OPCW

Technical Secretariat

S/1423/2016
26 September 2016
Original: ENGLISH

NOTE BY THE DIRECTOR-GENERAL

SUMMARY OF VERIFICATION ACTIVITIES IN 2015

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 2015, 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 2015
Annex 2: List of Designated OPCW Laboratories

Annex 1

OPCW VERIFICATION SUMMARY FOR 2015

1. EXECUTIVE SUMMARY

Overview

1.1 As at 31 December 2015, there were 192 States Parties to the Chemical Weapons Convention (hereinafter "the Convention"). Declared chemical weapons had yet to be destroyed in four 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, 79 of the States Parties maintained at least one declarable facility pursuant to Article VI of the Convention.

1.2 No verification activities could be undertaken for one signatory State not Party[1] and three non-signatory States.[2] Two States, Myanmar and Angola, joined the Convention in 2015.

1.3 By the end of 2015, 190 of the 192 States Parties had submitted initial declarations pursuant to the Convention (there were 188 such States Parties at the end of 2014). All but one of those 190 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 was one State Party with incomplete initial declarations at the end of 2014).

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 356 inspections/rotations in 2015, which accounted for 11,972 inspector days at 278 sites in 44 States Parties. This total consisted of 115 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 2,593 inspector days were spent in 2015 by the Secretariat in the Syrian Arab Republic or on verification activities connected to that State Party.[3]

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1 Israel.

2 The Democratic People's Republic of Korea, Egypt, and South Sudan.

3 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 related to chemical weapons, including those in Iraq and the Syrian Arab Republic, was 11,597 in 2015, while 3,023 inspector days were spent pursuant to Article VI, representing 79% and 21% respectively of the total number of inspector days (14,620).

1.6 No challenge inspections (CIs) or investigations of alleged use (IAUs) were requested in 2015.

1.7 The Secretariat was able to meet the mandated inspection aims at all inspections carried out in 2015. An issue or issues requiring further attention (IRFAs) were registered in connection with 11 inspections (one chemical weapons-related inspection and 10 Article VI inspections).

Chemical weapons verification

1.8 In 2015, the Secretariat verified the destruction of 3,136.007 metric tonnes (MT) of chemical weapons. Destruction operations took place at 10 chemical weapons destruction facilities (CWDFs) on the territory of possessor States Parties: one in Libya, five in the Russian Federation, and four 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 two facilities selected by the Secretariat through a commercial tender process (one in Finland and one in the United States of America).

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 65,737.442 MT, or 91%, of the declared chemical weapons stockpile of 72,525.092 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,[4] 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 92% 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 had been completely destroyed.

(e) No further progress had been made by Libya on the destruction of its Category 2 chemical weapons (unchanged at 40% destroyed).

[4] 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 2015, the Director-General had certified that 90 out of 97 CWPFs had either been destroyed (in 67 instances) or converted (in 23 instances). The remaining seven facilities—four CWPFs in Iraq and three CWPFs in the Syrian Arab Republic—remained to be destroyed. In 2015, the Secretariat carried out 16 inspections at 16 CWPFs in two States Parties, namely, the Russian Federation and the Syrian Arabic Republic (where 11 inspections were performed at the CWPFs to be destroyed).

1.11 In 2015, the Secretariat conducted nine inspections at seven chemical weapons storage facilities (CWSFs) in two States Parties, which amounted to 331 inspector days.

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. One 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 six OCW inspections (in Belgium, France, Germany, Italy, Switzerland, and the United Kingdom of Great Britain and Northern Ireland) in 2015. 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 43 States Parties in 2015. This comprised 11 Schedule 1 facilities (41% of the inspectable facilities); 42 Schedule 2 plant sites (23%); 19 Schedule 3 plant sites (5%); and 169 other chemical production facility (OCPF) plant sites (4%).

1.16 Four States Parties reported that they expected to be involved—as importers or exporters—in 12 transfers of Schedule 1 chemicals between States Parties in 2016. Declarations received in 2015 indicated exports of 5,200 MT of Schedule 2 chemicals by 55 States Parties, and exports of 358,000 MT of Schedule 3 chemicals by 122 States Parties in 2014. There were no reported transfers of Schedule 1 or Schedule 2 chemicals to States not Party in 2014.

Optimising the verification regime

1.17 In 2015, the Secretariat continued its efforts to maximise the number of sequential inspections as a way of saving resources. Fifteen of the 17 States Parties that received four or more industry inspections in 2015 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 59 sequential inspections in 2015.

1.18 Sampling and analysis (S&A) was used during 11 Article VI inspections in 2015: nine in Schedule 2 inspections, and for the first time one (subsequent) Schedule 3 and one (subsequent) OCPF inspection involved S&A. In both cases the inspection, including S&A, was completed within the 24-hour time limit.

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. As at 31 December 2015, a total of 47 users from 29 States Parties had registered for the SIX system.

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 954 incoming documents, declarations, and other verification-related documents from States Parties in 2015, comprising 9,205 pages.

2. INSPECTIONS

2.1 During 2015, and without counting its verification activities connected with the Syrian Arab Republic, the Secretariat conducted 356 inspections/rotations, which accounted for 11,972 inspector days at 278 sites in 44 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 2015 reached 14,620, and the number of States Parties in which verification operations were carried out was 46. On average, 1,213 inspector days were undertaken each month.

2.2 Table 1 lists the number and types of inspections or rotations completed in 2015 and other summary statistics on inspection activities, while Table 2 shows the inspections completed between EIF of the Convention and 31 December 2015.

