



**OPCW**

**Technical Secretariat**

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Verification Division  
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**NOTE BY THE DIRECTOR-GENERAL**

**SUMMARY OF VERIFICATION ACTIVITIES IN 2007**

1. The Second Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention 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” (RC-2/4, dated 18 April 2008, paragraph 9.51).
2. In keeping with the above, the Secretariat has prepared the attached Summary of Verification Activities in 2007, which reflects the verification work undertaken by the Secretariat in that year. The summary does not contain any confidential information and the Secretariat plans to make it available to the general public by placing it on the OPCW website in October 2009.
3. While not mandated by the Convention, the summary will, in the Director-General’s view, provide 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 this work to a wider audience.
4. During the past several months, the Secretariat and the Chairperson of the Executive Council conducted informal consultations on the Summary of Verification Activities in 2007 with a number of States Parties. These consultations demonstrated widespread endorsement of the Secretariat’s initiative. Finally, it should be noted that other international organisations, such as the International Atomic Energy Agency (IAEA), regularly publish similar material.

Annex: OPCW Verification Summary for 2007



## OPCW VERIFICATION SUMMARY FOR 2007

### I. Executive summary

- 1.1 As at 31 December 2007, there were 182 States Parties to the Chemical Weapons Convention<sup>1</sup> (hereinafter “the Convention”), of which five possessed chemical weapons stockpiles. Chemical weapons production facilities (CWPFs) in three States Parties had yet to be fully destroyed or converted, and converted CWPFs in three States Parties remained under systematic verification. Thirteen States Parties had made declarations regarding old chemical weapons (OCWs), and four regarding abandoned chemical weapons (ACWs). Seventy-nine States Parties had facilities and plant sites declared pursuant to Article VI of the Convention.
- 1.2 There were six signatory States not Party and seven non-signatory States, for which no verification activities could be undertaken<sup>2</sup>.
- 1.3 The Technical Secretariat (hereinafter “the Secretariat”) of the Organisation for the Prohibition of Chemical Weapons (OPCW) carried out 426 inspections/rotations in 2007, amounting to 22,047 inspector days, of which 18,832 inspector days (226 inspections/rotations) related to chemical weapons demilitarisation and 3,215 (200 inspections) to the non-proliferation goals of the Convention. The Secretariat was able to meet its mandated inspection aims at all its inspections. No challenge inspections or investigations of alleged use were requested in 2007.
- 1.4 The Secretariat continued to verify the efforts of the States Parties with declared stockpiles of chemical-warfare agents to meet their destruction obligations. In 2007, almost 10,000 metric tonnes (MTs) of such chemical weapons were destroyed at 12 chemical weapons destruction facilities (CWDFs) in five States Parties. This included the destruction of all declared chemical-warfare agents by Albania, which was completed by 11 July 2007. In addition, the Secretariat carried out verification activities related to the destruction of OCWs in seven States Parties and ACWs on the territories of three States Parties.
- 1.5 In accordance with Article VI of the Convention, the Secretariat also verified non-prohibited activities involving scheduled chemicals or unscheduled discrete organic chemicals (DOCs) declared by States Parties. In 2007, such inspections were carried out at 200 facilities and plant sites in 58 States Parties. Moreover, the Secretariat processed notifications from States Parties regarding transfers of more than 300,000 MTs of scheduled chemicals.
- 1.6 At the end of the review period, 13 States Parties still had not submitted their initial Article III and VI declarations, and five additional States Parties had submitted only

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<sup>1</sup> During the year 2007, the Convention entered into force for Barbados (6 April 2007). The Republic of the Congo deposited its instrument of ratification on 4 December 2007, with the Convention entering into force for this State with effect from 3 January 2008.

<sup>2</sup> The Bahamas, the Republic of the Congo, the Dominican Republic, Guinea-Bissau, Israel, and Myanmar had signed but not ratified the Convention. Angola, the Democratic People’s Republic of Korea, Egypt, Iraq, Lebanon, Somalia, and the Syrian Arab Republic had neither signed nor acceded to the Convention.

incomplete declarations. Several States Parties had yet to submit their full declarations regarding riot control agents.

#### Optimising the verification regime

- 1.7 With a view to strengthening the efficiency of on-going verification operations, joint teams from the OPCW and the respective State Party visited one CWDF in India, two in the Russian Federation, and four in the United States of America.
- 1.8 With regard to verification activities pursuant to Article VI of the Convention, timely, complete and accurate declarations are essential, not least in order to avoid fielding inspections to facilities and plant sites that are not inspectable pursuant to the Convention. The time and resources spent on handling declarations can be optimised through the submission of declarations in electronic form, as well as through the submission of more verification-related documents in unclassified form. In 2007, several additional States Parties endorsed the implementation of sequential inspections (back-to-back inspections during one mission), leading to a more efficient use of inspector resources.
- 1.9 The Secretariat continued the start-up phase in the use of sampling and analysis (S&A) during inspections. S&A was used during nine Schedule 2 inspections in 2007. Lessons learned were reviewed, with a view to making the best possible use of S&A as a verification tool.

