> C-11/DEC.18, dated 8 December 2006

<sup>25</sup> C-11/DEC.17, dated 8 December 2006

<sup>26</sup> C-16/DEC.11, dated 1 December 2011

#### **4. CHEMICAL WEAPONS PRODUCTION FACILITIES**

##### **Overview**

- 4.1 The Secretariat conducts inspections to verify progress at those CWPFs that have not yet been fully destroyed or converted for purposes not prohibited under the Convention.<sup>27</sup> Verification ceases once the Director-General certifies that destruction has been completed at a CWPF, whereas facilities that have been certified as converted remain subject to systematic inspections for at least 10 years.
- 4.2 In 2011, the Secretariat carried out 12 inspections at 11 CWPFs in three States Parties, which amounted to 160 inspection days.
- 4.3 Consultations between Iraq and the Secretariat continued, in order to clarify details of Iraq's initial declaration and with a view to developing detailed plans for the destruction or conversion of the five declared CWPFs. In May 2011, the Secretariat conducted initial inspections by means of helicopter overflights at the Iraqi CWPFs scheduled for destruction. During the inspection at the Fallujah 1, Fallujah 2, Fallujah 3, and Al-Muthanna CWPFs, the perimeter of the facilities, inventory, and condition of buildings and structures, as well as overall status of the facilities, were verified.
- 4.4 As at 31 December 2011, 70 CWPFs had been declared to the OPCW. With regard to 64 of these, the Director-General had certified the completion of destruction or conversion. Forty-three had been destroyed. Twenty-one had been converted for purposes not prohibited by the Convention. The following six CWPFs had yet to be certified as destroyed or converted:
- (a) the facility for production of a Vx-type substance and filling it into munitions, FGUP GosNIIOKhT, Novocheboksarsk, the Russian Federation (to be certified as converted);
  - (b) Al-Muthanna CWPF, Iraq (to be certified as destroyed);
  - (c) Fallujah 1 CWPF, Iraq (to be certified as destroyed);
  - (d) Fallujah 2 CWPF, Iraq (to be certified as destroyed);
  - (e) Fallujah 3 CWPF, Iraq (to be certified as destroyed); and
  - (f) Al-Rashad CWPF, Iraq (to be certified as converted).
- 4.5 Consultations continued in 2011 on the nature of continued verification measures at CWPFs upon completion of the 10-year period following the Director-General's certification of conversion. Pursuant to the Convention, the Council shall decide on such measures, taking into account recommendations of the Secretariat. In 2011, the

<sup>27</sup>

See subparagraph 1(c) of Article III, and Article V of the Convention, as well as Part V of the Verification Annex.

10-year period expired for one converted CWPF; this situation thus applied to eight facilities at the end of 2011—one in A State Party, five in the Russian Federation, and two in the United Kingdom of Great Britain and Northern Ireland.

### **Residual production capacity**

- 4.6 In accordance with the Convention, residual production capacity (RPC) shall be reduced to zero 10 years after the EIF of the Convention, that is, by 29 April 2007. Guided by a decision of the Conference<sup>28</sup> and by a document that sets forth the method for calculating the RPC of CWPFs,<sup>29</sup> the Secretariat assessed the RPC at the end of 2011 for all 13 States Parties that had declared CWPFs.

## **5. OLD AND ABANDONED CHEMICAL WEAPONS**

### **Overview**

- 5.1 With regard to OCWs, the verification work of the Secretariat includes inspections at declared storage sites in States Parties declaring OCW holdings in order to verify the consistency of any changes (recoveries or destruction) reported in semi-annual declarations or other notifications.
- 5.2 The Secretariat also carries out inspections to monitor ongoing activities with regard to ACWs. With respect to chemical weapons abandoned by Japan on the territory of China, the Secretariat also carries out quarterly inspections to verify destruction operations.
- 5.3 In 2011, the Secretariat conducted seven OCW inspections in seven States Parties and 10 ACW inspections in two States Parties. The discovery of approximately 2,415 OCWs was declared, while 3,539 OCWs were reported as destroyed. A total of 941 newly recovered ACWs were declared, and 25,974 ACWs were reported as destroyed during the review period. Meanwhile, 647 previously declared ACWs were confirmed not to be chemical weapons, and thus were removed from aggregates.
- 5.4 Two States Parties declared suspected OCWs or ACWs in 2011 for the first time. The Secretariat conducted inspections in both of these States Parties.
- 5.5 The Council had established the destruction deadline of 29 April 2012 for OCWs for one State Party and for chemical weapons abandoned by Japan on the territory of China.<sup>30</sup>

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<sup>28</sup> C-I/DEC.29, dated 16 May 1997

<sup>29</sup> S/260/2001, dated 5 June 2001

<sup>30</sup> The Council, at its Sixty-Seventh Session, adopted two decisions relating to those deadlines: EC-67/DEC.8, dated 17 February 2012, modifies the Council's previous decision and requests Italy to destroy as soon as possible all the OCWs it has declared. EC-67/DEC.6, dated 15 February 2012, reaffirms that the destruction of chemical weapons abandoned by Japan on the territory of China shall continue beyond 29 April 2012, in accordance with the provisions of the Convention.

### **Declared stocks**

- 5.6 Between EIF and 31 December 2011, 15 States Parties—Australia, Austria, Belgium, Canada, France, Germany, Italy, Japan, Poland, the Russian Federation, Slovenia, the Solomon Islands, Switzerland, the United Kingdom of Great Britain and Northern Ireland, and the United States of America—had declared OCWs. In 2011, approximately 2,130 OCWs were discovered and recovered, while 1,210 OCWs were reported as destroyed.
- 5.7 By the end of the review period, States Parties had declared a total of 60,398 OCWs produced before 1925 (eight States Parties) and 71,822 OCWs produced between 1925 and 1946 (eleven States Parties).<sup>31</sup> About 20,000 pre-1925 OCWs and 18,000 OCWs produced between 1925 and 1946 had yet to be destroyed. Around 12,573 chemical weapons abandoned by Japan on the territory of China were being kept at storage sites in China.

### **Verification activities**

- 5.8 In 2011, declarations related to OCWs were submitted by Australia, Belgium, Canada, France, Germany, Italy, Japan, Switzerland, and the United Kingdom of Great Britain and Northern Ireland. Switzerland reported suspected pre-1925 OCWs for the first time. The Secretariat conducted seven OCW inspections in seven States Parties in 2011.
- 5.9 During the period under review, nine ACW inspections were conducted. Eight of these were in relation to chemical weapons abandoned by Japan on the territory of China; one inspection concerned a suspected ACW declared by another State Party.
- 5.10 Three of the ACW inspections were quarterly inspections at the ACW-MDF at Nanjing, China. According to reporting by China and Japan, 25,974 ACWs were destroyed in 2011 at the ACW-MDF, bringing the total number of Japanese ACWs destroyed to 35,203 by 31 December 2011.
- 5.11 In 2011, the Council approved the facility arrangement and agreed plan for destruction for a second destruction facility for Japanese ACWs. The “Haerbaling ACW Test Destruction Facility” (ACWTDF), a stationary facility, had yet to be installed and become operational at the end of the review period.
- 5.12 The Secretariat, China, and Japan met three times in 2011 to discuss the anticipated increase in activity in 2012.

