



**Rudderless:
The Chemical Weapons Convention
At 1 ½**

Amy E. Smithson

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11 Dupont Circle, NW
Ninth Floor
Washington, DC 20036
phone 202.223.5956
fax 202.238.9604
<http://www.stimson.org>
email info@stimson.org

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INTRODUCTION

On the 29th of April 1997, the majority of the world's nations joined to activate an arms control and nonproliferation accord that will gradually compel the elimination of one of the most abhorred classes of weapons of all times. Previously, the international community had fallen short of the mark in efforts to try to abolish poison gas, despite the opprobrium following its widespread use in World War I.¹ The new Chemical Weapons Convention (CWC) extends the no use-prohibitions of the 1925 Geneva Protocol² to outlaw the development, acquisition, production, transfer, and stockpiling of chemical weapons as well.

The CWC requires the destruction of chemical weapons production facilities and arsenals over a ten-year period, and countries will witness the shrinking numbers of poison gas factories and munitions. A less tangible function of the CWC, but one that may turn out to be equally valued over the long term is that the CWC will help redefine how states assure their national security. The CWC requires nations to declare activities that were previously considered state secrets and private business information. The treaty authorizes routine and challenge inspections to monitor compliance with its prohibitions. Instead of building large caches of arms, the CWC's verification processes give governments reason to be confident that managed transparency—a limited waiver of state sovereignty—can enhance national and international security.

If countries are to accept that the CWC can successfully substitute interlocking compliance monitoring measures for reliance upon offensive military capabilities, then the CWC's verification provisions have to be stringent enough to detect and deter potential violators. The CWC's most severe verification tool, challenge inspections, was nothing short of revolutionary when the United States first

¹In April 1915, the German army initiated the age of modern chemical warfare when it released chlorine gas at Ypres along the Western front. In the early stages of World War I, poison gas was seen as an effective and versatile military asset that could break the stalemate of trench warfare. By the time the war concluded in 1918, some 113,000 tons of chemical weapons had been used on the battlefield by all the major players in the conflict. Over a million wartime casualties reportedly can be attributed to the use of chemical weapons. From a military standpoint, planners came to realize that chemical weapons would not play the decisive role in the outcome of the war. Rather, their long-term effects on troop morale and logistics proved more meaningful. Stockholm International Peace Research Institute, *The Problem of Chemical and Biological Warfare: Volume I, The Rise of CB Weapons* (Stockholm: Almqvist & Wiksell, 1971): 26–58 and 125–40. See also Valerie Adams, *Chemical Warfare, Chemical Disarmament* (Bloomington, Indiana: Indiana University Press, 1990) and Victor Utgoff, *The Challenge of Chemical Weapons: An American Perspective* (New York: St. Martin's Press, 1991).

² The 1925 Geneva Protocol, which has 145 members, prohibits the use of chemical weapons. *Arms Control and Disarmament Agreements: Texts and Histories of the Negotiations* (Washington, DC: US Arms Control and Disarmament Agency, 1996).

proposed it in 1984.³ This inspection tool remains untested today. Similarly, it remains to be seen whether the CWC can live up to its promise.

One hesitates to review any policy or program too soon after its inauguration because an accurate measure of performance and behavioral patterns can only be identified with the passage of time. Early on, it is difficult to distinguish inaugural, lack-of-experience problems from those attributable to ineffective administration, political and operational subversion of the effort, or genuine conceptual faults in the program or policy. At 18 months, however, one can begin to take measure, to identify problems and behavioral trends likely to spell success or failure.

Thus, the time has come to examine the CWC—to describe the aspects of the treaty's implementation that are going well and poorly. Indeed, there is good news to report. Already, the CWC's activation has moved a number of countries to relinquish their chemical weapons programs, an indication that the sought-after behavioral norm against the possession of chemical weapons is beginning to take hold. However, not all of the news is good. Damaging policies promoted by individual countries have been adopted by the CWC's governing bodies, which in turn has fostered poor behavior on the part of some states. This circular pattern threatens to undermine the CWC's landmark verification regime. In the pages to follow, this report dwells on some of these more negative developments because of their serious implications for the long-term integrity of the CWC.

To set the proper context for the main part of the discussion below, the next section of the report explains the CWC's verification provisions in more detail, followed by an account of the treaty's status. Briefly, the performance of the CWC's inspectorate is compared with that of the monitoring agency for the 1970 Nuclear Non-Proliferation Treaty (NPT). The next several segments of the report review several aspects of the CWC's implementation, including the performance of its governing bodies and the way that states have fulfilled their declaration and inspection obligations. The report concludes with a series of observations and recommendations. At this stage, the review shows the CWC to be a treaty under siege, surprisingly enough by some of the very nations that worked so diligently to negotiate it.

³ Then-Vice President George Bush personally traveled to Geneva to table a draft treaty text at the Conference on Disarmament. This US draft proposed the incorporation of any time, any place, no-right-of-refusal challenge inspections as the centerpiece of the CWC's verification regime. This proposal truly shocked the international community because monitoring of arms control accords at that point relied solely on national technical means (e.g., satellites, human intelligence). Even the less intrusive routine on-site inspection had yet to be conducted on a US-Soviet basis, much less in a multilateral treaty. The 1987 Intermediate-Range Nuclear Forces Treaty became the first disarmament agreement to include routine inspections, with the initial volley of inspections being exchanged between the USSR and the United States in mid-1988. For a chronicle of these events, see Joseph P. Harahan, *On-Site Inspections Under the INF Treaty* US Department of Defense, On-Site Inspection Agency (Washington, DC: US Government Printing Office, 1993). Bush's challenge inspection proposal is in United Nations, Conference on Disarmament, "Draft Text of the Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on Their Destruction," Document CD/500 (Geneva: 1984): 7–8, 10–1.

This report was compiled from the author's personal knowledge of pertinent developments, public sources, and interviews. The author has traveled to The Hague on several occasions to check on the progress of the treaty's implementation, and she gratefully acknowledges the cooperation of the Technical Secretariat in the preparation of this report. Some of the CWC's member governments may consider some of the details discussed in this report to be sensitive. The information in this report that is not documented to publicly available sources was confirmed through *multiple* interviews with individuals *outside* of the Technical Secretariat who have first-hand knowledge of the events in question. The author honors the request of these individuals to remain anonymous, but she thanks them for their candor and assistance with her research.

The Verification Provisions of the CWC

DECLARATION REQUIREMENTS

The foundation of the CWC's inspection activities is the declaration of chemical weapons capabilities and activities with so-called dual-purpose chemicals. Nations with offensive chemical weapons programs are required to declare their production, storage, and destruction facilities, which subsequently receive top monitoring priority. Defensive research programs are the other military activity to be declared. The CWC allows states to maintain research programs to ensure the integrity of defensive gear such as gas masks and detectors, but these activities are to be closely monitored since they involve work with the chemical agents listed on Schedule 1.⁴ Otherwise, these warfare agents (e.g., mustard, lewisite, soman, sarin, VX) and the capability to produce them are to be eliminated under the watchful eye of international inspectors.⁵ See Table 1 for more detail.

Table 1: The Time Frame for Chemical Weapons Destruction Under the CWC.

Percentage of Stockpile Destroyed	Year After Entry Into Force
Planning and Testing	1—2
1	3
20	5
45	7
100	10

Source: Chemical Weapons Convention, Verification Annex, Part IV (A), paragraph 17 (a).

The CWC's other declaration requirements pertain to the numerous chemicals used in ordinary commercial products—fertilizers, pesticides, flame retardants, and pharmaceuticals—that can also be diverted to manufacture poison gas. The CWC's monitoring regime therefore reaches into the private sector in a breadth and depth not previously attempted for arms control purposes.⁶ The framers of the

⁴ Chemical Weapons Convention, Article X, paragraph 2. States are allowed to produce one ton annually of chemical agents for research, medical, pharmaceutical, or protective purposes. Monitoring procedures for these activities are detailed in the CWC's Verification Annex, Part VI, Sections—through E.

⁵ Declaration requirements and destruction timetables can be found in Article III of the Chemical Weapons Convention.

⁶ The chemical industry is no stranger to inspections. In many nations, the environmental emissions and the health and safety practices of the chemical industry are heavily regulated and monitored. The CWC brings international as opposed to domestic inspectors inside the fence line of these plants for the first time. For an unvarnished reaction of chemical plant managers to the CWC's declaration and inspection requirements, see Amy E. Smithson, ed., *Implementing the Chemical Weapons Convention: Counsel from Industry*, Report no. 10 (Washington, DC: The Henry L. Stimson Center, January 1994).

CWC ranked dual-use chemicals in a hierarchy of risk to proliferation, placing the highly toxic precursors to warfare agents that are used in modest quantities for commercial purposes on Schedule 2. Chemicals that industry uses widely for commercial products are listed on Schedule 3.⁷ As noted in Table 2, the chemical industry is required to declare its activities with controlled chemicals above certain threshold quantities.

THE ROUTINE INSPECTION REGIME

Under the CWC, routine inspections are to be conducted at declared military and industry facilities in a manner that causes the least possible inconvenience to the inspected state and disturbance to the host facility.⁸ The CWC's on-site inspections are designed to acquire factual evidence to ascertain reliably that the CWC's members are engaged in legitimate commercial and defense activities, not weapons programs. The purpose of routine inspections is first and foremost to verify that the activities taking place are consistent with data declarations. While on site, the inspection team has the right to review documentation supporting the declaration, to observe visually declared areas of the facility, to interview facility personnel, and to request that photographs be taken.⁹ If the inspection team finds factual evidence inconsistent with declarations or host officials cannot sufficiently clarify other ambiguities uncovered during the course of an inspection, the inspectors are empowered to use more intrusive tools to determine whether chemical agents are being produced on site and whether controlled chemicals are being diverted for chemical agent production. The inspectors have the right of "unimpeded access" and may use equipment to collect and analyze samples.¹⁰ The inspectors can select items for inspection, but should host officials can object to any request that the inspectors make, they are to offer other access that demonstrates treaty compliance.¹¹

The frequency of routine inspections will be greatest at facilities where the twelve types of chemical warfare agents listed on the CWC's Schedule 1 are present. CWC inspectors will also routinely monitor industrial plants. The inspection thresholds for commercial facilities are also shown in Table 2. All Schedule 2 facilities will receive initial inspections, with the frequency of subsequent routine

⁷ The CWC's rules governing the declaration and monitoring of peaceful, industrial activities can be found in Article VI, and the Verification Annex, Parts VI, VII, VIII, and IX. The list of chemicals that the CWC controls can be found in the treaty's Annex on Chemicals.

⁸ Chemical Weapons Convention, Verification Annex, Part II, paragraph 40.

⁹ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 45 and 47–8.

¹⁰ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 27, 45, and 51–8.

¹¹ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 45–51.

inspections determined by the nature of the facility.¹² The inspectorate will randomly select no more than twenty Schedule 3 facilities in each country for routine inspection every year.¹³ According to the CWC, no Schedule 2 or 3 commercial facility can receive more than two routine inspections annually, although inspections may be less frequent.¹⁴

Table 2: Thresholds for Annual Data Declarations and Routine Inspections

Type of Facility	Type of Activity to be Reported for Previous Calendar Year and Anticipated for Next Calendar Year	Annual Production Threshold for Reporting	Threshold for Inspections
Schedule 1	Production, processing, consumption, acquisition, import and export data	100g	100g
Schedule 2	Production, processing, consumption, import and export data	1kg benzilate 100kg (Amiton, PFIB) 1 metric ton for other Schedule 2 chemicals	10 kg benzilate 1 metric ton (Amiton, PFIB) 10 metric tons for other Schedule 2 chemicals
Schedule 3	Production, import and export data	30 metric tons	200 metric tons
Other chemical production facilities	Production data for previous calendar year only	30 metric tons for discrete organic chemicals containing phosphorus, sulfur, or fluorine	200 metric tons

Source: Chemical Weapons Convention, Verification Annex, Part VI, paragraphs 10—1, 28; Part VII, paragraphs 3 and 12; Part VIII, paragraphs 3 and 12; Part IX, paragraphs 1 and 9.

Given the huge number of commercial chemical plants worldwide, the CWC's inspectors will be unable to check frequently upon every facility capable of making chemical weapons. To do so would require extensive resources to mount an overwhelming number of routine inspections. Rather, the CWC's strategy is to place inspectors routinely at the facilities with the highest proliferation risk and randomly at other industry sites. The CWC's challenge inspection provisions are designed to buttress this routine inspection strategy.

¹² Chemical Weapons Convention, Verification Annex, Part VII, paragraphs 12, 16, 19, and 20.

¹³ Chemical Weapons Convention, Verification Annex, Part VIII, paragraph 16.

¹⁴ Chemical Weapons Convention, Verification Annex, Part VII, paragraph 22, and Part VIII, paragraph 15.

THE CWC'S CHALLENGE INSPECTION AND SAMPLING PROVISIONS

The purpose of challenge inspections is to enable inspectors to ferret out suspected covert chemical weapons activities at non-declared or declared facilities. All countries that ratify or accede to the CWC are under a legally binding obligation to accept challenge inspections: Each participating state “shall permit the Technical Secretariat to conduct [an] on-site challenge inspection” “anywhere without delay” at “any facility or location in [its] territory or in any other place under [its] jurisdiction or control.”¹⁵ The CWC directs governments not to abuse the right to request challenge inspections and lays out the penalties for any state launching a frivolous inspection.¹⁶

Challenge inspections are to be conducted under a strict time line, shown in Figure 1. During the inspection, the challenged state has the right to protect sensitive or proprietary information.¹⁷ Using “managed access” procedures, host officials can log off computers, shroud sensitive equipment and stores of goods, and restrict the amount of access that inspectors are given in particularly sensitive areas.¹⁸ The treaty stipulates, however, that each country has “the right and the obligation to make every reasonable effort to demonstrate its compliance with the Convention and, to this end, to enable the inspection team to fulfill its mandate.”¹⁹ Thus, the CWC balances the need to give inspectors enough access to determine whether a challenged site is engaged in prohibited activity against the need to enable the facility under inspection to safeguard legitimate government and commercial proprietary information and materials that are unrelated to the CWC.

Should the inspectors uncover ambiguities during a challenge inspection, they may turn to sampling, which will seldom be employed in a routine inspection context. When this potent inspection tool is employed, the CWC gives host officials the right to approve how and where any sample is collected, allowing sensitive, proprietary information to be safeguarded.²⁰ The CWC’s inspectors will carry approved portable equipment to take samples, prepare them for analysis, and process and analyze them.

¹⁵ Chemical Weapons Convention, Article IX, paragraphs 8 and 10.

¹⁶ Chemical Weapons Convention, Article XI, paragraphs 9, 22, and 23.

¹⁷ Chemical Weapons Convention, Verification Annex, Part X, paragraphs 38–57.

¹⁸ Chemical Weapons Convention, Verification Annex, Part X, paragraph 48.

¹⁹ Chemical Weapons Convention, Article IX, paragraph 11(a). See also, Verification Annex, Part X, paragraphs 49–52. Note that the Pentagon, the intelligence community, and the US chemical industry thoroughly vetted and approved the CWC’s managed access procedures prior to US signature and ratification of the treaty.

²⁰ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 52–8.

Figure 1

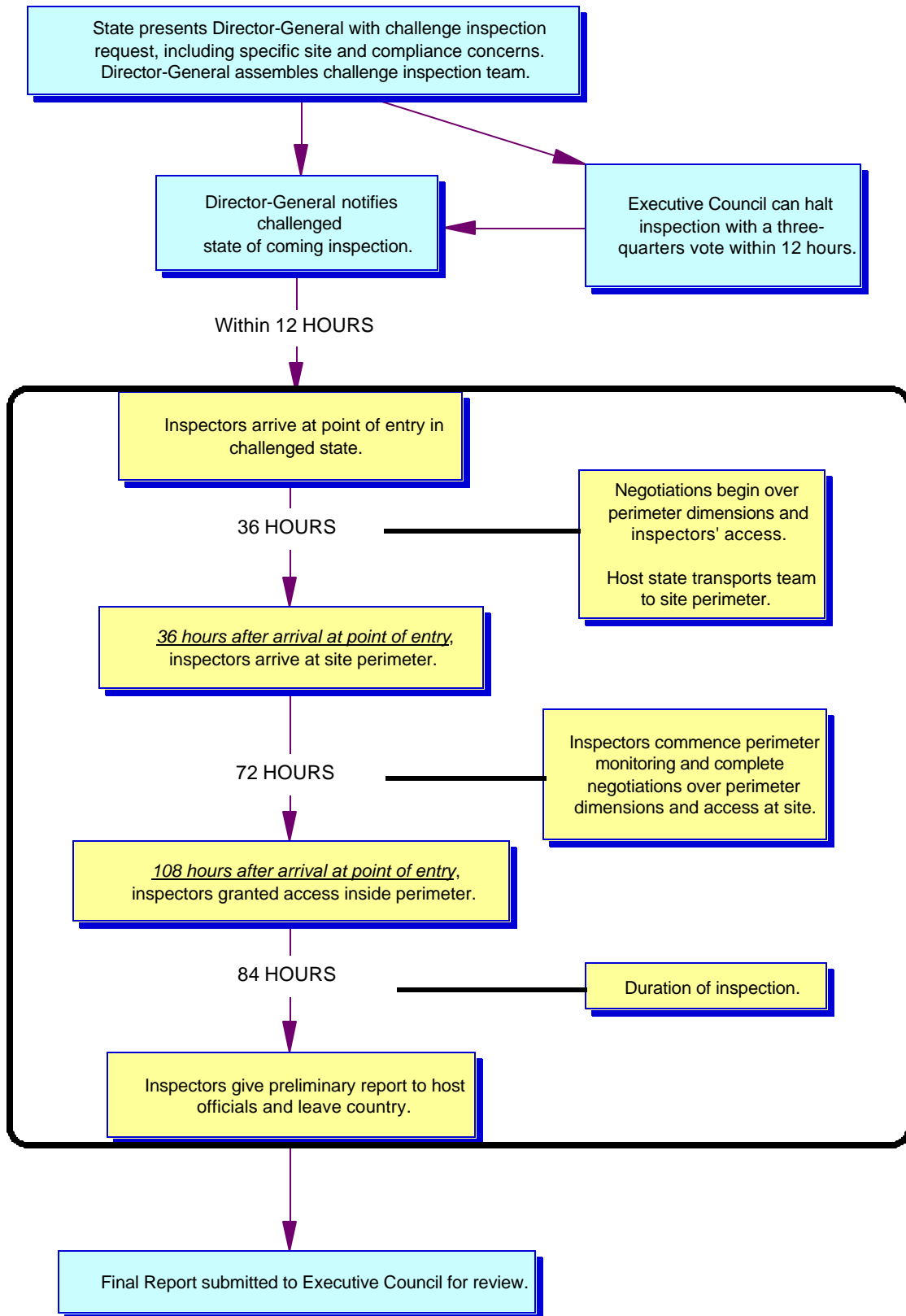


Figure 2 illustrates the series of steps that would unfold should sampling be required during an inspection. If ambiguities remain after on-site analysis, the inspectors have the right to forward the sample to the Technical Secretariat's designated laboratories for thorough structural analysis that can actually identify the chemical(s) in the sample.²¹ The Technical Secretariat certifies laboratories through a series of proficiency tests. The only US laboratory that the Technical Secretariat is likely to certify is the Army's laboratory at Aberdeen, Maryland. A sample sent for off-site analysis will be divided in the presence of host officials—one quarter of the sample will be retained by the inspected state and the other three quarters will be taken under strict chain of custody to the Technical Secretariat's laboratory in The Hague. The Technical Secretariat will divide the sample, pair it with other reference samples, and code or "blind" the entire group of chemical samples before sending them to certified laboratories for analysis. The Technical Secretariat will routinely send its designated laboratories various types of samples to test their performance. All samples are blind, so a designated laboratory has no way of knowing whether it has received a real inspection sample or a test. Access to a sample from an actual inspection will be highly protected. Only a very few specifically selected people in the Technical Secretariat's laboratory—individuals that have received previous clearance by the inspected country—will know the origin of a sample. Also, the results of the analysis will not be contained in any of the Technical Secretariat's reports if the inspected state deems those results to be highly confidential. These procedures are designed to shield sensitive national security or business data while allowing for thorough and effective compliance monitoring.