## 2. Inspections

- 2.1 Table 1 lists the number and types of inspections or rotations completed in 2007 and other summary statistics on inspection activities.

**TABLE 1: INSPECTIONS COMPLETED IN 2007**

Type of Facility	No. of Inspections Completed	No. of Facilities or Sites Inspected	No. of Inspector Days
<b>Chemical weapons-related inspections</b>			
CWDF	169	14	17,462
CWPF	17	13	258
CWSF <sup>3</sup>	26	20	810
ACW	6	5	132
OCW	6	6	84
DHCW <sup>4</sup>	2	0	84
<b>Totals</b>	<b>226</b>	<b>58</b>	<b>18,832</b>
<b>Article VI inspections</b>			
Schedule 1	11	11	161
Schedule 2	42	42	1,005
Schedule 3	29	29	474
OCPF <sup>5</sup>	118	118	1,577
<b>Totals</b>	<b>200</b>	<b>200</b>	<b>3,215</b>
<b>Combined totals</b>	<b>426</b>	<b>258</b>	<b>22,047</b>

<sup>3</sup> CWSF = Chemical weapons storage facility

<sup>4</sup> DHCW = Destruction of hazardous chemical weapons

<sup>5</sup> OCPF = Other chemical production facility

- 2.2 Although the number of inspections/rotations conducted at CWDFs in 2007 was higher than what had been budgeted for (169 conducted against 143 budgeted), the number of inspector days did not increase to the same extent (17,462 conducted against the 17,114 budgeted for). This was a consequence of positive results yielded by the efforts to optimise verification activities, which have led to a reduction in average team size of the inspection teams at the CWDFs in the United States of America and in the Russian Federation from eight to five, and in India from six to four.
- 2.3 In 2007, 200 were conducted in 58 States Parties, to verify activities not prohibited under the Convention in accordance with Article VI. More than 45% of these were hosted by 11 States Parties—China, Germany, India, the Islamic Republic of Iran, Italy, Japan, the Republic of Korea, Spain, Switzerland, the United Kingdom of Great Britain and Northern Ireland, and the United States of America—each of which received at least five such inspections during the reporting period. China hosted the largest number of Article VI inspections (15), followed by India (12). Table 2 shows the regional distribution of Article VI inspections during the reporting period.

**TABLE 2: ARTICLE VI INSPECTIONS BY REGION**

<b>Region</b>	<b>Number of Article VI Inspections</b>	<b>Percentage of Total</b>
Africa	12	6.0
Asia	75	37.5
Eastern Europe	24	12.0
Latin America and the Caribbean	15	7.5
Western European and Other Countries	74	37.0

#### Challenge inspections and investigations of alleged use

- 2.4 As in previous years, no challenge inspections or investigations of alleged use of chemical weapons or of riot control agents being used as a method of warfare were requested during the period under review.
- 2.5 The Secretariat continued to maintain its readiness to conduct challenge inspections and investigations of alleged use, should it be requested to do so. It held two challenge-inspection exercises during the period under review: a no-notice, two-day headquarters exercise in procedures and logistics at the beginning of May 2007 and a challenge-inspection field exercise hosted by the Netherlands in September 2007.
- 2.6 Regarding investigations of alleged use, the Secretariat made progress in the development of a comprehensive qualified-expert concept. During the period under review, the Secretariat invited States Parties to nominate qualified experts whose particular field of expertise could be required in an investigation of alleged use of chemical weapons. In response, States Parties nominated 112 individuals with particular expertise in the field of forensics, toxicology, epidemiology, disaster management, or in the disposal of unexploded ordnance and of improvised explosive devices.

### 3. Chemical weapons<sup>6</sup>

- 3.1 In 2007, the Secretariat verified the destruction of 9,719.430 MTs of Category 1 chemical weapons and 1.339 MTs of Category 2 chemical weapons. No Category 3 chemical weapons were destroyed during the year.
- 3.2 Three final inspections were carried out at chemical weapons storage facilities (CWSFs) in order to verify that those facilities had been emptied, and all remaining chemical weapons removed for destruction. Two of the final inspections took place in a State Party that has requested that its name be treated as highly protected (hereinafter referred to as “A State Party”) and the third one was conducted in Albania. By 31 December 2007, the Secretariat had verified that all declared CWSFs in those two States Parties had been emptied of chemical weapons and closed. In the case of A State Party, all remaining chemical weapons had been transferred to a temporary holding area in a CWDF and were awaiting destruction.
- 3.3 During the reporting period, 12 CWDFs were involved in the destruction of chemical weapons: one in A State Party, one in Albania, one in India, two in the Russian Federation, and seven in the United States of America. No destruction operations took place in the Libyan Arab Jamahiriya in 2007.