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<sup>31</sup> Including both confirmed and suspected OCWs

## 6. INDUSTRY VERIFICATION

### Overview

- 6.1 States Parties to the Convention undertake to declare facilities and activities related to chemicals that are listed in Schedule 1, 2, and 3 of the Convention's Annex on Chemicals, as well as OCPFs that produce discrete organic chemicals (DOCs).
- 6.2 The total number of facilities declared worldwide in connection with the Article VI verification regime at the end of the review period was 5,356, of which 4,855 were subject to systematic verification (see Table 5).

**TABLE 5: FACILITIES DECLARED PURSUANT TO ARTICLE VI AS AT 31 DECEMBER 2011**

| Number of Declared Facilities                                  |            |            |            |       |       |
|----------------------------------------------------------------|------------|------------|------------|-------|-------|
| Number of States Parties Having Declared Article VI Facilities |            |            |            |       |       |
| Regime                                                         | Schedule 1 | Schedule 2 | Schedule 3 | OCPF  | Total |
| Declared                                                       | 27         | 469        | 456        | 4,404 | 5,356 |
| Declarable                                                     | 27         | 393        | 449        | 4,403 | 5,272 |
| Inspectable                                                    | 27         | 179        | 421        | 4,228 | 4,855 |
| States Parties                                                 | 22         | 38         | 35         | 80    | 80    |

- 6.3 In 2011, the Secretariat verified the declared activities at 209 inspectable facilities and plant sites. The breakdown of inspections per verification regime changed slightly from 2010, with one less Schedule 3 inspection and two more OCPF inspections. Thus, 11 Schedule 1 facilities, 42 Schedule 2 plant sites, 29 Schedule 3 plant sites, and 127 OCPF plant sites were inspected in 2011. No uncertainties were recorded during 2011 inspections. IRFAs were recorded at 15 inspections: Two Schedule 1 inspections; eight Schedule 2 inspections; four Schedule 3 inspections; and one OCPF inspection. In addition, more than 100 observations during inspections were marked "gather further information" (this typically refers to declaration issues that do not amount to IRFAs according to the Secretariat's internal practices).
- 6.4 The number of sequential inspections increased significantly in 2011, compared with previous years, while the number of sequential inspections increased substantially. Six OCPF inspections were carried out at plant sites that turned out to be non-inspectable.

### Transfers of scheduled chemicals

#### Transfers of scheduled chemicals between States Parties

- 6.5 According to nine notifications received concerning transfers that were due to take place in 2011, five States Parties were anticipated to be involved in five Schedule 1 transfers in 2011—four as sending States Parties and four as recipients; the total amount of chemicals that were to be transferred in 2011 was 4.03 grams. Four transfers that had been anticipated to take place in 2011 were notified by both the sending and receiving States Parties. Of the nine notifications relating to transfers in 2011, only two were received within the 30-day notification period.

- 6.6 The annual declarations of past activities (ADPAs) for 2010 that were provided in 2011 indicate that 54 States Parties had transferred Schedule 2 chemicals in 2010, and that the total volume of this trade came to approximately 5,600 MTs. Meanwhile, 123 States Parties transferred Schedule 3 chemicals in 2010, and the total volume of this trade was approximately 311,000 MTs.
- 6.7 The total quantities of Schedule 1, 2, and 3 chemicals transferred in 2010, as declared by 31 December 2011, were as follows: 5,395 kgs of Schedule 1 chemicals; 5,600 MTs of Schedule 2 chemicals; and 311,000 MTs of Schedule 3 chemicals.

#### Transfers of scheduled chemicals to States not Party to the Convention

- 6.8 There were no reported transfers of Schedule 2 chemicals to States not Party in 2010. Seven States Parties had exported four Schedule 3 chemicals to three States not Party. Thionyl chloride accounted for 51% of the 1,944 MTs of Schedule 3 chemicals declared as having been exported to States not Party in 2010.

#### **Optimisation of the Article VI inspection regime**

- 6.9 During 2011, the Secretariat continued the efforts to maximise the number of sequential inspections (see Table 6) as a way of optimising the use of human and material resources.

#### **Sequential inspections**

- 6.10 Sequential inspections are an important tool for making the inspection process more efficient, and further efficiencies could be achieved, should additional States Parties agree to the conduct of sequential inspections on their territories, in particular those with large numbers of annual Article VI inspections. In this regard, 10 of the 14 States Parties that received six or more industry inspections in 2011 have advised the Secretariat that they concur with the use of sequential inspections on their territory. At the end of 2011, four had yet to endorse the practice. Of the 47 pairs of sequential inspections, adding up to 94 individual inspections, 45 (90 inspections) took place in the same State Party, while two (four inspections) were carried out in neighbouring States Parties (see Table 6).

**TABLE 6: SEQUENTIAL INSPECTIONS**

| <b>Sequential Inspections (On a Year-by-Year Basis)</b> |             |             |             |             |             |             |             |             |
|---------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>2003</b>                                             | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> |
| 8                                                       | 16          | 23          | 26          | 26          | 37          | 42          | 40          | 47          |

#### **Sampling and analysis**

- 6.11 The Secretariat has continued to use S&A during inspections on a routine basis, reaching 46 such missions in 22 States Parties by the end of 2011 (see Table 7). In 2011, eight Schedule 2 inspections involved S&A, two of which were in States Parties that had never received such inspections before—Finland and Mexico.
- 6.12 As at 31 December 2011, 22 out of 23 States Parties with inspectable Schedule 2 plant sites had received at least one S&A mission.

**TABLE 7: ON-SITE SAMPLING AND ANALYSIS**

| <b>Number of Inspections with Sampling and Analysis</b> |             |             |             |             |             |              |
|---------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|
| <b>2006</b>                                             | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>Total</b> |
| 2                                                       | 9           | 9           | 9           | 9           | 8           | 46           |

- 6.13 The Secretariat issued a progress report<sup>32</sup> on the use of S&A during Schedule 2 inspections, which summarised the experience gained and the way forward.

#### **Non-inspectable facilities**

- 6.14 In 2011, the number of inspections conducted at facilities that proved to be non-inspectable was six, significantly lower than that recorded in 2010 (see Table 8).