TABLE 1: INSPECTION ACTIVITIES IN 2015

Type of Facility	Inspectable or Operational Facilities[5]	Inspections Completed[6]	Facilities or Sites Inspected[5]	Inspector Days
Chemical Weapons-Related Inspections				
CWDF	7	85	10	8,196
CWSF	9	9	7	331
CWPF	40	5	5	65
OCW	6	6	6	71
ACW[7]	39	9	9	256
Totals		**115**	**37**	**8,949**
Inspector days connected with Iraq				55
Inspector days connected with the Syrian Arab Republic				2,593
Total number of chemical weapons-related inspector days				**11,597**
Article VI Inspections				
Schedule 1	27	11	11	216
Schedule 2	189	42	42	856
Schedule 3	401	19	19	203
OCPF	4,234	169	169	1,748
Totals	**4,851**	**241**	**241**	**3,023**
Combined totals		**356**	**278**	**11,972**
Combined total, including days connected with Iraq and the Syrian Arab Republic				**14,620**

5 For CWDFs and ACW destruction sites (ACWDs): operational facilities in 2015; for CWSFs, CWPFs, OCWs, and ACWs: inspectable in 2015; for Article VI facilities: inspectable in 2015.

6 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.

7 Including ACWDs.

TABLE 2: INSPECTION ACTIVITIES SINCE EIF[8]

Type of Facility	Inspections Completed	Facilities or Sites Inspected	Inspector Days
Chemical weapons-related inspections			
CWDF	1,797	42	209,659
CWSF	497	37	14,805
CWPF	472	72	8,902
OCW	130	37	2,128
ACW	102	47	2,837
DHCW[9]/EDCW[10]	25	n/a	1,734
Totals	**3,023**	**235**	**240,065**
Inspector days connected with Iraq			55
Inspector days connected with the Syrian Arab Republic			9,077
Total number of chemical-weapons related inspector days			**249,197**
Article VI inspections			
Schedule 1	270	39	4,607
Schedule 2	742	358	17,492
Schedule 3	4431	373	6,5787
OCPF	1,637	1,490	20,955
Totals	**2,839**	**2,260**	**49,841**
Combined totals	**5,747**	**2,331**	**289,906**
Combined total, including days connected with Iraq and the Syrian Arab Republic			**299,038**

Distribution of Article VI inspections

2.3 Forty-three States Parties received Article VI inspections in 2015. As can be seen in Table 3, this number was lower than previous years (50 States Parties in 2014). The decrease in the number of inspected States Parties is mainly due to the random nature of the selection of plant sites for inspection under paragraph 11 of Part IX of the Verification Annex to the Convention (hereinafter "the Verification Annex").

TABLE 3: DISTRIBUTION OF ARTICLE VI INSPECTIONS

	2007	2008	2009	2010	2011	2012	2013	2014	2015
No. of inspections	200	200	208	208	208	219	229	241	241
Inspected States Parties	58	40	38	38	39	44	46	50	43
No. of States Parties accounting for 50% of inspections	13	6	6	6	7	6	7	7	6

8 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.

9 DHCW = destruction of hazardous chemical weapons.

10 EDCW = emergency destruction of chemical weapons.

TABLE 4: DISTRIBUTION OF ARTICLE VI INSPECTIONS BY REGION

Regional Groups	No. of Industry Inspections	Percentage of Total	Percentage of Inspectable Sites
Africa	6	2%	1%
Asia	101	42%	58%
Eastern Europe	14	6%	4%
Latin America and the Caribbean	22	9%	5%
Western Europe and Other Countries	98	41%	32%

Challenge inspections and investigations of alleged use

2.4 No CIs were requested in 2015, and two CI 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 2015, 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-79/DG.12, dated 3 June 2015).

2.5 Inspectorate training and other readiness activities in regard to contingency operations in 2015 were conducted in a manner that recognised the many operational commonalities between CIs and IAUs. In 2015, the Secretariat conducted a CI exercise in Italy (Rieti), and participated in the exercise "Balkan Response", a multinational live-agent field exercise hosted by Serbia, in which participants practised a coordinated response to a chemical weapons attack by a non-State actor against a State Party to the Convention.

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 2015 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 2014 and ended on 13 February 2015.

2.9 The 2015 Inspectorate Training Programme (ITP) commenced on 5 January and ran through 16 December. The Inspectorate Division completed 2,456 equivalent training days within the ITP subprogramme. Delivery of training by inspectors required 590 equivalent training days. The programme (excluding training for new inspectors) comprised 48 individual training courses, with 45 calendar weeks involving training.

2.10 Seventy-five percent of the training held in 2015 was delivered within the territory of the Netherlands, with the remainder conducted within the territories of Belgium, France, Germany, Italy, Serbia, Spain, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. These States Parties assisted in the delivery of the training programme, either as host nations, through voluntary contributions, or through the provision of technical and/or administrative assistance.

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[11] amounted to 8,196 inspector days during 2015 (8,523 in 2014), while inspection efforts at CWSFs totalled 331 inspector days (351 in 2014). 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 2,593 (4,465 in 2014).

3.2 In 2015, the Secretariat verified the destruction of 3,136.007 MT of chemical weapons. This was a decrease compared to 2014, when the total verified destruction amounted to 4,084.258 MT.

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 65,737.442 MT, or 90.64%, of the declared chemical weapons (see Figure 1).