**TABLE 3: CHEMICAL WEAPONS DESTRUCTION FACILITIES OPERATIONAL OR UNDER CONSTRUCTION IN 2007**

Chemical Weapons Destruction Facilities by State Party	
A State Party	One CWDF
Albania	Qaf-Molla CWDF
India	One remaining CWDF
Libyan Arab Jamahiriya	Rabta Toxic Chemical Disposal Facility (RTCDF)*
Russian Federation	Kambarka CWDF Maradykovsky CWDF Kizner CWDF* Leonidovka CWDF* Pochev CWDF* Shchuchye CWDF*
United States of America	Anniston Chemical Agent Disposal Facility (ANCDF) Newport Chemical Agent Disposal Facility (NECDF) Pine Bluff Binary Destruction Facility (PBBDF) Pine Bluff Explosive Destruction System (PBEDS) Pine Bluff Chemical Agent Disposal Facility (PBCDF) Recovered Chemical Weapons Destruction Facility (RCWDF) Umatilla Chemical Agent Disposal Facility (UMCDF) Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP)* Pueblo Chemical Agent Destruction Pilot Plant (PCAPP)*

\* = Under construction

<sup>6</sup> Not including old and abandoned chemical weapons

Overall progress in meeting destruction obligations

- 3.4 At the end of the review period, the six above-mentioned States Parties had between them declared a total of 71,315.383 MTs of chemical weapons (69,549.310 MTs in Category 1 and 1,766.073 in Category 2), contained in 8,679,133 munitions or containers. Approximately 37% of these chemical weapons—or a total of 26,326.335 MTs (25,410.770 MTs in Category 1 and 915.565 MTs in Category 2)—had been verified as destroyed at the end of 2007. The following destruction of chemical weapons had been verified by the Secretariat:
- (a) Category 1 chemical weapons: The Secretariat had verified the destruction of 25,410.770 MTs of declared chemical-warfare agents, 24,212.795 MTs of which were unitary chemical weapons (9,480.611 MTs in 2007), comprising lewisite, sarin (GB), sulfur mustard (including H and HD), tabun (GA), VX, and Vx, contained in 2,368,682 munitions and containers (183,764 in 2007), as well as in other storage vessels. Another 1,197.976 MTs were binary chemical weapons which involved the following: 473.556 MTs of the key binary components DF (168.963 MTs in 2007) and QL (45.301 MTs in 2007). The Secretariat also verified the destruction of 724.419 MTs of another binary component, OPA (24.555 MTs in 2007); as well as 770,320 binary items (110,620 in 2007), consisting of 411,588 artillery projectiles and 358,732 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 914.932 MTs (1.339 MTs in 2007) of Category 2 chemical weapons: thiodiglycol (TDG), 2-chloroethanol (2-CE), phosgene, sodium sulphide, sodium fluoride, choloacetophenone (CN) (0.989 MTs in 2007), and adamsite (DM) (0.350 MTs in 2007); and 3,844 artillery projectiles.
- 3.5 Reaction mass corresponding to the hydrolysis of 198.450 MTs of VX at the Newport Chemical Agent Disposal Facility (NECDF) remained stored on site at the end of the reporting period, awaiting second-step treatment to complete the destruction of the Schedule 2B chemicals in the reaction mass. The same applied to reaction mass corresponding to the hydrolysis of 4,394.344 MTs of Vx generated during the first train of operations at the Maradykovsky CWDF. Also stored on that site were the corresponding drained munitions bodies, which were due for thermal treatment and additional mutilation by cutting.
- 3.6 Between them, the six States Parties had also declared 416,313 Category 3 chemical weapons, all of which had been verified as destroyed by the Secretariat by the end of 2005.
- 3.7 Seven inspections in 2007 related to CWDFs and CWSFs resulted in an issue requiring further attention (IRFA). Six of these, concerning the processing of munitions in hazardous (leaking) conditions at CWSFs in one State Party, remained open at the end of the review period, while one, regarding the declaration of a former CWSF as part of a CWDF, was resolved and closed.

### Progress by State Party

- 3.8 The Convention specifies when States Parties' holdings of chemical weapons are to be destroyed, but provides for the granting of extensions, under certain conditions, of the deadlines for destruction. All of the six States Parties that have declared stockpiles of chemical-warfare agents have been granted such deadline extensions. Paragraphs 3.9 to 3.15 provide an overview of the status of States Parties' efforts to implement their destruction obligations.
- 3.9 A State Party: In 2006, the Conference of the State Parties (hereinafter "the Conference") extended to 31 December 2008 the deadline for completion of the destruction of all chemical weapons stockpiles by A State Party<sup>7</sup>. At the end of the review period, it had destroyed 96% of its declared stockpile of Category 1 chemical weapons. It has not declared any Category 2 chemical weapons.