THE CWC'S MONITORING AGENCY AND GOVERNING BODIES

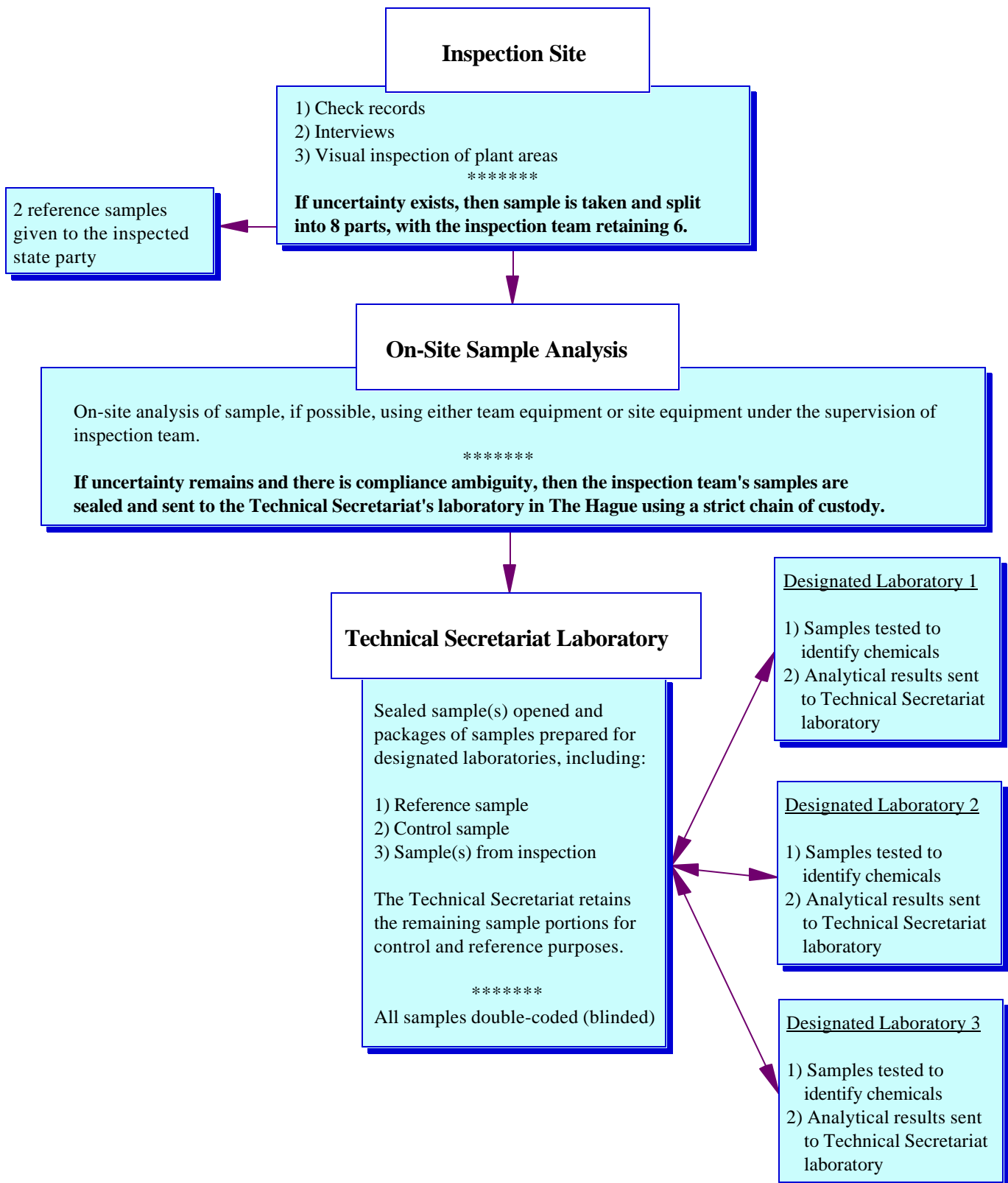
In the past, some states have delayed and hindered teams attempting to monitor compliance with other arms control regimes.²² Among the obstructive tactics wielded are delays in issuing inspectors' visas and granting permission for aircraft to enter domestic airspace. Little doubt can exist that the CWC's architects intended the treaty's inspectors to be able to carry out their tasks without undue interference. First, the CWC requires states to provide such clearances in advance making it more difficult for nations to put obstacles in the path of inspection teams. Furthermore, the CWC's inspectors, their equipment, their documents, and samples are entitled to the privileges and full immunities of diplomats, as guaranteed under the Vienna Convention.²³ The placement of these provisions on

²¹ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 54–7.

²² For a synopsis of the trials and tribulations that inspectors from the International Atomic Energy Agency (IAEA) have experienced while trying to execute safeguards inspections, see David S. Gualtieri, et al., "Advancing the Law of Weapons Control—Comparative Approaches to Strengthen Nuclear Non-Proliferation," *Michigan Journal of International Law* 16, no. 4 (Summer 1995): 1073–5.

²³ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 11(a), (c), and (d).

Figure 2



inspectors' privileges and immunities at the beginning of the general provisions in the CWC's Verification Annex indicates that such immunities are *conditio sine qua non* for adequate verification under the CWC.²⁴ So strongly and clearly are these immunities articulated in the CWC that they have become the new standard that is being duplicated in other treaties.²⁵

The CWC's implementing infrastructure, the Organization for the Prohibition of Chemical Weapons, has three arms. The inspectorate, called the Technical Secretariat, is located in The Hague, the Netherlands. Among other tasks, the inspectorate is charged with carrying out the CWC's monitoring requirements, including analyzing declarations, conducting inspections, and reporting the results to the CWC's governing bodies.²⁶ A 41-member Executive Council oversees the implementation of the CWC, examining proposed destruction plans, conversion requests, and agreements governing inspections at high proliferation-risk facilities.²⁷ The Executive Council weighs a variety of policy issues, but perhaps this body's best-known responsibility is its role in challenge inspections. A three-quarters vote of the Executive Council can block a challenge inspection.²⁸ All of the CWC's members will gather annually as the Conference of States Parties to evaluate the effectiveness with which the CWC is being implemented. The Conference of States Parties will give final approval to decisions made provisionally by the Executive Council and can take action to amend the treaty, as necessary.²⁹

²⁴ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 10–5.

²⁵ “The CWC enumerates six privileges and immunities pursuant to the Vienna Convention on Diplomatic Relations and two additional privileges not contained in the Vienna Convention.” Gualtieri, et al., “Advancing the Law of Weapons Control,” 1076–7. The 1996 Comprehensive Nuclear Test Ban Treaty replicates the CWC's provisions on privileges and immunities word for word in its Protocol, Part II(B), paragraph 27, subparagraphs a to i, paragraphs 28–31. The IAEA is also striving to increase the rights of its inspectors, using the CWC as the model.

²⁶ Chemical Weapons Convention, Article VIII, Section D.

²⁷ Chemical Weapons Convention, Article VIII, paragraphs 30–1.

²⁸ Chemical Weapons Convention, Article IX, paragraph 17.

²⁹ Article XV of the CWC outlines the procedures for amending the treaty. Major substantive changes to the treaty raised by member states are to be considered by an Amendment Conference, convened only if at least one-third of the states support the proposed change. Ratification of the amendment would occur if a simple majority of the Amendment Conference voted in favor and no participating state raised objections. The Executive Council has the authority to make technical changes to the CWC's annexes by unanimous vote. In addition, the Conference of States Parties can approve technical changes over the objection of the Executive Council by a two-thirds vote.

A CWC Update and Comparative Analysis

THE STATUS OF THE CWC

When CWC entered into force, more than 20 countries were thought to possess offensive chemical weapons capabilities. The countries designated as being of proliferation concern in the 1990s are: China, Egypt, India, Iran, Iraq, Israel, Libya, Myanmar, North Korea, Pakistan, Russia, South Korea, Syria, Taiwan, and Vietnam.³⁰ Several of these states have joined the CWC, namely China, India, Iran, Pakistan, Russia, and South Korea. Of these countries, Iran has yet to make a declaration and Pakistan's declaration reportedly contains no mention of its suspected chemical weapons capability.³¹ Table 3 shows the number and type of facilities that have been declared and inspected to date. As of 10 September 1998, the Technical Secretariat had received declarations from 82 of 117 CWC members and had completed over 200 inspection missions in 27 countries. A few sites in the United States are being monitored continuously.

Like Pakistan, China and India are among several states that adamantly disclaimed a chemical weapons capability before joining the CWC. India and China, however, have opened their chemical weapons programs to the scrutiny of inspectors since the CWC's activation. The treaty differentiates between two different types of offensive capabilities—poison gas arsenals and production facilities. India and South Korea have declared both chemical weapons plants and stockpiles. The other two countries to make dual declarations were the United States and Russia, which were known chemical weapons possessors before the CWC entered into force. Russia has the world's largest arsenal, the United States the second largest. Seven states—China, France, India, Japan,³² Russia, the United Kingdom, and the United States—declared former chemical weapons production facilities. Teams from the Technical

³⁰ US Department of Defense, *Proliferation: Threat and Response* (Washington, DC: US Government Printing Office, 1997); US Arms Control and Disarmament Agency, *Threat Control Through Arms Control, Report to Congress 1994* (Washington, DC: Arms Control and Disarmament Agency, 13 July 1995); US House of Representatives, Committee on Armed Services, *Countering the Chemical and Biological Threat in the Post-Soviet Era*, 102d Cong., 2d sess., H. Rpt. 102-15 (Washington, DC: US Government Printing Office, 1993); Office of Technology Assessment, *Proliferation of Weapons of Mass Destruction: Assessing the Risks*, US Congress OTA-IFC-559 (Washington, DC: US Government Printing Office, 1993).

³¹ "Pakistan claimed in October last year that it never possessed or produced such weapons while depositing the instrument of ratification" for the CWC. "Pak. Clarification on Chemical Weapons Pact," *The Hindu*, 14 April 1998. Iran recently informed the Technical Secretariat that it would soon make its declaration. "Statement by the Director-General: Opening Statement to the Eleventh Session of the Executive Council," Document EC-XI/DG.18 (The Hague: Organization for the Prohibition of Chemical Weapons, 1 September 1998).

³² Note that the production facility declared by Japan was Satyam 7, located at Kamikuishiki, formerly used by the religious cult Aum Shinrikyo, which released the nerve gas sarin on subway commuter trains in Tokyo on 20 March 1995. This terrorist attack killed a dozen and injured over 5,500. For more on Aum Shinrikyo's efforts to acquire and use chemical and biological weapons, see *Global Proliferation of Weapons of Mass Destruction*, Hearings before the Permanent Subcommittee on Investigations, US Senate Committee on Governmental Affairs, 104th Cong., 1st sess., Part I, S.Hrg. 104-422 (Washington, DC: US Government Printing Office, 1996); and William J. Broad, "When a Cult Turns to Germ Warfare," *New York Times*, 26 May 1998, A1.

Secretariat have completed initial inspection of all of the declared weapons-related facilities in these countries. Some of these facilities are already beginning to receive subsequent routine inspections.

Table 3: CWC Declaration and Inspection Activities from 29 April 1997 to 10 September 1998

Type of Facility	Declaration Activities	Inspection Missions Completed
Chemical weapons production facilities	58	69*
Chemical weapons storage facilities	34	53*
Chemical weapons destruction facilities	7	7 **
Schedule 1 facilities (single, small-scale production, research, and industrial)	23	29*
Schedule 2 industrial facilities	258 (109)***	50
Schedule 3 industrial facilities	395 (325)***	1****

Source: Technical Secretariat.

* Initial inspections have been completed at all declared facilities. Some facilities have received more than one inspection.

** Once destruction facilities are operating, inspectors are on-site continuously.

*** Number in parentheses represents the number of facilities that meet the threshold for inspections.

**** The first Schedule 3 facility inspection concluded early in September 1998.

At first, this tally of states declaring chemical weapons capabilities might appear rather modest. However, one needs to consider that several states are believed to have destroyed their chemical arsenals and production facilities quietly in preparation for the CWC's entry into force.³³ Thus, the full thrust of the CWC's budding behavioral norm should take into account the bow wave effect—the elimination of chemical weapons programs shortly before a country joins the treaty—as well as the disarmament that occurs directly under the Technical Secretariat's supervision.

The United States, which had the only operational chemical weapons destruction program when the CWC was activated, has received the most CWC inspections. The US declaration listed ten storage facilities, seven former production facilities, and six destruction sites.³⁴ Of the seven former US

³³ France and China, for example, are thought to have taken this course. Experts in the field also believe that Iran may be delaying its declaration until destruction of its stockpile of weapons is complete. The Technical Secretariat's teams will automatically go to declared sites to confirm that destruction has occurred, but it will be up to the CWC's members to challenge the declarations of the states that have taken this route if they have information that indicates not all of a country's capabilities were eliminated.

³⁴ The US chemical weapons storage facilities are: Blue Grass Chemical Activity, Kentucky; Dugway Proving Ground, Utah; Umatilla Chemical Depot, Oregon; Pueblo Chemical Depot, Colorado; Newport Chemical Depot, Indiana; Deseret Chemical Depot, Utah; Edgewood Chemical Activity, Aberdeen Proving Ground, Maryland; US Army, Chemical Activity, Pacific Command, Johnston Atoll; Pine Bluff Chemical Activity, Arkansas; and Anniston Army Depot, Alabama. Former US

production facilities, two have already been destroyed, and the destruction of three others has begun.³⁵ The former chemical weapons production facility in Van Nuys, California, was converted into a recording studio.³⁶ The Technical Secretariat is continuously monitoring the destruction of US chemical weapons stockpile at three locations—Johnston Atoll in the Pacific Ocean, Tooele, Utah, and Hawthorne, Nevada.³⁷ Inspectors are required to be present continuously as chemical weapons are being destroyed, which explains the high number of inspections being conducted on US soil. Since destruction operations began on Johnston Atoll in mid-1991, over 11 percent of the US stockpile has been eliminated.³⁸

production facilities are: Pine Bluff Chemical Activity, Arkansas; Rocky Mountain Arsenal, Colorado; Phosphate Development Works, Muscle Shoals, Alabama; Northrop Carolina Corporation Facility, Swannanoa, North Carolina; Newport Chemical Depot, Indiana; Aberdeen Proving Ground, Maryland; and Marquardt Corporation, Van Nuys, California. The US chemical weapons destruction facilities are: Johnston Atoll Chemical Agent Disposal System, Johnston Atoll; Tooele Chemical Agent Disposal Facility, Utah; and Hawthorne Army Depot, Nevada; Chemical Agent Transfer Facility, Aberdeen Proving Ground, Maryland; Chemical Agent Munitions Disposal System, Tooele, Utah; and Pine Bluff Arsenal, Arkansas. Information provided by the US On-Site Inspection Agency, Office of Public Affairs.

³⁵ The support buildings for the pilot production plant at Aberdeen, Maryland, have been destroyed. In mid-August, destruction of a former VX nerve agent production facility began at Newport, Indiana. Over 60 percent of the BZ filling facility at Pine Bluff, Arkansas, has been destroyed. The Phosphate Development Works at Muscle Shoals, Alabama, was destroyed prior to the CWC's entry into force. The Technical Secretariat sent an inspection team to that location to confirm this fact. Col. Edmund Libby, Project Manager, Non-Stockpile Chemical Materiel Program, provided the author information on the status of these destruction efforts in a telephone interview on 8 September 1998.

³⁶ Members can request the approval of the CWC's governing bodies of plans to convert weapons production facilities to peaceful purposes. A converted facility must not engage in activities with Schedule 1 or 2 chemicals. Chemical Weapons Convention, Verification Annex, Part V, paragraphs 64–86. The only other conversion that the Executive Council has approved has taken place is in the United Kingdom, where a former production plant was turned into a gymnasium. “Decision: Request from the United States of America for Conversion of Chemical Weapons Production Facility for Purposes Not Prohibited Under the Convention,” Document C-II/DEC.15 (The Hague: Organization for the Prohibition of Chemical Weapons, 5 December 1997); “Decision: Request from the United Kingdom of Great Britain and Northern Ireland for Conversion of Chemical Weapons Production Facility for Purposes Not Prohibited Under the Convention,” Document C-II/DEC.16 (The Hague: Organization for the Prohibition of Chemical Weapons, 5 December 1997); “Seventh Session of the Executive Council of the OPCW Concludes in The Hague,” Press Release no. 031 (The Hague: Organization for the Prohibition of Chemical Weapons, 21 November 1997); “Conference of States Parties Closes Its Second Session by Approving Its 1998 Budget,” Press Release no. 036 (The Hague, Organization for the Prohibition of Chemical Weapons, 8 December 1997).

³⁷ At Johnston Atoll and Tooele, high-tech incinerators are eliminating the unitary munitions of the US stockpile. The isopropyl alcohol component of over 200,000 M-687 binary munitions are being disassembled at Hawthorne, and this material is being shipped to a local commercial hazardous waste incinerator. This task, according to Col. Edmund Libby, Project Manager of the Non-Stockpile Chemical Materiel Program, is more than 50 percent completed. The other component of the binary munitions, a chemical known as DF, is stored at Pine Bluff and is slated for destruction later. Telephone interview with the author, 8 September 1998. Periodic destruction campaigns lasting for several weeks have also occurred at Pine Bluff Arsenal, in Arkansas, the Chemical Transfer Facility in Aberdeen, and the Chemical Agent Munitions Disposal System at Tooele. For more information on US destruction operations at Johnston Atoll and Tooele, see the web site for the Program Manager for Chemical Demilitarization at: www.pmcda.apgea.army.mil/. See also National Research Council, *Evaluation of the Johnston Atoll Chemical Disposal System Operational Verification Testing: Part II* (Washington, DC: National Academy Press, 1994); National Research Council, *Review and Evaluation of Alternative Chemical Disposal Technologies* (Washington, DC: National Academy Press, 1996); and National Research Council, *Review of Systemization of the Tooele Chemical Agent Disposal* (Washington, DC: National Academy Press, 1996).