**TABLE 8: INSPECTIONS AT SITES THAT ARE NON-INSPECTABLE**

| <b>Number of Inspections at Non-inspectable Sites</b> |             |             |             |             |
|-------------------------------------------------------|-------------|-------------|-------------|-------------|
| <b>2007</b>                                           | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> |
| 13                                                    | 5           | 5           | 11          | 6           |

- 6.15 The reasons for the fact that six inspections took place at non-inspectable OCPF sites can be categorised as follows: (a) the failure of the States Parties concerned to update their OCPF declarations in a timely manner; and (b) errors in the interpretation of the OCPF declaration requirements.
- 6.16 In the first category, one inspection was carried out in 2011 at a plant site that had ceased its production activities, while the declarations covering its activities had not been updated to reflect this new state of affairs. In terms of the second category, there were two inspections at plant sites where the aggregate discrete organic chemical (DOC) production was below the declaration threshold of 200 MTs. The other three cases from the second category included an inspection at a plant site where only inorganic chemicals were being produced, a plant site that was exclusively producing explosives, and a plant site where only hydrocarbons were produced.

#### **Secretariat's support to consultations on chemical-industry and other Article VI issues**

- 6.17 In 2011, the Industry Cluster discussed salts of scheduled chemicals and held initial consultations on the harmonisation of Schedule 3 production AND and the need for a *de minimis* value for Schedule 1 transfers. In addition, the Cluster pursued consultations on the issues of OCPF site-selection methodology and the number of Article VI inspections—two issues that were also considered by the Council. The Secretariat assisted the Vice-Chairperson and coordinator of the Industry Cluster in the context of these discussions, and provided presentations and non-papers at the request of States Parties in relation to all issues under consideration.
- 6.18 During the reporting period, the Secretariat also continued to provide legal and technical support to consultations concerning the captive use of a Schedule 1 chemical

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<sup>32</sup>

S/953/2011, dated 29 July 2011

as part of the production of an analgesic, Ketobemidone, brought to the attention of the Council in 2010 by Denmark. Following the consultations, Denmark stated that it would henceforth be using a different production method that did not involve Schedule 1 chemicals, and that it would update its national legislation.

## **7. OTHER VERIFICATION-RELATED ACTIVITIES**

### **Implementation matters**

- 7.1 This section provides information about several ongoing matters that constitute challenges to the Secretariat's ability to effectively discharge its verification responsibilities. It is not an exhaustive list. By highlighting these subjects, the Secretariat is giving States Parties an opportunity to see how the matters are affected by remedial action taken by the Secretariat and States Parties; the Secretariat will continue to monitor how these challenges develop over time.

### **Outstanding initial declarations**

- 7.2 Despite ongoing efforts to remind States Parties of their obligations and to provide declaration training, as mentioned above, a number of States Parties have still not submitted their initial declarations, as required by the Convention. The Secretariat is not able to fulfil its verification tasks with regard to these States Parties.

### Follow-up actions taken

- 7.3 Since EIF of the Convention, the Secretariat has reminded States Parties of their declaration obligations through, inter alia, reminder letters, bilateral meetings, and presentations at regional and subregional meetings and at workshops. During the reporting period, the Secretariat sent notes verbales to all States Parties that had yet to submit initial declarations. In addition, the Secretariat held bilateral meetings with Cape Verde, the Congo, the Solomon Islands, Tonga, Tuvalu, and Vanuatu on declaration issues. A technical-assistance visit (TAV) focussing on declaration issues was undertaken to the Congo.

### Progress and status

- 7.4 During the year, the Secretariat received no new initial declarations pursuant to Articles III and VI of the Convention. This means that, by the end of 2011, 180 of the 188 States Parties had submitted initial declarations pursuant to Article III and/or Article VI.
- 7.5 As at 31 December 2011, 11 States Parties had not yet submitted their required initial declarations pursuant to the Convention. Eight States Parties had not yet submitted any initial declarations: Cape Verde (9 December 2003)<sup>33</sup>, the Congo (2 February 2008), Guinea-Bissau (19 July 2008), Haiti (23 April 2006), Timor-Leste (6 July 2003), Tonga (28 July 2003), Tuvalu (19 March 2004), and Vanuatu

<sup>33</sup>

The dates indicate the due date of the initial declaration for the State Party concerned (that is, 30 days after EIF of the Convention for the State Party).

(15 November 2005). Two States Parties—Kiribati and the Solomon Islands—had yet to submit their initial declarations under Article VI; and one, Saint Vincent and the Grenadines, had yet to submit its chemical weapons-related initial declaration pursuant to Article III.

### **Outstanding or late annual declarations**

- 7.6 In order for the Secretariat to be able to continue to perform its verification tasks effectively, it is of the utmost importance that States Parties continue to submit their ADPAs and annual declarations of anticipated activities (ADAAs) in a timely manner. When planning its inspection activities, the Secretariat uses the most recent information available on file, in order to determine inspectable facilities and plant sites, and the relevance of these for the object and purpose of the Convention. Outdated information not only leads to erroneous site selections, but also risks increasing the rate of inspections at non-inspectable sites. Both of these scenarios involve an inefficient use of inspection resources. In addition, late submission of AND can cause transfer discrepancies, thus resulting in unnecessary RFCs. This imposes a burden on States Parties that have submitted their AND declarations on time, but then receive an RFC in regard to a transfer discrepancy, due to the late submission by the other State Party involved in the transfer.

### Follow-up actions taken

- 7.7 In 2011, the Secretariat held bilateral meetings with representatives of States Parties that have submitted annual declarations more than 30 days late at least twice since the approval by the Council of a decision on timely submission by States Parties of declarations under Article VI of the Convention (EC-51/DEC.1, dated 27 November 2007), to stress the importance of timely submissions and to offer advice and assistance, if needed. There were 21 States Parties that fell into this category; the Secretariat met with eight of these during the review period.

### Progress and status

- 7.8 Due in part to consultations in 2010 and 2011, six of the 21 States Parties referred to above submitted their ADPAs for 2010 on time. In five cases, this was the first time since approval of the above-mentioned Council decision (EC-51/DEC.1) that declarations were submitted on time. The overall number of States Parties submitting their ADPAs for 2010 more than 30 days late was significantly lower than in previous years (11 for 2010, compared to 19 each for 2009 and 2008). The Secretariat will continue to hold such bilateral meetings with States Parties, as required.
- 7.9 Overall, 88 States Parties (90 in the previous year) submitted ADPAs for 2010 during 2011. Of these:
- (a) Fifty-four (52 in the previous year) States Parties with declarable facilities or activities met the deadline of 31 March 2011 for submitting at least part of their required declarations.