**TABLE 4: PROGRESS IN THE DESTRUCTION OF CHEMICAL-WARFARE AGENTS AS AT 31 DECEMBER 2007**

	<b>A State Party</b>	<b>Albania</b>	<b>India</b>	<b>Libyan Arab Jamahiriya</b>	<b>Russian Federation</b>	<b>United States of America</b>
Category 1	96%	100%	93%	0%	24%	51%
Category 2	N/A	100%	100%	39%	100%	N/A

- 3.10 Albania: Albania was granted extensions of the intermediate deadlines for the destruction of its Category 1 chemical weapons, on the understanding that this would not modify its obligation to destroy its entire Category 1 stockpile by 29 April 2007<sup>8</sup>. It subsequently informed the Executive Council (hereinafter "the Council") about equipment-related problems causing an unscheduled period of inactivity at the Qaf-Molla CWDF. Albania completed the destruction of its entire stockpile of Category 1 chemical weapons on 4 July 2007, and the destruction of its Category 2 chemical weapons on 11 July 2007, as verified by the Secretariat.
- 3.11 India: India was granted an extension of the deadline for the destruction of all of its Category 1 chemical weapons<sup>9</sup>. According to the extension granted by the Conference in 2006, India is due to destroy all of its Category 1 chemical weapons stockpiles no later than 28 April 2009. At the end of the review period, India had destroyed 93% of its Category 1 chemical weapons. It had also destroyed all of its declared Category 2 chemical weapons.
- 3.12 Libyan Arab Jamahiriya: The Conference established new deadlines for the Libyan Arab Jamahiriya to destroy its Category 1 chemical weapons (one percent to be completed by 1 May 2010; 20% by 1 July 2010; 45% by 1 November 2010, and 100% by 31 December 2010<sup>10</sup>), and called upon it to complete the destruction of its Category 2 chemical weapons as soon as possible, and no later than

<sup>7</sup> C-11/DEC.12, dated 8 December 2006

<sup>8</sup> C-11/DEC.19, dated 8 December 2006

<sup>9</sup> C-11/DEC.16, dated 8 December 2006

<sup>10</sup> C-11/DEC.15, dated 8 December 2006

31 December 2011. During the review period, no destruction activities took place in the Libyan Arab Jamahiriya, which continued to experience delays in the selection of the destruction technology and construction of its CWDF. Consequently, destruction in this State Party remained at the level of 0% of its Category 1 chemical weapons and 39% (551.350 MTs) of its Category 2 chemical weapons.

3.13 Russian Federation: The Conference has set 31 December 2009 as the intermediate deadline for the destruction by the Russian Federation of 45% of its Category 1 chemical weapons, and 29 April 2012 was established as the final deadline<sup>11</sup>. The Russian Federation had previously been granted an extension until 29 April 2007 of the intermediate deadline for the destruction of 20% of its Category 1 chemical weapons stockpiles<sup>12</sup>. In 2007, the Secretariat verified the destruction by the Russian Federation of 6,359.961 MTs of Category 1 chemical weapons (compared with 2,270.651 MTs in 2006). It met the 29 April 2007 destruction deadline, as 20% of its declared stockpiles had been accounted for as destroyed by that date. As at 31 December 2007, 9,762.547 MTs of chemical-warfare agent in the Russian Federation had been accounted for as destroyed, corresponding to 24% of its declared Category 1 chemical weapons stockpile. It had also destroyed all of its declared Category 2 chemical weapons.

3.14 United States of America: The Conference extended the deadline for the United States of America to complete the destruction of all its Category 1 chemical weapons to 29 April 2012<sup>13</sup>. Previously, in 2003, the Conference had granted an extension to 31 December 2007 of the intermediate deadline for the destruction of 45% of this State Party's Category 1 chemical weapons stockpiles<sup>14</sup>. The United States of America destroyed 3,082.518 MTs of its Category 1 chemical weapons in 2007 (compared with 1,145.719 MTs in 2006). It completed the destruction of 45% of its Category 1 chemical weapons stockpiles in June 2007, ahead of the intermediate deadline. As at 31 December 2007, it had destroyed 14,074.585 MTs of chemical-warfare agent, or 51%, of the declared stockpile. In addition, the Secretariat verified the hydrolysis, in 2007, of 198.450 MTs of VX at the Newport Chemical Agent Disposal Facility (NECDF). The United States of America has not declared any Category 2 chemical weapons.

3.15 A State Party, India, the Libyan Arab Jamahiriya, the Russian Federation and the United States of America had also declared Category 3 chemical weapons, which they had destroyed before the Convention's deadline of 29 April 2002.

#### **4. Chemical weapons production facilities**

4.1 Since the entry into force of the Convention, 65 former CWPFs have been declared to the OPCW, all of which shall be destroyed or converted for non-prohibited purposes. In 2007, the Secretariat verified the completion of destruction or conversion of the following three facilities:

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

<sup>12</sup> C-8/DEC.13, dated 24 October 2003

<sup>13</sup> C-11/DEC.17, dated 8 December 2006

<sup>14</sup> C-8/DEC.15, dated 24 October 2003



- (a) DF Production and Fill Facility at Pine Bluff Arsenal, United States of America (destroyed);
- (b) the facility for the production of lewisite, Open Joint Stock Company (OJSC) Kaprolaktam, Dzerzhinsk, Russian Federation (destroyed); and
- (c) the facility for soman production, OJSC Khimprom, Volgograd, Russian Federation (converted).