³⁸ As of 9 September 1998, 11.69 percent of the US stockpile had been destroyed. Telephone interview with Greg Mahall, Office of the Program Manager for Chemical Demilitarization, 9 September 1998.

Russia has declared 24 former chemical weapons production facilities, seven storage sites, and, if Moscow's submission is consistent with past declarations, some 40,000 metric tons of chemical agents.³⁹ The Technical Secretariat has completed initial inspections at these locations, but the financial crisis in Russia has stymied efforts to get a destruction program underway. Nerve agents comprise 81 percent of Russia's stockpile, which Moscow proposes to destroy its chemical weapons with a two-step process—neutralization followed by bituminization.⁴⁰ However, Russia has stated that it will need outside funds to move forward with its destruction program. The United States and several European countries have offered financial and technical assistance, but larger sums will be needed before much headway can be made in destroying Russia's mammoth stockpile.⁴¹ Experts expect that Russia will be unable to meet the CWC's ten-year destruction deadline and will have to ask the Executive Council for more time. The CWC allows an extension of up to five years, but the Executive Council may impose additional verification requirements.⁴²

States that declare chemical weapons stockpiles are required to file their destruction plans with the Technical Secretariat so that they can be approved and the inspectorate can assign the needed resources to monitor the elimination process strategies. Little is publicly known, however, about the plans of India and South Korea. However, late in May 1998 Prime Minister Shri Atal Bihari Vajpayee

³⁹ The Soviet Union declared a stockpile of this size under the terms of the 1989 Wyoming Memorandum of Understanding, a confidence-building arrangement wherein the superpowers would engage in two phases of data exchanges and trial inspections. See "Fact Sheet: US-Soviet Memorandum of Understanding on Chemical Weapons" (Washington, DC: White House, 23 September 1989). On 29 December 1989, Washington and Moscow exchanged data on their aggregate stockpile size; the types of agents in their stockpiles; the percent of chemical agents in munitions, devices, or bulk containers; the location of storage, production, and destruction facilities; and the types of agent and munitions at each storage facility. This data exchange was followed by reciprocal visits to two production facilities, three storage sites, and two industrial chemical facilities. Phase II of the data exchanges and trial inspections did not occur until 1994, at which time both sides voiced concerns about the completeness and accuracy of the data provided.

⁴⁰ In layman's terms, neutralization is a process whereby a chemical or other material is inserted into the agent to dilute its potency significantly. Russia proposes to use monoethanolamine to neutralize sarin and soman; potassium isobutylate to neutralize VX. Bituminization further dilutes the toxicity of the resulting waste product by mixing it with asphalt and calcium oxide hydrate. This two-step process produces insoluble salts, which will probably be stored indefinitely. Amy E. Smithson and Maureen Lenihan, "The Destruction of Weapons Under the Chemical Weapons Convention," *Science & Global Security* 6 (1996), 93. For more detail on Russia's destruction plans, see the forthcoming "scorpion" series volume on this topic from the Stockholm International Peace Research Institute.

⁴¹ From 1992 to 1998, the United States set aside over \$170 million in Cooperative Threat Reduction Program funds to aid Russia's chemical weapons destruction program. The goals of US assistance are to help with the safe, secure, timely, cost effective, and environmentally sound destruction of Russia's chemical weapons stockpile, with priority given to the destruction of nerve-agent filled munitions. Most of the US funds have been earmarked for building a pilot destruction facility at Shchuche, where 13.6 percent of the Russian stockpile is stored, namely artillery munitions containing the nerve agents VX, sarin, and soman. The European Union and several individual European nations have also been providing aid to Russia. The European assistance has been centered on helping to destroy Russia's stocks of mustard and lewisite, which are located at Gorky and Kambarka. "Duma Puts CWC on Fall Legislative Agenda," *The CBW Chronicle* vol. II, issue 3 (October 1997).

⁴² Chemical Weapons Convention, Verification Annex, Part IV(A), paragraphs 24–6.

publicly stated that India would soon submit its destruction plans to the Technical Secretariat.⁴³ The CWC does not stipulate what technology a state must use to destroy its arms, only that it must be irreversible and safe for humans and the environment.⁴⁴ Given the expense and public sensitivity associated with chemical weapons destruction, even the most technically advanced and wealthy countries can have difficulty mounting a destruction program. After over a decade of research, technology testing, and regulatory approval, the US destruction program has finally begun to make some significant progress. The concerns of communities near chemical weapons storage sites about having poison gas stocks destroyed in their neighborhoods are causing governments to move forward with some caution.

Although the opening spurt of inspections focused on chemical weapons-related sites, the Technical Secretariat started monitoring Schedule 1 facilities in July 1997. The first inspections in the private sector transpired in November 1997. As planned, the inspectors initially concentrated their efforts on the higher-risk Schedule 2 sites, but in August 1998 the Technical Secretariat enlarged its monitoring sweep to Schedule 3 facilities. That month, the first inspection of a Schedule 3 commercial plant began. As of 10 September 1998, some 52 inspections had been completed at commercial plants in 18 countries.⁴⁵

The difficulty of getting destruction programs underway aside, another obvious shortcoming in the CWC's implementation is that the treaty is not universal. At the 18-month benchmark, over 115 countries had joined the CWC. Table 4 lists the CWC's members in alphabetized list order. More than 50 additional countries have signed the CWC but have yet to ratify it. A number of suspected proliferators have not enlisted, including Egypt, Iraq, Israel, Libya, Myanmar, North Korea, Syria, and Vietnam. The CWC does not assume that all nations will enroll promptly in the treaty. Therefore, CWC members are allowed to maintain their defenses and holdout states will feel the brunt of the treaty's automatic economic penalties. Absentee states will be cut off from supplies of chemical weapons precursors because all CWC members are required to enact export controls precluding such trade with them.⁴⁶ Aside from damaging the economies and standards of living in these holdout countries, the penalties will make it more difficult for them to sustain chemical weapons programs.

⁴³ "Paper Laid on the Table of the House on Evolution of India's Nuclear Policy," Submitted to Parliament by Shri Atal Bihari Vajpayee, Prime Minister of India, 27 May 1998.

⁴⁴ Chemical Weapons Convention, Article V, paragraph 11.

⁴⁵ These inspections occurred at Schedule 2 and Schedule 3 industrial facilities. Information provided by the Technical Secretariat in a telephone interview, 11 September 1998.

⁴⁶ Countries opting to remain outside the CWC regime will be denied access to Schedule 2 chemicals beginning in May 2000, three years after the CWC entered into force. During the interim period, states that have not joined are required to produce end-use certificates that assure treaty members of the intended legitimate use of the chemicals. Chemical Weapons Convention, Verification Annex, Part VII, paragraphs 31-2. Regarding transfers of Schedule 3 chemicals to non-member states, such exchanges are currently permitted under the treaty, provided that end-use certificates are produced. In the year 2002, the

COMPARISONS WITH THE NUCLEAR NON-PROLIFERATION TREATY AND ITS INSPECTION AGENCY

With this review of the CWC's status in mind, the progress made under the CWC can be compared to the status of another nonproliferation treaty, the Nuclear Non-Proliferation Treaty (NPT), after a similar period of time.⁴⁷ Opened for signature in 1968, the NPT divided the world into two distinct groups: states that possessed nuclear weapons and states that did not. The NPT framework calls for non-nuclear weapons states to refrain from manufacturing or receiving nuclear devices. The NPT permits the exchange of only peaceful nuclear technologies among its members. Countries that openly admitted their nuclear weapons status in 1968 were China, France, the Soviet Union, the United Kingdom, and the United States. At 18 months, the NPT had 70 members.⁴⁸

Some 185 states now adhere to the NPT, but two of the five known nuclear weapons possessors, China and France, did not join the NPT until March and August of 1992, respectively. The NPT was nonetheless viewed as an effective nonproliferation regime.⁴⁹ India and Pakistan, which conducted nuclear tests in May 1998, both refuse to join the NPT.⁵⁰ Another suspected nuclear weapons possessor, Israel, has also shunned the NPT. On the other hand, Argentina, Brazil, and South Africa have all abandoned their nuclear programs and opened them to the inspectors of the International Atomic Energy Agency (IAEA).⁵¹

When the IAEA was created in 1957, its principal job was to provide countries with assistance in the peaceful uses of the atom. As part of the NPT regime, the IAEA was tasked with conducting safeguards inspections to monitor the uses of nuclear technology in NPT member states. The IAEA has

Conference of States Parties will decide whether trade of Schedule 3 chemicals to non-member states should also be prohibited. Chemical Weapons Convention, Verification Annex, Part VIII, paragraphs 26–7.

⁴⁷ The third treaty to ban a class of weapons of mass destruction, the 1972 Biological and Toxin Weapons Convention, lacks verification procedures and is therefore ill suited for comparative purposes. Negotiations are underway in the Conference of Disarmament to strengthen this treaty by adding a verification protocol that may contain monitoring provisions patterned after those in the CWC.

⁴⁸ The NPT entered into force on 5 March 1970. The 18-month benchmark is thus 5 September 1971.

⁴⁹ For example, Kathleen Bailey deems the NPT regime absent the participation of China and France an arms control success in "Rushing to Build Missiles," *Washington Post*, 6 April 1990.

⁵⁰ John F. Burns, "India Sets 3 Nuclear Blasts, Defying a Worldwide Ban; Tests Bring a Sharp Outcry," *New York Times*, 12 May 1998; John F. Burns, "Nuclear Anxiety: the Overview; India Detonated a Hydrogen Bomb, Experts Confirm," *New York Times*, 18 May 1998; and John Kifner, "Nuclear Anxiety: the Overview; Pakistan Sets off Atom Test Again, but Urges Peace," *New York Times*, 31 May 1998.

⁵¹ See relevant sections in Rodney W. Jones and Mark G. McDonough, *Tracking Nuclear Proliferation: A Guide in Maps and Charts*, 1998 (Washington, DC: Carnegie Endowment for International Peace, 1998): 223–52.

approximately 200 inspectors, and they conduct an average of 2,500 inspections annually at some 1,000 locations worldwide. By comparison, during its first year the Technical Secretariat's inspector corps of about 130 individuals completed just over 200 inspections in the CWC's first year.⁵² These numbers may look disparate, but in general the Technical Secretariat's inspection teams are larger and they spend a longer amount of time at inspection sites than do their IAEA counterparts. Also, the IAEA's inspectors do not spend nearly as much time in the field as the CWC's inspectors. Table 5 compares the two agencies side-by-side, showing, among other factors, the number of days that each organization expects its inspectors days to spend in the field and the days they actually spent on site.

A comparison of the budgets of the two organizations for 1998 shows the IAEA's total budget to be \$221,992,000 and the Technical Secretariat's at \$72,203,590.⁵³ More specifically, the inspection activities of the Technical Secretariat are expected to cost \$42,732,667,⁵⁴ the IAEA's monitoring activities approximately \$78,585,000.⁵⁵ The IAEA's 1998 expenditures on technical cooperation and assistance is targeted to total \$71,500,000.⁵⁶ The Technical Secretariat, which has far more modest programming in that regard, spent \$2,562,260 on such activities.⁵⁷

⁵² CWC inspections began a month after the treaty entered into force on 29 April 1997. This tally is cumulative from the onset of inspections on 1 June 1997 until 25 May 1998. An additional 6 inspections were underway late in May 1998. Information on inspection totals provided by the Technical Secretariat, telephone interview with the author, 10 September 1998. In July of 1998, the Technical Secretariat hired seventy more inspectors, raising the total number of inspectors to 206. "Exponential Increase in OPCW Inspector Strength," Press Release no. 014/98 (The Hague: Organization for the Prohibition of Chemical Weapons, 6 July 1998).

⁵³ Technical Secretariat budget figures have been converted from Dutch guilders using an exchange rate of NLG 1.95 to the US dollar. Total IAEA expenditures will likely run closer to \$300,000,000 for 1998. The \$221 million amount does not include the nearly \$73 million targeted program budget for technical cooperation and assistance. Nor does the \$221 million amount account for an additional \$18 million voluntarily contributed by member countries for safeguards activities on top of the safeguards sum built into the overall budget.

⁵⁴ "Organization for the Prohibition of Chemical Weapons: Programme and Budget 1999," Document C-III/DEC/CRP.1 (The Hague: Organization for the Prohibition of Chemical Weapons, 7 August 1998): 1.

⁵⁵ "The Agency's Budget for 1998," General Conference, 41st regular session, Document GC(41) (Vienna: International Atomic Energy Agency, 10 August 1997).

⁵⁶ International Atomic Energy Agency, *Annual Report 1997* (Vienna: International Atomic Energy Agency, 1997): Annex, 71.

⁵⁷ The Technical Secretariat engages in basically two types of technical cooperation and assistance—programs aimed directly at improving members' adherence to their CWC obligations (e.g., training courses for national authorities and preparation of declarations) and programs that foster the exchange of scientific information, equipment, and technology for peaceful uses of chemistry (e.g., support for laboratories that may seek certification by the Technical Secretariat). In the future, the Technical Secretariat may also help with mock inspections and technical expertise related to destruction technologies. Dr. John Gee, Deputy Director-General, Technical Secretariat, "Implementing the CWC: Experiences After One Year of Entry into Force," speech to the Friedrich Ebert Foundation (Bonn: 7 May 1998): 9–10.

Although the IAEA has nearly 30 years of safeguards inspection experience, the Technical Secretariat performed quite efficiently and well during its first year of operations. In an effort to strengthen its role and the rights of its inspectors, the IAEA has turned, interestingly enough, to the CWC as a model. In the aftermath of the 1991 Gulf War, the IAEA's inspectors, working under the more powerful mandate of the United Nations cease-fire conditions, found undeclared nuclear material in Iraq.⁵⁸ When the IAEA also encountered difficulties verifying the completeness and correctness of North Korea's initial declaration under the NPT, proposals were made to improve the IAEA's powers to inspect undeclared sites, using the CWC as a model.⁵⁹ In May 1997, the IAEA's Board of Governors took what the agency described as a "major milestone" toward providing "the legal basis necessary to enhance the Agency's ability to detect undeclared nuclear material and activities."⁶⁰

Table 5: Comparison of IAEA and Technical Secretariat Inspection Activities in 1997

	IAEA	Technical Secretariat
Number of inspectors	200	126*
Number of countries subject to inspections	70	25
Number of sites inspected	Approximately 1,000	168
Person-days of inspection per year	10,240	Approximately 15,000
Average duration of inspection	3 days with 2–3 inspectors**	5 days with 6–8 inspectors
Number of inspections per year	2,500	204***
Average number of days in the field annually per inspector	Approximately 50	Approximately 120
Total cost of inspections	\$78 million	\$42 million

Sources: IAEA *Annual Report 1997*; IAEA Press Office, Vienna, Austria; Technical Secretariat.

* The Technical Secretariat hired an additional 70 inspectors and 10 inspector assistants in July 1998.

**Inspections range from a one-day visit by a single inspector to a week-long visit by as many as six inspectors.

*** This number does not take into consideration the permanent presence of 6–12 inspectors at US destruction facilities. In the first year, over 70 percent of the inspectorate's resources were on the ground continuously at four sites in the United States.

⁵⁸ R. Jeffrey Smith, "Iraq Withholding Location of Nuclear Material," *Washington Post*, 1 May 1991.

⁵⁹ For more in depth examinations of the relations between North Korea and the IAEA, see Michael J. Mazarr, *North Korea and the Bomb: A Case Study in Nonproliferation*. (New York: St. Martin's Press, 1995) and Leon V. Sigal, *Disarming Strangers: Nuclear Diplomacy with North Korea*, (Princeton: Princeton University Press, 1998).

⁶⁰ IAEA, *Annual Report*, 49. See also, Gualtieri et al., 1098–1111.

A More Detailed Examination of the CWC's Status

THE CONFERENCE OF STATES PARTIES: TILTING THE BALANCE⁶¹

For four years preceding the CWC's entry into force, the treaty's signatories met in a decision-making forum known as the PrepCom, short for Preparatory Commission. Because the CWC does not spell out every minute detail about how the treaty is to operate, the PrepCom was charged with developing draft procedures, guidelines, and recommendations for the treaty's implementation.⁶² All CWC signatories had voting rights in the PrepCom. Several countries were very active and influential in shaping the PrepCom's decisions, including a few that did not ratify the accord before the end of April 1997.⁶³ After the CWC's entry into force on April 29th, the first Conference of States Parties convened in May 1997 to adopt the decisions framed by the PrepCom.

At first glance, the language of the measures discussed in this section of the report may appear to be innocuous. However, a strong argument can be made that the PrepCom and the Conference took liberties in elaborating and interpreting the CWC's provisions, crafting a subtle and interrelated series of operational practices that dilute the CWC's basic verification provisions. These questionable decisions are scattered throughout several documents designed to govern the inspectors' health and safety practices and the use of inspection equipment.

The CWC states that the Technical Secretariat's personnel are to be granted "privileges and immunities as are necessary in the independent exercise of their functions."⁶⁴ This sweeping protection for the inspectors encompasses, among other things, their right to conduct their business free from undue health and safety risks. While on location, the inspection team is to abide by the host site's health and

⁶¹ The author wishes to acknowledge the assistance of a CWC expert, who asks to remain anonymous, in the preparation of this section of the report. She is extremely grateful to this individual, whose knowledge of the treaty's intricacies far surpasses her own.

⁶² The PrepCom was created by the September 1992 Paris Resolution. "Resolution Establishing the Preparatory Commission for the Organization for the Prohibition of Chemical Weapons," Legal Series, PC-OPCW 1 and Addenda 1-3 (The Hague: Organization for the Prohibition of Chemical Weapons, 1996): 1-6. The PrepCom was tasked with developing the CWC's verification procedures, drawing up the organization's budget, recruiting and training inspectors, and crafting the general infrastructure that would eventually make up its successor organization, the Organization for the Prohibition of Chemical Weapons. From the guidelines and parameters set forth in the treaty, the PrepCom's responsibility was to realize the specific policies needed to implement the CWC. To accomplish its mission, the PrepCom created smaller groups of experts to tackle the broad spectrum of topics mandated in its initial resolution. Groups on Budget and Administration, as well as Verification and Technical Cooperation and Assistance, were in turn split up into more manageable sub-groups to deal with everything from training of inspectors to safety procedures, from financial and staff regulations to declarations. Consensus voting on the issues became the norm during the sixteen PrepCom sessions.

⁶³ The delegations from Israel and Iran are cases in point. Israel has yet to ratify the CWC; Iran acceded to the CWC on 3 November 1997.