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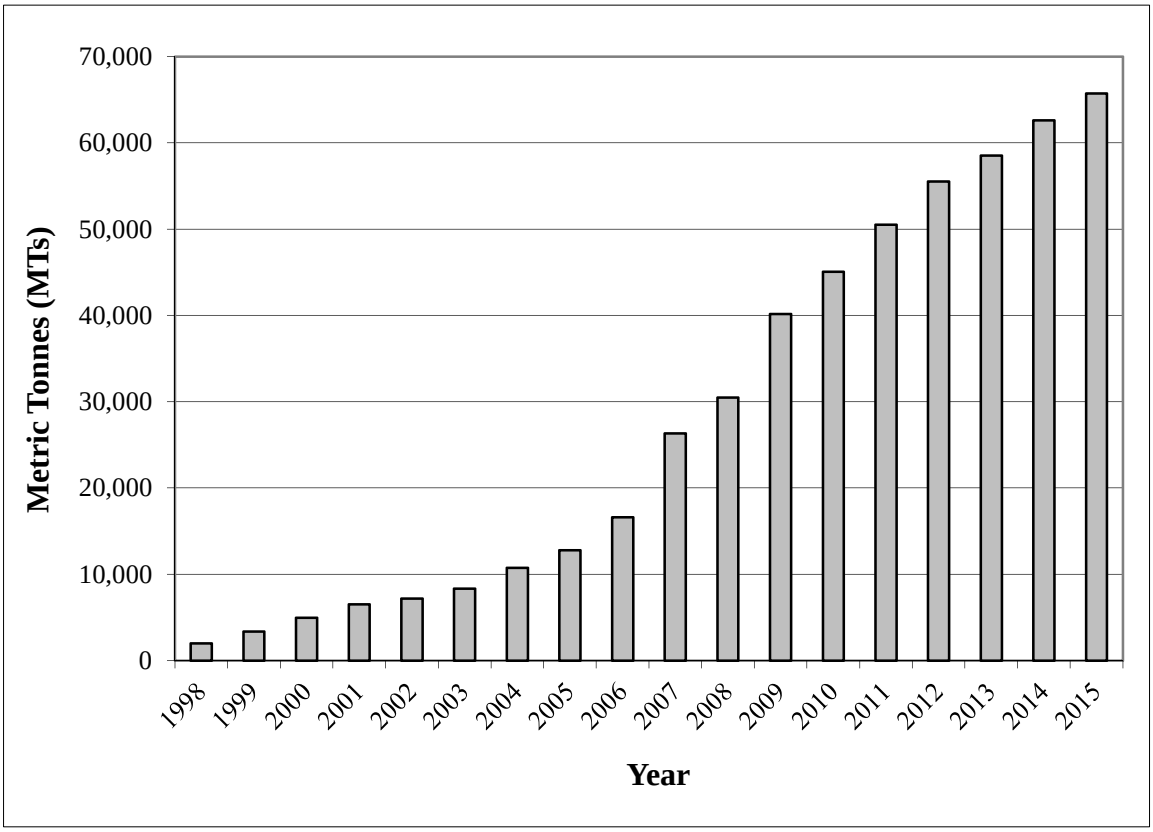
11 This number does not include the inspector days for the destruction of the chemical weapons declared by the Syrian Arab Republic at the destruction facilities provided by the States Parties (in-kind contributions) or commercial disposal facilities selected through the OPCW tendering process.

FIGURE 1: VERIFIED DESTRUCTION OF CHEMICAL WEAPONS: CUMULATIVE FROM 1998 TO 2015



3.4 In 2015, 10 CWDFs (three more than in 2014) were involved in the destruction of Category 1 and 2 chemical weapons: one in Libya, five in the Russian Federation, and four in the United States of America.

3.5 Additionally, two commercial disposal facilities (one in Finland and one in the United States of America) were selected through an OPCW tendering process to destroy Category 1 and 2 chemical weapons transferred outside the Syrian Arab Republic. Table 5 lists the destruction facilities that were operating or under construction during 2015.

TABLE 5: CHEMICAL WEAPONS DESTRUCTION FACILITIES IN SERVICE OR UNDER CONSTRUCTION IN 2015

Libya	Rabta Toxic Chemicals Destruction Facility (RTCDF)	
Russian Federation	Maradykovsky Shchuchye Pochep Leonidovka Kizner	
Syrian Arab Republic	**Destruction Facilities Provided by States Parties** Mexichem (United Kingdom of Great Britain and Northern Ireland) Gesellschaft zur Entsorgung von chemischen Kampfstoffen und Rüstungsaltlasten mbH (GEKA mbH) (Germany)	**Commercial Disposal Facilities (Selected Through OPCW Tender)** Ekokem Riihimäki Waste Disposal Facility, Finland Veolia ES Technical Solutions, LLC, United States of America
United States of America	Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP)** Pueblo Chemical Agent-Destruction Pilot Plant Explosive Destruction System (PCAPP-EDS) Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP)* Blue Grass Chemical Agent Destruction Pilot Plant Static Detonation Chamber (BGCAPP-SDC)* Prototype Detonation Test and Destruction Facility (PDTDF) Aberdeen Proving Ground Chemical Transfer Facility (APG/CTF) Recovered Chemical Weapons Destruction Facility (RCWDF)	

* Facility under construction and systematisation

** Construction complete; systemisation was ongoing in 2015

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

Progress in meeting destruction obligations

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 72,524.092 MT of chemical weapons (70,493.546 MT of Category 1 and 2,031.546 MT of Category 2), contained in 8,270,588 munitions and containers. Approximately 90.64% of these chemical weapons—or a total of 65,737.442 MT (64,437.945 MT of Category 1 and 1,299.497 MT of Category 2)—had been verified

as destroyed as at 31 December 2015.[12] The possessor States Parties had also declared 417,833 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 2015, 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 64,435.031 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, 62,172.364 MT were unitary chemical weapons (2,991.831 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 6,207,802 munitions and containers (of which 642,133 were destroyed in 2015), as well as in other storage vessels that had a volume of less than $2m^3$ and in larger volume storage tanks, from which the chemical-warfare agent had been drained. Another 2,262.667 MT were binary chemical weapons (none destroyed in 2015), 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 declared DF and OPA canisters, and 306 other containers for binary components.