4.2 The following four declared CWPFs were still to be fully destroyed or converted at the end of the review period:

- (a) last remaining CWPF in India (temporarily converted to a CWDF to be destroyed upon completion of chemical weapons destruction);
- (b) Rabta Pharmaceutical Factory 1, Libyan Arab Jamahiriya (to be converted);
- (c) Rabta Pharmaceutical Factory 2, Libyan Arab Jamahiriya (to be converted); and
- (d) the facility for production of a Vx-type substance and filling it into munitions, Federal State Unitary Enterprise (FGUP) GosNIIOKhT, Novocheboksarsk, Russian Federation (to be converted).

4.3 As at 31 December 2007, the Secretariat had confirmed the destruction of 42 CWPFs and certified the conversion of 19 others. Verification activities had ceased at the destroyed CWPFs, while verification continued in accordance with the Convention at the 19 converted former CWPFs in A State Party (one facility), the Russian Federation (15 facilities) and the United Kingdom of Great Britain and Northern Ireland (three facilities).

#### Residual production capacity

4.4 The Convention provides that States Parties shall reduce residual production capacity (RPC) at their former CWPFs to zero level ten years after the entry into force of the Convention, that is, by 29 April 2007<sup>15</sup>.

**TABLE 5: RESIDUAL PRODUCTION CAPACITY AT CWPFs – TIMELINES ESTABLISHED IN THE CONVENTION**

No.	Period after Entry into Force	Date	RPC
1.	End of year 5	29 April 2002	60%
2.	End of year 8	29 April 2005	20%
3.	End of year 10	29 April 2007	0%

4.5 By that date, the zero RPC level<sup>16</sup> had been reached at 61 of the 65 declared CWPFs in nine of the 12 State Parties that had declared CWPFs (including the United States

<sup>15</sup> See subparagraphs 30(a) and 30(b) of Part V of the Verification Annex to the Chemical Weapons Convention.

<sup>16</sup> With regard to the Libyan Arab Jamahiriya, see paragraph 4.6 above.

of America, for which the last CWPF was certified as destroyed on 16 April 2007). By the end of 2007, the Secretariat assessed the RPC for all States Parties that had declared CWPFs, and found that the remaining RPC was 3.15% for India, 9.7% for the Libyan Arab Jamahiriya, and 8.9% for the Russian Federation.

- 4.6 For the Libyan Arab Jamahiriya, RPC is to reach zero by 29 July 2008 in accordance with the approved conversion request for its remaining CWPFs. During 2007, the Libyan Arab Jamahiriya submitted a national paper to the Council, in which it informed States Parties that it expected to complete conversion of its two CWPFs after the approved date, but not later than December 2009.
- 4.7 Three CWPF inspections in 2007 registered IRFAs, two of which concerned additional equipment items to be included in the conversion plans declared and one regarding chemicals produced at a converted CWPF. These IRFAs were resolved, and the inspection files had been closed by the end of the reporting period.

## **5. Old and abandoned chemical weapons**

- 5.1 The Convention contains provisions regarding the destruction of OCWs and ACWs. In 2007, the Council granted Italy an extended deadline for the destruction of all of its declared OCWs until 29 April 2012. The Council had granted a similar request by China and Japan in 2006 with regard to chemical weapons abandoned by Japan on the territory of China. The Council also approved, in 2007, a plan involving the transport of three recovered OCWs from the territory of Austria to the territory of Germany so that they could be destroyed, and instructed the Secretariat to monitor the entire process continuously. The munitions were subsequently transported under observation and destroyed in the presence of an OPCW team in April 2007.

### Declared stocks

- 5.2 Between the entry into force of the Convention and 31 December 2007, 13 States Parties—Australia, Austria, Belgium, Canada, France, Germany, Italy, Japan, the Russian Federation, Slovenia, the Solomon Islands, the United Kingdom of Great Britain and Northern Ireland, and the United States of America—had declared a total of 54,284 OCWs produced before 1925 (seven States Parties) and 67,085 produced between 1925 and 1946 (nine States Parties).
- 5.3 Six of those States—Belgium, France, Germany, Italy, Japan, and the United Kingdom of Great Britain and Northern Ireland—had declared OCWs on their territories as at 31 December 2007, and those States regularly inform the Secretariat of new OCW finds. At the end of the review period, almost 45,000 OCWs yet to be destroyed were stored by the six States Parties concerned. Three States Parties—China, Italy and Panama—had declared ACWs on their territories, while Japan had declared ACWs on the territory of China.

### Progress in destruction

- 5.4 The collected OCW stocks in the United Kingdom of Great Britain and Northern Ireland had been completely destroyed by 29 April 2007, and by that same date,

Germany had destroyed all of its OCWs produced between 1925 and 1946. Both States Parties have discovered further OCWs since destruction was completed and such discoveries are anticipated to continue.

#### Inspection activities

- 5.5 Six OCW inspections were conducted in 2007 in six States Parties, most of which were making good progress in destroying their declared weapons. Six ACW inspections were conducted, each of which concerned chemical weapons abandoned by Japan on the territory of China. No issues were identified and, with the announcement of plans to introduce mobile destruction technologies in the near future, progress continued to be made by the two States Parties on preparations for the next major phases of recovery and destruction in China. The Secretariat, China, and Japan met twice in 2007 to discuss the anticipated increase in activity in 2008 and 2009, and the verification measures the OPCW might apply.