⁶⁴ Chemical Weapons Convention, Article VIII, paragraph 49, and Verification Annex, Part II, Section B.

safety standards, unless they do not meet the Technical Secretariat's requirements.⁶⁵ The Conference, however, blessed several procedures that intertwine health and safety matters with confidentiality issues in ways that give host governments justification to interfere with inspections for health and safety reasons. Moreover, these Conference decisions leave it to the discretion of host governments to apply numerous health and safety requirements.⁶⁶ Conceivably, an inspected state could manufacture reasons for certain pieces of equipment, such as their environmental detectors, to be declared confidential. Once a declaration of confidentiality is made, it provides host officials leverage to hinder monitoring activities, deny the inspectors the right to acquire data independently, and prevent them from verifying the environmental data that host officials provide.⁶⁷

The inspectors' ability to make an independent determination of the environmental conditions at inspection sites has important implications for verification. Inconsistent with the CWC, the Conference's decision allows states to refuse permission for the inspection team to use its own environmental devices. When such consent is denied, the inspectors may have reason to believe that the health and safety data that host officials provide could be either professionally unreliable or manipulated to prevent the inspectors from discovering noncompliance. One measure that the Conference sanctioned would allow host officials to block inspection activities when a dispute arises over health and safety policies, even after the inspectorate's director has specifically given authorization for an inspection to proceed.⁶⁸

The Conference has also thrown numerous hurdles in front of the inspectors' rights to carry and use equipment. For example, the Conference enacted measures that permit countries to discriminate against equipment as the inspection team enters a country, during the process in which host officials check the equipment to confirm its presence on the Secretariat's approved equipment list.⁶⁹ This review process was intended to be one of equipment identification and authentication, not one where the

⁶⁵ Chemical Weapons Convention, Verification Annex, Part II, paragraph 43.

⁶⁶ The Technical Secretariat's Health and Safety Policy is detailed in "Decision: Procedures Concerning the Implementation of Safety Requirements for Activities of Inspectors and Inspection Assistants, in Accordance with Part II, Paragraph 43, of the Verification Annex," Document C-I/DEC.8 (The Hague: Organization for the Prohibition of Chemical Weapons, 14 May 1997): subparagraphs 3.3.3, 5.2.2, 5.3.2, 5.5.1, 5.5.1(a) and subparagraph 2.1 (a) of the OPCW Health and Safety Regulations, C-I/DEC.8, subparagraph 4.1 (b).

⁶⁷ Under these circumstances, the Technical Secretariat cannot live up to its statutory responsibility to safeguard the life and physical well-being of its staff. To be blunt, the Conference approved measures that could jeopardize the health of inspectors and result in the Organization for the Prohibition of Chemical Weapons being held liable in the event of accidents.

⁶⁸ C-I/DEC.8, paragraph 3.3.3(c).

⁶⁹ This identification process is outlined in the CWC, Verification Annex, Part II, paragraph 29. The CWC defines approved equipment as "the devices and instruments necessary for the performance of the inspection team's duties that have been certified by the Technical Secretariat in accordance with [the CWC's] regulations," including "administrative supplies or recording materials that would be used by the inspection team." Chemical Weapons Convention, Verification Annex, Part I, paragraph 1.

inspected nation places restrictions on the inspectors' equipment. The CWC clearly states that after this identification process is completed at the point of entry, the inspected country cannot place *any* restriction that bars the team from the bringing approved equipment to the inspection site.⁷⁰ From the outset, the Technical Secretariat has welcomed the efforts that members have made to acquaint their officials with the capabilities and operation of the equipment on the approved list. Lately, the Secretariat has even sent countries notices reminding them that its equipment is available for inspection and familiarization. Yet, the Conference backed a procedure claiming that a government that has been denied the opportunity to familiarize itself with equipment has the right to refuse the item(s) in question.⁷¹ Two additional measures adopted by the Conference assert a country's right to block inspectors from transporting approved equipment to the inspection site if it is not specifically designated for the type of inspection taking place.⁷² Some pieces of specialized equipment will rarely, if ever, be employed in certain settings, but most pieces of the Technical Secretariat's equipment are applicable to multiple inspection needs. The Conference's decisions conflict with the CWC, which contains no restrictions *per se* that would impede the use of any item of approved equipment for any type of inspection.

Other Conference decisions encroach even more upon the inspectors' use of equipment. Facility agreements, which are discussed below in a separate section of the report, are to be negotiated to guide the conduct of inspections at high-risk facilities. The Conference passed a measure indicating that an inspected state can enumerate in facility agreements the restrictions to be placed on the use of equipment.⁷³ According to another Conference-sanctioned procedure, governments can also adopt health

⁷⁰ Chemical Weapons Convention, Verification Annex, Part II, paragraph 27. Furthermore, the CWC's privileges and immunities also state that the inspectors' equipment is "inviolable subject to the provisions contained in this Convention." Verification Annex, Part II, paragraph 11(d).

⁷¹ "Decision: List of Approved Equipment with Operational Requirements and Technical Specifications," Document C-I/DEC.71 (The Hague: Organization for the Prohibition of Chemical Weapons, 23 May 1997): page 3, paragraph d.

⁷² Paragraph 29, Part II of the CWC's Verification Annex instructs the Technical Secretariat to attach documents and devices to its equipment to facilitate its authentication as approved equipment at the point of entry. In some cases, the inspectorate's documentation will describe the specific purpose for pieces of equipment. The decision taken by the Conference incorrectly interprets the aforementioned paragraph 29 by giving host officials the option to place restrictions on equipment unless it "meets the description of the approved equipment for the particular type of inspection." See "Decision: Procedures for the Inspection of Equipment, in Accordance with Part II, Paragraph 29, of the Verification Annex," Document C-I/DEC.7 (The Hague: Organization for the Prohibition of Chemical Weapons, 14 May 1997): paragraph 1.2. See also C-I/DEC.71, Annex (a), which asserts a similarly invalid right for the inspected government to deny equipment for this reason.

⁷³ C-I/DEC.71, page 3, paragraph b. According to paragraph 13 of the Confidentiality Annex, host officials can "indicate to the inspection team the equipment, documentation, or areas that it considers sensitive and not related to the purpose of the inspection." (Emphasis added.) The CWC does not obligate the inspection team to forego using the equipment, but the inspectors should take a state's concerns into consideration when drafting a facility agreement or negotiating final adjustments to an inspection plan. The inspectors are to work with host officials to devise a reasonable alternative, if possible. For example, the inspected state could make an alternative piece of equipment available that is acceptable to the inspectors, helps to demonstrate compliance, and is consistent with the timely and effective accomplishment of the inspection mission. Confidentiality Annex, paragraphs 13-4.

and safety regulations that would constrain the use of inspection equipment.⁷⁴ The inspectorate's Health and Safety Policy vests the inspection team leader with the authority to alter inspection plans to account for a site's safety regulations.⁷⁵ Each facility will have its own safety code. Presumably, such health and safety regulations will differ from one location to another. The CWC does not, however, bestow upon governments the right to create a blanket safety policy for the purpose of excluding one or more items of inspection equipment at all of its sites.

In addition, a number of the Conference's decisions elaborating the procedures to be followed during inspections are incompatible with the CWC's directive that inspectors' equipment is inviolable.⁷⁶ According to the CWC, the inspected state cannot object to data that the inspectors want to include in their preliminary findings.⁷⁷ However, the Conference commended a procedure that opens avenues for host officials to press the inspectors to delete information from their equipment before they have fully evaluated it. Should host officials claim that the inspectors have recorded information unrelated to the CWC, a representative of the inspected state will supervise the extraction or transfer of compliance-related data to another medium acceptable to both parties.⁷⁸ This approach gives host officials the leverage to decide what information the inspectors will or will not retain.

Subsequent Conference-approved measures are phrased in such a way that they award states the discretion to confiscate and retain—without the express consent of the Technical Secretariat—any piece of recording equipment that host officials claim has not been satisfactorily cleared of data that is unrelated to treaty compliance.⁷⁹ Thus, at the end of an inspection and within the time limits of the debriefing

⁷⁴ C-I/DEC.71, page 3, paragraph c.

⁷⁵ See OPCW Health and Safety Policy, C-I/DEC.8, subparagraph 4.3(a).

⁷⁶ Chemical Weapons Convention, Verification Annex, Part II, paragraphs 11(d) and 28.

⁷⁷ Inspectors are not to accept instructions from any source other than the Technical Secretariat, and CWC members are “not to seek to influence them in the discharge of their responsibilities.” Chemical Weapons Convention, Article VIII, paragraphs 46 and 47. During the debriefing process, a representative of the host state is required to countersign the inspection team's preliminary findings only “to indicate that he has taken notice of the contents of the document.” The CWC does not authorize host officials to object to or change preliminary findings. Chemical Weapons Convention, Verification Annex, Part II, paragraph 60. See also, the OPCW Policy on Confidentiality, Document C-I/DEC.13, Part VI, paragraph 6.6, which specifically states, “The inspected State Party may not . . . object to inclusion of information in the preliminary inspection findings, if following full consultations the inspection team maintains that it is relevant to compliance with the Convention in the terms of the inspection mandate.”

⁷⁸ “Decision: Measures in Relation to Approved Equipment Following Completion of Inspection Activities,” Document C-I/DEC.51 (The Hague: Organization for the Prohibition of Chemical Weapons, 16 May 1997): subparagraph 3.2.4.

⁷⁹ C-I/DEC.51, subparagraphs 3.1.3, 3.1.4, and 3.2.5. The inspectors are to retain custody of their equipment from the time they leave The Hague until they finish their mission. Chemical Weapons Convention, Verification Annex, Part II, paragraph 28. An inspection team is “to ensure that sensitive equipment or information, not related to chemical weapons, is protected” during the course of an inspection. CWC, Confidentiality Annex, paragraph 14. At the end of an inspection, the OPCW's Confidentiality Policy notes that under the control of the inspectors, equipment can be decontaminated to clean it of

process,⁸⁰ inspection teams could be placed in a very unfavorable situation—forced to decide prematurely what is germane to their compliance evaluation or possibly have to surrender to the host government some of their information or equipment. These invented rights for the CWC’s members make a mockery of the treaty’s inviolability provisions and they offer members means to evade detection by expropriating evidence that could document their own noncompliance.

The Conference also took aim at the inviolability of the inspectors’ equipment with measures permitting the host government to replace pieces of the inspectors’ equipment they opt to retain and to dispose of them “to the satisfaction of the inspection team” before the inspectors depart.⁸¹ To maintain that inviolable equipment seized by a host government that is dissatisfied with the inspection results can be discarded “to the satisfaction of the inspection team” is ludicrous. Furthermore, procedures sanctioning the impoundment and destruction of compliance evidence should not sit well with governments that say they are interested in a verifiable treaty.

The CWC directs inspectors to collect certain types of information during the course of their activities, such as observations as to whether a site’s declaration is accurate and complete; factual evidence that would assist in formulating a risk assessment of the inspected facility; information germane to a facility’s compliance, noncompliance, or ambiguities that could not be resolved during the course of the inspection; and comments about the cooperation extended by host officials.⁸² The inviolability of the inspectors’ papers and approved equipment means that such information is to remain within the exclusive purview of the inspectors. In the field, the inspectors lack the time to review all of their data thoroughly. The inviolability rule was incorporated in the CWC partly to enable the inspectors to call upon the expertise and know-how of the Technical Secretariat’s professional staff, who can check the inspectors’ private observations against other data.⁸³ Thus, the inviolability of the inspectors’ recorded information is crucial to the preparation of an independent final inspection report.

traces of proprietary or sensitive data unrelated to the CWC. See the OPCW Confidentiality Policy, Document C-I/DEC.13, Part 6, paragraphs 6.4 and 6.7.

⁸⁰ The debriefing process is to be completed within 24 hours after the inspection ends. Chemical Weapons Convention, Verification Annex, Part II, paragraph 60.

⁸¹ C-I/DEC.51, subparagraphs 3.3 (a) and (b). Subparagraph “a” requires the host government to replace or reimburse the inspectorate for the confiscated equipment no later than seven days after the inspection team departs. Well-developed nations may be able to afford to replace numerous pieces of inspection equipment, but, considering the high cost of some equipment, this requirement may not be feasible for some developing countries. A portable gas chromatograph/mass spectrometer, for instance, costs about \$270,000. This measure could give wealthy states an edge to ensure that the inspectors cannot detect noncompliance.

⁸² Chemical Weapons Convention, Verification Annex, Part II, paragraphs 46, 51, and 62; Part VI, paragraphs 23 and 30; Part VII, paragraphs 18 and 20.

⁸³ For example, the headquarters staff can help the inspectors determine whether an explanation that host officials have provided concerning the use of a piece of equipment is reasonable and consistent with practices at other sites of the same type.

The Conference also assaulted the inviolability of the inspectors' papers and property in another fashion.⁸⁴ The CWC requires the inspectors to provide host officials with their preliminary findings before they leave the site, along with a list of any samples, copies of written information (e.g., documents) and data gathered, and other material to be taken off site.⁸⁵ According to the Conference's decision, before departure from the site the inspectors are obligated to allow host officials to copy all of the raw information they recorded in their notebooks, on computers, or in other approved equipment (e.g., cameras, video recorders).⁸⁶ Since all of these items of recording media are approved inspection equipment, this Conference directive batters the concept of inviolability, which excludes *any* access by the inspected state to the information that inspectors catalog during the course of their duties, especially to the information stored in or on recording equipment.

In sum, several of the Conference's decisions upset the treaty's balance between the rights of the inspectors and the rights of the states being inspected. The measures described above tilt that balance in favor of the CWC's members, fabricating "rights" for the inspected state that have no basis in the treaty and infringe heavily upon an inspection team's privileges, immunities, and rights to use equipment. Not only do these concocted rights impair inspection activities, they devalue the verification system and create loopholes for potential cheaters.

OLD HABITS AND THE EXECUTIVE COUNCIL

The PrepCom bequeathed the Executive Council, which is charged with overseeing the day-to-day operation of the CWC, a large number of unresolved issues. Unfortunately, the Executive Council has not been able to work its way through this backlog of unsettled issues. Like the PrepCom that preceded it, the Council has fallen into the habit of politicizing technical issues and then postponing decisions time and again. One of the few decisions that the Executive Council has taken is to approve a process for settling outstanding issues,⁸⁷ which has been implemented apparently to little effect. The

Not all data in the notebooks will be included in this report. Chemical Weapons Convention, Verification Annex, Part II, paragraph 62 and Confidentiality Annex, paragraph 17. The Technical Secretariat stores inspectors' notebooks securely for a year after an inspection, at which point they are destroyed.

⁸⁴ For the duration of the inspection, from entry to departure, the inspectors' privileges and immunities cover their "papers and correspondence, including records, and samples and approved equipment." Chemical Weapons Convention, Verification Annex, Part II, paragraphs 11–2.

⁸⁵ Chemical Weapons Convention, Verification Annex, Part II, paragraph 60.

⁸⁶ C-I/DEC.51, subparagraph 3.2.1.

⁸⁷ In May 1997, the Executive Council decided to address these matters "through a flexible, informal and transparent consultation process," aiming to settle all outstanding issues prior to the second Conference of States Parties. "First Session of the Conference of the States Parties to the Chemical Weapons Convention Successfully Concludes Its Work in The Hague," Press Release no. 154 (The Hague: Organization for the Prohibition of Chemical Weapons, 24 May 1997).

Council met eight times in 1997, with an additional special session convened in December. Six meetings are slated for 1998.

The average Executive Council agenda contains about 15 issues, but the Council usually takes decisions on only a couple of matters, deferring the rest. To its credit, the Executive Council moved in its September 1998 session to approve a model agreement for inspections at Schedule 2 plant sites.⁸⁸ However, a number of other issues critical to the successful implementation of the CWC await a Council ruling. A few of these are summarized below, with a brief description of the negative consequences accruing from the Council's inaction.

- ** A minute amount of saxitoxin, which is listed on Schedule 1, is contained in the medical kits that coastal countries need to treat the shellfish poisoning caused by red tides. The shelf life of these kits, which include five micrograms of saxitoxin, is six months. According to the CWC, both the sending and receiving states must notify the Technical Secretariat 30 days in advance of a Schedule 1 transfer and file annual reports on transfers during the previous year.⁸⁹ Over the past 1 1/2 years, the Technical Secretariat's staff has been buried under the overwhelming amount of paperwork required to process the notices of more than 150 saxitoxin transfers related to these medical kits, yet the cumulative total of Schedule 1 material involved is 0.2 grams. A compelling case can be made for modifying the Schedule 1 transfer rules to facilitate these saxitoxin transfers for humanitarian and health purposes.
- ** Another unresolved Schedule 1 issue involves the point at which the manufacture of ricin is to be counted toward the annual one ton threshold for producing Schedule 1 chemicals.⁹⁰ A concentration of about five percent of ricin can be found in unprocessed castor beans, and roughly ten billion pounds of castor beans are grown annually worldwide. Brazil and Thailand raise large castor crops, but in India alone an estimated 10,000 home-based small businesses are crushing and processing castor beans. Processed or crystallized ricin, with a concentration of about 60 percent, is being employed for medical research to explore cures for cancer and other diseases. Declarations will be made inconsistently until the Executive Council defines the point at which the ricin concentration in castor bean processing is to be declared under the Schedule 1 threshold.

⁸⁸ "Major Breakthroughs at Eleventh Session of the OPCW's Executive Council," Press Release no. 021/98 (The Hague: Organization for the Prohibition of Chemical Weapons, 8 September 1998).

⁸⁹ Chemical Weapons Convention, Verification Annex, Part VI, paragraphs 5 and 6.

⁹⁰ The treaty allows each member to produce one ton of Schedule 1 chemicals annually for research, medical, pharmaceutical, or defense research purposes. These activities might include the testing of protective equipment or the development of antidotes and vaccines to guard against certain chemical agents. Production under the rubric of defensive purposes is limited to only two facilities per country. Chemical Weapons Convention, Article VI and the Verification Annex, Part VI, paragraphs 2, 8, and 10.

- ** The CWC requires members to report aggregate national data of their trade in CWC-controlled chemicals.⁹¹ Analysis of the industry declarations that have been made to date has revealed monumental discrepancies in import and export records.⁹² For example, country X has declared that it sent country Y one ton of chemical Z, but country Y has declared receiving 15 tons of that chemical from country X. To compile their declarations, many states are probably relying on the records maintained by their customs departments, which track the international flow of products using the chemical non-specific Harmonized System Code.⁹³ Unless improved, the accuracy of these trade records will be insufficient to enable the Technical Secretariat to monitor the international chemical trade and guard against diversion of precursor chemicals.
- ** Commercial products are usually a combination of several chemicals. If a significant percentage of a Schedule 3 chemical is present in a mixture, then it is possible for that chemical to be recovered and diverted for clandestine chemical weapons production.⁹⁴ For this reason, the CWC requires that initial and annual industry declarations include the above-threshold production of mixtures with a “low concentration” of Schedule 3 chemicals.⁹⁵ The Schedule 3 declaration threshold is set at 30 tons per year. Although during the PrepCom many government and industry representatives concurred that 30 percent **or less** of a Schedule 3 chemical in a mixture constitutes a low concentration, the Executive Council has yet to approve any number. Therefore, countries have filed industry declarations based upon widely differing low concentration percentages.
- ** The term “discrete organic chemicals” has not been precisely defined for treaty monitoring purposes, so countries are also uncertain about the activities that should be covered in this part of their declaration. The CWC requires states to report the production of discrete organic chemicals containing phosphorous, sulfur, or fluorine in excess of a 30 metric ton threshold for each preceding

⁹¹ Nations must maintain and report production, processing, consumption, and import/export data by chemical, by country, and by gross amount for Schedule 2 chemicals. Only production and import/export data need to be reported for Schedule 3 chemicals. Chemical Weapons Convention, Verification Annex, Part VII, paragraph 1 and Part VIII, paragraph 1.

