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**NOTE BY THE DIRECTOR-GENERAL****SUMMARY OF VERIFICATION ACTIVITIES IN 2014**

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” (paragraph 9.51 of RC-2/4, dated 18 April 2008). In addition, as stated in paragraphs 3.187 and 3.188 of the Note by the Secretariat issued for the Third Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention (hereinafter “the Third Review Conference”), “Review of the Operation of the Chemical Weapons Convention since the Second Review Conference” (RC-3/S/1, dated 12 March 2013 and Corr.1, dated 20 March 2013), “[r]ecent developments in the Secretariat’s factual reporting on verification have further enhanced transparency and the continued assurance of States Parties’ compliance. ... The Secretariat will continue its efforts to improve the way it reports on verification results.”
2. In light of the above, the Secretariat has prepared the attached OPCW verification summary for 2014, which reflects the verification work undertaken by the Secretariat during that year.
3. The summary provides valuable reporting on the Secretariat’s verification activities, especially to States Parties that are not represented in The Hague. In terms of public outreach, it is consistent with the OPCW’s Media and Public Affairs Policy (C-I/DEC.55, dated 16 May 1997) and presents pertinent information on such work to a wider audience.
4. The summary follows a structure similar to the verification summaries from previous years, and does not contain any classified information.

**Annexes:**

- Annex 1: OPCW Verification Summary for 2014  
Annex 2: List of Designated OPCW Laboratories



## Annex 1

### OPCW VERIFICATION SUMMARY FOR 2014

#### 1. EXECUTIVE SUMMARY

##### Overview

- 1.1. As at 31 December 2014, there were 190 States Parties to the Chemical Weapons Convention (hereinafter “the Convention”). Declared chemical weapons had yet to be destroyed in five States Parties, and declared chemical weapons production facilities (CWPFs) had yet to be fully destroyed in two States Parties. Six States Parties had stocks of old chemical weapons (OCWs) that had yet to be destroyed or otherwise disposed of, while recovered abandoned chemical weapons (ACWs)—confirmed or suspected—were present on the territory of two States Parties. According to declared information, 80 of the States Parties maintained at least one declarable facility pursuant to Article VI of the Convention.
- 1.2. There were two signatory States not Party<sup>1</sup> and four non-signatory States<sup>2</sup> for which no verification activities could be undertaken. No States joined the Convention in 2014.
- 1.3. By the end of 2014, 188 of the 190 States Parties had submitted initial declarations pursuant to the Convention (there were 185 such States Parties at the end of 2013). All but one of those 188 States Parties had submitted complete initial declarations; one State Party had submitted its initial declaration under Article III but had yet to do so under Article VI (there were two States Parties with incomplete initial declarations at the end of 2013).

##### Verification operations

- 1.4. With regard to the chemical demilitarisation and industry verification programmes, and without counting the Secretariat’s continuous operations in the Syrian Arab Republic or its activities verifying the destruction of Syrian chemical weapons outside the territory of the Syrian Arab Republic, the Secretariat performed 352 inspections/rotations in 2014, which accounted for 12,198 inspector days at 279 sites in 50 States Parties. This total consisted of 111 inspections or rotations connected to chemical weapons demilitarisation under Articles IV and V, and 241 inspections related to industry verification under Article VI. In addition, a further 4,465 inspector days were spent in 2014 by the Secretariat in the Syrian Arab Republic or on verification activities connected to that State Party.<sup>3</sup>

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<sup>1</sup> Israel and Myanmar.

<sup>2</sup> Angola, the Democratic People’s Republic of Korea, Egypt, and South Sudan.

<sup>3</sup> This figure includes verification activities both with respect to declared sites in that State Party and with respect to destruction activities that occurred outside its territory, as well as missions related to its initial declaration.

- 1.5. The overall number of inspector days in 2014 related to chemical weapons, including those in the Syrian Arab Republic, was 13,690, while 2,973 inspector days were spent pursuant to Article VI, representing 82% and 18% respectively of the total number of inspector days (16,663).
- 1.6. No challenge inspections (CIs) or investigations of alleged use (IAUs) were requested in 2014.
- 1.7. The Secretariat was able to meet the mandated inspection aims at all inspections carried out in 2014. An issue or issues requiring further attention (IRFAs) were registered in connection with 24 inspections (two chemical weapons-related inspections and 22 Article VI inspections).

#### Chemical weapons verification

- 1.8. In 2014, the Secretariat verified the destruction of 4,084.258 metric tonnes (MT) of chemical weapons. Destruction operations took place at seven chemical weapons destruction facilities (CWDFs) on the territory of possessor States Parties: one in Libya, five in the Russian Federation, and one in the United States of America. In addition, chemical weapons declared by the Syrian Arab Republic were destroyed outside the territory of that State Party at four facilities provided through in-kind contributions of States Parties and at two facilities selected by the Secretariat through a commercial tender process.
- 1.9. The Secretariat verified the year-end status of destruction of chemical-warfare agents at the end of the review period as follows:
  - (a) A total of 62,601.440 MT, or 86%, of the declared chemical weapons stockpile of 72,524.542 MT had been verified as destroyed or withdrawn from chemical weapons stocks for purposes not prohibited under the Convention.
  - (b) Of the seven declared chemical weapons possessor States Parties, A State Party,<sup>4</sup> Albania, and India had destroyed their entire declared stockpiles of chemical weapons.
  - (c) The declared Category 1 chemical weapons of the Syrian Arab Republic and Libya had been completely destroyed, while the Russian Federation had destroyed 84% and the United States of America 90% of their respective declared quantities.
  - (d) The declared Category 2 chemical weapons of the Syrian Arab Republic had been removed from its territory, and 88% of these had been destroyed.
  - (e) No further progress had been made by Libya on the destruction of its Category 2 chemical weapons (unchanged at 40% destroyed).

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<sup>4</sup> The State Party in question has requested that its name be regarded as highly protected information. Therefore, for the purposes of this report, it is referred to as "A State Party".

- 1.10. By 31 December 2014, the Director-General had certified that 79 out of 97 CWPFs had either been destroyed (in 56 instances) or converted (in 23 instances). The remaining 18 facilities—four CWPFs in Iraq and 14 CWPFs in the Syrian Arab Republic—remained to be destroyed. In 2014, the Secretariat carried out 20 inspections at 20 CWPFs in three States Parties, namely, the Russian Federation, the Syrian Arab Republic (where 13 inspections were performed at the CWPFs to be destroyed), and the United Kingdom of Great Britain and Northern Ireland. Three of those inspections were carried out in accordance with the decision entitled “Nature of Continued Verification Measures at Converted Facilities Ten Years After the Director-General’s Certification of Their Conversion” (EC-67/DEC.7, dated 16 February 2012).
- 1.11. In 2014, the Secretariat conducted 10 inspections at eight chemical weapons storage facilities (CWSFs) in four States Parties, which amounted to 351 inspector days. In addition, the Secretariat verified the removal of all declared chemical weapons from the 12 declared CWSFs in the Syrian Arab Republic.
- 1.12. The destruction of the chemical weapons abandoned by Japan on the territory of China continued, and was based on the destruction plan jointly presented to the Executive Council (hereinafter “the Council”) by China and Japan (EC-67/NAT.11, dated 15 February 2012), pursuant to decision EC-67/DEC.6 (dated 15 February 2012), adopted by the Council at its Sixty-Seventh Session and in accordance with the provisions of the Convention.
- 1.13. The Secretariat carried out nine inspections related to chemical weapons abandoned by Japan on the territory of China, including one inspection related to the verification of destruction activities. An initial inspection related to two items declared as ACWs was also carried out in the Syrian Arab Republic.
- 1.14. Since entry into force (EIF) of the Convention, 16 States Parties had declared OCWs. Of these, 11 States Parties had declared OCWs produced between 1925 and 1946, and nine States Parties had declared pre-1925 OCWs. The Secretariat conducted five OCW inspections (in Belgium, France, Germany, Italy, and the United Kingdom of Great Britain and Northern Ireland) in 2014. In many cases, destruction operations have made considerable progress; however, recoveries of significant quantities of OCWs continue to be made.

#### Article VI verification

- 1.15. In terms of Article VI of the Convention, the Secretariat verified declared activities at 241 facilities and plant sites in 50 States Parties in 2014. This comprised 11 Schedule 1 facilities (41% of the inspectable facilities); 42 Schedule 2 plant sites (22%); 19 Schedule 3 plant sites (5%); and 169 other chemical production facility (OCPF) plant sites (4%).
- 1.16. Five States Parties reported that they expected to be involved—as importers or exporters—in 12 transfers of Schedule 1 chemicals between States Parties in 2014. Declarations received in 2014 indicated exports of 5,200 MT of Schedule 2 chemicals by 50 States Parties, and exports of 340,000 MT of Schedule 3 chemicals by 125

States Parties in 2013. There were no reported transfers of Schedule 1 or Schedule 2 chemicals to States not Party in 2013.