(b) Category 2 chemical weapons: The Secretariat had verified the destruction of 1,299.497 MT of Category 2 chemical weapons (161.239 MT in 2015): CNS, thiodiglycol (TDG), 2-chloroethanol (2-CE), phosgene, sodium sulfide, sodium fluoride, chloroacetophenone (CN), adamsite (DM), phosphorous oxychloride, phosphorous trichloride, phosphorous pentachloride, hydrogen

[12] 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).

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 2015, 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 2015, mainly due to the fragile security situation in the country.

Libya

3.11 As at 31 December 2015, Libya had destroyed 26.345 MT, or 100% of its declared stockpile of Category 1 chemical weapons. This State Party had also completed the destruction of 669.809 MT, or 47.78%, of its declared Category 2 chemical weapons, as well as all of its declared Category 3 chemical weapons.

Russian Federation

3.12 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.

3.13 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.

3.14 Additionally, the Russian Federation notified the Secretariat of the completion of the destruction of Category 1 chemical weapons at four CWDFs (Leonidovka in August 2015 and Maradykovsky, Shchuchye, and Pochep in September 2015).

Syrian Arab Republic

3.15 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).

3.16 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).

3.17 In 2015, the Secretariat verified the destruction of all Category 1 and 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

3.18 The United States of America submitted three amendments to its initial declaration in 2015, thereby adjusting its chemical weapons inventory and updating the site diagram and building list for two CWSFs.

3.19 The United States of America also submitted, inter alia, the following information:

(a) a revision to the detailed facility information (DFI) for the PCAPP-EDS, updating technical information;

(b) an addendum to the DFI for the PCAPP, providing information for the destruction of energetics at the Anniston SDC, Alabama. Volume II of the DFI addendum has been added, containing piping, instrumentation and location diagrams for the SDC facility;

(c) an addendum to the DFI for the PDTDF, providing information for the testing of destruction technologies. Amendments and modifications of the PDTDF agreed detailed plan for verification were also submitted; and

(d) a letter containing proposals to conduct the 2015 annual recovered chemical weapons destruction review in December 2015 at the APG, Maryland.

3.20 As at 31 December 2015, the Secretariat had verified the destruction or withdrawal for purposes not prohibited under the Convention of 24,925.214 MT, or 89.76%, of the stockpile of Category 1 chemical weapons declared by the United States of America. In 2015 the Secretariat verified the destruction in the United States of America of 1.512 MT of Category 1 chemical weapons.

3.21 The Secretariat conducted an initial visit to the PCAPP in Pueblo, Colorado, in January 2015. The destruction operations were to start in September 2016.

3.22 In December 2015, the Secretariat conducted an inspection to review documents related to the destruction of items recovered and destroyed at the RCWDF, PDTDF, and APG/CTF.

3.23 At the invitation of the United States of America, the Council conducted a visit to the PCAPP and PCAPP-EDS, in Pueblo, Colorado, in March 2015.

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 2015, the Secretariat carried out 16 inspections at 16 CWPFs in two States Parties, including 11 inspections at the CWPFs to be destroyed in the Syrian Arab Republic.

4.2 As at 31 December 2015, 97 CWPFs had been declared to the OPCW. The Director-General had certified the completion of destruction or conversion of 90 of those facilities. Sixty-seven had been certified as destroyed. Twenty-three had been converted for purposes not prohibited by the Convention. Seven CWPFs remained to be destroyed and certified.

4.3 In 2015, 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 three 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 2015 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 2015, the Secretariat conducted six OCW inspections in six States Parties and 10 ACW inspections in two States Parties. The discovery of approximately 1,429 OCWs was declared by States Parties, while approximately 68 OCWs were reported as

destroyed. Around 1,870 ACWs in China were reported as newly recovered and/or identified, and 1,690 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 2015. In addition, the Abandoned Chemical Weapons Test Destruction Facility (ACW TDF) at Haerbaling continued destruction operations in 2015, and finally, the third ACW MDF at Wuhan completed its destruction operations in 2015. At the end of the period under review, 39,249 ACWs had been destroyed in China and around 13,500 ACWs had been declared at storage sites, awaiting final destruction or additional identification.

Declared stocks

5.5 Between EIF of the Convention and 31 December 2015, 16 States Parties had declared OCWs. Of these, 11 States Parties declared 72,019 OCWs produced between 1925 and 1946, while nine States Parties declared 65,853 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 2015, OCWs and/or suspected OCW discoveries were reported to the Secretariat by Belgium, Canada, France, Germany, the Netherlands, Poland, and the United Kingdom of Great Britain and Northern Ireland.

5.7 Based on information received, seven States Parties still had OCWs or suspected OCWs on their territories at the end of the review period, and more than 38,900 OCWs had yet to be destroyed or otherwise disposed of.

5.8 As at 31 December 2015, 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 18 provinces in China. Of these, 39,240 had already been destroyed.

Verification activities

5.9 In 2015, the Secretariat conducted six OCW inspections in Belgium, France, Germany, Italy, Switzerland, and the United Kingdom of Great Britain and Northern Ireland.

5.10 During the period under review, 10 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 5,264, of which 4,772 were subject to systematic verification (see Table 6). In 2015, the Secretariat verified the declared activities at 241 facilities and plant sites in 43 States Parties. The breakdown of inspections per verification remained the same as in 2014. Thus, 11 Schedule 1 facilities, 42 Schedule 2 plant sites, 19 Schedule 3 plant sites, and 169 OCPF plant sites were inspected in 2015.