- (b) Twenty-eight (34 in the previous year) States Parties submitted their ADPAs for 2010 between 1 April and 31 December 2011.
  - (c) Six (four in the previous year) States Parties submitted ADPAs for 2010 with no declarable facilities and activities (nil declarations).
- 7.10 By the end of the review period, the Secretariat had received ADAAs for 2012 from 51 States Parties (52 in 2010). Of these:
- (a) Thirty-six (the same number as in the previous year) States Parties met the deadline for submitting at least part of their required 2012 ADAAs (16 States Parties for Schedule 1 chemicals and facilities (2 October deadline); and 36 for Schedule 2 and 3 chemicals and facilities (1 November deadline).
  - (b) Nine (the same number as in the previous year) States Parties submitted their required ADAAs for 2012 after the deadline, but before 31 December 2011.
  - (c) Six (seven in the previous year) States Parties reported no declarable facilities or activities (nil declarations).
- 7.11 The Council has requested that States Parties anticipating difficulties in the timely submission of their declarations inform the Secretariat at the earliest possible date of the circumstances of such difficulties. With regard to the ADPAs for 2010 and ADAAs for 2012, most States Parties that provided such information quoted “logistical difficulties” as the main reasons for delays in submitting annual declarations.

### **Transfer discrepancies**

- 7.12 Since EIF, discrepancies between the Schedule 2 and 3 transfer data provided by the importing States Parties and those provided by the exporting States Parties in respect of the same transfer have been of such magnitude (approximately 75% of the transfers between States Parties have discrepancies) that data monitoring for non-proliferation purposes is very difficult to achieve.

### **Follow-up actions taken**

- 7.13 One reason for transfer discrepancies has been the lack of a common understanding on the meaning of the terms “import” and “export” for declaration purposes. A 2002 decision by the Conference at its Seventh Session<sup>34</sup> contained guidelines for reporting AND, but it stopped short of containing a definition of imports and exports. In 2008, the Conference adopted a decision<sup>35</sup> setting out voluntary guidelines for the declaration of import and export data for Schedule 2 and 3 chemicals, with the intention of reducing the number of transfer discrepancies. This decision, which focused on the physical movement of scheduled chemicals rather than on customs

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<sup>34</sup> C-7/DEC.14, dated 10 October 2002

<sup>35</sup> C-13/DEC.4, dated 3 December 2008

procedures, included a definition of the meaning of the terms “import” and “export” (albeit solely for the purposes of the submission of declarations).

- 7.14 In its decision on voluntary guidelines, the Conference requested the Secretariat to “report in three years on the progress achieved through the implementation of this decision for consideration by the Executive Council” (paragraph 6 of C-13/DEC.4). The Secretariat provided the Council with such a report in 2011, on the basis of a questionnaire-based survey that had been circulated to States Parties.<sup>36</sup>
- 7.15 From the 52 responses received, representing 97.8% of the worldwide trade (by weight) in Schedule 2 and 3 chemicals in 2010, 44 States Parties (84.6%) responded that they had fully implemented the decision, three States Parties (5.8%) responded that they had partially implemented the decision, and five States Parties (9.6%) responded that they had not yet done so. All five States Parties that have yet to implement the decision indicated that they intended to implement it in the future. More detailed analysis of the results of the survey is available in the report by the Secretariat to the Council on the implementation of the guidelines regarding declaration of import and export data for Schedule 2 and 3 chemicals (EC-67/S/1, dated 16 January 2012).
- 7.16 The Second Review Conference encouraged the Secretariat, in close consultation with States Parties, to continue efforts to resolve ambiguities and discrepancies, and to provide them with appropriate assistance.<sup>37</sup> The Secretariat, in this regard, organised five regional and subregional workshops in 2011, in order to provide States Parties with in-depth training for customs authorities on practical ways of implementing the transfer provisions of the Convention, with a view to reducing discrepancies. In addition, transfer issues and the implementation of the above-referenced voluntary guidelines were an important element of the agenda at all 2011 regional meetings of National Authorities.

#### Progress and status

- 7.17 As was the case in previous years, there were still considerable inconsistencies between the Schedule 2 and 3 transfer data provided by the importing States Parties and the data provided by the exporting States Parties in respect of the 2010 transfers. However, a small improvement has been noted: As at 31 December 2011, approximately 71% of transfers between States Parties contained discrepancies, compared to 74% in 2009 and in 2010.
- 7.18 With regard to Schedule 2 chemicals, 660 AND declarations of imports and exports for the year 2010 (compared to 589 in 2009) were received during the reporting period, equivalent to 525 (465 in 2009) transfers between States Parties.<sup>38</sup> Of these, 214 (177 in 2009) were above the declaration thresholds established by the Conference at its Seventh Session. Ninety-six of the 214 transfers that were above the

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<sup>36</sup> S/900/2011, dated 16 February 2011

<sup>37</sup> Paragraph 9.45 of RC-2/4

<sup>38</sup> For reporting purposes, the Secretariat has taken “transfer between States Parties” to mean the sum of all imports and exports of a specific scheduled chemical between two States Parties in the year in question, including those declared by only one of the States Parties concerned.

declaration thresholds, or 45% (47% in 2010), were declared by just one of the two States Parties involved.

- 7.19 A total of 1,676 Schedule 3 AND declarations of imports and exports covering the year 2010 were received during the reporting period—equivalent to 1,186 transfers between States Parties. Five hundred twenty-nine (the same figure as for 2009) of these transfers were above the declaration thresholds established by the Conference,<sup>39</sup> of which 161—or 30% (36% in 2009)—were declared by just one of the two States Parties involved.

### **Quality of declarations**

- 7.20 The sections above focus on issues related to outstanding or late declarations, and transfer discrepancies. Another matter of relevance to the implementation of the Convention concerns States Parties with declarable activities that nevertheless declare that they do not have such activities or that under-declare.

### **Follow-up actions taken**

- 7.21 Actions taken by the Secretariat to address the issue of the quality of import/export declarations are largely the same as for transfer discrepancies. Particular emphasis is placed on those States Parties that are repeatedly named as recipients of scheduled chemicals by exporters, but do not submit any AND declarations of their own.
- 7.22 During 2011, the Secretariat met with eight States Parties that have had transfer discrepancies in two or more of the last three years, but have not submitted AND declarations, in order to highlight the importance of making import/export declarations and to offer advice and assistance. In addition, customs officers from six States Parties belonging to this group of countries received in-depth training on Convention-related transfer issues at regional or subregional customs workshops during 2011.
- 7.23 During 2011, the Secretariat followed up on a pilot project, started in late 2009, to analyse trends (over the previous five years) in AND declarations in order to identify potential additional declared activities involving Schedule 2 chemicals. During the reporting period, an additional two out of the six States Parties approached by the Secretariat in the pilot project declared additional Schedule 2 plant sites that had been identified as a result of enquiries into the issues raised in this pilot project and of activities in the context of outreach to industry. This brings the number of new declarable plant sites identified as a result of this pilot project to 11, in three States Parties.
- 7.24 Following the success of the pilot project, the Secretariat has extended this analysis to all States Parties and held bilateral meetings in this regard with an additional seven States Parties in 2011. The Secretariat will incorporate this analysis into its routine data-monitoring activities and will continue to report on the results of such activities in future verification-implementation reports (VIRs).