### **Optimising the verification regime**

- 1.17. In 2014, the Secretariat continued its efforts to maximise the number of sequential inspections as a way of saving resources. Sixteen of the 18 States Parties that received four or more industry inspections in 2014 concurred with the use of sequential inspections on their territories. Trial sequential inspections were conducted on the territory of one additional State Party. In total, the Secretariat carried out 51 sequential inspections in 2014.
- 1.18. Sampling and analysis (S&A) was used during nine Schedule 2 inspections in 2014.
- 1.19. Through the Verification Information System (VIS) programme, which comprises several information-technology components and related projects, the Secretariat has over the years increased the use of information-technology tools for the preparation, submission, and processing of declaration data. These tools aim to introduce efficiencies for both the Secretariat and the States Parties. The VIS and associated data-analysis tools are essential for the processing and effective monitoring of verification-related information; the Secretariat continues to explore ways to enhance these capabilities. Following the success of the electronic declaration tool for National Authorities (EDNA), in 2014 the Secretariat introduced a secure transmission system—the Secure Information Exchange (SIX)—for declarations-related data. The system provides a secure electronic channel for the exchange of electronic declarations and other information, including that of a classified nature, between States Parties and the Secretariat.
- 1.20. The ability of the Secretariat to implement its verification responsibilities effectively and efficiently continues to be adversely affected by outstanding or late declarations, although sustained engagement between the Secretariat and the States Parties concerned has recently resulted in significant improvements in this area.
- 1.21. In total, the Secretariat processed 980 incoming documents, declarations, and other verification-related documents from States Parties in 2014 (an increase of 12% on the previous year), comprising 12,840 pages.

## **2. INSPECTIONS**

- 2.1 During 2014, and without counting its verification activities connected with the Syrian Arab Republic, the Secretariat conducted 352 inspections/rotations, which accounted for 12,198 inspector days at 279 sites in 50 States Parties. With the inclusion of the number of inspector days spent on operations connected with the Syrian Arab Republic, the total number of inspector days for 2014 reached 16,663, and the number of States Parties in which verification operations were carried out was 51. On average, 1,389 inspector days were undertaken each month.
- 2.2 Table 1 lists the number and types of inspections or rotations completed in 2014 and other summary statistics on inspection activities, while Table 2 shows the inspections completed between EIF of the Convention and 31 December 2014.

**TABLE 1: INSPECTION ACTIVITIES IN 2014**

Type of Facility	Inspectable or Operational Facilities <sup>5</sup>	Inspections Completed <sup>6</sup>	Facilities or Sites Inspected <sup>5</sup>	Inspector Days
<b>Chemical Weapons-Related Inspections</b>				
CWDF	7	80	9	8,523
CWSF	9	10	8	351
CWPF	40	7	7	72
OCW	6	5	5	52
ACW <sup>7</sup>	39	9	9	227
<b>Totals</b>		<b>111</b>	<b>38</b>	<b>9,225</b>
Inspector days connected with the Syrian Arab Republic				4,465
Total number of chemical weapons-related inspector days				<b>13,690</b>
<b>Article VI Inspections</b>				
Schedule 1	27	11	11	169
Schedule 2	189	42	42	838
Schedule 3	401	19	19	186
OCPF	4,234	169	169	1,780
<b>Totals</b>	<b>4,851</b>	<b>241</b>	<b>241</b>	<b>2,973</b>
<b>Combined Totals</b>		<b>352</b>	<b>279</b>	<b>12,198</b>
Combined total, including days related to the Syrian Arab Republic				<b>16,663</b>

<sup>5</sup> For CWDFs and ACW destruction sites (ACWDs): operational facilities in 2014; for CWSFs, CWPFs, OCWs, and ACWs: inspectable in 2014; for Article VI facilities: inspectable in 2014.

<sup>6</sup> Inspections carried out in the Syrian Arab Republic and in connection with destruction activities outside its territory are not included in this column because of the unique nature of the Secretariat's operations with respect to that State Party. The figures reported here may therefore differ slightly from those in the narrative sections below, where Syrian operations, particularly with respect to CWPFs and ACWs, are included to the extent possible.

<sup>7</sup> Including ACWDs.

**TABLE 2: INSPECTION ACTIVITIES SINCE EIF<sup>8</sup>**

Type of Facility	Inspections Completed	Facilities or Sites Inspected	Inspector Days
<b>Chemical weapons-related inspections</b>			
CWDF	1,712	41	201,463
CWSF	488	37	14,474
CWPF	467	72	8,837
OCW	124	37	2,057
ACW	93	43	2,581
DHCW <sup>9</sup> /EDCW <sup>10</sup>	24	n/a	1,704
<b>Totals</b>	<b>2,908</b>	<b>230</b>	<b>231,116</b>
Inspector days connected with the Syrian Arab Republic			6,484
Total number of chemical-weapons related inspector days			<b>237,600</b>
<b>Article VI inspections</b>			
Schedule 1	259	38	4,391
Schedule 2	700	349	16,636
Schedule 3	412	363	6,584
OCPF	1,468	1,351	19,207
<b>Totals</b>	<b>2,839</b>	<b>2,101</b>	<b>46,818</b>
<b>Combined Totals</b>	<b>5,747</b>	<b>2,331</b>	<b>277,934</b>
Combined total, including days related to the Syrian Arab Republic			<b>284,418</b>

### Distribution of Article VI inspections

2.3 Fifty States Parties received Article VI inspections in 2014. As can be seen in Table 3, this number was higher than previous years (46 States Parties in 2013). Contributing factors that might have led to this increase included:

- (a) the three-pool approach of the one-step S/962 methodology:<sup>11</sup> while the number of States Parties that declared at least one OCPF plant site has remained relatively stable in recent years (at around 80), the approach has the effect of increasing the coverage of States Parties in the selection of plant sites;
- (b) an increase in the number of budgeted annual OCPF inspections (22 more in 2014 than in 2013);
- (c) the limitation on the number of inspections set out in paragraph 13 of Part IX of the Verification Annex to the Chemical Weapons Convention (hereinafter “the Verification Annex”), which has the effect of distributing inspections among more States Parties than would otherwise have been the case; and

<sup>8</sup> For CWSFs, the figures related to the number of inspected facilities do not include facilities declared as “CWSFs at CWDFs”, as these are verified as part of the respective CWDF and not as separate entities.

<sup>9</sup> DHCW = destruction of hazardous chemical weapons.

<sup>10</sup> EDCW = emergency destruction of chemical weapons.

<sup>11</sup> The revised interim site-selection methodology in accordance with Secretariat Note S/962/2011 (dated 8 September 2011).

- (d) an increase in the rate of subsequent (repeat) inspections, from 15% in 2013 to 20% in 2014.

**TABLE 3: DISTRIBUTION OF ARTICLE VI INSPECTIONS**

	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>No. of inspections</b>	180	200	200	208	208	208	219	229	241
<b>Inspected States Parties</b>	54	58	40	38	38	39	44	46	50
<b>No. of States Parties accounting for 50% of inspections</b>	11	13	6	6	6	7	6	7	7

**TABLE 4: DISTRIBUTION OF ARTICLE VI INSPECTIONS BY REGION**

<b>Regional Groups</b>	<b>No. of Industry Inspections</b>	<b>Percentage of Total</b>	<b>Percentage of Inspectable Sites</b>
Africa	2	1%	1%
Asia	105	44%	58%
Eastern Europe	16	7%	5%
Latin America and the Caribbean	19	7%	5%
Western Europe and Other Countries	99	41%	31%

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

- 2.4 No CIs were requested in 2014, and no CI field exercises were conducted. However, the Secretariat continues to maintain a high standard of readiness to conduct CIs under Article IX of the Convention, if requested by the States Parties to do so. In 2014, and in accordance with a request of the Third Review Conference (paragraph 9.111 of RC-3/3\*, dated 19 April 2013), the Director-General published a Note on the Secretariat's readiness to conduct a CI or an IAU (EC-76/DG.11, dated 12 June 2014).
- 2.5 Inspectorate training and other readiness activities in regard to contingency operations in 2014 were conducted in a manner that recognised the many operational commonalities between CIs and IAUs. Consequently, training courses in 2014, which were designed and executed in a manner that focused on the technical skills and knowledge acquired by the Secretariat, are relevant in the event of an Article IX request.
- 2.6 The Secretariat received no requests from States Parties for an IAU during the year in review and no IAU field exercises were conducted. Ongoing operations in the Syrian Arab Republic, however, including the work of the OPCW Fact-Finding Mission in Syria to establish the facts surrounding allegations of the use of chlorine, required a significant number of working days at OPCW Headquarters and in the field. Those

activities further confirmed the readiness of the Secretariat to conduct such investigations.