⁹² “In some cases the amounts declared as being respectively imported and exported differ by an order of magnitude or more. Some 96 percent of declared Schedule 2 chemical transfers and 98% of declared Schedule 3 chemical transfers were not reconcilable between importing and exporting State Parties.” Gee, “Implementing the CWC,” 6.

⁹³ The World Customs Organization designates tracking numbers, known as “H.S. Code” numbers, for individual products and categories of products.

⁹⁴ Note that while reverse engineering of a chemical mixture is possible, it can be difficult to achieve and is not the most direct route to proliferation of chemical weapons. Aspiring proliferators would no doubt prefer to obtain precursor chemicals without having to go to the time and expense to extract them from chemical mixtures. Subjecting facilities that produce, import, and export Schedule 3 chemical mixtures to routine inspection increases the risk of detection should cheaters attempt to use this avenue.

⁹⁵ Chemical Weapons Convention, Verification Annex, Part VIII, paragraphs 3 and 5.

year.⁹⁶ For monitoring purposes, should chemicals produced biologically or biochemically be considered discrete organic chemicals? The declarations to date reflect uncertainty about what should or should not be reported, and reporting discrepancies will persist until the Executive Council articulates a definition.

The CWC will continue to be implemented inconsistently and incompletely until the Council weighs in on these and other issues.

In addition to having deferred so many important issues over the past 18 months, a few of the decisions that the Executive Council has managed to take have been criticized, particularly those regarding the handling of inspectors' notebooks and the lengthy approval process for chemical spectra for the Secretariat's analytical database. Revisiting an issue that the Conference bungled earlier, Germany, France, and Japan pushed very hard for the Council to stipulate an operational policy requiring inspectors to turn over their notebooks at the conclusion of an inspection so that host governments could photocopy the contents, as mentioned above. This approach exploits to the advantage of individual countries what appears to be a discrepancy between two parts of the CWC, one that states that the inspectors' notebooks are inviolable under the Vienna Convention and another that requires the inspection team to provide its preliminary findings to the host government. According to a legal brief prepared by the Technical Secretariat, no discrepancy exists. Neither the CWC nor the Vienna Convention "acknowledges or permits any exception to the...inviolability [of all inspectors' papers and correspondence]. Any such exception would...compromise and vitiate the unbiased and independent nature of inspection records."⁹⁷ Giving this revised policy the nod during its January 1998 meeting, the Executive Council ignored this legal advice and the warnings that having to forfeit their notebooks would intimidate the inspectors and indirectly affect the field work.⁹⁸

Having little choice, the Technical Secretariat complied with the Council's instruction to institute a revised standard operating procedure whereby its inspectors are to photocopy their notebooks upon request. Almost all countries are now asking for copies of the notebooks. The negative implications of

⁹⁶ Chemical Weapons Convention, Verification Annex, Part IX, paragraph 1(b). The inspection threshold for plants that produce discrete organic chemicals containing phosphorus, sulfur, or fluorine (also referred to as "PSF-chemicals") is 200 metric tons annually. Chemical Weapons Convention, Verification Annex, Part IX, paragraph 9(b).

⁹⁷ "Note by the Legal Adviser: Legal Opinion on the Inviolability of Papers and Correspondence, Including Records, Samples and Approved Equipment of the Inspection Team Under the Convention," Document C-II/TS.3 (The Hague, Organization for the Prohibition of Chemical Weapons, 4 December 1997): 2.

⁹⁸ See paragraph 9.3 of "Report of the Eighth Session of the Executive Council," Document EC-VIII/2 (The Hague: Organization for the Prohibition of Chemical Weapons, 30 January 1998). Also see "Eighth Regular Session of the Executive Council Concludes in The Hague," Secretariat Brief no. 003 (The Hague: Organization for the Prohibition of Chemical Weapons, 2 February 1998): 3.

this policy are not difficult to forecast. Knowing that host officials can copy their notes, the inspectors are unlikely to feel free to record their personal reflections concerning the effectiveness of inspection activities, questions about compliance, and the level of cooperation they have received. A blatant violation of the treaty may be judged an international crime, so without the protection inviolability affords, an inspector would have to be heroic to record his or her observations of a gross violation of the CWC.

In the back of their minds, the inspectors also cannot help but worry that their recorded views may later be used against them. An inspector will think twice about writing remarks that a host government might not like knowing that at any time each government can withdraw without explanation permission for staff members to conduct inspections on its territory.⁹⁹ An inspector blacklisted by several countries would essentially be confined to headquarters. Finally, should the inspectors choose to rely on their memories instead of their written observations, the inspectors become vulnerable to accusations of incompleteness, inaccuracy, or un-professionalism if they forget any details. Thus, common sense indicates that the inspectors' notebooks decision will ultimately weaken the inspectorate.

Another Executive Council decision that has been criticized is the lengthy process established to approve chemical spectra for the Technical Secretariat's database. The capability to analyze the chemical samples taken during inspections will derive partly from the contents this database. The inspectors should be able to identify all of the more than 120,000 chemicals that the treaty controls, but spectra for only approximately 600 have been put into the database. Proposed spectra are first examined by an expert review panel, then provisionally sanctioned by the Council while awaiting final approval by the Conference of States Parties.¹⁰⁰ Another 400 candidate spectra will be put through this triple-layer approval process in the fall of 1998. While scrupulously fair, this approval process is so cumbersome that many, many years will be needed before the database will contain the spectra for even half of the CWC's controlled chemicals.

The similarity in the way that the PrepCom operated and the way that the Executive Council has begun to work has also not escaped notice. To date, only one matter has come to a vote in the Executive Council,¹⁰¹ a strong indicator that every effort is being made to reach consensus and avoid confrontation

⁹⁹ The inspected state may describe its objections to an inspector, but is not required to do so. Chemical Weapons Convention, Verification Annex, Part II, paragraph 4.

¹⁰⁰ "Proposed Mechanism for Updating the OPCW Central Analytical Database," Document EC-IV/Dec.2, as adopted by the second Conference of States Parties, Document C-II/8 (The Hague: Organization for the Prohibition of Chemical Weapons, November 1997): paragraph 11.2(c). Another factor that will slow the accumulation of spectra for the database is that the Conference's decision implies that only governments are permitted to propose chemical spectra, even though chemical spectra are available from literature that has been peer-reviewed within the scientific community.

¹⁰¹ The vote in question involved a \$20,000 raise for the Technical Secretariat's Director-General, Jose Bustani. The vote split mostly along financial lines. The three states bearing the brunt of the financial burden—the United States, Japan, and

in this form. Many of the same individuals who frequented the PrepCom's meeting rooms are also representing their nations on the Council. Of the Executive Council's 41 members, only three or four countries routinely bother to send representatives of ambassadorial rank to the meetings.¹⁰² Most of the junior diplomats that attend either have had years of experience in working CWC issues specifically but lack multilateral disarmament experience, or are simply untrained lower-level embassy functionaries. Thus, the Council as currently constituted is a mix of those who refuse to abandon long-held viewpoints and those who are unfamiliar with or even disinterested in the issues being discussed. Easily polarized, the Council therefore often defers decisions and is falling short of its responsibilities to "promote the effective implementation" of the CWC.¹⁰³

PROBLEMS WITH THE PAPERWORK

The Technical Secretariat plans and executes its on-site inspections based upon the declarations of member states about their chemical weapons and commercial industry activities. For the majority of nations that have joined this treaty, submitting this initial declaration was their maiden voyage into the world of participatory arms control, where mutual security is based upon increased transparency via disarmament and nonproliferation monitoring. This concept alone was bound to be novel for most government and military officials, who are taught that national security depends partly upon secrecy. In addition to grappling with an unprecedented requirement to reveal previously secret information, most governments have also been struggling to set up their domestic implementing infrastructure, to learn the type of industrial and military activities that are to be declared under the CWC, and to explain to the owners and managers of commercial plants why they must report their activities to international authorities. Under these circumstances, it was to be expected that a number of countries would fail to meet the CWC's declaration deadlines or would provide incomplete or inaccurate information to the Secretariat.

As of 8 September 1998, 29 of the CWC's members had yet to provide the Technical Secretariat with an initial declaration.¹⁰⁴ When it became apparent last year that countries were having difficulty

Germany—opposed the raise, with 33 of the Executive Council's members supporting the increase. This hotly debated matter is alluded to in "Second Session of the Conference of the States Parties," Secretariat Brief no. 001 (The Hague: Organization for the Prohibition of Chemical Weapons, 10 December 1997): 6.

¹⁰² Approximately 20 member states have at one time or another sent ambassadors to attend part of at least one Executive Council meeting.

¹⁰³ Chemical Weapons Convention, Article VII, paragraph 31.

¹⁰⁴ As of early September 1998, a total of 82 CWC members had provided initial declarations. "Major Breakthroughs," Press Release no. 021/98. In a related, but also serious problem, a large number of countries have yet to provide the Technical Secretariat with other notifications that are required to conduct on-site inspections. For instance, only 60 states have identified their points of entry for inspection teams, 47 have notified the Secretariat of standing diplomatic clearance numbers for non-

completing their declarations, the Technical Secretariat began consulting with the governments concerned to describe their treaty obligations, explain the declaration process, and underscore the importance of fulfilling the declaration requirements.¹⁰⁵ Slowly, the pressure has been increasing on countries that have yet to declare, with the Technical Secretariat making repeated requests for the requisite data. This combination of technical assistance and stiff reminders should lead to some improvement in compliance with the CWC's declaration requirements in the months ahead.

Another issue that will need to be addressed by the CWC's two governing bodies is the incompleteness of declarations. The United States, for example, has declared and opened to inspection its chemical weapons-related facilities (e.g., former production, storage, destruction, and defense sites). However, Washington has not declared the US industry facilities that produce, consume, import, or export proliferation-risk chemicals above threshold quantities. Before the US industry declaration is filed, government and industry officials want to activate the regulations governing declarations and inspections within the private sector. Passage of the CWC's implementing legislation will initiate the dissemination of these regulations throughout the United States.¹⁰⁶ Other countries (e.g., France, India), it should be noted, have submitted industry declarations without having implementing legislation in place.

The United States will remain in so-called "technical" violation of the CWC until US industry declarations are submitted. In this regard, Washington is setting a very poor example for full treaty compliance by other countries. Treaty member Iran, a suspected chemical weapons possessor,¹⁰⁷ can

scheduled aircraft, and 77 have listed their National Authority points of contact. "Executive Council Concerned with Declaration Requirements," Press Release no. 012/98 (The Hague: Organization for the Prohibition of Chemical Weapons, 24 June 1998).

¹⁰⁵ In addition to bilateral consultations, the Technical Secretariat has hosted a number of seminars on the full array of issues associated with national implementation of the CWC. "Regional Seminar on National Implementation of the Chemical Weapons Convention in Slovakia," Secretariat Brief no. 002 (The Hague: Organization for the Prohibition of Chemical Weapons, 17 December 1997); and "Regional Seminar on the Chemical Weapons Convention: 24–5 June 1998, Amman, Jordan," Secretariat Brief no. 007 (The Hague: Organization for the Prohibition of Chemical Weapons, 2 July 1998). Several of these seminars were also hosted from 1993 to early 1997, during the PrepCom years.

¹⁰⁶ The other major option is to promulgate these regulations by Executive Branch order, an approach that the US industry strongly resists because the implementing legislation contains some key protective measures in it. One such measure would protect the confidential business information that industry provides under the CWC from release via Freedom of Information Act requests. Another would bar the US government from sending escorts from other regulatory agencies (e.g., the Environmental Protection Agency, the Occupational Safety and Health Agency) on CWC inspections.

¹⁰⁷ Iran ratified the CWC in November 1997 and is widely believed to be a chemical weapons possessor. Iran's chemical weapons program is thought to have commenced during the early phases of the 1980s Iran-Iraq War and accelerated in the wake of Iraq's ongoing development and use of chemical weapons. A number of publicly available US government reports describe Iranian production and stockpiling of blister, blood, and choking agents. These documents include the US Department of Defense, *Proliferation: Threat and Response 1997*; Office of Technology Assessment, *Proliferation of Weapons of Mass Destruction*; and US Arms Control and Disarmament Agency, *Annual Report to the Congress 1997* (Washington, DC: US Government Printing Office, 1997). According to a non-governmental analyst, Iran has at least two major chemical weapons research and development facilities and used chemical weapons in a limited fashion toward the end of its war with Iraq. After 1985, Iran produced a "minimum of several hundred tons of blister, blood, and choking agents" and began producing nerve

point to the incompleteness of the US declaration as justification for its failure to file a declaration. Similarly, other countries can refer to the incompleteness of the US declaration as a pretext for mis-declaring military-related facilities and under-declaring the number of industry facilities. Several countries have apparently not filed full or accurate declarations. Following initial inspections at a few military-related sites, the Technical Secretariat has recommended that some states modify their declarations to reflect more accurately the nature or scope of the declared activity.

The under-declaration of industry facilities appears to be a more widespread problem. According to the formula for estimating the number of industry facilities involved in the manufacture of specialty chemicals, for every chemical production facility, one would expect to find 10 to 20 down-line processor facilities and 5 to 10 consumer facilities. Depending upon the original chemical involved, this formula will vary, but it is a reasonable rule of thumb. So far, states have been declaring production facilities with *far* fewer consumption and processing facilities than would be expected given the number of production facilities declared. Obviously, however, manufacturers are selling their chemicals to down-line customers. Understandable reasons exist for this under-declaration problem. Governments may not know how to obtain the requisite information because chemical producers consider their customer lists to be proprietary business information. However, with a bit of ingenuity and diligence, the chemical industry can provide the necessary data without compromising proprietary business information.

The declaration problems—failure to declare, mis-declaration, and under-declaration—must be addressed promptly before technical violations become prevalent for years to come. The phrase technical violation is a euphemism for breaking a legally binding treaty obligation. Well over a year into the CWC's activation, states that have not filed declarations or have supplied incomplete or inaccurate declarations have yet to receive much criticism or any formal punishment.¹⁰⁸ Until clear consequences are established for flouting the CWC's declaration requirements, these negative behavioral trends will not correct themselves.

FACILITY AGREEMENTS AS INSPECTION CURBS

The purpose of facility agreements, negotiated after the initial inspection, is to provide a more specific framework for inspections at individual sites that the Technical Secretariat will monitor routinely. Although countries can forego facility agreements, it is considered advantageous to negotiate them for all chemical weapons-related and Schedule 2 industry facilities because they provide more predictable, site-

agents no later than 1994. Anthony H. Cordesman, "Weapons of Mass Destruction in the Middle East: War Fighting and Arms Control Implications" (Washington, DC: Center for Strategic and International Studies, 18 April 1996): 12.

¹⁰⁸ Within the Executive Council, some states (e.g., Italy, China, France, Germany) have threatened to stop inspections in their countries until the United States makes its industry declaration.

specific guidelines for subsequent routine inspections.¹⁰⁹ Among other things, a facility agreement will identify the areas within a large commercial facility where work occurs with treaty-controlled chemicals and specify each site's health and safety practices. A facility agreement is supposed to facilitate the inspection process for both the inspectors and their hosts, not to preclude the use of the CWC's full array of monitoring tools should inspectors have reason to apply them. The CWC does not require that facility agreements be completed prior to the Technical Secretariat's subsequent routine inspection of sites, but there has been a certain amount of time pressure on the Technical Secretariat to wrap up negotiations with member states or possibly incur delays in its inspection schedules.

The absence of standardized or "model" facility agreements for Schedule 1 and 2 sites has made concluding facility agreements more difficult and time-consuming. Instead of working from a model text, different states have presented the Technical Secretariat with widely varying draft agreements incorporating many of the proposals that circulated during the PrepCom process to limit the use of equipment, the provision of documentation, and access.¹¹⁰ Thus, the Technical Secretariat's staff have been placed on the defensive trying to ward off the efforts of some states to lace their facility agreements with measures that would to impede the inspections in ways small and not-so-small.

When negotiating facility agreements, a number of countries have taken the position—encouraged by the Conference's decisions—that some pieces of equipment can be used only for a certain type of inspection.¹¹¹ In contrast, the Technical Secretariat, backed by Canada and the United Kingdom, maintains that any piece of approved equipment can be used during all inspections. China, France, Germany, India, and Iran are pushing for a definitive, shorter list of equipment in facility agreements as a way to preclude the inspectorate from using the equipment of its choice at sites governed by facility agreements.¹¹² Nowhere in the treaty, however, is the principle of designated pieces of equipment for

¹⁰⁹ Facility agreements are optional for other industrial sites. Experts consider it unlikely that facility agreements will be negotiated for Schedule 3 and other industry facilities because they are to be inspected on a random and therefore infrequent basis. According to a formula set forth in the treaty, the number of inspections permitted at these sites shall not exceed three (3) plus five(5) percent of the total combined number sites declared in the two categories, or 20 inspections, whichever number is lower. Chemical Weapons Convention, Verification Annex, Part VIII, paragraph 16.

¹¹⁰ For more discussion on these proposals, see the section below, Equipment Problems, Revisited.

¹¹¹ The Conference's decisions, discussed above, are C-I/DEC.7, paragraph 1.2 and C-I/DEC.71, Annex (a). For example, the CWC specifically allows the use of "approved location-finding equipment" during challenge inspections. Chemical Weapons Convention, Verification Annex, Part X, paragraph 22. The Global Positioning System (GPS) is on the list of approved inspection equipment, and the CWC does not specify that the GPS cannot be used during routine inspections. Nonetheless, some countries are arguing that the GPS can be employed only during challenge inspections. Similarly, although the inspectors would not normally take non-destructive evaluation equipment to an industry facility, under some circumstances it may be necessary to use this type of equipment at an industry plant.