### Progress and status

- 7.25 The Secretariat has only limited means of determining the prevalence of situations involving transfer discrepancies. However, there are a considerable number of States Parties with repeated transfer discrepancies that do not submit any AND declarations at all. Of the 86 States Parties that had transfer discrepancies in 2010, 20 (or 23%), did not submit any AND declarations for that year.
- 7.26 As at 31 December 2011, 15 States Parties had repeated (two or more) transfer discrepancies in the previous three years and did not submit AND declarations for those years. One State Party that had originally been in this group submitted its AND declarations for the years concerned, following consultations with the Secretariat in 2011.
- 7.27 A document<sup>40</sup> prepared by the Secretariat in 2010 as a reference tool for States Parties to consult when they are compiling their lists of OCPFs suggests that the number of OCPFs appears to correlate to factors such as the size of chemical industry in a particular State Party, the gross domestic product (GDP) of the State Party, the amount of chemical exports, the size of the economically active population, the expenditure on research and development, and International Standards Organization (ISO) 14001 certifications. While no detailed conclusions can be derived from such indicators, they could be used as a tool for identifying the possible existence of additional declarable facilities.

### **Status of required declarations**

#### Riot control agents (RCAs)

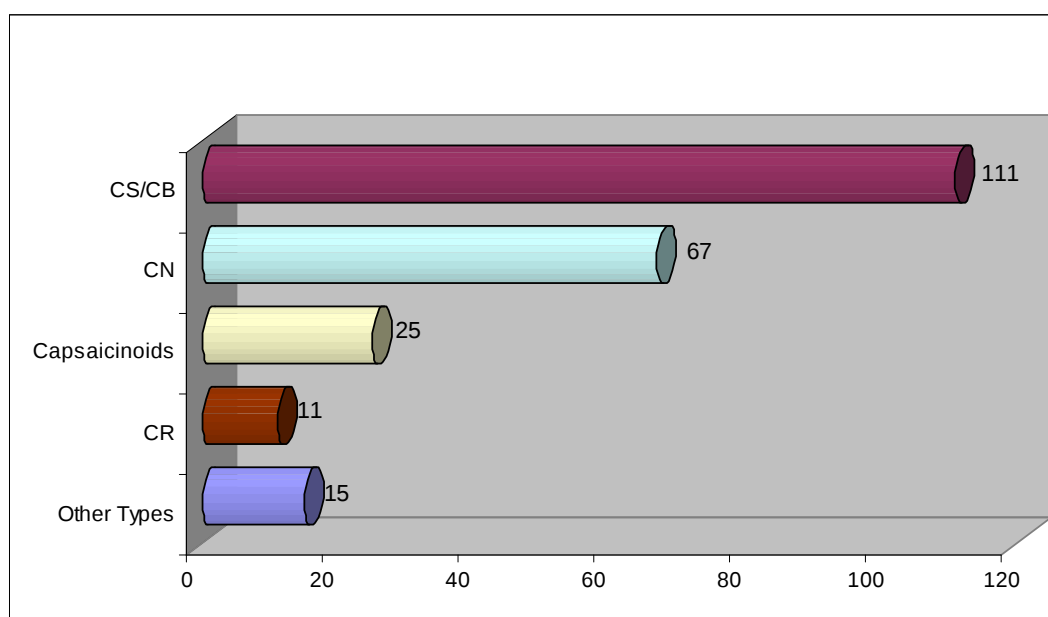
- 7.28 During the period under review, four States Parties provided updated information on RCAs. As at 31 December 2011, of the 179 States Parties that had submitted initial declarations under Article III, 176 States Parties submitted information on riot control agents (RCAs), while the information on RCAs was missing from three States Parties' declarations. Of the 176 States Parties that provided information on their RCAs, 130 declared possession of RCAs, while 46 States Parties declared that they did not possess RCAs. Figure 2 shows the types of RCAs declared by States Parties.

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<sup>40</sup>

S/862/2010/Rev.1, dated 31 August 2010

**FIGURE 2: NUMBER OF STATES PARTIES HAVING DECLARED RIOT CONTROL AGENTS – BY TYPE OF RCA**



Other facilities primarily for the development of chemical weapons

- 7.29 With regard to other facilities primarily for the development of chemical weapons, the situation remained unchanged in 2011. As at 31 December 2011, 30 such facilities had been declared by 11 States Parties. This included 16 proving-and-testing grounds, and 14 laboratories and research-and-defence establishments. At the end of the reporting period, four such facilities were being used as research centres or laboratories for defence and protective purposes, or for the destruction of OCWs.

**Handling of declarations**

Clarification of declarations

- 7.30 As part of its verification activities, the Secretariat sometimes needs to ask States Parties for clarifications related to their declarations, by issuing RFCs. In a 2004 decision, the Council urged States Parties to expedite their responses to RFCs, established a 90-day deadline for responding to such requests, and recommended that the Secretariat take follow-up action in cases where it cannot determine whether or not a facility is inspectable.
- 7.31 During 2011, 86 RFCs were issued with regard to transfer discrepancies. During the reporting period, the Secretariat also issued 153 reconciliation letters to ensure that the information held by the Secretariat on declared Schedule 2 and 3 facilities and OCPFs was up to date; it also issued 45 other Article VI-related RFCs and reminder letters.

### Processing of declarations

- 7.32 In 2011, the Secretariat received 874 incoming documents, declarations, and other verification-related documents (1,002 in 2010), comprising 13,724 pages in hard copy (14,853 in 2010), from States Parties. Five hundred and thirty-nine, or 62%, comprising 2,967 pages, were unclassified. However, the majority of the pages that were received continued to be classified: 98 documents (4,976 pages) were classified as “OPCW Highly Protected”, 88 documents (3,750 pages) as “OPCW Protected”, and 149 documents (2,031 pages) as “OPCW Restricted”. In other words, 48% of the documents (36% in 2010), and 78% of the pages (also 78% in 2010) were classified.
- 7.33 The Secretariat continues to ensure that all documents are handled in strict compliance with the OPCW confidentiality regime. Meanwhile, the Secretariat continues to encourage States Parties to minimise the number of classified documents.
- 7.34 In accordance with the Convention,<sup>41</sup> the Secretariat provided redacted information on ADPAs for 2010 and on ADAAs for 2011 to 44 States Parties. All information on declarations, both chemical weapons- and industry-related, was provided on CD-ROM, unless a hard copy was specifically requested.