### **Inspector training**

- 2.7 Inspector training in 2014 focused on maintaining the mandatory qualifications required within the quality system for the conduct of inspection activities, as well as on preparing experienced inspectors and inspection team leaders to perform inspection duties for “non-routine” missions and contingency operations, such as CIs and IAUs. There was a continued focus on training inspectors for activities in non-permissive and conflict-affected environments.
- 2.8 A new inspector training group (Group N), consisting of 16 inspectors from all four specialities, was trained. The 14-week training programme comprised 13 general and specialist modules. It started on 3 September and continued in 2015.
- 2.9 The 2014 Inspectorate Training Programme (ITP) commenced on 13 January and ran through 19 December. The Inspectorate Division completed 2,005 equivalent training days within the ITP subprogramme. Delivery of training by inspectors required 600 equivalent training days. The programme comprised 44 individual training courses, with 48 calendar weeks involving training, and included some non-budgeted training courses such as Safe and Secure Approaches in Field Environments (SSAFE) training, health and safety orientation at CWDFs in the United States of America, and the Level 4A radiation course. Despite this, the total number of training days was 15% lower than planned (approximately 2,400 days), largely due to the cancellation of many regular inspector courses because of team preparations and verification activities related to the Syrian Arab Republic.
- 2.10 The training held in 2014 was delivered within the territories of Belgium, the Czech Republic, France, Germany, Italy, the Netherlands, Spain, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.

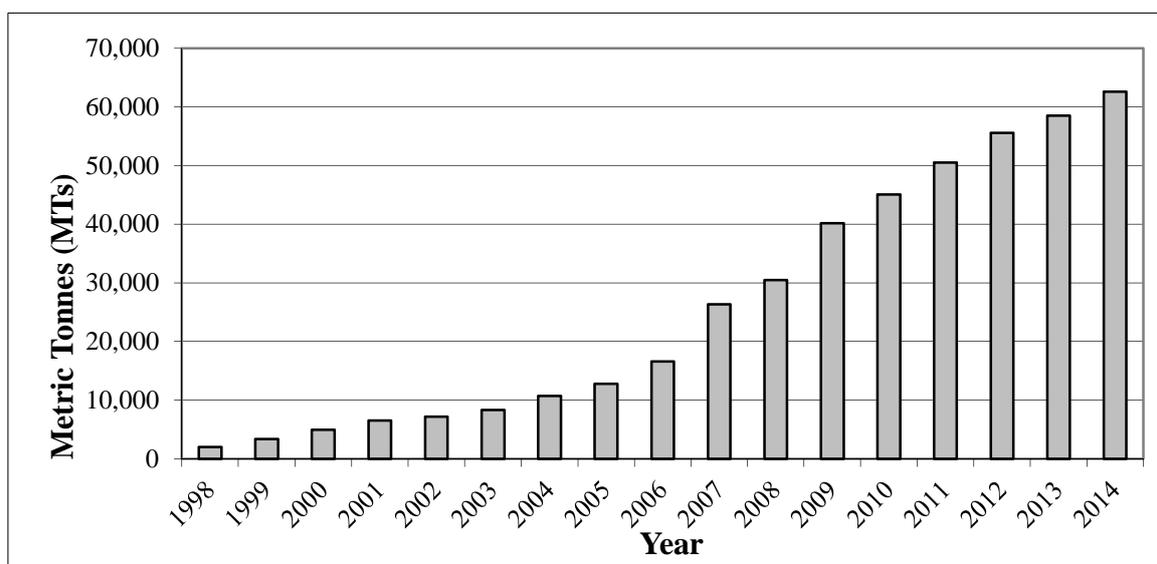
## **3. CHEMICAL WEAPONS**

- 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 use by inspectors. For the purpose of verification, inspectors are granted unimpeded 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 and that no chemical weapons have been diverted. Inspections are also carried out at CWSFs to ensure that no removal of chemical weapons takes place except in accordance with the Convention.

Inspections at CWDFs<sup>12</sup> amounted to 8,523 inspector days during 2014 (7,714 in 2013), while inspection efforts at CWSFs totalled 351 inspector days (325 in 2013). In addition, the number of inspector days spent on operations connected to the destruction of chemical weapons declared by the Syrian Arab Republic, as well as on missions of the Declaration Assessment Team (DAT), was 4,465 (2,019 in 2013).

- 3.2. In 2014, the Secretariat verified the destruction of 4,084.258 MT of chemical weapons. This was an increase compared to 2013, when the total verified destruction amounted to 2,977.245 MT. The increase in destruction quantities was largely due to the destruction of the chemical weapons declared by the Syrian Arab Republic.
- 3.3. By the end of the review period, the overall amount of Category 1 and 2 chemical weapons verified as destroyed, including withdrawals from chemical weapons stocks for purposes not prohibited under the Convention, totalled 62,601.440 MT, or 86.3%, of the declared chemical weapons (see Figure 1).

**FIGURE 1: VERIFIED DESTRUCTION OF CHEMICAL WEAPONS: CUMULATIVE FROM 1998 TO 2014**



- 3.4. In 2014, seven CWDFs (the same number as in 2013) were involved in the destruction of Category 1 chemical weapons: one in Libya, five in the Russian Federation, and one in the United States of America.

<sup>12</sup>

This number does not include the inspector days for the destruction of the chemical weapons declared by the Syrian Arab Republic at the destruction facilities provided by the States Parties (in-kind contributions) or commercial disposal facilities selected through the OPCW tendering process.

- 3.5. Additionally, four facilities were provided through in-kind contributions by States Parties (one facility by Germany, two facilities by the United Kingdom of Great Britain and Northern Ireland, and one facility by the United States of America) to destroy Category 1 and 2 chemical weapons transferred outside the Syrian Arab Republic, as well as effluent generated by that destruction process. An additional two commercial disposal facilities (one in Finland and one in the United States of America) were selected through an OPCW tender process to destroy Category 1 and 2 chemical weapons transferred outside the Syrian Arab Republic and effluent generated by the destruction process. Table 5 lists the destruction facilities that were operating or under construction during 2014.

**TABLE 5: CHEMICAL WEAPONS DESTRUCTION FACILITIES IN SERVICE OR UNDER CONSTRUCTION IN 2014**

<b>Libya</b>	Ruwagha Static Detonation Chamber (RSDC)	
<b>Russian Federation</b>	Maradykovsky Shchuchye Pochev Leonidovka Kizner	
<b>United States of America</b>	Recovered Chemical Weapons Destruction Facility (RCWDF) Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP)* Pueblo Chemical Agent Destruction Pilot Plant (PCAPP)** PCAPP Explosive Destruction System (PCAPP-EDS)**	
<b>Syrian Arab Republic</b>	<b>Destruction Facilities Provided by States Parties</b>  Cape Ray Field Deployable Hydrolysis System Chemical Weapons Destruction Facility (United States of America)  Ellesmere Port High Temperature Incinerator (United Kingdom of Great Britain and Northern Ireland)  Mexichem (United Kingdom of Great Britain and Northern Ireland)  Gesellschaft zur Entsorgung von Chemischen Kampfstoffen und Rüstungsaltslasten mbH (GEKA mbH) (Germany)	<b>Commercial Disposal Facilities (Selected Through OPCW Tender)</b>  Ekokem Riihimäki Waste Treatment and Disposal Facility, Finland  Veolia ES Technical Solutions, LLC, United States of America

\* Facility under construction and systematisation

\*\* Construction complete; systemisation ongoing at the end of 2014

- 3.6. At the end of the review period, there remained five States Parties with declared chemical weapons that had yet to be completely destroyed—Iraq, Libya, the Russian Federation, the Syrian Arab Republic, and the United States of America.