### **6. Industry verification**

- 6.1 At the end of the review period, 5,734 facilities (plant sites) in 79 States Parties worldwide were declared within the scope of the Convention's Article VI verification regime, which mandates verification of declared facilities. These facilities produce, consume, and/or process for non-prohibited purposes chemicals that are included in the Schedules of chemicals in the Convention or produce DOCs. The 200 facilities and plant sites inspected by the Secretariat in 2007 comprised 11 Schedule 1 facilities (41% of the number of inspectable facilities), 42 Schedule 2 plant sites (26%), 29 Schedule 3 plant sites (8.5%), and 118 OCPF plant sites (2.6%).
- 6.2 A considerable number of inspections were conducted at facilities (primarily OCPF plant sites) that turned out to be non-inspectable (13 inspections, or 11%, compared to an average of 7% in the preceding years). This highlighted the importance of timely, complete and accurate Article VI declarations. During the year, a number of States Parties provided the Secretariat with updated plant site information, ranging from names and addresses to annual production ranges and product group codes. The access to such up-to-date information is vital in order to enable the Secretariat to plan and conduct its verification activities effectively and efficiently. Progress was also made in terms of States Parties agreeing to sequential inspections (inspection of several sites during one mission) and the consideration of the optimisation of inspection-team sizes.
- 6.3 In 2007, verification activities carried out at 200 Article VI facilities resulted in one inspection with an IRFA, which concerned chemicals produced at a declared facility. However, that issue had been fully resolved and closed at the end of the review period.

#### Consultations on Article VI inspections

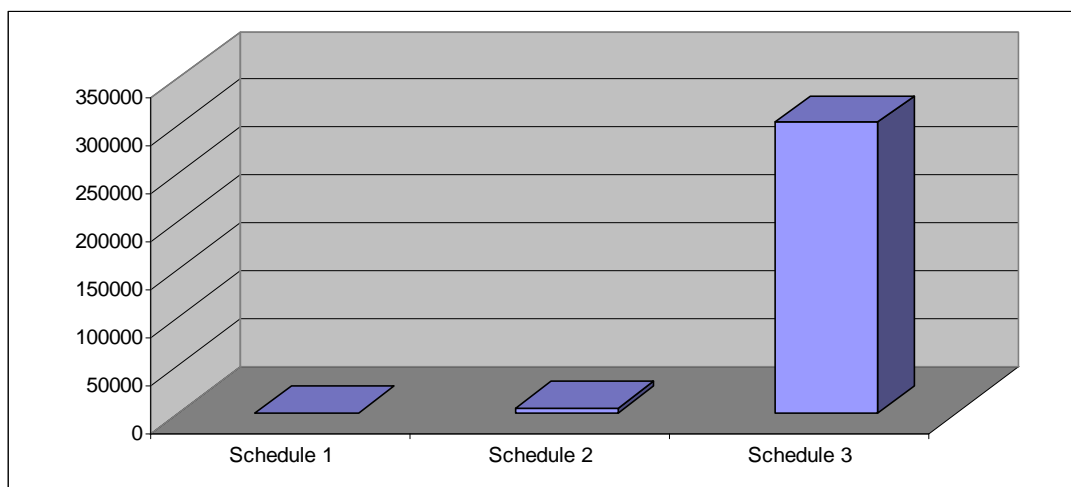
- 6.4 As a result of the Council's consideration of the 2008 Programme and Budget, consultations on the number and frequency of Article VI inspections were held on three occasions in 2007.

- 6.5 Also reporting to the Council, States Parties considered three issues during informal consultations, namely: (a) the process of selecting OCPFs for inspection; (b) the submission of late declarations; and (c) the transfer discrepancies in Aggregate National Data (AND) declarations.

#### Transfers of scheduled chemicals between States Parties

- 6.6 According to 29 notifications that the Secretariat received concerning the transfer of Schedule 1 chemicals in 2007, nine States Parties were anticipated to be involved in 16 Schedule 1 transfers during the year. This included four sending States Parties—Germany, the Netherlands, Sweden, and the United States of America, and six receiving States Parties—Canada, Finland, Germany, Singapore, Switzerland, and the United Kingdom of Great Britain and Northern Ireland. The total amount of chemicals to be transferred in 2007 was 214.728 kg. Thirteen transfers anticipated to take place in 2007 were notified by both the sending and receiving States Parties.
- 6.7 The Annual Declarations on Past Activities (ADPAs) for 2006 provided by States Parties in 2007 indicate that 45 had transferred Schedule 2 chemicals in 2006, and 118 had transferred Schedule 3 chemicals in that year. The total volume of trade in 2007 came to approximately 5,700 MTs of Schedule 2 chemicals and 304,000 MTs of Schedule 3 chemicals.