TABLE 6: FACILITIES DECLARED PURSUANT TO ARTICLE VI AS AT 31 DECEMBER 2015

Number of Declared Facilities Number of States Parties Having Declared Article VI Facilities					
Regime	**Schedule 1**	**Schedule 2**	**Schedule 3**	**OCPF**	**Totals**
Declared	27	460	423	4,354	5,264
Declarable	27	433	416	4,352	5,228
Inspectable	27	185	390	4,170	4,772
States Parties	23	36	34	81	81

6.2 In 2015, an IRFA or IRFAs were recorded at 10 Article VI inspections, that is, at six Schedule 2 inspections, three Schedule 3 inspections, and one OCPF inspection. Furthermore, 179 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 2015, one Schedule 2 and six OCPF inspections were carried out at plant sites that turned out to be non-inspectable (see paragraph 6.17 below).

Transfers of scheduled chemicals

Transfers of Schedule 1 chemicals according to ADPAs for 2014

6.4 Eleven transfers of Schedule 1 chemicals were declared by four States Parties in their annual declarations of past activities (ADPAs) for 2014. All these 11 transfers were notified by both the sending and receiving States Parties. The total amount of Schedule 1 chemicals transferred in 2014 was 12.03 grams. A total of 32 notifications regarding 16 transfers were received from 13 States Parties. Notifications for all of these 16 transfers were provided by both the sending and receiving States Parties. Using the 32 notifications as a basis, the total amount of chemicals that was to be transferred in 2015 was 25.86 grams.

Transfers of Schedule 2 and Schedule 3 chemicals between States Parties in ADPAs for 2014

6.5 The ADPAs for 2014 that were received in 2015 indicated that a total of 55 States Parties transferred Schedule 2 chemicals in 2014, and that the total volume of this trade came to approximately 5,200 MT. Meanwhile, 122 States Parties transferred

Schedule 3 chemicals in 2013, and the total volume of this trade was approximately 358,000 MT.

Transfers of Schedule 2 and 3 chemicals to States not Party in ADPAs for 2014

6.6 In the ADPAs for 2014 received in 2015, there were no reported transfers of Schedule 2 chemicals to States not Party in 2014. Eight States Parties exported four Schedule 3 chemicals to three States not Party.

Optimisation of the Article VI inspection regime

6.7 Throughout 2015, the Secretariat continued its efforts to optimise the effectiveness and efficiency of the Article VI inspection regime.

6.8 Inspections were carried out with a comparable team size to that of similar inspections carried out in 2014. However, 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 In January 2015, updated inspection report templates were introduced for OCPF inspections. The updated templates facilitated a more streamlined post-inspection process, thus reducing the time on site for OCPF inspections.

6.10 During 2015, 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, 15 of the 17 States Parties that received four or more industry inspections in 2015 have advised the Secretariat that they concur with the use of sequential inspections on their territory. Out of the 59 sequential inspections that took place in 2015, 53 were consecutive inspections in a single country, while six allowed inspectors to conduct inspections in two States Parties during one mission. As a result of performing those 59 sequential inspections, the Secretariat saved at least EUR 275,000 in travel costs, and 144 inspector weeks of work.

6.11 In 2015, eight more sequential inspections were carried out than in 2014. This was due in part to the location of the sites selected, and the fact that one State Party that receives a high number of inspections accepted the conduct of sequential inspections.

TABLE 7: SEQUENTIAL INSPECTIONS

Sequential Inspections (On a Year-by-Year Basis)											
2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
16	23	26	26	37	42	40	47	48	57	51	59

6.12 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, Jordan,

Lithuania, Oman, Pakistan, Portugal, the Russian Federation, Ukraine, the United Arab Emirates, and Viet Nam.

Sampling and analysis

6.13 The Secretariat has continued to conduct Schedule 2 inspections using S&A on a routine basis, reaching 81 such missions in 22 States Parties by the end of 2015 (see Table 8).

6.14 In 2015, there were 11 inspections involving S&A, nine in Schedule 2 inspections, and for the first time one (subsequent) Schedule 3 and one (subsequent) OCPF inspection involved S&A. In both cases the inspection, including S&A, was completed within the 24-hour time limit. This brought the total of Article VI inspections using S&A to 83, and the number of States Parties that have received S&A missions to 24, giving a broader geographical distribution.

6.15 As at 31 December 2015, 91% (20 out of 21) 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 ARTICLE VI PLANT SITES

Number of Inspections with S&A										
2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**
2	9	9	9	9	8	9	8	**9**	11	83

6.16 Analytical data have been continually included in the OPCW Central Analytical Database (OCAD), following validation by the Validation Group and approval by the Council.

Inspections at non-inspectable Article VI sites

6.17 In 2015, a total of seven Article VI inspections were carried out at sites that proved to be non-inspectable (six OCPF sites and one Schedule 2 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

2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
5	14	6	5	7	8	7

Secretariat support to consultations on industry and other Article VI issues

6.18 Four informal consultations were conducted in 2015, 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 e-learning modules for declarations, inspections, and related tools;

the SIX project; evaluation of the OCPF site-selection methodology; preparedness to conduct S&A at Schedule 3 and OCPF facilities; a summary of industry verification in 2014; a briefing on the system for certifying designated laboratories; the procedure for handling cases of Schedule 1 chemicals as unavoidable by-products; updates to the Schedule 1 report templates; recommendations from the Scientific Advisory Board regarding verification; and the milestone of reaching 3,000 industry inspections in 2015.

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. The Secretariat will continue to work with the relevant States Parties towards the submission of their outstanding initial declarations.

Progress and status

7.3 During 2015, the Secretariat received initial declarations pursuant to Articles III and VI of the Convention from Myanmar and Somalia. This means that, by the end of 2015, 190 of the 192 States Parties had submitted initial declarations in accordance with Article III and/or Article VI.