### Progress in meeting destruction obligations

- 3.7. At the end of the review period, A State Party, Albania, India, Libya, the Russian Federation, the Syrian Arab Republic, and the United States of America had declared a total of 72,524.542 MT of chemical weapons (70,492.996 MT of Category 1 and 2,031.546 MT of Category 2), contained in 8,270,362 munitions and containers. Approximately 86.3% of these chemical weapons—or a total of 62,601.440 MT (61,444.607 MT of Category 1 and 1,156.833 MT of Category 2)—had been verified as destroyed as at 31 December 2014.<sup>13</sup> The possessor States Parties had also declared 417,832 items of Category 3 chemical weapons. All those items had been destroyed at the end of the review period.
- 3.8. In 2011, pursuant to a recommendation of the Council at its Thirty-First Meeting, the Conference of the States Parties (hereinafter “the Conference”) at its Sixteenth Session adopted a decision regarding the final extended deadline of 29 April 2012 (C-16/DEC.11, dated 1 December 2011). Pursuant to that decision, Libya, the Russian Federation, and the United States of America submitted in April 2012 and October 2014 (the latter due to the Russian Federation’s Addendum (EC-68/P/NAT.1/Add.1, dated 6 October 2014)) detailed plans for the destruction of their respective remaining chemical weapons, which specified the planned completion dates for destruction of the remaining chemical weapons by each of the States Parties concerned.
- 3.9. As at 31 December 2014, OPCW inspectors had verified the destruction of the following quantities of chemical weapons in the seven above-mentioned States Parties that had declared chemical weapons stockpiles:
- (a) Category 1 chemical weapons: The Secretariat had verified the destruction of 61,441.694 MT of this category of chemical weapons. In addition, a total amount of 2.913 MT of Category 1 chemical weapons had been withdrawn pursuant to Article VI of the Convention and subparagraph 2(d) of Part VI of the Verification Annex. Of the total amount, 59,179.026 MT were unitary chemical weapons (2,804.651 MT in 2014), including lewisite, sarin (GB), sulfur mustard (including H, HT, and HD), tabun (GA), tabun with UCON, soman (GD) and viscous soman (GD), VX, Vx, and unknown agent, contained in 5,565,669 munitions and containers (of which 640,368 were destroyed in 2014), 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 2,262.667 MT were binary chemical weapons (1,042.705 MT in 2014), which included the following: DF, QL, OPA, sodium-O-ethyl methyl phosphonothioate, hexamine, diisopropyl aminoethyl chloride hydrochloride, diethyl aminoethyl chloride hydrochloride, and isopropanol. Overall, the Secretariat had verified the destruction of 785,066 binary items, including 415,108 artillery projectiles, 369,958 separately

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Included in this total is 2.913 MT of Schedule 1 chemicals that had been withdrawn from Category 1 chemical weapons stockpiles for purposes not prohibited under the Convention (see subparagraph 2(d) of Part VI of the Verification Annex).

declared DF and OPA canisters, and 306 other containers for binary components.

- (b) Category 2 chemical weapons: The Secretariat had verified the destruction of 1,156.833 MT of Category 2 chemical weapons (236.902 MT in 2014): CNS, thiodiglycol (TDG), 2-chloroethanol (2-CE), phosgene, sodium sulfide, sodium fluoride, chloroacetophenone (CN), adamsite (DM), phosphorous oxychloride, phosphorous trichloride, phosphorous pentachloride, hydrogen fluoride, hydrochloric acid, mono isopropylamine, di-isopropyl aminoethanol, triethylamine, trimethylphosphite, dimethylphosphite, butanol, and methanol, as well as 3,847 artillery projectiles.
- (c) Category 3 chemical weapons: As at the end of 2014, the Secretariat had verified the destruction of 417,825 items of Category 3 chemical weapons declared to the OPCW.

### **Iraq**

- 3.10. Iraq has reiterated on numerous occasions its firm commitment to meeting its obligations under the Convention, including for the destruction of its declared chemical weapons, and has continued to keep the Secretariat and States Parties informed of all steps being taken towards the assessment and destruction of the declared stockpiles of chemical weapons. However, no destruction of declared chemical weapons took place in this State Party in 2014.
- 3.11. At the Nineteenth Session of the Conference, representatives from the Iraqi National Authority presented a briefing regarding the status of the site where remnants of chemical weapons are located.

### **Libya**

- 3.12. As at 31 December 2014, Libya had destroyed 26.345 MT, or 100% of its declared stockpile of Category 1 chemical weapons (3.452 MT of which were destroyed in 2014). This State Party had also completed the destruction of 555.706 MT, or 39.64%, of its declared Category 2 chemical weapons, as well as all of its declared Category 3 chemical weapons.

### **Russian Federation**

- 3.13. In accordance with Conference decision C-16/DEC.11, the Russian Federation reported to the Council through periodic and/or annual reports on the progress achieved towards the complete destruction of its remaining stockpile of chemical weapons. All reports were received on time and in accordance with the provisions of the decision.
- 3.14. The Russian Federation also provided notifications to the Secretariat about various other activities at CWSFs and CWDFs—notably, the transfer of munitions within the same CWSF, or from a CWSF to a CWDF, the suspension of destruction activities in order to allow for the servicing of the processing equipment, and other operational information.

### **Syrian Arab Republic**

- 3.15. During 2014 the Syrian Arab Republic submitted seven amendments to its initial declaration.
- 3.16. In accordance with paragraph 19 of Council decision EC-M-34/DEC.1 (dated 15 November 2013), the Syrian Arab Republic submitted monthly reports on activities undertaken with regard to the destruction of chemical weapons and CWPFs, providing information regarding the security situation in the Syrian Arab Republic and its impact on verification and destruction measures, and efforts regarding destruction activities with regard to chemical weapons and CWPFs. All monthly reports were made available to States Parties in accordance with EC-M-33/DEC.1 (dated 27 September 2013).
- 3.17. At its Thirty-Eighth Meeting, the Council adopted a decision authorising the destruction of Syrian chemical weapons at commercial facilities outside the Syrian Arab Republic (EC-M-38/DEC.1, dated 30 January 2014).
- 3.18. In 2014, the Secretariat verified the destruction of all Category 1 chemical weapons and 89.2% of the Category 2 chemical weapons declared by the Syrian Arab Republic. Most destruction operations took place in the facilities outside the territory of the Syrian Arab Republic listed in Table 5 above.

### **United States of America**

- 3.19. The United States of America submitted three amendments to its initial declaration in 2014, thereby adjusting its chemical weapons inventory and updating the site diagram and building list for one CWSF.
- 3.20. The United States of America also submitted, inter alia, the following information:
  - (a) two revisions to the addendum to the detailed facility information (DFI) for the Prototype Detonation Test and Destruction Facility (PDTDF), declaring the Picatinny Arsenal as a non-contiguous addition to the PDTDF and providing information for the testing and destruction of propellant in M67 rocket motor assemblies and related M441 shipping and firing tubes at Picatinny;
  - (b) plans to employ a static detonation chamber (SDC) at the BGCAPP for the destruction of the stockpile of mustard projectiles and Department of Transportation bottles stored at the Blue Grass Chemical Activity (BGCA) CWSF;
  - (c) revised DFI and piping and instrumentation diagrams for the Pueblo Chemical Agent-Destruction Pilot Plant Explosive Destruction System (PCAPP-EDS), in accordance with paragraphs 30 and 31 of Part IV(A) of the Verification Annex, which stated that that facility was scheduled to begin chemical weapons destruction operations in October 2014; and
  - (d) DFI and a draft facility agreement for the PCAPP CWDF.

- 3.21. As at 31 December 2014, the Secretariat had verified the destruction or withdrawal for purposes not prohibited under the Convention of 24,923.703 MT, or 89.75%, of the stockpile of Category 1 chemical weapons declared by the United States of America. In 2014 the Secretariat verified the destruction in the United States of America of 0.005 MT of Category 1 chemical weapons.

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

- 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. Verification ceases once the Director-General certifies that destruction of a CWPF has been completed, whereas facilities that have been certified as converted remain subject to systematic inspections for 10 years under the provisions of the Convention and for the next five years under the provisions of the Council decision on the nature of continued verification measures at converted facilities 10 years after the Director-General's certification of their conversion (EC-67/DEC.7). In 2014, the Secretariat carried out 20 inspections at 20 CWPFs in three States Parties, including 13 inspections at the CWPFs to be destroyed in the Syrian Arab Republic.
- 4.2 As at 31 December 2014, 97 CWPFs had been declared to the OPCW. The Director-General had certified the completion of destruction or conversion of 79 of those facilities. Fifty-six had been certified as destroyed. Twenty-three had been converted for purposes not prohibited by the Convention. Eighteen CWPFs, located in Iraq and the Syrian Arab Republic, had yet to be destroyed and certified.
- 4.3 In 2014, in accordance with Council decision EC-67/DEC.7 on the nature of continued verification measures at converted facilities 10 years after the Director-General's certification of their conversion, the Secretariat inspected two such facilities in the Russian Federation and one in the United Kingdom of Great Britain and Northern Ireland.
- 4.4 In accordance with the Convention, residual production capacity (RPC) shall be reduced to zero 10 years after EIF of the Convention. Guided by a decision of the Conference (C-I/DEC.29, dated 16 May 1997) and by a document that sets forth the method for calculating the RPC of CWPFs (S/260/2001, dated 5 June 2001), the Secretariat assessed the RPC at the end of 2014 for all 14 States Parties that had declared CWPFs.

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

- 5.1 The verification work of the Secretariat with regard to OCWs comprises 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 either annual or ad hoc declarations, as well as 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, during periods of destruction the Secretariat also carries out quarterly inspections to verify those destruction operations.