¹¹² Iran, for example, has argued that the members should have the right to refuse any piece of approved equipment that was not available commercially and that such refusals should not be considered acts of noncompliance. "First Session Concludes Its Work in The Hague," Press Release no. 154, 4.

specific inspections established. The CWC provides instead for the Technical Secretariat to conduct field inspections using, as appropriate, any or all equipment from the approved list. In another inspection-restricting tactic, members such as India and Russia are asserting that the Technical Secretariat has no right to inspect a facility more frequently than the number of inspections per year that may be stipulated in the agreement.¹¹³ Such tactics are an effort to make the facility agreement superior to the CWC, when legally the opposite is true. Expressing a view echoed by many, one observer stated that some members “view the facility agreement as an individual exception to the rules of the CWC.”¹¹⁴

The Executive Council has approved approximately 40 without the benefit of model facility agreements. Table 6 provides more detail about the type of agreements that have passed muster. Dozens of additional agreements are in the process of being drafted and approved by host countries before being presented to the Executive Council. To the extent that some countries succeed in using facility agreements to curtail the use of equipment, the provision of documentation, and the extent of inspectors’ access, those states will have created for themselves inequalities in a verification system that was designed to be equally intrusive for all participating nations.

Table 6: Facility Agreements Approved by the Executive Council as of 15 September 1998

Type of Facility	Number of Agreements Approved	Member State(s)
Chemical weapons production facilities	10	United States
Chemical weapons storage facilities	14	United States and one other state party
Old and abandoned chemical weapons storage facilities	1	Italy
Schedule 1 (single small-scale facilities)*	7	Australia, Canada, Finland, the Netherlands, Norway, Sweden, and the United Kingdom
Schedule 1 (other facilities)	2	United Kingdom and Finland
Chemical weapons destruction facilities	1**	United States

Source: Technical Secretariat.

* For protective, medical, or pharmaceutical research purposes.

** Plus five Transitional Verification Arrangements covering facilities that were already operating at entry into force or began operation shortly thereafter.

¹¹³ For example, a facility agreement could state that a Schedule 2 site is slated to be inspected once per year, but the CWC allows for two routine inspections annually at this category of facility. Chemical Weapons Convention, Verification Annex, Part VII, paragraph 22 and Part VIII, paragraph 15.

¹¹⁴ Interview with the author, 1 September 1998.

COMPLICATIONS WITH INSPECTIONS

When the Technical Secretariat's inspectors made their initial forays into the field in June and July of 1997, they had five months of training under their belts, but little real-world experience in the conduct of inspections.¹¹⁵ Relatively few governments had experience with the intricacies entailed in hosting on-site inspections—from logistics and time lines to the management of transparency regarding sensitive data and sites. Not surprisingly, some mistakes occurred during the first wave of CWC inspections. Some nations had created and tested their procedures for receiving and passing along the notification of pending inspections, others had not. Errors occurred with the shipment and checking of equipment as the teams arrived in some countries.¹¹⁶ Such procedural gaffes were not helped by the fact that most of the inspectors and their escorts were novices when it came to implementing the CWC's complex requirements. Many such inaugural problems were resolved as the Technical Secretariat and the host governments gained more experience with the proper procedures.

Although the inspectors have encountered some problems with obtaining documents to review, the majority of difficulties in the field have involved the employment of inspection equipment. Of necessity, CWC inspection teams tote much more equipment with them than other types of arms control inspectors.¹¹⁷ In the line of duty, CWC inspectors must at times don full-body protective gear, be able to ascertain the contents of munitions, and analyze chemical samples, among other tasks. All equipment that the inspectors bring with them has been approved through a laborious process.¹¹⁸ Nonetheless,

¹¹⁵ The inspectors' training incorporated 2 1/2 weeks of on-site training at chemical facilities. China, Finland, France, Germany, India, Italy, the Netherlands, Rumania, Russia, the Slovak Republic, and the United Kingdom hosted training courses. Gee, "Implementing the CWC," 6.

¹¹⁶ For example, the Technical Secretariat sent equipment on an inspection that had not been thoroughly cleaned from a prior inspection and sent without notice to the host country unidentified albeit harmless chemical quality assurance samples along with an approved sample test kit. Interviews with the author on 12 August 1998, 13 August 1998, and 21 August 1998. Similar problems took place during a trial challenge inspection held at an island military base off of northern Wales from 2 to 6 February 1998. When the Technical Secretariat sent notice of the pending trial, some pages of the notification were not transmitted and a "working hours" telephone number was used despite the fact that the message was sent on February 1st, a Sunday. During the equipment check, one item was not sealed and the labels on two other items had been switched. The way that equipment was packed presented other difficulties for host officials trying to check its authenticity. "Joint Report on the Challenge Inspection Exercise Carried Out at the Royal Air Force Valley Military Airfield, Anglesey, United Kingdom of Great Britain and Northern Ireland," Technical Secretariat Document S/53/98 (The Hague: Organization for the Prohibition of Chemical Weapons, 12 June 1998): 3, 5–7.

¹¹⁷ The inspectors are especially likely to bring large amounts of equipment on challenge inspections or during the initial inspection of a facility because they are unfamiliar with the site and need to be prepared for numerous contingencies. On subsequent inspections, they may bring less equipment.

¹¹⁸ During the PrepCom, groups of experts met to debate and approve the technical specifications and performance criteria for each piece of equipment. The final list of approval equipment was authorized by first Conference of States Parties. See C-I/DEC.71.

government officials in several countries voiced objections to the use of certain pieces of approved equipment, including laptop computers, the Global Positioning System (GPS), secure telephones, and hand-held radios. Misuse of these pieces of equipment, say some governments, could compromise sensitive data or provide military intelligence information, so some countries have refused their use citing national security policy, health and safety concerns, and unfamiliarity with the equipment.¹¹⁹ Some states have also rejected chemical agent monitors, claiming unfamiliarity with one or the other of the two monitors in the Technical Secretariat's equipment warehouse.

Some of these frictions and misunderstandings will probably ease as time passes. For instance, the sensitivity to the use of the GPS may abate as host governments gain confidence in the Technical Secretariat's ability to safeguard sensitive data and as the use of GPS receivers becomes more commonplace in commercial equipment. In some circumstances, legitimate health and safety reasons exist for host officials to insist on caution with the use of some pieces of equipment. However, whenever the host government denies the use of equipment, an alternative and satisfactory inspection means must be offered.¹²⁰ Finally, the Technical Secretariat makes all equipment on the approved list available for officials from participating countries to examine, so lack of familiarity with equipment should by now be an unacceptable reason to reject equipment.

Fortunately, most countries, while somewhat ill at ease with the inspections, have nonetheless received them with a cooperative frame of mind. Several governments, for example the United Kingdom, Australia, and Canada, have approached the inspections as an opportunity to demonstrate compliance and enhance international security over the long term. Some countries, for instance Germany and Japan, have exhibited more cooperation on some occasions than on others. Russia has also received special mention for the generally positive reception they have afforded the inspectors. Not only have Russian officials gone out of their way to help the inspectors fix equipment problems, they have volunteered a great deal of secondary supporting documentation to help the inspectors confirm the accuracy of their declarations. Overall, host officials at the inspected sites have been described as being more cooperative than those

¹¹⁹ Some states have asked to seal the A drives of laptop computers and to completely reformat them before the inspectors depart. The Technical Secretariat stores files generated during an inspection on computer floppy disk and in paper copy form. These items are sealed at the inspection site and opened back in The Hague in the presence of a representative from the inspected state. The inspectors will allow host officials to delete informational files from a laptop's—drive, but not to reformat the computer completely. Regarding hand-held radios, countries rightly asserted the need for the inspectors to employ a frequency different than those used by the police, military, and air traffic control, and appropriate operational frequencies were quickly found in most instances. Some countries, such as China and India, reportedly have internal laws prohibiting the use of the GPS because it provides exact locations that could be used for military targeting. Use of the GPS has therefore been problematic in some countries. Finally, sensitivities about the secure telephone have abated as host officials come to understand that inspection-related data is much less secure when discussed over open telephone lines. Some countries continue to reject the use of secure telephones.

¹²⁰ Requirements to that effect can be found in Chemical Weapons Convention, Article IX, paragraph 20 and Verification Annex, Part X, paragraphs 24 and 42. For example, states denying use of the GPS have provided military maps to enable the inspectors to determine the geographical location of facilities.

representing the National Authority. Although the inspection teams have encountered generally positive receptions elsewhere, the United States has apparently been handling in an entirely different manner.

The first teams of CWC inspectors that arrived in the United States were well aware that the US government had amassed significant experience in arms control monitoring, having participated in a variety of bi- and multi-lateral inspection activities since the late 1980s.¹²¹ Given this experience, the Technical Secretariat's personnel expected their US counterparts to be tough and meticulous, but professional, in their observance of inspection procedures. For their part, US officials assumed they would be able to teach the Technical Secretariat's rookies a thing or two about the inspection business. Just as in other countries, the inspectors and their hosts engaged in a certain amount of mutual testing. In the United States, however, the mood hovering over the inspections was apparently more intense than it was elsewhere.¹²² For instance, during one early inspection, the inspectors found themselves unable to operate some electronic equipment because they brought the wrong adapter instead of the standard one for US electric currents. So captious were the US personnel that they refused to loan the inspectors an adapter or allow them to purchase one at a nearby store, stating that borrowed or newly purchased adapters was not equipment officially approved for CWC inspections.¹²³ In hindsight, both the inspectors and US host officials concede that they made some mistakes, and the US has exhibited more cooperative behavior on some subsequent inspections, even loaning the inspectors some equipment.¹²⁴

¹²¹ The United States began to accumulate on-site inspection experience as part of the Conference on Confidence- and Security-Building Measures and Disarmament in Europe (CDE) process that began in 1984. The CDE process worked to reduce tensions in Europe by instituting a series of data exchanges, declarations, notifications, and consultations. In September 1986, the CDE's participating states agreed to provide each other with 42 days advance notice of large troop movements in Europe; to invite outside observers to witness the maneuvers; and to allow on-site inspections from both the air and ground. These early inspections were wrought with tension and were conducted in a very "by-the-book" fashion. See Don O. Stovall, "A Participant's View of On-Site Inspections," *Parameters* 19, no. 2 (June 1989): 2–17. From that beginning, the United States has since joined several treaties with inspection obligations: the Intermediate-Range Nuclear Forces Treaty; Strategic Arms Reduction Treaty; Conventional Forces in Europe Treaty; Open Skies Treaty; and the Threshold Test Ban Treaty. In 1988, the On-Site Inspection Agency was established to conduct inspections abroad and escort inspectors coming to US facilities under these treaties.

¹²² In a telltale sign of this mindset, some officials at the On-Site Inspection Agency apparently refer to their procedures for escorting the Technical Secretariat's inspectors as "rules of engagement," a term of art normally used for encounters with the enemy on the battlefield.

¹²³ In another display of determination to adhere to the exact letter of the inspection procedures, US officials turned back equipment at the outset of an inspection, the point of entry, because they had received advance notice of a name change for an item. The article in question was the tape used to seal the inspectors' equipment to prevent unauthorized access to it. In the inspection mandate that US officials were sent, the Technical Secretariat listed this item as frangible, fractural, adhesive seals, as it is described on the approved equipment list. On the inspection equipment sealed with this tape, however, the Technical Secretariat marked the seals simply as tamperproof. This technicality—the difference in names—became the US justification for rejecting the equipment sealed with this tape.

¹²⁴ The United States has loaned inspection teams equipment that it had pledged to allow the Technical Secretariat to purchase, but now refuses to provide, for reasons discussed in the section of the report entitled, Equipment Problems, Revisited.

Nonetheless, a few more significant and recurring disputes have overshadowed inspections in the United States. One disagreement involves the tagging of munitions.¹²⁵ From a verification perspective, the CWC recognizes multiple purposes for tagging. First, the Technical Secretariat has the right to tag munitions to denote ones that are to be sampled to confirm their contents—whether a bomb is filled with mustard or sarin. Samples of actual munition contents need to be taken randomly because the outside markings on a munition, while a reasonably reliable indicator of munition fill, could be easily altered should a country attempt to cheat by substituting munitions with identical markings and a benign fill and hiding some of its real weapons.¹²⁶ Second, the Technical Secretariat has the right to tag items for other important verification purposes, namely to assist the inspectors with the monitoring of weapons inventories over time and through the endpoint of destruction.¹²⁷ Hence, the inspectors have sought to tag a sufficient number of items to confirm reliably the US stockpile declaration and the subsequent destruction process, some of which they may opt to sample. From the US perspective, the number of munitions tagged has important cost implications. Sampling and analysis is an expensive and time-consuming process that requires safety precautions and could delay destruction schedules. Therefore, the United States argued that a minimum number of rounds be tagged.

Evidently disregarding the inventory control function of tags and assuming that every munition tagged will be sampled, US officials suggested that the inspectors tag only two munitions per storage magazine. The Technical Secretariat and US officials subsequently reached a gentleman's compromise, agreeing that three munitions per magazine would be tagged if US officials claim that the magazine holds munitions filled with only one chemical agent. However, in storage magazines that contain rounds with two different agent fills, US officials have insisted that only three munitions be tagged even though the circumstances instead merit tagging of at least six. In short, the United States has taken a position of “trust Uncle Sam, the green-striped ones are tabun.” Ironically, US officials are asking the Technical Secretariat to abandon the philosophy that has guided US inspection activities since the 1980s, former President Ronald Reagan's dictum of “trust, but verify.”¹²⁸ According to this verification philosophy, US

¹²⁵ Tags are tamper proof markers that allow for the undisputed identification of items of military equipment controlled by an arms control treaty. For more information, see Steve Fetter and Thomas Garwin, “Tags,” in *Verification of Conventional Arms Control in Europe: Technological Constraints and Opportunities*, eds. Richard Kokoski and Sergey Koulik (Boulder, Colorado: Westview Press, 1990): 139–54.

¹²⁶ Chemical Weapons Convention, Verification Annex, Part IV (A), paragraphs 49 and 67. The United States has requested that the inspectors take samples just prior to the destruction of weapons, not in the storage bunker or magazine.

¹²⁷ The inspectors “shall employ, as appropriate, agreed seals, markers, or other inventory control procedures to facilitate an accurate inventory of chemical weapons prior to destruction.” Convention Weapons Convention, Verification Annex, Part IV (A), paragraph 62. See also, paragraphs 66–7 of Part IV (A).

¹²⁸ At the signing of the Intermediate-Range Nuclear Forces Treaty on 8 December 1987, President Reagan made the following statement: “But the importance of [the INF Treaty] transcends numbers. We have listened to the wisdom in an old Russian maxim. And I'm sure you're familiar with it, Mr. General Secretary, though my pronunciation may give you difficulty. The maxim is: *Dovorey no provorey* – trust, but verify.” From “Remarks on Signing the Treaty Eliminating Intermediate-Range and Short-Range Nuclear Missiles,” *Weekly Compilations of Presidential Documents* vol. 23 (8 December 1987): 1458.

officials adamantly declined to accept a color stripe or other exterior markings on the outside of a munition as proof of identification during the inspections under the Intermediate-Range Nuclear Force Treaty. Instead, US officials insisted on the use of specialized measurement equipment to certify the exact dimensions of missile stages as the standard of verification.¹²⁹

In addition, US officials have cited health and safety concerns when refusing to allow the inspectors to weigh ton containers filled with chemical agent. Although US officials claim to be wary of an accident during the weighing process, the Army has stored its bulk agent in modified commercial ton containers, which are frequently weighed when used for industrial purposes.¹³⁰ Privately, US officials concede that the real problem is that not all of these containers have been filled to the same level and some evaporation has occurred over time as a result of routine maintenance activities. Weighing the ton containers would therefore reveal inaccuracies in the US declaration, which is based upon the nominal, not the actual fill of these ton containers. By arguing that the actual weight should not be a key point of verification, US officials again deserted their trust-but-verify philosophy and left the Technical Secretariat to try to verify the amount of agent in the ton containers via ultrasonic measurement and calculation. For verification purposes, this approach is insufficient.¹³¹ Given the hard line that the United States has taken

Interestingly enough, “trust, but verify” was the On-Site Inspection Agency’s motto until 1993, when it was changed to “trust and verify.”

¹²⁹ At the Votkinsk missile production facility, the United States installed a large machine to x-ray two tiny perimeter slices of exiting railcar canisters to ascertain that they did not contain an SS-20 missile first stage either directly or within the shell of an SS-25 missile stage. George L. Rueckert, *Global Double Zero: The INF Treaty from Its Origins to Implementation* (Westport, Connecticut: Greenwood Press, 1993), 157. See also, “Votkinsk Portal Monitoring System: System Description” (Albuquerque, New Mexico: Sandia National Laboratories, 16 June 1989); Harahan, *On-Site Inspections Under the INF Treaty*, 74–8, 83–7; “Bechtel’s Cargoscan to Support INF Verification,” *Defense News* 4, no. 16 (17 April 1989): 35. In addition, the United States had the right under to treaty to request periodically that missile canisters be opened, whereupon a piece of equipment called the stage measuring device was maneuvered into the canister to measure the circumference of the missile stage. The United States insisted that this device have measurement capabilities because exterior markings were not reliable identifiers of an SS-20 missile stage. While visiting Sandia National Laboratories in 1988, the author personally handled this unwieldy piece of equipment, which Sandia personnel were evaluating.

¹³⁰ According to an Army spokesperson, the ton containers employed at US chemical weapons storage facilities are the same as those used to transport and store a variety of commercially available chemicals (e.g., chlorine). Although this official stated that the Army does not weigh its ton containers as part of its routine maintenance procedures, US storage facilities do maintain specialized equipment on-site, such as cranes and scales, to accommodate requests for weight measurements, should such a need arise. Information provided on 1 September 1998 by Cathy DeWeese, US Army, Edgewood Chemical Activity. Other former US officials familiar with the Chemical Corps’ handling of ton containers have been present when these containers were weighed during the 1990s. Interviews with the author, 13 August 1998, 31 August 1998, 1 September 1998.

¹³¹ The ultrasonic sensor may give incorrect readings if the agent inside the container has thickened, crystallized, or has air pockets. A nation attempting to cheat on the CWC could spoof such indirect monitoring methods by removing some of the agent inside bulk containers and diluting the remaining agent with water. In this scenario, a photon-induced neutron spectrometer would still detect the presence of agent inside the container but will be unable to discern whether the agent is concentrated or diluted. Ideally, the Technical Secretariat can employ several monitoring tools in conjunction with each other to safeguard against diversion of agent from bulk containers. Therefore, it is important that the inspectors be able to weigh ton containers at a storage facility at least randomly, if not comprehensively.

when assessing other countries' arms control compliance,¹³² one would be hard pressed to believe that US policy makers would find it acceptable if other nations maintained that the inspectors retire after obtaining only a rough estimate of the amount of chemical agent in their bulk containers. Alternate means exist to calculate more precisely the level of agent in ton containers, but as will be discussed below, the Technical Secretariat has run into problems obtaining such equipment.