7.4 As at 31 December 2015, the following two States Parties had not yet submitted their required initial declarations under both Articles III and VI: Angola (due date: 15 November 2015) 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. 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.

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 regard to actions taken by the Secretariat to address the issue of timely submission of declarations, particular emphasis has been placed on supporting the States Parties concerned. In 2015, the Secretariat provided tailor-made technical assistance to those States Parties in the framework of several bilateral meetings and consultations.

Progress and status

7.8 Nine of the 15 States Parties that had submitted their ADPAs for 2013 more than 30 days late and that had submitted previous ADPAs more than 30 days late at least twice since November 2007 submitted their ADPAs for 2014 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[13] were provided in 2015 by the Secretariat. In addition, one status report focusing on ADPAs for 2014 and ADAAs 2016 as at 31 December 2015 has been published in 2016 (EC-81/DG.4, dated 14 January 2016).

7.10 In 2015, overall, 89 States Parties with declarable facilities or activities submitted ADPAs for 2014. Of these, 75 States Parties met the deadline of 31 March 2015 for submitting at least part of their required declarations, and 14 States Parties submitted their ADPAs for 2014 more than 30 days late.

7.11 In 2015, 48 States Parties with declarable facilities or activities submitted ADAAs for 2016. Of these, 21 States Parties met the deadline (2 October 2015) for Schedule 1 chemicals and facilities, and 44 States Parties met the deadline (1 November 2015) for Schedule 2 and 3 chemicals and facilities. In total, 45 States Parties met the deadline for submitting at least part of their required ADAAs for 2016, and three States Parties submitted their required ADAAs for 2016 after the deadline but before 31 December 2015.

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

13 EC-78/DG.4 (dated 12 January 2015) and EC-79/DG.13 (dated 11 June 2015).

through a variety of means. In 2015, the majority of States Parties continued to fully replace their lists of OCPFs annually, with the result that approximatively 99% of declared OCPFs were either updated in 2015 or were declared for the first time. However, one State Party had not fully updated its list of declarable OCPFs for five years or more.

Transfer discrepancies

7.13 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*).

Actions taken by the Secretariat on transfer discrepancies

Cooperation with the World Customs Organization

7.14 In the framework of cooperation with the World Customs Organization (WCO), the Secretariat initiated the Harmonized System project together with the WCO on the subject of identification by customs authorities of the most traded scheduled chemicals. This project aims to allocate unique international six-digit Harmonized System codes to the most traded scheduled chemicals, to identify globally traded scheduled chemicals and, ultimately, to ensure complete and accurate declarations and resolve existing transfer discrepancies.

7.15 The Harmonized System project covers two phases. The first phase, which focuses on the 33 most traded scheduled chemicals, was successfully completed in 2015, and resulted in the approval of an amendment to the International Convention on the Harmonized System, scheduled to enter into effect on 1 January 2017. The second phase of the project focuses on the 15 most traded scheduled chemicals. In 2015, the Secretariat officially requested the WCO to include the 15 most traded scheduled chemicals in the next amendment to the International Convention, scheduled for 2022. In order to examine possible amendments related to these 15 chemicals, the WCO continues to work in close cooperation with the Secretariat on technical aspects of the chemicals.

Capacity building

7.16 In 2015, the Secretariat held several events focused on capacity building in relation to Article VI declarations. During these events, which were attended by different stakeholders, the Secretariat placed particular emphasis on raising awareness of the transfers regime of the Convention and on resolving transfer discrepancies. Furthermore, the Secretariat facilitated a forum in which participants could share key problems and best practices in resolving transfer discrepancies, and make suggestions to the Secretariat for future consideration.

Transfer discrepancies with respect to Schedule 2 and Schedule 3 chemicals

7.17 Despite the follow-up actions taken by the Secretariat, according to the ADPAs for 2014, there were still considerable Schedule 2 and 3 transfer discrepancies,[14] as was the case in previous years. In particular, approximately 68% (509) of the total number (748) of Schedule 2 and Schedule 3 transfers between States Parties showed transfer discrepancies, compared to 67% in 2013 and 68% in 2012. The ADPAs for 2014 show that the aforementioned 509 transfer discrepancies of Schedule 2 and 3 chemicals involved 80 States Parties. Out of these 509 transfer discrepancies, 151 were encountered for Schedule 2 chemicals and 358 for Schedule 3 chemicals.