- 5.3 In 2014, the Secretariat conducted five OCW inspections in five States Parties and 10 ACW inspections in two States Parties. The discovery of approximately 1,390 OCWs was declared by States Parties, while approximately 190 OCWs were reported as destroyed. Around 2,100 ACWs in China were reported as newly recovered and/or identified, 11 previously declared items were deleted from the declaration as they were determined not to be ACWs, and 486 ACWs were reported as destroyed during the review period.
- 5.4 Chemical weapons abandoned by Japan on the territory of China were subject to the destruction deadline of 29 April 2012 (EC-46/DEC.4, dated 5 July 2006). According to Council decision EC-67/DEC.6, the destruction of chemical weapons abandoned by Japan on the territory of China was to continue after 29 April 2012, in accordance with the provisions of the Convention. The second destruction facility for chemical weapons abandoned by Japan on the territory of China, the Abandoned Chemical Weapons Mobile Destruction Facility (ACW MDF) at Shijiazhuang, continued operations in 2014. In addition, the Abandoned Chemical Weapons Test Destruction Facility (ACW TDF) at Haerbaling commenced destruction operations in November, and finally, the third ACW MDF at Wuhan started operations in December. At the end of the period under review, 37,550 ACWs had been destroyed in China and more than 13,000 ACWs had been declared at storage sites, awaiting final destruction.

#### **Declared stocks**

- 5.5 Between EIF of the Convention and 31 December 2014, 16 States Parties had declared OCWs. Of these, 11 States Parties declared 72,001 OCWs produced between 1925 and 1946, while nine States Parties declared 64,437 OCWs produced before 1925. All of these States Parties provided information to the Secretariat on recovery and destruction operations, and on steps being taken to destroy or otherwise dispose of the OCWs as toxic waste.
- 5.6 Two States Parties that informed the Secretariat that they had completed destruction of all recovered OCWs by 29 April 2007 continue to inform the Secretariat about new discoveries. In 2014, OCWs and/or suspected OCW discoveries were reported to the Secretariat by Belgium, France, Germany, Italy, Japan, Switzerland, and the United Kingdom of Great Britain and Northern Ireland.
- 5.7 Based on information received, six States Parties still had OCWs or suspected OCWs on their territories at the end of the review period, and more than 37,500 OCWs had yet to be destroyed or otherwise disposed of.
- 5.8 As at 31 December 2014, four States Parties had declared confirmed or suspected ACWs on their territories. In particular, more than 50,000 items of chemical weapons abandoned by Japan on the territory of China had been discovered at over 90 locations in 17 provinces in China. Of these, 37,187 had already been destroyed.

#### **Verification activities**

- 5.9 In 2014, the Secretariat conducted five OCW inspections in Belgium, France, Germany, Italy, and the United Kingdom of Great Britain and Northern Ireland.

- 5.10 During the period under review, ten ACW inspections were conducted, nine of which were in relation to chemical weapons abandoned by Japan on the territory of China.

## 6. INDUSTRY VERIFICATION

- 6.1 The total number of facilities declared worldwide in connection with the Article VI verification regime at the end of the review period was 5,373, of which 4,851 were subject to systematic verification (see Table 6). In 2014, the Secretariat verified the declared activities at 241 facilities and plant sites in 50 States Parties. The breakdown of inspections per verification regime changed slightly from that recorded for 2013, with a decrease of 10 inspections for Schedule 3 plant sites and an increase of 22 inspections in the OCPF regime. Thus, 11 Schedule 1 facilities, 42 Schedule 2 plant sites, 19 Schedule 3 plant sites, and 169 OCPF plant sites were inspected in 2014.

**TABLE 6: FACILITIES DECLARED PURSUANT TO ARTICLE VI AS AT 31 DECEMBER 2014**

<b>Number of Declared Facilities</b>					
<b>Number of States Parties Having Declared Article VI Facilities</b>					
<b>Regime</b>	<b>Schedule 1</b>	<b>Schedule 2</b>	<b>Schedule 3</b>	<b>OCPF</b>	<b>Totals</b>
Declared	27	473	441	4,432	5,373
Declarable	27	442	428	4,430	5,327
Inspectable	27	189	401	4,234	4,851
States Parties	23	37	35	80	80

- 6.2 In 2014, an IRFA or IRFAs were recorded at 22 inspections, that is, at one Schedule 1 inspection, 16 Schedule 2 inspections, four Schedule 3 inspections, and one OCPF inspection. Furthermore, 197 observations during inspections were marked “gather further information” (typically, declaration issues that do not amount to IRFAs, according to the Secretariat’s internal practices).
- 6.3 In 2014, one Schedule 3 and seven OCPF inspections were carried out at plant sites that turned out to be non-inspectable (see paragraph 6.15 below).

### **Transfers of scheduled chemicals**

#### Transfers of scheduled chemicals between States Parties

- 6.4 According to 23 notifications received concerning transfers that were due to take place in 2014, five States Parties were anticipated to be involved in 12 Schedule 1 transfers in 2014—four of which sent and received Schedule 1 chemicals and one was only a recipient of such transfers. The total amount of Schedule 1 chemicals that was to be transferred in 2014 was 12.02 grams. Notification of 11 of the total of 12 transfers that had been anticipated to take place in 2014 was given by both the sending and receiving States Parties; notification of one was given only by the receiving State Party. Of the 23 notifications relating to transfers in 2014, 20 were received on time in accordance with the notification period (not less than 30 days before any transfer takes place).

- 6.5 The annual declarations of past activities (ADPAs) for 2013 that were received in 2014 indicated that a total of 50 States Parties transferred Schedule 2 chemicals in 2013, and that the total volume of this trade came to approximately 5,200 MT. Meanwhile, 125 States Parties transferred Schedule 3 chemicals in 2013, and the total volume of this trade was approximately 340,000 MT.

#### Transfers of Schedule 2 and 3 chemicals to States not Party to the Convention

- 6.6 In the ADPAs for 2013 received in 2014, there were no reported transfers of Schedule 2 chemicals to States not Party in 2013. Eleven States Parties exported four Schedule 3 chemicals to three States not Party.

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

- 6.7 Throughout 2014, the Secretariat continued its efforts to optimise the effectiveness and efficiency of the Article VI inspection regime.
- 6.8 In order to further optimise the size of inspection teams, contributing to a more efficient inspection process, inspections were often carried out with a reduced team size compared to similar inspections carried out before 2014. The Secretariat will continue to evaluate and re-assess the size of the inspection teams, with a view to ensuring the greatest possible levels of both efficiency and effectiveness.
- 6.9 During 2014, the Secretariat also continued its efforts to maximise the number of sequential inspections (see Table 7) as a way of optimising the use of human and material resources. Sequential inspections (two inspections in one mission) are an important tool for making the inspection process more efficient; 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, 16 of the 18 States Parties that received four or more industry inspections in 2014 have advised the Secretariat that they concur with the use of sequential inspections on their territory. One additional State Party conducted trial sequential inspections in 2014. Out of the 51 sequential inspections that took place in 2014, 44 were consecutive inspections in a single country, while seven allowed inspectors to conduct inspections in two States Parties during one mission. As a result of performing those 51 sequential inspections, the Secretariat saved at least EUR 220,000 in travel costs, and 128 inspector weeks of work.
- 6.10 In 2014, somewhat fewer sequential inspections were carried out than in 2013 (see Table 7). This was due in part to the location of the sites selected (which also involved a larger number of States Parties receiving inspections in 2014 compared to the previous year). In addition, a number of the inspected States Parties do not allow sequential inspections or have certain conditions in place for sequential inspections (for example, maximum distance between inspected plant sites) that were not able to be fulfilled in all cases.

**TABLE 7: 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>	<b>2012</b>	<b>2013</b>	<b>2014</b>
8	16	23	26	26	37	42	40	47	48	57	51

- 6.11 At the end of the review period, the following States Parties with inspectable Schedule 3 and/or OCPF plant sites had not yet agreed to the Secretariat's conducting sequential inspections in some form: Azerbaijan, Chad, Ecuador, Georgia, Germany, India, Indonesia, Jordan, Lithuania, Oman, Pakistan, Portugal, the Russian Federation, Tajikistan, Ukraine, the United Arab Emirates, and Viet Nam.

### **Sampling and analysis**

- 6.12 The Secretariat has continued to conduct Schedule 2 inspections using S&A on a routine basis, reaching 72 such missions in 22 States Parties by the end of 2014 (see Table 8). In 2014, there were nine inspections involving S&A, one of which was an initial Schedule 2 inspection.
- 6.13 As at 31 December 2014, 91% (20 out of 22) of the States Parties with currently inspectable Schedule 2 plant sites had received at least one S&A mission. Two additional States Parties that had received S&A no longer have inspectable sites.