**FIGURE 1: TRANSFERS OF CHEMICALS BY SCHEDULE IN METRIC TONNES**



- 6.8 As in previous years, there were considerable inconsistencies between the Schedule 2 and 3 transfer data provided by importing States Parties and those provided by the exporting States Parties in respect to the same transfers. Forty-seven percent of the reported transfers of Schedule 2 chemicals were declared by just one of the two States Parties involved and the same figure for Schedule 3 chemicals was 34%.

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

- 6.9 No transfers of Schedule 2 chemicals to States not Party in 2006 were reported to the Secretariat. During the reporting period, however, one State Party informed the Secretariat of the export of a Schedule 2 chemical to a State not Party in 2005. Eight

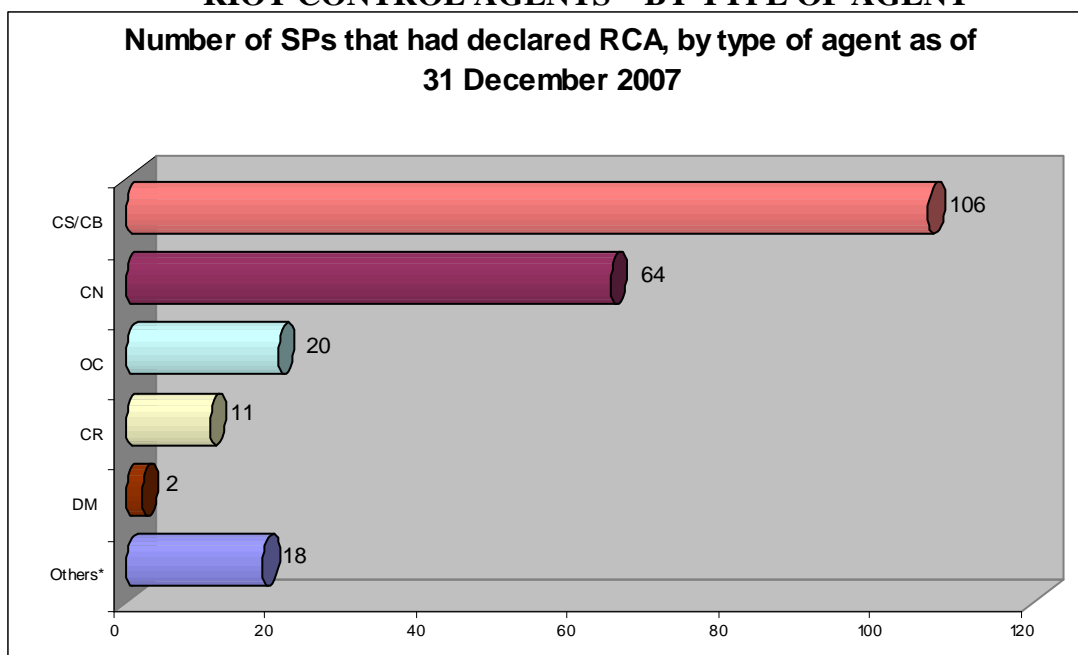
States Parties reported exports in 2006 of five Schedule 3 chemicals to five States not Party. Thionylchloride accounted for 57% of the 2,469 MTs of Schedule 3 chemicals declared to have been exported to States not Party in 2006.

## 7. Other verification-related activities

### Riot control agents

- 7.1 As at 31 December 2007, 124 States Parties had declared possession of riot control agents (mainly tear gas). During the period under review, one State Party—the Central African Republic—submitted its initial declaration in regard to riot control agents. Three other States Parties—Guatemala, Kyrgyzstan, and the Netherlands—submitted amendments to their initial declarations providing updated information on riot control agents. Of the 124 above-referenced States Parties, 106 declared possession of CS riot control agents, and 64 of CN riot control agents. Fourteen had yet to provide the information required under the Convention, namely, the chemical name of the riot control agent, its structural formula, and its Chemical Abstracts Service (CAS) registry number.

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



\* Includes pepper spray (3); PAVA (3); MPA (2); CND (3); CNB (1); CNC (1); CNK (1); capsaicin (1); ethyl bromide acetate (1); mixture of OC and CS (1); and mixture of capsaicin, dehydrocapsaicin, and nonivamid (1).

### Receipt and processing of declarations

- 7.2 In 2007, the Secretariat received initial declarations from six additional States Parties—the Central African Republic, the Democratic Republic of the Congo, Montenegro, Nepal, Saint Vincent and the Grenadines, and Turkmenistan—pursuant to Article III and/or Article VI of the Convention. By 31 December 2007, 169 of the States Parties had submitted initial declarations, while 13 had yet to submit their

initial declarations as required by the Convention. Four other States Parties had yet to submit their initial declarations under Article VI, and one had yet to submit its initial declaration under Article III. These States Parties' initial declarations thus remained incomplete at the end of the review period.

7.3 In 2007, two States Parties provided their original ADPAs for 2006 solely in electronic format and five States Parties did so in hard and in electronic copy. This facilitated the processing of declarations via the Verification Information System (VIS).