Although the frequency and intensity of disagreements between the inspectors and their US escorts has declined, the atmosphere surrounding the inspections in the United States remains tense in comparison to what is transpiring in other countries. Observed one individual extremely familiar with the situation, "Every single request that the inspectors make is questioned, disputed. It is as though [US officials] are treating every inspection like it was a challenge inspection."¹³³ A diplomat described US officials as having "mind sets that are clouded with a confrontational approach, perhaps a legacy of the early bilateral inspections with the USSR, wherein every inspection is treated as a zero-sum game."¹³⁴

At the time that the CWC entered into force, the United States had the only operational destruction program and the largest number of military facilities to be inspected, so other nations had an opportunity to observe the way that the US government treated the inspectors before inspection teams arrived on their territory. Some of the more unfortunate examples that the United States set did not go unnoticed. Two other chemical weapons possessors, Russia and South Korea, have recited virtually word for word the US reasons for curtailing tagging, sampling, and analysis of their munitions. Similarly, India has balked at the use of weighing equipment.¹³⁵ Unwittingly, the United States may have initiated the beginning of a domino effect of non-cooperative behavior. If this trend is not reversed, it will degrade verification effectiveness over the long term.

¹³² A prime example where US allegations of noncompliance were adamant was the 1979 outbreak of anthrax in the Soviet city of Sverdlovsk. The US government asserted that the epidemic was caused by a leak from a covert biological weapons production facility, but the Soviets attributed the 64 deaths to contaminated meat. Few other nations took issue with the Soviet cover story, which was proved false in 1992 when Russian President Boris Yeltsin conceded that the USSR and Russia had maintained an active biological weapons program in violation of the Biological and Toxin Weapons Convention. Yeltsin's admission was originally given to the Russian newspaper *Komsomolskaya Pravda* and subsequently reported by R. Jeffrey Smith, "Yeltsin Blames '79 Anthrax on Germ Warfare Efforts," *Washington Post*, 16 June 1992, A1. The US charges of noncompliance can be found in the annual arms control compliance reports, which the government began to send to Congress in 1984. For an epidemiological study that concurs with the US government's conclusions about the military origins of this disease outbreak, see Matthew Meselson et al., "The Sverdlovsk Anthrax Outbreak of 1979," *Science* 266, no. 5188 (18 November 1994): 1202–8.

¹³³ Interview with author, 12 August 1998.

¹³⁴ Author's interview with a foreign diplomat, 27 August 1998. Another individual summarized the circumstances with a bit of humor: "The US escorts are so inflexible that they have to call Washington to get permission to put a different topping on the pizza." Interview with the author, 14 August 1998.

¹³⁵ Although one cannot rule out the possibility that India learned of the US behavior by some other means, India was on the Executive Council and Indian officials therefore saw the US facility agreement, which states that only boxes of munitions (not ton containers) can be weighed.

In some regards, the US behavior is baffling. US military and civilian leaders have foresworn future use of chemical weapons, including for retaliatory purposes.¹³⁶ Whether or not the United States participates in the CWC, the Army is required by law to destroy the US chemical arsenal.¹³⁷ The United States, it seems, has nothing to hide. Although the level of cooperation a state offers cannot be the sole gauge for judging compliance with the CWC, the behavior that US authorities have displayed during some inspections may lead other countries to question US intentions. Members of the CWC, it should be recalled, are required to cooperate with the inspection process, and the inspectors are to note in their reports the level of cooperation received.¹³⁸ The United States has consistently received the lowest of the three grades for cooperation—excellent, very good, and good.¹³⁹

CLASSIFICATION INFLATION

To monitor the CWC's prohibitions against the possession and proliferation of chemical weapons, the Technical Secretariat's personnel must have access to chemical weapons and industry sites that would otherwise keep their doors tightly closed. The CWC therefore contains strong measures to prevent the compromise of national security and confidential business information obtained as a result of the treaty's declaration and inspection processes.¹⁴⁰ Accordingly, the Technical Secretariat's personnel

¹³⁶ In the aftermath of the Gulf War, President George Bush revised US policy in May 1991 to state that the United States would "formally [forswear] the use of chemical weapons for any reason, including retaliation against any state, effective when the [Chemical Weapons] Convention enters into force." Gen. John Shalikashvili, then Chairman of the Joint Chiefs of Staff, testified that the US military's ability to deter chemical attacks on US troops would be rooted not in a chemical retaliatory capability, but in "robust chemical weapons defense and the ability to rapidly bring to bear superior and overwhelming military force." US Senate Committee on Armed Services, *Military Implications of the Chemical Weapons Convention*, 103d Cong., 2d sess., S.Hrg. 103-835, (Washington, DC: US Government Printing Office, 1984); US Senate Committee on Foreign Relations, *Chemical Weapons Convention Hearings*, 103d Congress, 2d sess., S.Hrg. 103-869 (Washington, DC: US Government Printing Office, 1984).

¹³⁷ Public Law 99-145, Title XIV, Part B, Section 1412 (50 USC 1521), 8 November 1985 (Department of Defense Authorization Act, 1986) mandated the destruction of all unitary weapons in the US stockpile of lethal chemical agents and munitions by September 1994. The United States began full-scale operations at its first destruction facility, on Johnston Atoll, in August 1993, and its second, at Tooele, Utah, in August 1996. For more on the controversies accompanying the early years of the Army's destruction program, see Amy E. Smithson, *The US Chemical Weapons Destruction Program: Views, Analysis, and Recommendations*, Report no. 13 (Washington, DC: The Henry L. Stimson Center, September 1994). Current information about the US destruction program can be found at the Army's website: www.pmcda.apgea.army.mil/.

¹³⁸ On the requirement of states to cooperate with inspections, see Chemical Weapons Convention, Article IV, paragraph 5; Article V, paragraph 6; Article VI, paragraphs 3, 4, 5, and 6 Article VII, paragraph 7, Article XI, subparagraphs 11 (a) and (b); Verification Annex, Part II, paragraphs 51 and 59; Part XI, paragraph 16. For the inspectors' responsibilities to record their observations on cooperation, see Chemical Weapons Convention, Verification Annex, Part II, paragraphs 46, 51, and 62.

¹³⁹ Interviews with author, 11 and 28 August 1998.

¹⁴⁰ These measures are specified in the Chemical Weapons Convention's Confidentiality Annex.

sign confidentiality pledges to adhere to strict information access and handling rules. Information is classified in four levels— unclassified, restricted, protected, and highly protected.¹⁴¹

The starting point of the Secretariat's information handling system is the level of classification that member states assign to the various documents associated with the declaration and inspection process. Once a state designates a piece of information or document to be highly protected, for example, every subsequent document that incorporates that information must also carry the highly protected classification. Ordinarily, this regulatory approach would not be problematic if discretion was used in originally assigning designations to information.

However, in the 18 months since the CWC's activation, member states, when offered the choice of level of classification, have exhibited clear preferences to over-classify data. Inconsistency in assigning the appropriate level of classification has also been apparent. To illustrate the problems, the Technical Secretariat's personnel roster is a matter of public record and therefore unclassified. Each member is sent the unclassified list of inspectors for screening and approval of which individuals will be given visas to conduct inspections in that country.¹⁴² While it is understandable that a nation might want the Technical Secretariat to keep confidential the names of inspectors it has deemed unacceptable, one state returned its list of screened inspectors stamped highly protected. This same country later submitted unclassified communications about its screened list of inspectors. During inspections, some states have labeled 100 percent of the documents audited to ascertain the veracity of the declaration highly protected. Other countries have volunteered more extensive documentation than the inspectors have requested, and still others have classified a certain type of information highly protected in one instance only to turn around later and indicate that the very same information is restricted or unclassified.

These circumstances indicate that some confusion may exist among some member states about how to classify information. When in doubt, some members have far too frequently opted for the higher levels of classification, even for the most mundane information. The inflation of classification markings has a huge ripple effect as the inspectorate's staff, working with originally over-classified documents, spawns additional overly classified documents during the process of inspection planning, analysis, and reporting. As a result, the Technical Secretariat is literally inundated with materials that are overly classified. Reportedly, more than 50 percent of the documents in the inspectorate's files are marked

¹⁴¹ While the fundamental principles underpinning the policy on classifying information can be found in the Convention's Annex on Confidentiality, the specifics of the confidentiality policy were ultimately decided upon by the Conference of States Parties in May 1997. The dissemination of information within the inspectorate is on a need-to-know basis and is tightly controlled through the four-tier classification system. The confidentiality policy outlines in excruciating detail the nature of the data that a state can ask the Technical Secretariat to shield, ranging from annual declarations and inspection reports to facility agreements and samples taken in the field. In addition, inspectors undergo an extensive vetting process and are required to sign confidentiality agreements. Document C-I/DEC.13.

¹⁴² Chemical Weapons Convention, Verification Annex, Part II, paragraphs 2 and 4.

highly protected, but the actual volume of real highly protected material is only about five percent. Amidst this sea of over-classified documents, concerns may arise as to whether the importance of *bona fide* classified information could eventually be lost. In addition, the work efficiency of the inspectorate's personnel will continue to be effected negatively because they are compelled to take elaborate security precautions with all classified material, actual and inflated.

REGIME TRANSPARENCY AND COMPLIANCE JUDGMENTS

The Achilles Heel of arms control has always been how treaty compliance is to be judged and, if noncompliance is found, how it is to be punished.¹⁴³ To a certain extent, compliance assessments are inherently subjective. The conclusions reached about the results of a challenge inspection or a pattern of behavior differ from capital to capital and even from ministry to ministry within governments. What is viewed as a clear-cut violation in one capital is seen as reason for further consideration, not punitive action, in another.¹⁴⁴ In short, compliance assessments, like any policy decision, can be a messy business. Additional information about a country's activities can help clarify compliance decisions, building a body of factual evidence that supports a determination of whether a state is abiding by a treaty's prohibitions. With regard to the CWC, the Technical Secretariat is the fact-finder and member states are supposed to evaluate each other's declarations and inspection results for indications of compliance, ambiguous behavior that may cause concerns, or outright foul play. At present, however, information flow to CWC members is constrained to the point that those without extensive independent intelligence assets may lack sufficient data to make compliance judgments.

According to the confidentiality regulations, the Technical Secretariat can announce to the general public only the data that each country allows to be released about its status under the CWC. Abiding by these restrictions, the Technical Secretariat has made only a trickle of the most general information about the CWC's implementation available to the public. For instance, the Technical

¹⁴³The debate over arms control, verification, and compliance has been voluminous. For a sampler, see Fred Charles Ikle, "After Detection—What?" *Foreign Affairs* 39, no. 2 (January 1961): 208-20; Richard J. Barnet, "Violations of Disarmament Agreements," *Disarmament and Arms Control* 1, no. 1 (Summer 1963): 33-48; Robert J. Einhorn, "Treaty Compliance," *Foreign Policy* 45 (Winter 1981/1982): 29-47; James A. Shear, "Arms Control Treaty Compliance: Buildup to a Breakdown," *International Security* 10, no. 2 (Fall 1985): 141-82; Michael Krepon, "The Political Dynamics of Verification and Compliance Debates," in *Verification and Arms Control*, ed. William C. Potter (Lexington, Massachusetts: Lexington Books, 1985): 136-51.

¹⁴⁴ A case in point are the differing assessments of the United Nations Special Commission's (UNSCOM's) inspections in Iraq. The United States and the United Kingdom assert that these inspections prove the Iraqi government has not been forthcoming and is not complying with the terms of the Gulf War cease-fire agreement, which state that Iraq must relinquish and destroy its ballistic missile, nuclear, biological, and chemical weapons capabilities. The US and British governments have argued that rigorous inspections should continue in Iraq. Russia, France, and China have supported an easing of inspections and sanctions against Iraq. Independent, multilateral panels of experts have concluded that Iraq has not been truthful about its biological and chemical weapons programs. Barbara Crossette, "Experts Dispute Iraq's Claim It Ended Germ Warfare Effort," *New York Times*, 10 April 1998, A5; R. Jeffrey Smith, "A2 Panels Reject Iraqi Claims on Arms," *Washington Post*, 20 February 1998, A19.

Secretariat issued a carefully worded statement that three members had declared possessing a chemical weapons stockpile.¹⁴⁵ Even the United States, which declassified data about its arsenal in January 1996 and had long been known as a chemical weapons possessor,¹⁴⁶ did not give the Technical Secretariat consent to be named as a possessor in this initial press release. India and South Korea also did not acquiesce to the Technical Secretariat's request to identify them as chemical weapons possessors, despite the fact that New Delhi issued a press statement to that effect. The media later identified South Korea as the third country in the possessor trio.¹⁴⁷

After cloaking their chemical weapons status for many years, nations that come clean under the CWC about their past chemical weapons activities will inevitably elicit some domestic and international criticism. These uncomfortable moments aside, with the passage of time it will become clear that India, South Korea, and the other governments that step forward to shed their chemical weapons programs have grasped the opportunity that the CWC offers to close this ugly chapter in human history. Seoul and New Delhi have done what the CWC requires and what the international community needs to usher in a new era of cooperative security. Despite the fact that the Technical Secretariat has repeatedly appealed members to release more information, very little of this good news is reaching the public because some states are allowing only expurgated information to be distributed.

¹⁴⁵ "Executive Council of the OPCW Concludes Its Fourth Session in The Hague," Press Release no. 012 (The Hague: Organization for the Prohibition of Chemical Weapons, 9 September 1997). Moscow ratified the CWC on 5 November 1997, and from the outset has allowed the Technical Secretariat to describe Russia as a possessor. Prior to the CWC's entry into force, the United States, Russia, and Iraq were the only three known possessor states. The status of Russia and the United States has long been a matter of public record, with the two states having exchanged data about their stockpiles as part of the Wyoming Memorandum of Understanding in September 1989. Arms Control and Disarmament Agency, "Fact Sheet: US-Russian Wyoming Memorandum of Understanding on Chemical Weapons," September 1998. Widespread Iraqi use of chemical weapons during the Iran-Iraq War in the 1980's has been well documented. See, for example, Gordon M. Burck and Charles Flowerree, *International Handbook on Chemical Weapons Proliferation* (New York: Greenwood Press, 1991): 85–129. See also Physicians for Human Rights, *Winds of Death: Iraq's Use of Poison Gas Against Its Kurdish Population*, Report of a Medical Mission to Turkish Kurdistan, February 1989. UNSCOM has overseen the destruction of most of the Iraqi arsenal, although questions remain about Iraq's production and weaponization of the nerve agent VX. An October 1997 UNSCOM points to discrepancies between Iraq's public statements regarding an allegedly small-scale VX production program and documents and samples suggesting a far more vigorous quest for VX capabilities. Security Council, *Report of the Secretary General on the Activities of the Special Commission Established by the Secretary-General Pursuant to Paragraph 9 (b)(I) of Resolution 687 (1991)*, Document no. S/1997/774 (New York: United Nations, 6 October 1997). These suspicions of a significant Iraqi VX program, including the existence of missiles armed with the agent, were confirmed months later through analysis of warhead fragments recovered by UNSCOM inspectors. Jim Hoagland and Vernon Loeb, "Tests Show Nerve Gas in Iraqi Warheads," *Washington Post*, 23 June 1998, A1. See also John M. Goshko, "Iraqi Nerve Gas Tests Confirmed," *Washington Post*, 25 June 1998, A30.

¹⁴⁶ "US Chemical Weapons Stockpile Information Declassified," News Release (Washington, DC: Office of the Assistant Secretary of Defense for Public Affairs, 22 January 1996).

¹⁴⁷ "Press Note" (New Delhi, India: 23 June 1998); "Chemical Weapons Stockpile Declared," *Indian Express* (27 June 1998); Barbara Crossette, "Countries Admit Use of Poisons in Weapons," *New York Times*, 17 August 1997; "The Desperate Efforts to Block the Road to Doomsday," *Economist*, 6 June 1998.

More importantly, the situation is not much better among the members of the CWC family. Some states have blocked efforts to make more than the most generic of characterizations about their CWC status available to other treaty members and have placed a stranglehold on the availability of final inspection reports.¹⁴⁸ At present, each final inspection report is sent only to the state that was inspected and is not being circulated even to the Executive Council. Final inspection reports include a summary of the inspection mandate, an overview of what occurred during the inspection, factual findings, the inspectors' assessment of the cooperation afforded by host authorities, comments from the inspected state, and a notation of any issues that remain unsettled at the conclusion of the inspection.¹⁴⁹ The Technical Secretariat now separates unresolved inspection matters into two categories: The less serious are labeled issues needing further attention, the more weighty as verification uncertainties. Many countries that have received inspections do not want to divulge what has been inspected and virtually all inspected states are loath to let other governments know whether anything went awry or that ambiguities remained after the conclusion of an inspection.

With review of final inspection reports barred for the time being, the only other pertinent information sources available to most CWC members are the Technical Secretariat's reports, which are short on detail because members are censoring data. The Technical Secretariat has furnished a Status of Implementation Report for most Executive Council meetings. The status report gives statistics on the number and type of inspections that have been completed without naming the individual facilities or countries involved. The Secretariat supplied a more lengthy and analytical document called the Verification Implementation Report for the Executive Council's January 1998 meeting. Apparently, this retrospective analysis of the inspection activities of the prior year will be prepared on an annual basis. The Verification Implementation Report addresses problems that have been encountered during the

¹⁴⁸ In a related problem, some states have also attempted to restrict access to declarations among the staff of the Technical Secretariat's Verification Division, where all staff carry the highest clearances. This part of the inspectorate analyzes the declarations, plans the inspections, prepares inspection mandates, briefs and de-briefs inspection teams, assists in drafting final inspection reports, and evaluates the overall results of inspections. Thought of by some as the "brains" of the inspectorate, the Verification Division is manned by about 50 technical specialists, analysts, assistants, and managers. Despite pressure from some members, the Technical Secretariat has managed to deflect their attempts to screen staff and prevent them from accessing data declarations, avoiding severe handicaps on the productivity of this rather small but crucial unit of the inspectorate. This problem is alluded to in "Executive Council of the OPCW Concludes Its Third Session in The Hague," Press Release no. 009 (The Hague: Organization for the Prohibition of Chemical Weapons, 11 August 1997).

¹⁴⁹ For routine inspections, the inspection team provides a preliminary report during the debriefing process, with a final report sent to the host government no later than 10 days after the inspection is completed. If uncertainties remain following an inspection, the Technical Secretariat begins a consultative process with the member involved to resolve the ambiguities, forwarding the matter to the Executive Council if necessary. Chemical Weapons Convention, Verification Annex, Part II, paragraphs 60-4. A preliminary report following a challenge inspection must be filed within 72 hours after the inspection team returns to headquarters. Copies are sent to the state requesting the inspection, the challenged state, and the Executive Council. A draft of the final inspection report must be available to the inspected state within 20 days, with the final report due no later than 30 days after the conclusion of the challenge inspection. Chemical Weapons Convention, Verification Annex, Part X, Section D, paragraphs 59, 60, and 61. The final challenge inspection report is then circulated to the Executive Council and all CWC members. Chemical Weapons Convention, Article IX, paragraph 21.

monitoring process involving declarations, inspections, cooperation, and equipment. Among other matters, the report looks at problems outstanding after inspections and budgetary matters. The analysis is without context because the report contains no identification of where and when problems occurred.¹⁵⁰ In the words of one diplomat who has participated in Executive Council meetings, “castrated information is being provided to members.”¹⁵¹

Given the withholding of final inspection reports from other members and the forced banality of the Technical Secretariat’s reports, most governments will be quite hard pressed to determine whether others are in compliance and to evaluate whether the treaty is working as intended. Another indicator of dysfunction is the lack of interest on the part of CWC members in each other’s declarations. All CWC members have the right to review the data declarations of other participating states, but to date only 18 nations have requested the declarations of other CWC members.¹⁵² This apparent indifference and the data censorship being exercised are inauspicious omens belying the rhetoric of numerous CWC members extolling the goal of the full, equal, and effective implementation of the CWC.