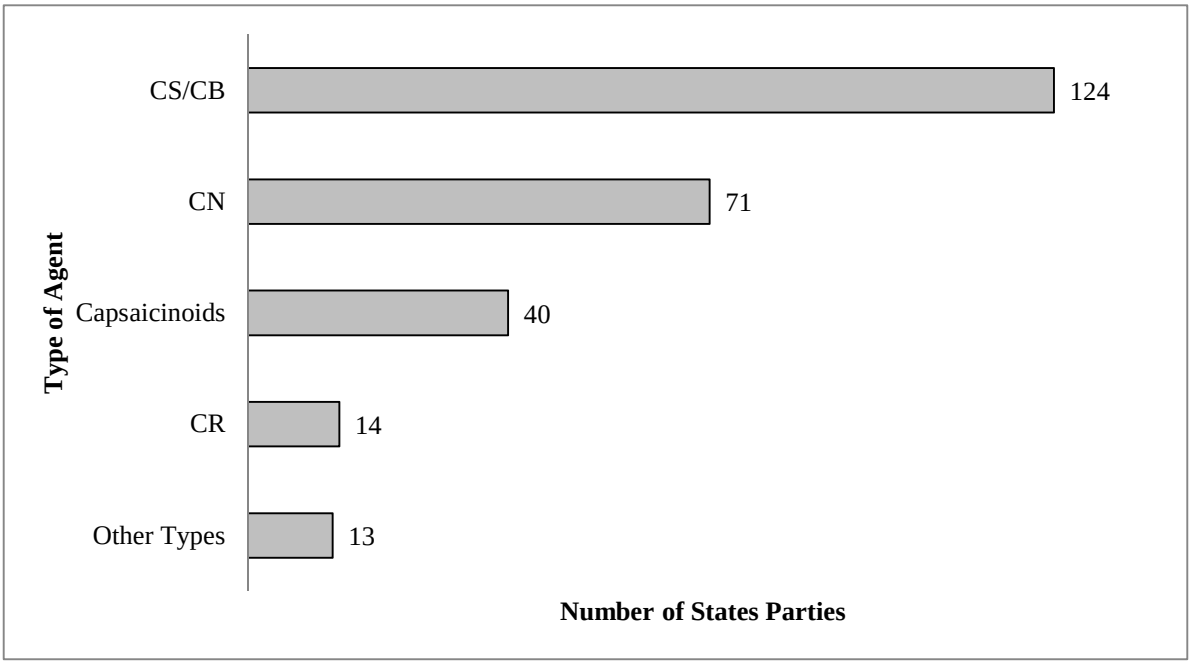
Status of required declarations

Riot control agents

7.18 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.

[14] 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.

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



Handling of declarations

Clarification of declarations

7.19 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.

7.20 The Secretariat did not issue any RFCs addressing inspectability-related issues in 2015. A small number of inspectability-related issues were identified during the reporting period, but in each case these issues were quickly resolved through discussions between the Secretariat and the States Parties concerned, without the need for RFCs to be issued. At the end of reporting period, there were no outstanding issues of this nature.

7.21 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 12 missions as at 31 December 2015.

Processing of declarations

7.22 In 2015, the Secretariat received 954 incoming documents, comprising 9,205 pages, from States Parties. These documents included 99 ADPA 2014, 65 ADAA 2016, and

other verification-related documents. Four hundred and ninety-six documents, or 52%, comprising 2,768 pages (30%), were unclassified. However, the majority of the pages that were received continued to be classified: 122 documents (979 pages) were classified as "OPCW Highly Protected"; 194 documents (4,605 pages) as "OPCW Protected"; and 152 documents (853 pages) as "OPCW Restricted". In other words, 48% of the documents received (60.2% in 2014), and 70% of the pages (82% in 2014) 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

7.23 Fifty-two States Parties provided their ADPAs for 2014 either solely or additionally in electronic format (as compared with 49 States Parties in the preceding year). A total of 37 States Parties submitted their original ADAAs for 2016 in electronic format (as compared with 30 States Parties in the preceding year).

7.24 The Secretariat has continued to provide States Parties with support during their submission of electronic declarations using EDNA. In addition, six representatives from five States Parties attended the EDNA training courses organised during the Twentieth 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 2015.

7.25 In 2015, the Secretariat successfully completed work on improvements to the EDNA tool and released two enhanced versions (3.1 and 3.2) to States Parties, in January and September respectively. The new versions include updates to the list of chemicals, in line with the latest version of the Handbook on Chemicals (2014), full support for the new product group codes in accordance with the Declarations Handbook 2013, a number of technical enhancements, and corrections of previously reported errors.

7.26 In 2015, the Secretariat also observed a significant rise in interest amongst the States Parties in using the Secure Information Exchange (SIX) system, which was made available to States Parties in July 2014 (S/1192/2014, dated 1 July 2014). As at 31 December 2015, a total of 47 users from 29 States Parties had registered for the system. As reported to the States Parties in the Note by the Secretariat S/1327/2015 (dated 13 November 2015), the expected key benefits of the system have started to materialise, particularly those related to improvements in both the timeliness of declarations and the overall efficiency of the declaration processing. During the Twentieth Session of the Conference, the Secretariat also organised a dedicated training session, which was attend by 12 representatives from 11 States Parties.

7.27 In 2015, 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 made available to States Parties in the first quarter of 2015. This set incorporates a dedicated e-learning module for electronic declarations, which includes use of the EDNA software and 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

7.28 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. The decision required States Parties to implement the guidelines as soon as practicable.

7.29 The decision also required the Secretariat to report in the Verification Implementation Report on the progress made by States Parties in implementing the decision, beginning not later than 1 January 2012. To gather information for this report, a total five surveys have been carried out: in 2011 (S/948/2011, dated 6 July 2011), in 2012 (S/1040/2012, dated 18 September 2012), in 2013 (S/1125/2013, dated 17 September 2013), in 2014 (S/1213/2014, dated 12 September 2014), and in 2015 (S/1310/2015, dated 15 September 2015).

7.30 As at 31 December 2015, the overall response to the five surveys showed that 58 of the 192 States Parties had responded to at least one of the five surveys. Of those 58 States Parties, 39 States Parties had implemented the decision and 19 had not.

7.31 In addition, 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 11 S&A missions in 2015. 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 fifth exercise on biomedical sample analysis was conducted in February 2015. Twenty-six laboratories from 21 Member States participated, with 24 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 the exercise for biomedical sample analysis was held during the year to discuss the findings from the fifth exercise, and to initiate planning for the first proficiency test for biomedical sample analysis, which was to be initiated in February 2016.

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-Sixth, the holding of the Thirty-Seventh, and the start of the Thirty-Eighth OPCW Proficiency Tests. The particulars of these tests are provided in Table 10.