**TABLE 8: SAMPLING AND ANALYSIS AT SCHEDULE 2 PLANT SITES**

<b>Number of Inspections with S&amp;A</b>									
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>Total</b>
2	9	9	9	9	8	9	8	9	72

- 6.14 Analytical data have been continually included in the OPCW Central Analytical Database (OCAD), following validation by the Validation Group and approval by the Council. The Council decision to include the derivatives of scheduled chemicals was an important step towards improving the OCAD.

### **Inspections at non-inspectable Article VI sites**

- 6.15 In 2014, a total of eight Article VI inspections were carried out at sites that proved to be non-inspectable (seven OCPF sites and one Schedule 3 site). In the past few years, the Secretariat has made efforts to address the issue of non-inspectability through a variety of means, including bilateral consultations and requests for clarification (RFCs), internal analyses and checks, and education and outreach at training courses and seminars for National Authorities. In addition, e-learning modules have been developed. Table 9 shows how the number of inspections at non-inspectable sites has varied over time.

**TABLE 9: INSPECTIONS AT SITES THAT ARE NON-INSPECTABLE**

<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
5	5	14	6	5	7	8

### **Secretariat support to consultations on industry and other Article VI issues**

- 6.16 Five informal consultations were conducted in 2014, and were webcast to enable the representatives of National Authorities to remotely observe consultation proceedings. States Parties undertook consultations on a number of outstanding verification-related topics, including transfer discrepancies, the SIX project, improvements in the submission and handling of industry declarations, late submission of declarations, evaluation of the OCPF site-selection methodology, preparedness to conduct S&A at

Schedule 3 and OCPF facilities, revisions to the OCPF report templates, possible measures to reduce the number of discrepancies discovered during inspections, refinements to inspections, results of implementation of the policy guidelines for determining the number of inspections, engaging the chemical industry associations, and the OPCW's new training laboratory.

## **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 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 Since EIF of the Convention, the Secretariat has reminded States Parties of their declaration obligations through a variety of means, including bilateral consultations and RFCs, reconciliation letters, and education and outreach at regional and subregional meetings, courses, seminars, and workshops. During the reporting period, the Secretariat sent notes verbales to all States Parties that had yet to submit initial declarations, and followed up with those States Parties.

### Progress and status

- 7.3 During 2014, the Secretariat received initial declarations pursuant to Articles III and VI of the Convention from Haiti, Timor-Leste, and Vanuatu. In addition, the Secretariat received an initial declaration pursuant to Article VI from the Solomon Islands. This means that, by the end of 2014, 188 of the 190 States Parties had submitted initial declarations in accordance with Article III and/or Article VI.
- 7.4 As at 31 December 2014, the following two States Parties had not yet submitted their required initial declarations under both Articles III and VI: Somalia (due date: 28 July 2013) and Tonga (due date: 28 July 2003). One State Party—Kiribati—had submitted its initial declaration under Article III but had yet to do so under Article VI (due date: 6 November 2000).

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

- 7.5 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, countries that submit their aggregate national data (AND) late 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 concerning a transfer discrepancy.

#### Follow-up actions

- 7.6 In 2007, the Council adopted a decision on the timely submission of Article VI declarations (EC-51/DEC.1, dated 27 November 2007), in which it requested, inter alia, that all States Parties concerned ensure that their Article VI declarations were submitted on time, and that the Secretariat continue to inform States Parties of their reporting requirements. The decision also called on States Parties to inform the Secretariat of the circumstances as to why they did not meet their reporting obligations, and asked them to indicate whether they would welcome assistance from the Secretariat in order to do so.
- 7.7 In order to stress the importance of timely submissions and to offer advice and assistance, the Secretariat held bilateral meetings during 2014 with representatives of 14 of the 15 States Parties whose annual declarations had been submitted more than 30 days late at least twice since November 2007.<sup>14</sup>

#### Progress and status

- 7.8 As a result of bilateral meetings with States Parties, out of the 15 States Parties that, as at 31 December 2013, had submitted their ADPAs more than 30 days late at least twice since November 2007, seven States Parties submitted their ADPAs for 2013 on time.
- 7.9 Since the 2007 decision on timely submission of Article VI declarations, the Secretariat has regularly been requested to prepare status reports for the Council on the implementation of that decision. Two such reports<sup>15</sup> were provided in 2014 by the Secretariat. In addition, one status report focusing on ADPAs for 2013 and ADAAs 2015 as at 31 December 2014 has been published in 2015 (EC-78/DG.4, dated 12 January 2015).
- 7.10 Overall, 99 States Parties (as compared to 91 in the previous year, as at 31 December 2013) submitted ADPAs for 2013 during the year 2014, including 11 nil declarations. Of these, 71 States Parties with declarable facilities or activities (56 in the previous year, as at 31 December 2013) met the deadline of 31 March 2014 for submitting at least part of their required declarations, and 17 States Parties with declarable facilities or activities (27 in the previous year, as at 31 December 2013) submitted their ADPAs for 2013 between 1 April and 31 December 2014.

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<sup>14</sup> If the most recent declaration was submitted on time, the State Party is not counted in the category of States Parties submitted more than 30 days late at least twice since November 2007.

<sup>15</sup> EC-75/DG.1 (dated 15 January 2014) and EC-76/DG.10\* (dated 11 June 2014).

- 7.11 By the end of the review period, 53 States Parties (48 in the previous year) had submitted ADAAs for 2015 during 2014, including seven nil declarations. Of these, 18 States Parties met the deadline (2 October) for Schedule 1 chemicals and facilities, and 38 States Parties met the deadline (1 November) for Schedule 2 and 3 chemicals and facilities. In total, 41 States Parties (37 in the previous year) met the deadline for submitting at least part of their required 2015 ADAAs, and four (nine in the previous year) States Parties submitted their required ADAAs for 2015 after the deadline but before 31 December 2014. Furthermore, one additional State Party submitted an amendment to its initial declaration concerning a new Schedule 1 facility.
- 7.12 In line with EC-53/DG.11 (dated 17 June 2008), the Secretariat has continued to highlight to States Parties the need to review and update their lists of declared OCPFs through a variety of means. In 2014, as a result of these activities, the majority of States Parties continued to fully replace their lists of OCPFs annually, with the result that over 99% of declared OCPFs were either updated in 2014 or were declared for the first time. However, two States Parties had not fully updated their list of declarable OCPFs for five years or more.

### **Transfer discrepancies**

- 7.13 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 67% of all transfers between States Parties have discrepancies) that data monitoring for non-proliferation purposes is very difficult to achieve.

### Follow-up actions taken

- 7.14 The Third Review Conference encouraged the cluster on chemical-industry and other Article VI issues to consult on ways to reconcile such discrepancies, and called upon States Parties and the Secretariat to continue working to identify the causes of discrepancies related to Article VI declarations, such as those relating to AND for Schedule 2 and 3 transfers (paragraph 9.93 and subparagraph 9.95(g) of RC-3/3\*). The Secretariat, in this regard, organised six regional and subregional courses in 2014, in order to provide the customs authorities of States Parties with in-depth training on practical ways of implementing the transfer provisions of the Convention. Transfer issues were an important topic on the agenda of all events related to Article VI attended by National Authorities in 2014.
- 7.15 In addition, the Secretariat has made improvements to transfer discrepancy letters to assist States Parties in further resolving transfer discrepancies. The Secretariat has begun to provide not only data from the previous year, but also updated data regarding the year before, with an indication of whether or not the transfer discrepancy has been resolved.

### Progress and status

- 7.16 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 transfers that took place in 2013 and were declared in 2014.

- 7.17 With regard to Schedule 2 chemicals, 480 transfers between States Parties were recorded in 2013 (529 in 2012). Of these 480 transfers, 186 (181 in 2012) were above the declaration thresholds established by the Conference at its Seventh Session (C-7/DEC.14, dated 10 October 2002). Of the 186 transfers, 128 met the criteria for a transfer discrepancy,<sup>16</sup> of which 74 were declared by only one of the two States Parties involved.
- 7.18 With regard to Schedule 3 chemicals, 1,276 (1,338 in 2012) transfers between States Parties were recorded in 2013. Of these 1,276 transfers, 554 (550 in 2012) were above the declaration thresholds established by the Conference (C-7/DEC.14). Of the 554 transfers, 378 met the criteria for a transfer discrepancy and 144 of those 378 transfers were declared by just one of the two States Parties involved.

### **Quality of declarations**

- 7.19 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 and progress

- 7.20 In order to provide guidance for the preparation of declarations to be submitted by States Parties in accordance with the requirements of the Convention, after the publication of the Declarations Handbook 2013 in English, the Secretariat published this document in 2014 in the five remaining OPCW official languages. In addition, in 2014 the Secretariat updated the three OPCW tools that assist States Parties in the identification of scheduled chemicals: the on-line Scheduled Chemicals Database (superseding the 2009 version), the Handbook on Chemicals (superseding the 2009 version), and the brochure on the most traded scheduled chemicals (superseding the 2006 version).
- 7.21 In regard to actions taken by the Secretariat to address the issue of the quality of import/export declarations, particular emphasis is placed on those States Parties that are repeatedly named in transfer discrepancies, but do not submit any AND declarations of their own. During 2014, the Secretariat met with five of the six States Parties that had had repeated (two or more) transfer discrepancies in the previous calendar years in order to highlight the importance of making import/export declarations and to offer advice and assistance.