7.4 The Secretariat received 875 declarations and other verification-related documents from States Parties, of which 62% (63% in 2006) were unclassified; on the other hand 84% of the 20,123 pages received (80% in 2006) were classified. All the steps required for the processing of these documents (registration, classification marking, database input, scanning, indexing, photocopying, document control, and checking)—along with the evaluation of the verification-related information in the documents—continued to require substantial resources in 2007 in order to ensure continuing compliance with the OPCW's confidentiality regime.

## **8. Technical support for verification activities**

### OPCW Central Analytical Database (OCAD)

8.1 During 2007, 268 mass spectrometry (MS) spectra, 25 nuclear-magnetic-resonance (NMR) spectra, 36 infrared spectrometry (IR) spectra, and 136 gas chromatography-retention index GC(RI) data were validated, and 175 MS spectra, 18 IR spectra, and 14 GC(RI) data were approved by the Council for inclusion in the OCAD. A new version of the OCAD on DVD was released, which contains electronic version 8 (e-OCAD v.8) and portable data format version 10 (PDF-OCAD v.10) of the OCAD. The on-site analytical database (OS-e-OCAD v.8) has also been included on the DVD.

### OPCW Laboratory support for S&A

8.2 The OPCW Laboratory continued to support inspection teams in S&A-related verification activities by issuing extracts from the OCAD in hard copy and electronic form to inspection teams for the conduct of on-site inspection activities. Assistance and support were also provided to the inspectors who are analytical chemists in preparation for Schedule 2 inspections involving S&A. This included acquiring chemicals needed to emulate process streams and consultations on the methods used for analysing the results.

### Training

8.3 The OPCW Laboratory trained five newly recruited inspectors who are analytical chemists in OPCW S&A procedures. It maintains regular training for all inspectors who are analytical chemists, and conducted two special training sessions in 2007 on specific aspects of the blinded-analysis software (AMDIS) used for on-site inspections.

8.4 During the year, training on detection and protection equipment and decontamination

procedures was provided during visits to Croatia, Kuwait, Malaysia, Trinidad and Tobago, and Uganda. Two States Parties—the Islamic Republic of Iran and Zambia—received training in laboratory techniques and analytical equipment.

#### Designated OPCW laboratories

- 8.5 The OPCW proficiency-testing scheme continues to attract new laboratories. On the basis of test results in the Twenty-First Proficiency Test (held in 2007), the Director-General added the Laboratory of Toxicant Analysis of the Chinese Academy of Military Medical Sciences to the list of designated laboratories (see Table 6), and two States Parties nominated laboratories for the first time for the Twenty-First Proficiency Test. The number of designated laboratories at the end of 2007 was 19. That includes seven temporarily suspended laboratories that will not be selected by the Director-General for the analysis of authentic samples until they regain full designation status.

**TABLE 6: LIST OF DESIGNATED OPCW LABORATORIES<sup>17</sup>**

No.	State Party	Laboratory	Date of Designation
1.	Belgium	Defence Laboratories Department (DLD)	12 May 2004
2.	China	The Laboratory of Analytical Chemistry, Research Institute of Chemical Defence	17 November 1998
3.	China	Laboratory of Toxicant Analysis, Academy of Military Medical Sciences, Institute of Pharmacology & Toxicology	14 September 2007
4.	Czech Republic	Research Institute for Organic Syntheses, Analytical Department, Centre of Ecology Toxicology and Analytics (CETA)*	29 June 1999
5.	Finland	Finnish Institute for Verification of the Chemical Weapons Convention (VERIFIN)	17 November 1998
6.	France	DGA - Centre d'Etudes du Bouchet (CEB)	29 June 1999
7.	Germany	Armed Forces Scientific Institute for Protection Technologies, NBC Protection (WIS-120)*	29 June 1999
8.	India	Defence Research & Development Establishment, VERTOX Laboratory*	18 April 2006
9.	Republic of Korea	Chemical Analysis Laboratory, CB Department, Agency for Defence Development*	17 November 1998
10.	Netherlands	TNO Defence, Security and Safety	17 November 1998
11.	Poland	Laboratory for Chemical Weapons Convention Verification, Military Institute of Chemistry and Radiometry*	29 June 1999
12.	Russian Federation	The Laboratory for the Chemical and Analytical Control, Military Research Centre	4 August 2000
13.	Singapore	Verification Laboratory DSO National Laboratories	14 April 2003
14.	Spain	Fábrica Nacional "La Marañosa"*	16 August 2004
15.	Sweden	Swedish Defence Research Agency (FOI), Division of CBRN Defence	17 November 1998
16.	Switzerland	Spiez Laboratory	17 November 1998
17.	United Kingdom	Defence Science and Technology Laboratory (Dstl), Porton Down	29 June 1999
18.	United States	Edgewood Chemical and Biological Forensic Analytical Center, Aberdeen Proving Ground*	29 June 1999
19.	United States	University of California, Lawrence Livermore National Laboratory	29 June 1999

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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 its performance in a recent official OPCW Proficiency Test.