### Electronic declarations

- 7.35 Forty States Parties provided their original ADPAs for 2010 either solely or additionally in electronic format (as compared with 30 States Parties in the preceding year). A total of 30 States Parties submitted their original ADAAs for 2012 in electronic format (28 the year before). The increasing number of electronic declarations in 2011 can be attributed to continued uptake of the electronic declarations tool for National Authorities (EDNA) by States Parties.
- 7.36 The Secretariat has provided States Parties with significant support during their submission, using EDNA version 2.1, of ADPAs for 2010. Furthermore, 18 representatives from 14 States Parties attended EDNA training during the Sixteenth Session of the Conference and 22 representatives from 14 States Parties attended the regional workshop held in Islamabad, Pakistan, for the Asia region. The Secretariat has also provided a basic course on electronic declarations as part of the “Training Course on National Authorities and Chemical Databases” organised by the Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN) in August 2011.
- 7.37 In 2011, the Secretariat has observed continued interest in electronic declarations. The EDNA project team has continued to work on improvements to the tool, based on the requests received from States Parties during the second user-group forum,<sup>42</sup> regional workshops, and training sessions held at OPCW Headquarters.

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<sup>41</sup> See subparagraph 2(b)(i) of the Confidentiality Annex to the Convention.  
<sup>42</sup> S/882/2010, dated 1 November 2010

**Implementation by States Parties of the 2009 Conference decision on low-concentration limits for mixtures of chemicals containing Schedule 2A and 2A\* chemicals**

- 7.38 The Conference at its Fourteenth Session approved a decision<sup>43</sup> on guidelines regarding concentration limits for mixtures of chemicals containing Schedule 2A and 2A\* chemicals. Under the decision, States Parties were requested to implement the guidelines as soon as practicable, and the Secretariat was requested to report on progress made by States Parties in implementing the decision, beginning not later than 1 January 2012. To gather information for this report, the Secretariat in 2011 carried out a survey of the implementation of this decision by States Parties.<sup>44</sup>
- 7.39 Responses to the survey by 32 of the 188 States Parties have been included in this analysis. Of these, 21 States Parties indicated that they had fully implemented the decision; five indicated they were in the process of implementing the decision; and six indicated that they had not yet implemented the decision. Of the 11 States Parties that indicated that they were in the process of implementing the decision or had not yet implemented the decision, six indicated that they anticipated implementing the decision during 2012. In addition to the States Parties that responded to the survey, two other States Parties provided submissions under paragraph 5 of Article VII of the Convention in 2010; these submissions indicated that they had implemented this decision.

**8. TECHNICAL SUPPORT FOR VERIFICATION ACTIVITIES**

**Sampling and analysis for verification purposes**

- 8.1 The OPCW Laboratory calibrated, prepared, and dispatched the gas chromatography-mass spectrometry (GC-MS) instruments for eight S&A missions in 2011. In each case, the instrumentation was fully certified by the Office of Internal Oversight (OIO).
- 8.2 Assistance and support were provided to the inspectors who are analytical chemists, in preparation for inspections involving S&A. This included acquiring the chemicals needed to emulate process streams and consultations on the methods used for analysing the results.
- 8.3 A workshop on confidence-building exercises for biomedical sample analysis was held in February 2011. Discussions on the findings from the first exercise took place, and planning was initiated for a second exercise to be held in February 2012. The recommendation was made to hold such exercises on a yearly basis, with a view to the development of biomedical S&A as a tool in support of IAUs.
- 8.4 During the CI exercise in Thailand, the OPCW Laboratory supported the team in its S&A activities, and advised the Director-General on the dispatch of samples to designated laboratories, although that element was ultimately not part of the actual exercise.

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<sup>43</sup> C-14/DEC.4, dated 2 December 2009

<sup>44</sup> S/948/2011, dated 6 July 2011

### Official OPCW proficiency tests

- 8.5 In 2011, the Secretariat completed the Twenty-Eighth and Twenty-Ninth Official OPCW Proficiency Tests. It also began the Thirtieth Test, which was completed in 2012. The particulars of these tests are provided in Table 9.

**TABLE 9: SUMMARY OF THE TWENTY-EIGHTH, TWENTY-NINTH, AND THIRTIETH OFFICIAL OPCW PROFICIENCY TESTS**

|                                     | <b>Twenty-Eighth Proficiency Test</b>                                             | <b>Twenty-Ninth Proficiency Test</b>                                                  | <b>Thirtieth Proficiency Test</b>                   |
|-------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|
| Sample Preparation                  | Dstl Porton Down, United Kingdom                                                  | FOI, Sweden                                                                           | AMMS, China                                         |
| Evaluation of Results               | DSO, Singapore                                                                    | ECBC, United States                                                                   | LLNL, United States                                 |
| Number of Nominations <sup>45</sup> | 27                                                                                | 20                                                                                    | 21                                                  |
| Results                             | 11 As, 4 Bs, 4 Cs<br>3 Ds, 4 failures (1 for procedural reasons),<br>1 trial test | 13 As, 0 Bs, 1 C, 1 D<br>4 failures (3 of these for procedural reasons), 1 trial test | 11 As, 4 Bs, 1 C, 1 D,<br>2 failures, 2 trial tests |

- 8.6 Four laboratories were added to the list of designated laboratories, including, for the first time, one in the Islamic Republic of Iran. Following the Twenty-Ninth Proficiency Test results, there were 22 OPCW-designated laboratories from 17 States Parties. Four of these were temporarily suspended. At the end of the review period, India had three designated laboratories; while China, the Russian Federation, and the United States of America had two each (see the Annex 2 of this Note).

### OPCW Central Analytical Database

- 8.7 The Validation Group met twice in 2011 and technically approved 735 new analytical data. These data, and some from 2010, were processed and forwarded to the Council for its approval. Nine-hundred and fifty-seven new analytical data approved by the Council were incorporated into the new version of the OCAD (V.14\_2011), which was certified by the OIO and released to States Parties in December 2011. The contents of the OCAD, as approved by the Council for inclusion by 31 December 2011, are reflected in Table 10.

<sup>45</sup>

Including sample preparation/evaluation laboratories

**TABLE 10: CONTENTS OF THE OPCW CENTRAL ANALYTICAL DATABASE**

| <b>Number of Analytical Data in the OCAD<br/>(Status at the End of Each Year)</b>               |             |             |             |             |             |             |             |             |             |             |
|-------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                                                                                 | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> |
| MS <sup>46</sup>                                                                                | 2138        | 2824        | 3372        | 3476        | 3571        | 3742        | 3940        | 4183        | 4382        | 4823        |
| IR <sup>47</sup>                                                                                | 670         | 713         | 811         | 859         | 903         | 921         | 925         | 936         | 936         | 964         |
| NMR <sup>48</sup>                                                                               | 1305        | 1389        | 1389        | 1389        | 1389        | 1389        | 1391        | 1391        | 1391        | 1391        |
| GC(RI) <sup>49</sup>                                                                            | 2598        | 3482        | 4244        | 4250        | 4356        | 4370        | 4616        | 4832        | 3649        | 4137        |
| <b>Number of Chemical Species in the OCAD<sup>50</sup><br/>(Status at the End of Each Year)</b> |             |             |             |             |             |             |             |             |             |             |
| MS                                                                                              |             |             |             |             |             | 2846        | 3049        | 3214        | 3321        | 3657        |
| IR                                                                                              |             |             |             |             |             | 671         | 687         | 698         | 698         | 716         |
| NMR                                                                                             |             |             |             |             |             | 298         | 298         | 298         | 298         | 298         |
| GC(RI)                                                                                          |             |             |             |             |             | 2655        | 2747        | 2894        | 3018        | 3470        |