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<sup>16</sup>

A transfer discrepancy arises for a transferred Schedule 2 or 3 chemical when the difference between the quantities declared by the importing and exporting States Parties is more than the relevant threshold specified for that chemical in paragraph 3 of Part VII or paragraph 3 of Part VIII of the Verification Annex.

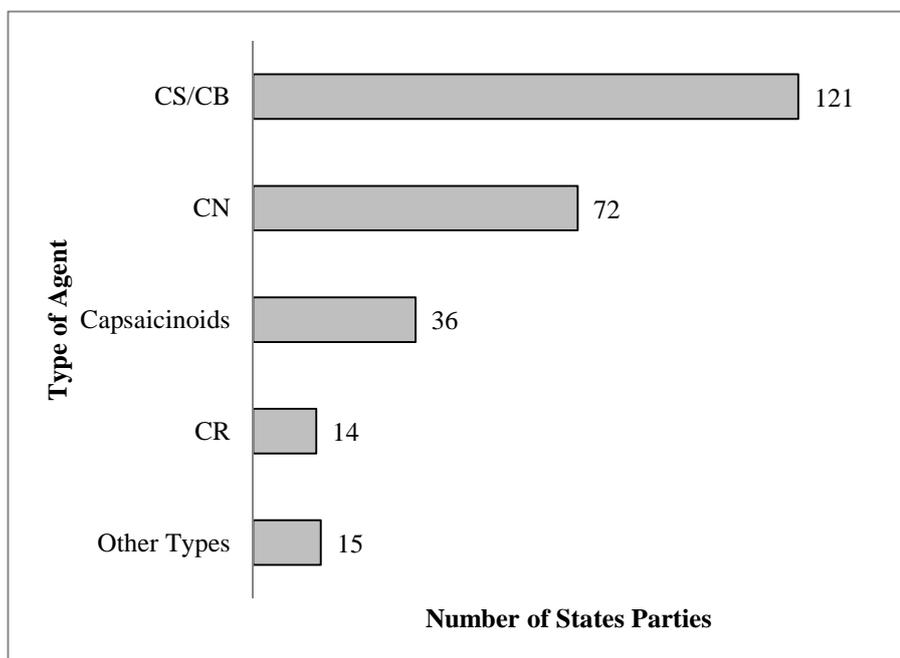
- 7.22 Analysis of the information provided in the ADPAs for 2013 shows that 125 States Parties were involved in transfers of Schedule 2 chemicals, Schedule 3 chemicals, or both, and three States not Party were involved in transfers of Schedule 3 chemicals in 2013. Of these 125 States Parties, 91 were involved in transfers of chemicals whose declared quantities exceeded the declaration threshold in 2013. Of these 91 States Parties, transfer discrepancies within the meaning of this term were identified concerning 80, which is a slight improvement on previous years reported (81 in 2012 and 82 in 2011). Of these 80 States Parties, 14 did not submit AND declarations for the year 2013 during the reporting period, which is also an improvement (17 in 2012 and 17 in 2011).

### Status of required declarations

#### Riot control agents

- 7.23 In line with efforts undertaken in previous years to keep information received from States Parties in regard to chemicals held for riot control purposes up to date, the Secretariat takes every opportunity—such as bilateral consultations, follow-up correspondence, RFCs, reminder letters, etc.—to highlight to States Parties the need to update their declarations with respect to riot control agents (RCAs). The latest information on the number of States Parties having declared RCAs, by agent type, is contained in Figure 2.

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



## **Handling of declarations**

### Clarification of declarations

- 7.24 As part of its verification activities, the Secretariat sometimes needs to ask States Parties for clarification related to their declarations (by issuing RFCs). In a 2004 decision (EC-36/DEC.7, dated 26 March 2004), 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.
- 7.25 While there were no RFCs addressing inspectability-related issues, the Secretariat issued 80 RFCs with regard to transfer discrepancies in 2014 (see paragraphs 7.13 to 7.22 above). The Secretariat also issued four letters for other Article VI-related RFCs and 10 reminder letters regarding Article VI declaration submissions.
- 7.26 Since submission by the Syrian Arab Republic of its initial declaration in 2013, the Secretariat has undertaken a process of continuous assessment and evaluation of that declaration, as well as other supporting documents, in order to ensure that all declaration-related requirements under the Convention have been met. In order to address the identified gaps, discrepancies, and inconsistencies in the Syrian declaration, in 2014 the Secretariat established the DAT, which had conducted five missions as at 31 December 2014.

### Processing of declarations

- 7.27 In 2014, the Secretariat received 980 incoming documents, comprising 12,840 pages, from States Parties. These documents included 99 ADPA 2013, 53 ADAAs 2015, and other verification-related documents. Three hundred and ninety documents, or 39.8%, comprising 2,410 pages (18.7%), were unclassified. However, the majority of the pages that were received continued to be classified: 135 documents (3,024 pages) were classified as “OPCW Highly Protected”; 298 documents (6,158 pages) as “OPCW Protected”; and 157 documents (1,248 pages) as “OPCW Restricted”. In other words, 60.2% of the documents received (44.6% in 2013), and 82% of the pages (81.3% in 2013) were classified. The Secretariat continues to ensure that all documents are handled in strict compliance with the OPCW confidentiality regime. Meanwhile, the Secretariat encourages States Parties to evaluate classification levels carefully and to minimise the number of classified documents to the extent possible.

### Electronic declarations

- 7.28 Forty-nine States Parties provided their ADPAs for 2013 either solely or additionally in electronic format (as compared with 44 States Parties in the preceding year). A total of 30 States Parties submitted their original ADAAs for 2015 in electronic format (the same as in the year before).
- 7.29 The Secretariat has continued to provide States Parties with support during their submission of electronic declarations using EDNA. In addition, 15 representatives from 12 States Parties attended the EDNA training courses organised during the

Nineteenth Session of the Conference. The Secretariat 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 2014.

- 7.30 In 2014, the Secretariat successfully completed work on improvements to the EDNA tool and released version 3.0 to States Parties. The new version includes a dedicated module for the declaration of Schedule 1 facilities and activities. Ten out of 23 States Parties with declarable Schedule 1 activities submitted their Schedule 1 ADPA declarations in electronic format, nine of which used the new version of EDNA for this purpose. The Secretariat continued work on further improvements in EDNA based on requests received from States Parties.
- 7.31 In 2014, the Secretariat also completed the project to establish a secure electronic transmission system, through the SIX system. As a result, the system was made available to States Parties on 1 July 2014. The system provides a secure electronic channel for the exchange of electronic declarations and other information, including that of a classified nature, between States Parties and the Secretariat. As at 31 December 2014, a total of 16 users from nine States Parties had registered for the SIX system and the first official documents had been successfully exchanged, such as the ADAA for 2015, amendments to previously submitted Article VI declarations of past and anticipated activities, responses to official letters to the Secretariat, and an Article III declaration. The Secretariat also transmitted reconciliation letters to States Parties using SIX. The Secretariat expects a further increase in the use of the system and is continuing its efforts to provide the necessary support and training to States Parties. Twelve representatives from 11 States Parties attended the dedicated SIX training course organised during the Nineteenth Session of the Conference.
- 7.32 In 2014, the Secretariat increased its efforts to provide and support training opportunities to the States Parties through the development of e-learning modules. As a result, a set of six modules was developed in 2014, in order to be made available to States Parties in the first quarter of 2015. This set includes a dedicated e-learning module for electronic declarations and use of the EDNA software, as well as a module introducing the SIX system.