TABLE 10: SUMMARY OF THE THIRTY-SIXTH, THIRTY-SEVENTH, AND THIRTY-EIGHTH OFFICIAL OPCW PROFICIENCY TESTS

	Thirty-Sixth Proficiency Test	Thirty-Seventh Proficiency Test	Thirty-Eighth Proficiency Test
Sample Preparation	DLD, Belgium	WIS, Germany	OPCW Laboratory
Evaluation of Results	LLNL, United States	TNO, the Netherlands	LAVEMA, Spain
Number of Nominations[15]	25	19	26
Results	13 As 3 Bs 1 C 2 Ds 3 failures 1 F*[16] 2 trial tests	5 As 2 Bs 1 C 1 D 5 failures 5 trial tests	15 As 3 Bs 1 C 3 Ds 2 failures 2 trial tests

8.6 At the end of the reporting period, there were 19 designated laboratories from 15 Member States, five of which had had their designation temporarily suspended. Annex 2 shows the status of each designated laboratory as at 31 December 2015.

OPCW Central Analytical Database

8.7 The Validation Group met twice in 2015 and technically approved 390 new analytical data. Data from the second Validation Group meeting of 2014 were processed and forwarded to the Council for its approval.

8.8 Eighty-two new analytical data were approved by the Council and were incorporated into the new version of the OCAD (V.18), which has been certified by the OIO and released to States Parties in January 2016. Several data were approved by the Council for removal from the OCAD to ensure that the database is populated only by high quality data. The OCAD (database/extracted analytical data) was issued 11 times for on-site inspections and training purposes.

15 Including sample preparation/evaluation laboratories.

16 F* indicates a failure due to a reporting error; the laboratory does not lose designation.

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

TABLE 11: CONTENTS OF THE OPCW CENTRAL ANALYTICAL DATABASE

Number of Analytical Data in the OCAD (Last Five Versions)					
	V.14	**V.15**	**V.16**	**V.17**	**V.18**
MS[17]	4,823	4,957	5,243	5,376	5,412
IR[18]	964	975	981	989	988
NMR[19]	1,391	1,391	1,391	1,391	1,391
GC(RI)[20]	4,137	4,253	4,485	4,614	4,639
Number of Chemical Species in the OCAD[21]					
MS	3,657	3,731	3,898	4,003	4,022
IR	716	723	726	734	734
NMR	298	298	298	298	298
GC(RI)	3,470	3,560	3,740	3,866	3,878

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 2015, confirming that the Laboratory is following ISO[22] 17025 and 17043 standards.

8.11 The audit by the Dutch Raad voor Accreditatie (RvA) was carried out successfully in 2015. No non-conformities were noted. The accreditation has been continued.

Analytical equipment

8.12 The OPCW Laboratory purchased a replacement GC-MS system to be used for on-site inspections, and three new GC-MS systems replaced older systems and were installed in the multipurpose training facility. Additional items to complete the multipurpose training facility were also acquired (for example, tables, benches, and an interactive display).

8.13 The OPCW Laboratory also purchased equipment to enhance its capability for handling and analysing trace level samples, such as a vacuum concentrator and liquid chromatograph.

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, consisting of

17 MS = mass spectrometry.

18 IR = infrared spectroscopy.

19 NMR = nuclear magnetic resonance spectrometry.

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

21 Number of distinct chemicals represented in the OCAD.

22 ISO = International Organisation for Standardization.

a classroom and laboratory, has been constructed within the Rijswijk facility. The laboratory is equipped with four fume hoods, four GC-MS systems, and an LC-MS[23] system (purchased in 2014). All equipment is on movable tables, enabling the space to be used for non-laboratory purposes. An adjoining space has been converted into a classroom/office, where lectures may be given.

8.15 A week-long class on advanced proficiency testing, with six external participants, marked the opening of the facility. Other training classes were held throughout the year for both internal and external participants.

[23] LC-MS = liquid chromatography-mass spectrometry.

Annex 2

LIST OF DESIGNATED OPCW LABORATORIES[24]

	State Party	Laboratory Name	Date of Designation
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.	France	DGA Maîtrise NRBC Département d'analyses chimiques	29 June 1999
5.	Germany	Bundeswehr Research Institute for Protective Technologies and NBC Protection*	29 June 1999
6.	India	VERTOX Laboratory Defence Research and Development Establishment	18 April 2006
7.	Iran (Islamic Republic of)	Defense Chemical Research Laboratory*	3 August 2011
8.	Netherlands	TNO Defence, Security and Safety	17 November 1998
9.	Republic of Korea	Chemical Analysis Laboratory CB Department, Agency for Defence Development	3 August 2011
10.	Republic of Korea	Chemical, Biological and Radiological Defence Research Institute*	4 September 2012
11.	Russian Federation	Laboratory for Chemical and Analytical Control Military Research Centre*	4 August 2000
12.	Russian Federation	Central Chemical Weapons Destruction Analytical Laboratory of the Federal State Unitary Enterprise, "State Scientific Research Institute of Organic Chemistry And Technology"	15 Apr 2015
13.	Singapore	Verification Laboratory Defence Medical and Environmental Research Institute, DSO National Laboratories*	14 April 2003
14.	Spain	Laboratorio de Verificación de Armas Químicas (LAVEMA), Instituto Tecnológico, "La Marañosa"*	16 August 2004
15.	Sweden	FOI, CBRN Defence and Security Swedish Defence Research Agency	17 November 1998
16.	Switzerland	Spiez Laboratory Swiss NBC Defence Establishment	17 November 1998
17.	United Kingdom of Great Britain and Northern Ireland	Defence Science and Technology Laboratory Chemical and Biological Systems Porton Down	29 June 1999
18.	United States of America	Edgewood Chemical/ Biological Forensic Analytical Center	17 November 1998
19.	United States of America	Lawrence Livermore National Laboratory	14 April 2003

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[24] 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.