**OPCW Laboratory accreditation**

- 8.8 The full reassessment audit by the Dutch Accreditation Council, the Raad voor Accreditatie (RVA), was carried out successfully on 9 November 2011. Minor nonconformities were noted, primarily related to the change from International Laboratory Accreditation Council (ILAC) to ISO standards. Corrective actions have been taken, and continued accreditation was granted in early 2012.
- 8.9 Two internal audits, to cover three scopes in the OPCW Laboratory under accreditation, were conducted by the OIO in 2011; minor problems were found and corrective actions were taken.
- 8.10 The proficiency-testing scheme was conducted under the regulations of the International Labour Accreditation Council ILAC/G13 in 2011. The Laboratory's quality documentation was updated to conform to the newer proficiency testing standard, ISO17043, which will take effect in 2012.

**Approved equipment**

- 8.11 The equipment replacement plan was updated and executed. One new GC-MS system was received, and a new liquid chromatography-mass spectrometry (LC-MS) system was ordered, for delivery in 2012. Old GC-MS systems are retained at the OPCW Laboratory for inspector-training purposes.

<sup>46</sup> MS = mass spectrometry

<sup>47</sup> IR = infrared

<sup>48</sup> NMR = nuclear magnetic resonance spectrometry

<sup>49</sup> GC(RI) = gas chromatography-retention indices

<sup>50</sup> Number of distinct chemicals represented in the OCAD

## Annex 2

LIST OF DESIGNATED OPCW LABORATORIES<sup>51</sup>

|    | State Party | Laboratory Name and Address                                                                                                                                          | Laboratory Contact                                                                                                                                                                                                    | Date of Designation  |
|----|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1. | Belgium     | Defence Laboratories<br>Department (DLD)<br>Kwartier Majoor Housiau<br>Martelarenstraat 181<br>B-1800 Vilvoorde (Peutie)                                             | Mr Kris Geukens<br>Tel: +32 27555816<br>+32 468863177<br>Fax: +32 27555808<br><a href="mailto:Kris.geukens@mil.be">Kris.geukens@mil.be</a>                                                                            | 12 May 2004          |
| 2. | China       | The Laboratory of Analytical<br>Chemistry<br>Research Institute of Chemical<br>Defence<br>P.O. Box 1043<br>Yangfang Town, Changping<br>District, Beijing 102205      | Ms Liu Shilei<br>Ms Zhang Chunhong<br>Tel: +86 10 69760259<br>+86 136 61288823<br>Fax: +86 10 69765318<br><a href="mailto:ricdlacl@public.bta.net.cn">ricdlacl@public.bta.net.cn</a>                                  | 17 November<br>1998  |
| 3. | China       | Laboratory of Toxicant Analysis<br>Academy of Military Medical<br>Sciences<br>Institute of Pharmacology &<br>Toxicology, Beijing 100850                              | Mr Jianwei Xie<br>Tel: + 86 10 68225893<br>+86 13 621345667<br>Fax: +86 10 68225893<br><a href="mailto:Xiejw1964@yahoo.com.cn">Xiejw1964@yahoo.com.cn</a><br><a href="mailto:AMMSLTA@gmail.com">AMMSLTA@gmail.com</a> | 14 September<br>2007 |
| 4. | Finland     | Finnish Institute for Verification of<br>the Chemical Weapons Convention<br>(VERIFIN)<br>P.O. Box 55<br>A.I. Virtasen aukio 1<br>FIN-00014<br>University of Helsinki | Mr Martin Söderström<br>Tel: +358 9 19150438<br>Fax: +358 9 19150437<br><a href="mailto:Martin.soderstrom@helsinki.fi">Martin.soderstrom@helsinki.fi</a>                                                              | 17 November<br>1998  |
| 5. | France      | DGA - Centre d'Etudes du<br>Bouchet (CEB)<br>5 rue Lavoisier<br>PO Box 3<br>F-91710 Vert le Petit                                                                    | Ms Anne Bossée<br>Tel: +33 1 69908421<br>Fax: +33 1 64935266<br><a href="mailto:Anne.bossee@dga.defense.gouv.fr">Anne.bossee@dga.defense.gouv.fr</a>                                                                  | 29 June 1999         |
| 6. | Germany     | Bundeswehr Research Institute<br>for Protection Technologies<br>NBC Protection (WIS-120)<br>P.O. Box 1142<br>Humboldtstrasse 1<br>D- 29633 Munster                   | Mr Damian Mageria<br>Tel: +49 51 92 13 6402<br>Fax: +49 51 92 13 6355<br><a href="mailto:Damianmagiera@bwb.org">Damianmagiera@bwb.org</a>                                                                             | 29 June 1999         |
| 7. | India       | Defence Research & Development<br>Establishment<br>VERTOX Laboratory<br>Jhansi Road<br>Gwalior 474002                                                                | Mr D.K. Dubey<br>Tel: + 91 751 2233 488<br>Fax: +91 751 2341 148<br><a href="mailto:dkdubey@rediffmail.com">dkdubey@rediffmail.com</a>                                                                                | 18 April 2006        |

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An asterisk (\*) next to the name of a laboratory means that its status as an OPCW-designated laboratory remained suspended as at the end of the reporting period because of the performance in a recent official OPCW Proficiency Test. These laboratories will not be considered for receipt of samples taken for off-site analysis until they perform satisfactorily in future proficiency tests.