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

- 7.33 The Conference at its Fourteenth Session approved a decision (C-14/DEC.4, dated 2 December 2009) on guidelines regarding low-concentration limits for mixtures 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, subsequent to the first three surveys on the States Parties' implementation of this decision, which were carried out in 2011 (S/948/2011, dated 6 July 2011), in 2012 (S/1040/2012, dated 18 September 2012), and in 2013 (S/1125/2013, dated

17 September 2013), a fourth survey was carried out in 2014 (S/1213/2014, dated 12 September 2014).

- 7.34 As at 31 December 2014, 51 (or 27%) of the 190 States Parties had responded to at least one of the four surveys. Of those 51 States Parties, 32 States Parties indicated that they had fully implemented the decision, seven indicated that they were in the process of implementation, and 12 indicated that they had not yet implemented the decision. During 2014, the Secretariat received six responses to either the third or fourth surveys. Of these, two States Parties indicated that they had fully implemented the decision; three States Parties indicated they had not yet implemented the decision, and one State Party indicated that it was in the process of implementation.
- 7.35 In addition to the States Parties that responded to the first survey, one State Party provided a submission under paragraph 5 of Article VII of the Convention in 2010; this submission indicated that the State Party 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 gas-chromatography mass-spectrometry (GC-MS) instruments for nine S&A missions in 2014. 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 fourth confidence-building exercise for biomedical sample analysis was conducted in February 2014. Twenty-one laboratories from 17 Member States participated, with 20 laboratories returning reports. The results indicated a continued improvement over the earlier exercises and highlighted the skill and expertise of Member States' laboratories.
- 8.4 A workshop on confidence-building exercises for biomedical sample analysis was held during the year to discuss the findings from the fourth exercise, and to initiate planning for a fifth confidence-building exercise for biomedical sample analysis, which was to be conducted in February 2015.

### **Official OPCW proficiency tests**

- 8.5 Each year, the OPCW carries out proficiency tests for institutions that may wish to participate in the OPCW network of analytical laboratories. The year under review saw the completion of the Thirty-Fourth, the holding of the Thirty-Fifth, and the start of the Thirty-Sixth OPCW Proficiency Tests. The particulars of these tests are provided in Table 10.

**TABLE 10: SUMMARY OF THE THIRTY-FOURTH, THIRTY-FIFTH, AND THIRTY-SIXTH OFFICIAL OPCW PROFICIENCY TESTS**

	<b>Thirty-Fourth Proficiency Test</b>	<b>Thirty-Fifth Proficiency Test</b>	<b>Thirty-Sixth Proficiency Test</b>
<b>Sample Preparation</b>	ADD, Republic of Korea	DCRL, Iran (Islamic Republic of)	DLD, Belgium
<b>Evaluation of Results</b>	Dstl, United Kingdom	VERIFIN, Finland	LLNL, United States
<b>Number of Nominations</b> <sup>17</sup>	26	18	
<b>Results</b>	11 As 4 Bs 5 C 1 D 3 failures 2 trial tests	6 As 2 Bs 4 Cs 4 Ds no failures 2 trial tests	13 As 3 Bs 1 C 2 Ds 4 failures 2 trial tests 2 withdrawals

8.6 At the end of the reporting period, there were 21 designated laboratories from 17 Member States, eight of which had had their designation temporarily suspended. Annex 2 shows the status of each designated laboratory as at 31 December 2014.

#### **OPCW Central Analytical Database**

8.7 The Validation Group met twice in 2014 and technically approved 232 new analytical data. Data from the first Validation Group meeting of 2014, and some from 2013, were processed and forwarded to the Council for its approval.

8.8 Two hundred and seventy-one new analytical data were approved by the Council and were incorporated into the new version of the OCAD (V.17), which has been certified by the OIO and released to States Parties in January 2015. The OCAD (database/extracted analytical data) was issued 11 times for on-site inspections and training purposes.

8.9 The contents of the OCAD are reflected in Table 11.

<sup>17</sup>

Including sample preparation/evaluation laboratories.

**TABLE 11: CONTENTS OF THE OPCW CENTRAL ANALYTICAL DATABASE**

<b>Number of Analytical Data in the OCAD (Last Five Versions)</b>					
	<b>V.13</b>	<b>V.14</b>	<b>V.15</b>	<b>V.16</b>	<b>V.17</b>
<b>MS<sup>18</sup></b>	4,382	4,823	4,957	5,243	5,376
<b>IR<sup>19</sup></b>	936	964	975	981	989
<b>NMR<sup>20</sup></b>	1,391	1,391	1,391	1,391	1,391
<b>GC(RI)<sup>21</sup></b>	3,649	4,137	4,253	4,485	4,614
<b>Number of Chemical Species in the OCAD<sup>22</sup></b>					
<b>MS</b>	3,321	3,657	3,731	3,898	4,003
<b>IR</b>	698	716	723	726	734
<b>NMR</b>	298	298	298	298	298
<b>GC(RI)</b>	3,018	3,470	3,560	3,740	3,866

**OPCW Laboratory accreditation**

- 8.10 Two internal audits, to cover three areas of activity in the OPCW Laboratory under accreditation, were conducted by the OIO in 2014, confirming that the Laboratory is following ISO<sup>23</sup> 17025 and 17043 standards.
- 8.11 The audit by the Dutch Raad voor Accreditatie (RvA) was carried out successfully in 2014. One minor non-conformity was noted and corrective action was taken. The accreditation was continued in January 2015.

**Analytical equipment**

- 8.12 The OPCW Laboratory purchased a replacement GC-MS system to be used for on-site inspections. In order to prepare within 24 hours for an on-site inspection with S&A, an automated thermal desorption system for GC-MS was also purchased. This system will be evaluated in 2015.
- 8.13 The OPCW Laboratory also purchased equipment to enhance its capability for handling and analysing biomedical samples (a biosafety cabinet, autoclave, centrifuge, UV-Vis<sup>24</sup> spectrometer, etc.).

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18 MS = mass spectrometry.

19 IR = infrared spectroscopy.

20 NMR = nuclear magnetic resonance spectrometry.

21 GC(RI) = gas chromatography-retention indices.

22 Number of distinct chemicals represented in the OCAD.

23 ISO = International Organisation for Standardization.

24 UV/Vis = ultraviolet-visible.

### **Multipurpose training facility**

- 8.14 In order to enhance the sharing of knowledge for the benefit of States Parties and personnel involved in verification, a small multipurpose training facility has been constructed within the Rijswijk facility. This approximately 38m<sup>2</sup> space is equipped with four fume hoods, and will be equipped with four GC-MS systems (existing equipment) and an LC-MS<sup>25</sup> system (purchased new for this laboratory). All equipment will be on movable tables, enabling the space to be used for non-laboratory purposes. An adjoining space has been converted into an office area, where lectures may be given.

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<sup>25</sup>

LC-MS = liquid chromatography-mass spectrometry.

**Annex 2**

**LIST OF DESIGNATED OPCW LABORATORIES<sup>26</sup>**

	<b>State Party</b>	<b>Laboratory Name</b>	<b>Date of Designation</b>
1.	Belgium	Defence Laboratories Department*	12 May 2004
2.	China	The Laboratory of Analytical Chemistry Research Institute of Chemical Defence	17 November 1998
3.	China	Laboratory of Toxicant Analysis Institute of Pharmacology and Toxicology Academy of Military Medical Sciences	14 September 2007
4.	Finland	VERIFIN, Finnish Institute for Verification of the Chemical Weapons Convention	17 November 1998
5.	France	DGA Maîtrise NRBC Département d'analyses chimiques	29 June 1999
6.	Germany	Bundeswehr Research Institute for Protective Technologies and NBC Protection*	29 June 1999
7.	India	VERTOX Laboratory Defence Research and Development Establishment	18 April 2006
8.	India	Council of Scientific and Industrial Research Centre for Analysis of Chemical Toxins Indian Institute of Chemical Technology	4 September 2008
9.	Iran (Islamic Republic of)	Defense Chemical Research Laboratory*	3 August 2011
10.	Netherlands	TNO Defence, Security and Safety	17 November 1998
11.	Republic of Korea	Chemical Analysis Laboratory CB Department, Agency for Defence Development	3 August 2011
12.	Republic of Korea	Chemical, Biological and Radiological Defence Research Institute*	4 September 2012
13.	Romania	Chemical Analysis and Testing Laboratory Scientific Research Center for CBRN Defense and Ecology*	4 September 2012
14.	Russian Federation	Laboratory for Chemical and Analytical Control Military Research Centre*	4 August 2000
15.	Singapore	Verification Laboratory Defence Medical and Environmental Research Institute, DSO National Laboratories*	14 April 2003
16.	Spain	Laboratorio de Verificación de Armas Químicas (LAVEMA), Instituto Tecnológico, "La Marañosa"*	16 August 2004
17.	Sweden	FOI, CBRN Defence and Security Swedish Defence Research Agency	17 November 1998
18.	Switzerland	Spiez Laboratory Swiss NBC Defence Establishment	17 November 1998
19.	United Kingdom of Great Britain and Northern Ireland	Defence Science and Technology Laboratory Chemical and Biological Systems Porton Down	29 June 1999

<sup>26</sup>

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. These laboratories will not be considered for receipt of samples taken for off-site analysis until they perform satisfactorily in future OPCW proficiency tests.

	<b>State Party</b>	<b>Laboratory Name</b>	<b>Date of Designation</b>
20.	United States of America	Edgewood Chemical/ Biological Forensic Analytical Center	17 November 1998
21.	United States of America	Lawrence Livermore National Laboratory	14 April 2003

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