|     | State Party                | Laboratory Name and Address                                                                                                                                                                                         | Laboratory Contact                                                                                                                                                                                                | Date of Designation |
|-----|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 8.  | India                      | Council of Scientific and Industrial Research (CSIR)<br>Centre for Analysis of Chemical Toxins (CACT)<br>Indian Institute of Chemical Technology (IICT)<br>Tarnaka, Hyderabad 500 607                               | Mr R. Srinivas<br>Mr J.S. Yadav<br>Tel: +91 40 27193482<br>Fax: +92 40 27193156<br><a href="mailto:srini@iict.res.in">srini@iict.res.in</a><br><a href="mailto:sragampeta@yahoo.co.in">sragampeta@yahoo.co.in</a> | 4 September 2008    |
| 9.  | India                      | Institute of Pesticide Formulation Technology (IPFT)<br>Sector-20, Udyog Vihar<br>Opposite Ambience Mall on NH-8<br>Gurgaon, Haryana 122016                                                                         | Mr S.K. Raza<br>Tel: +91 124 2347788<br>Fax: +91 124 2349489                                                                                                                                                      | 3 August 2011       |
| 10. | Iran (Islamic Republic of) | Defence Chemical Research Laboratory (DCRL)<br>PO Box 31585 1461<br>27th km of Tehran<br>Karaj Special Road, Karaj                                                                                                  | Mr Mehran Babri<br>+98 261 231 3441<br><a href="mailto:Dcrl.mod@gmail.com">Dcrl.mod@gmail.com</a>                                                                                                                 | 3 August 2011       |
| 11. | Netherlands                | TNO Defence, Security and Safety<br>Lange Kleiweg 137<br>2288 GJ Rijswijk                                                                                                                                           | Ms Helma Spruit<br>Tel: +31 15 284 3831<br>Fax: +31 15 284 3991<br><a href="mailto:Helma.spruit@tno.nl">Helma.spruit@tno.nl</a>                                                                                   | 17 November 1998    |
| 12. | Poland                     | Laboratory for Chemical Weapons Convention Verification<br>Military Institute of Chemistry and Radiometry*<br>a1. Antoniego Chrusciela 105<br>PL-00-910 Warsaw                                                      | Mr Maksymilian Stela<br>Tel: +48 22 516 9931<br>Fax: +48 22 673 5180<br><a href="mailto:m.stela@wishir.waw.pl">m.stela@wishir.waw.pl</a>                                                                          | 29 June 1999        |
| 13. | Republic of Korea          | CB Department<br>Chemical Analysis Laboratory<br>Agency for Defence Development<br>179-1 Su-Nam Dong<br>Yuseong, Taejeon 305-600                                                                                    | Mr Yong Gwan Byun<br>Tel: +82 42 821 4670<br>Fax: +82 42 821 2391<br><a href="mailto:Ygbyun0715@yahoo.com">Ygbyun0715@yahoo.com</a>                                                                               | 3 August 2011       |
| 14. | Russian Federation         | The Laboratory for the Chemical and Analytical Control of the Military Research Centre<br>Brigadirsky pereulok, 13,<br>105005 Moscow                                                                                | Mr I. Rybalchenko<br>Tel: +7495 267-5107<br>Fax: +7495 693-3857<br><a href="mailto:riv@lumex.ru">riv@lumex.ru</a><br><a href="mailto:rivirus@mail.ru">rivirus@mail.ru</a>                                         | 4 August 2000       |
| 15. | Russian Federation         | Central Chemical Weapons Destruction Analytical Laboratory of the Federal National Unitary Establishment<br>State Research Institute of Organic Chemistry and Technology<br>Shosse Entusiastov 23<br>111 024 Moscow | Mr V. V. Demiduk<br>Tel: +74 95 6732291<br>Fax: +74 95 5632218<br><a href="mailto:Dir@gosniiookht.ru">Dir@gosniiookht.ru</a>                                                                                      | 3 August 2011       |

|     | State Party    | Laboratory Name and Address                                                                                                                                                                   | Laboratory Contact                                                                                                                                                                                                                                          | Date of Designation |
|-----|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 16. | Singapore      | Verification Laboratory<br>Defence Medical and<br>Environmental Research Inst<br>DSO National Laboratories*<br>Block 6, 11 Stockport Road<br>Singapore 117605                                 | Ms Chua Hoe Chee<br>Tel: +65 6871 2901<br>Fax: +65 6872 6219<br><a href="mailto:smutian@dso.org.sg">smutian@dso.org.sg</a>                                                                                                                                  | 14 April 2003       |
| 17. | Spain          | Laboratorio de Verificación de<br>Armas Químicas (LAVEMA)<br>Instituto Tecnológico “La<br>Marañosa”*<br>Carretera San Martin de la<br>Vega, Km. 10.5<br>San Martin de la Vega<br>Madrid 28330 | Mr Juan Carlos Fernández<br>Fernández<br>Tel: +34 91 8098591<br>Fax: +34 91 8098571<br><a href="mailto:jcfernandez@oc.mde.es">jcfernandez@oc.mde.es</a><br><a href="mailto:aferlop@oc.mde.es">aferlop@oc.mde.es</a>                                         | 16 August<br>2004   |
| 18. | Sweden         | Swedish Defence Research<br>Agency (FOI)<br>Division of CBRN Defence<br>Cementvägen 20<br>SE-901 82 Umeå                                                                                      | Ms Yvonne Nygren<br>Tel: +46 90 106808<br>Fax: +46 90 106800<br><a href="mailto:Yvonne.nygren@foi.se">Yvonne.nygren@foi.se</a>                                                                                                                              | 17 November<br>1998 |
| 19. | Switzerland    | Spiez Laboratory<br>CH-3700 Spiez                                                                                                                                                             | Mr Peter Siegenthaler<br>Tel: +41 33 228 1730<br>Fax: +41 33 228 1402<br><a href="mailto:Peter.siegenthaler@babs.admin.ch">Peter.siegenthaler@babs.admin.ch</a>                                                                                             | 17 November<br>1998 |
| 20. | United Kingdom | Defence Science and<br>Technology Laboratory (Dstl)<br>Porton Down<br>Salisbury, Wiltshire SP4 0JQ                                                                                            | Mr James Riches<br>Mr Robert Reed<br>Tel: +44 1980 61 3986<br>Fax: +44 1980 61 3830<br><a href="mailto:Jriches@dstl.gov.uk">Jriches@dstl.gov.uk</a><br><a href="mailto:rwread@dstl.gov.uk">rwread@dstl.gov.uk</a>                                           | 29 June 1999        |
| 21. | United States  | Edgewood Chemical and<br>Biological Forensic Analytical<br>Center<br>RDCB-DRC-F, Bldg. E5100<br>5183 Blackhawk Road<br>Aberdeen Proving Ground,<br>MD 21010-5424                              | Mr Lynn D. Hoffland<br>Mr Stanley Ostazeski<br>Tel: +1 410 436 8600<br>Fax: +1 410 436 3384<br><a href="mailto:Lynn.hoffland@us.army.mil">Lynn.hoffland@us.army.mil</a><br><a href="mailto:Stanley.ostazeski@us.army.mil">Stanley.ostazeski@us.army.mil</a> | 29 June 1999        |
| 22. | United States  | Forensic Science Center*<br>L-091, Lawrence Livermore<br>National Laboratory<br>7000 East Avenue<br>Livermore, CA 94550-9234                                                                  | Mr Armando Alcaraz<br>Tel: + 1 925 423 6889<br>Fax: +1 925 423 9014<br><a href="mailto:alcarazl@llnl.gov">alcarazl@llnl.gov</a>                                                                                                                             | 29 June 1999        |