MORALE AT THE TECHNICAL SECRETARIAT

For the most part, the personnel at the Technical Secretariat exhibit an *esprit de corps* born of the excitement and purpose of implementing a new and important arms control and nonproliferation accord. Some factors, however, have begun to take their toll on morale at the inspectorate. Like any organization, the Technical Secretariat has its share of superior and inferior employees. As of August 1998, several inspectors¹⁵³ had already been deployed on site over 170 days, and some staffers have labored long and hard to stretch the inspectorate’s resources to meet heavy inspection loads and the treaty’s deadlines.¹⁵⁴

¹⁵⁰ The Executive Council did not adopt this report as an official Council document, noting that the analysis therein represented the Technical Secretariat’s viewpoint and not that of member states. Ironically, some members also stated disapproval of the report’s lack of specificity, namely that it was difficult for them to discern what problems had occurred where because no countries were named in the analysis. In September 1998, the Technical Secretariat presented the Executive Council with a Draft Report of the Organization on the Implementation of the Convention, which is an analytical document similar to the Verification Implementation Report.

¹⁵¹ Interview with author, 13 August 1998.

¹⁵² Chemical Weapons Convention, Confidentiality Annex, Section A, paragraph 2 (b)(i); “Executive Council Concerned with Declaration Requirements,” Press Release no. 012/98.

¹⁵³ Such personnel matters should be the province of the Secretariat’s chief, but many CWC members believe take umbrage at personnel actions that affect their citizens. The director-general should be able to manage the inspectorate without undue interference from the CWC’s members.

¹⁵⁴ The Verification Division plans to deploy inspectors on site for a minimum of 120 days per year, with the remainder of their work time spent at headquarters with paperwork and preparations related to inspections. Within 60 to 90 days of the CWC’s entry into force, initial inspections of chemical weapons production facilities were to be completed. Initial inspections of storage facilities were due within 90 to 120 days, while initial inspections of single small-scale production facility inspections

Others have not worked with the same dedication, which has created an even greater burden for the inspectorate's hard workers. In July 1997, Director-General Jose Bustani sent shock waves through the inspectorate by terminating three staffers for inadequate performance of their duties. This act put the remaining personnel on notice that poor performers would be sent home. Although firing personnel in an international organization is a politically sensitive matter, productivity and morale at the Technical Secretariat would be boosted if Bustani were to continue to exercise periodically his authority to dismiss poorly performing employees. The Technical Secretariat is too small and has far too much work to do to be encumbered by deadwood.

Next, personnel have not been able to use the Technical Secretariat's computer system. A few countries, led by Germany, have expressed repeated concerns that the data security safeguards in the inspectorate's data management system are insufficient. Despite the conclusion of two prior evaluations that the measures incorporated into this system are sufficient to protect classified information, a handful of countries continue to object to its use. The inability to use the computer system has doubled, if not tripled the workload on an already stressed staff. Personnel cannot enter data into the computer database and have been forced to plan and execute inspections while grappling with a document confidentiality system that is by all accounts a paperwork nightmare. Regardless, the Executive Council requested yet another audit of the computer system's security capabilities.¹⁵⁵

Two keys to high organizational morale and effectiveness are the availability of career advancement opportunities and performance awards for workers. Such performance incentives, which are separate from a worker's base pay and can include non-monetary awards where stellar performance is publicly recognized, can be particularly galvanizing for those in the lower personnel ranks.¹⁵⁶ An organization is only as strong as the effort put forth by its most junior workers. Given the time limitation placed on the Technical Secretariat's employment contracts, there are worries that the lack of financial rewards and career prospects could lead to a lack of allegiance to the Secretariat and its mission. Before long, the novelty of implementing the CWC will wear off and the long hours required to plan and execute inspections will begin to sap even the inspectorate's most diligent staffers. Incentives should be developed to foster continued high performance at the Technical Secretariat.

had to be finished within 180 days. Initial visits to chemical weapons destruction facilities occur no less than 240 days before these sites are opened and on a continuing basis once they are operational. Chemical Weapons Convention, Verification Annex, Part IV(A), paragraphs 38, 53, and 65; Part V, paragraph 19; Part VI, paragraph 25.

¹⁵⁵ According to the Technical Secretariat, this third audit began early in September 1998. Telephone interview with the author, 10 September 1998.

¹⁵⁶ Note that a recent job reclassification study assessing the salary level appropriate for the various jobs within the inspectorate recommended upgrades or downgrades of 70 posts—20 among the Technical Secretariat's senior managerial ranks and 50 in the general service and junior professional ranks. "OPCW Post Structure and Classification Recommendations" (The Hague: Organization for the Prohibition of Chemical Weapons, August 1998).

MATTERS FINANCIAL

Just over two months after inspections began, Director-General Bustani let it be known that the Technical Secretariat was in such dire financial straits that he would soon be forced to halt inspections.¹⁵⁷ The Technical Secretariat's 1997 operating budget was just under \$44 million, and two of the countries carrying the largest financial burden for implementing the CWC—the United States and Japan—were tardy in paying their assessments.¹⁵⁸ Just before inspection activities would have been curtailed, the United States paid, alleviating the funding crisis. Japan followed suit.

This incident aside, the CWC's members have on the whole been fairly responsible in financing the organization. Approximately 85 percent of the organization's 1997 budget has been collected from the CWC's members.¹⁵⁹ Moreover, the Technical Secretariat operated under budget during its first year of inspections, delivering a savings of \$18 million from the \$44 million budget.¹⁶⁰ Members have been assessed 122 million guilders, or approximately \$61 million, to implement the CWC in 1998. As of mid-July 1998, they still owed approximately 29 percent of this amount.¹⁶¹ Although some members have not paid their assessments, the Technical Secretariat is not suffering the sizable financial difficulties that hamper some other international organizations.

¹⁵⁷ Bustani warned the Executive Council that he might have to convene a press conference to explain the funding shortage as the reason for stopping inspections. "Statement by the Director-General: Closing Statement to the Third Session of the Executive Council," Document EC-III/DG.13 (The Hague: Organization for the Prohibition of Chemical Weapons, 4 August 1997); "Executive Council of the OPCW Concludes Its Third Session in The Hague," Press Release no. 009; "Director-General Bustani Meets With Prime Minister Kok of the Netherlands," Press Release no. 011 (The Hague: Organization for the Prohibition of Chemical Weapons, 25 August 1997).

¹⁵⁸ Japan was having trouble making its payment because of clashes with its budgetary cycle. The United States was trying to reconcile a difference between the amount it had been assessed and Congressional limits placed upon the amount the United States would pay. According to the formula used to calculate what each CWC member owed, the United States was assessed 27.4 percent, or \$24.3 million, of the total budget. The Senate stated that the United States could pay no more than 25 percent of the Technical Secretariat's costs. Decreasing the US assessment by the 2.4 percent difference required an awkward, difficult negotiation, but a compromise position was finally reached. The Executive Council agreed to a provisional formula for recalculating assessments, with a ceiling rate of 25 percent and a floor rate of 0.01 percent. The delicate compromise was approved by the second Conference of States Parties in December 1997, but is still a matter of controversy. "Executive Council of the OPCW Concludes its Fourth Session in The Hague," Press Release no. 012; "Second Session of the Conference of the States Parties," Secretariat Brief no. 001 (The Hague: Organization for the Prohibition of Chemical Weapons, 10 December 1997).

¹⁵⁹ "Second Session of the Conference of the States Parties," Secretariat Brief no. 001, 4.

¹⁶⁰ Data provided by the Technical Secretariat in a telephone interview on 10 September 1998.

¹⁶¹ Both the United States and Japan have paid their 1998 assessments. "Report by the Director General: Report on the Status of Assessed Contributions as of 15 July 1998, Annex 1," Document EC-XI/DG.3 (The Hague: Organization for the Prohibition of Chemical Weapons, 31 July 1998). See also, "Second Session of the Conference of States Parties," Secretariat Brief no. 001, 3.

A potential financial impasse that had been building for months was apparently averted in September 1998, when the Executive Council approved a formula for chemical weapons possessor states to reimburse the inspectorate for certain costs of monitoring the destruction of chemical weapons production facilities and arsenals. The CWC clearly states that weapons possessors are responsible for paying to monitor the destruction of their chemical weapons capabilities, but does not elaborate how this payment is to be calculated.¹⁶² Depending upon which costs are incorporated into the payment formula, this financial burden mounts considerably for major chemical weapons possessors, such as Russia and the United States. In addition to routine inspections of storage facilities, inspectors are to monitor some destruction activities virtually around the clock and year-round for years to come. A provisional, contentious formula for calculating reimbursement costs was reached in November 1997.¹⁶³

The United States, which has the only active chemical weapons destruction program, has set precedents in its negotiation with the Technical Secretariat over which monitoring activities and costs will be reimbursed. The US government did not dispute transportation costs from The Hague to various chemical weapons facilities, but 16 months of tedious negotiations were required to settle what portion of the inspectors' salaries and their common staff costs (e.g., medical insurance, pension funds) the United States will reimburse.¹⁶⁴ Staff salaries constitute roughly 60 percent of the Technical Secretariat's budget, with common staff costs making up roughly one-third of that amount.¹⁶⁵ The negotiation between the United States and the Technical Secretariat concluded just prior to the September meeting of the Executive Council, which subsequently approved on an ad referendum basis a formula that lightens the expense burden to be paid by chemical weapons possessors.¹⁶⁶

To date, the United Kingdom and South Korea are the only two countries to have begun reimbursing the Technical Secretariat for the rather modest costs of confirming the destruction of their

¹⁶² Chemical Weapons Convention, Article IV, paragraph 16; Article V, paragraph 19.

¹⁶³ "Seventh Session of the Executive Council of the OPCW Concludes," Press Release no. 031.

¹⁶⁴ "Chemical Arms Body Reaches Deal on Inspection Cost," *Reuters*, 7 September 1998.

¹⁶⁵ One formula would calculate salaries based upon 365 days a year, another on 261 working days annually, and a third option on 221 staff days per year. The first approach would result in the lowest sum, the last in the most expensive bill for chemical weapons possessor states.

¹⁶⁶ The Executive Council approved a formula that defines the salary of an average inspector, which excludes common staff costs altogether, and then calculates the bill on the basis of the number of inspectors participating in a given inspection multiplied by the average salary of each, which is multiplied by the number of days on the inspection. All days count the same, whether weekends or holidays. The use of 365 days rather than a lesser figure (e.g., 261 days, which omits weekends) makes the cost of the inspection less expensive to the United States and other chemical weapons possessors. Details of this formula provided by the Technical Secretariat in a telephone interview on 10 September 1998. Note that the money the US government saves on reimbursing its monitoring costs it will pay when other possessors, such as Russia, follow the US precedent.

chemical weapons production facilities.¹⁶⁷ Thus far, the United States owes approximately \$5.5 million to reimburse monitoring costs. Other states that owe reimbursements include China, France, India, Japan, and Russia.¹⁶⁸ Countries that require monitoring of the destruction of their offensive chemical weapons capabilities will be unlikely to reimburse the Technical Secretariat for these costs until the United States begins doing so. Therefore, as the unpaid bill for reimbursement costs mounts, the Technical Secretariat could become mired in financial difficulties.

Meanwhile, the Technical Secretariat appears to be keeping its fiscal house in order. The inspectorate expects to conduct about 325 inspections in 1998 and to repeat its under budget performance of 1997. The budget that the Technical Secretariat has requested for 1999 is virtually the same as its 1998 allotment.¹⁶⁹

EQUIPMENT PROBLEMS, REVISITED

Appreciating the difficulty of conducting on-site inspections at a wide variety of military and industrial sites around the world, the architects of the CWC intended for the inspectors to be sent into the field suitably equipped to detect treaty-controlled chemicals and oversee the elimination of dangerous arsenals without undue risk to their own health and safety. During the PrepCom, however, various countries started to whittle away at the types and capabilities of equipment that the inspectors would carry. Perhaps one of the first prospective items for the list of approved equipment to run into controversy was a portable x-ray machine, intended to help the inspectors determine whether munitions were filled with conventional explosives or perhaps a chemical agent. First the United States, then China, then Iran raised objections to equipping the inspectors with a portable x-ray. Attempts were made to restrict the use of this piece of equipment, which would be particularly helpful at locations with old, corroded munitions, to inspections of old and abandoned weapons sites. The British delegation protested, repudiating the notion that a piece of inspection equipment could be used only for a certain type of inspection. This incident set the tone for subsequent PrepCom debates about equipment, not to mention the Conference of State Parties' adoption of several policies that limit equipment use.

¹⁶⁷ The author deduced that South Korea had begun to make payments in this regard, because the reference document lists the country involved only as "a state party." The United Kingdom has paid just under \$33,000 and South Korea has paid over \$59,000 of its approximately \$290,000 invoice for these reimbursements. "Report by the Director-General: Status of Reimbursement of Verification Costs Under Articles IV or V of the Convention as of 15 July 1998," Document EC-XI/DG.4 (The Hague: Organization for the Prohibition of Chemical Weapons, 31 July 1998).

¹⁶⁸ For 1997, the US bill is 6 million Dutch guilders, or \$3 million. The tally to date in 1998 is 5.3 million guilders, or roughly \$2.6 million. *Ibid.* According to the Technical Secretariat, these amounts were calculated based upon an inspector work year of 221 days. Telephone interview with the author, 10 September 1998.

¹⁶⁹ "Major Breakthroughs," Press Release no. 021/98.

From that point on, the PrepCom delegations hobbled or deleted from the list one piece of proposed equipment after another. Representatives of Israel led the charge against allowing inspectors to carry dosimeters, which would indicate exposure to radiation sources.¹⁷⁰ Citing the need to prevent the compromise of sensitive business information, France argued strenuously to handicap the capabilities of inspectors' analytical equipment, the gas chromatograph/mass spectrometer (GC/MS) and infrared spectrometer. In laboratories around the world, these pieces of equipment are widely used to identify chemicals.¹⁷¹ The Israeli delegation suggested, and many other delegations readily agreed, that this equipment should be "dumbed down" or "blinded." As a result, when screening samples the GC/MS can only give a simple "yes" or "no" answer as to whether the sample contains chemical(s) in the Technical Secretariat's very limited database of CWC-controlled chemicals.¹⁷² The inspectors will get no details beyond that "yes" or "no." This level of field analytical capability *may* be sufficient for routine inspection purposes, when the need for definitive sample analysis is rare. However, this level of capability is likely to fall short during a challenge inspection, when confronted with questionable, unknown chemicals. In short, the inspectors will be left with compliance concerns that cannot be resolved with reduced sample analysis capabilities.

The inspectors were also supposed to be able to use several pieces of non-destructive evaluation equipment to ascertain the contents of munitions without having to resort to sampling.¹⁷³ During the heyday of bilateral cooperation with the USSR on chemical weapons disarmament initiatives, the United States conducted research to develop a suite of non-destructive evaluation equipment. The United States offered to provide the Technical Secretariat with the fruits of that labor—the acoustic resonance spectrometer, ultrasonic pulse echo device, and the photon-induced neutron spectrometer. The US government delivered ultrasonic and neutron spectrometer devices to The Hague before things went awry. An interagency committee implementing the Munitions Control Act ruled that the neutron spectrometer had been illegally exported to the Technical Secretariat, which was told that these items would be confiscated if brought back to the United States. Furthermore, this committee prohibited the sale of the

¹⁷⁰ Consequently, the inspectors now lack an independent means to detect a radiation hazard when they are on site. Not inconceivably, some countries could neglect to give the inspectors notification of the presence of radiation hazards, a possibility that puts the inspectors' health at risk. To remedy this situation, the Technical Secretariat will propose adding a device to the approved equipment list that detects a radiation hazard but does not further identify the nature of the hazard.

¹⁷¹ The infrared spectrometer will be employed when a sample is of a pure or nearly pure compound, rather than a mixture of chemicals. The GC/MS can both differentiate and identify different chemicals in a mixture.

¹⁷² The inspectorate's database of chemical spectra at present contains only about 600 of the more than 120,000 chemicals controlled by the CWC. This problem is discussed in the section of the report entitled *Old Habits and the Executive Council*.

¹⁷³ The following description of events derives from the author's personal observations of a series of developments over an extended period of time.

acoustic resonance spectrometer to the inspectorate.¹⁷⁴ The only piece of equipment from the original trio deemed exportable was the commercially available ultrasonic pulse echo device. Other interagency export control rulings caused the US government to renege on its offer to train the Technical Secretariat's inspectors and have prevented the United States from its sharing chemical weapons destruction technologies with some countries.

Only once has the Technical Secretariat sent a fully equipped team into the field. In early February 1998, the United Kingdom allowed the inspectorate to check its ability to conduct challenge inspections under real-world conditions at an island air force base off the coast of Wales. To test the inspectors, British officials hid a number of inert bombs and air-to-air missiles painted with markings indicative of a chemical agent fill. The inspectors found these items, but were then hampered in their efforts to determine the contents of these munitions when their non-destructive evaluation equipment failed. The inspectors did manage to set up and operate the GC/MS for the duration of the exercise, during which samples were collected and analyzed. However, one of the lessons learned from this mock challenge is that the inspectors need more field practice with their equipment and other techniques in order to be prepared to function at full capacity during an actual challenge inspection.¹⁷⁵

A couple of countries, the United Kingdom and the United States, have offered to make analytical equipment available to CWC inspection teams on their soil. While such offers may appear to be a satisfactory way to alleviate equipment shortfalls, they are not without their drawbacks. The Technical Secretariat's personnel are compelled to observe as the host country operates its own analytical equipment. If the host government intended to cheat, it could calibrate and operate the equipment to give predetermined, false results. Ideally, the Technical Secretariat should not be dependent upon the inspected state for capabilities that should be independent.

The Technical Secretariat is doing its best to perform effectively under trying conditions. By failing to deliver promised equipment, blinding the capabilities of equipment, and denying use of equipment, the CWC's members have stripped significant monitoring tools from the inspectors, impeding their ability to verify the CWC effectively. "With the inability to use the equipment," observed one

¹⁷⁴ The intelligence community and the State, Commerce, Defense, and Energy Departments are represented on this interagency committee. The regulations flowing from the Munitions Control Act, known as the International Traffic in Arms Regulations, pertain to exports of military hardware, services, and training. The committee decided to ban export of the photon-induced neutron spectrometer and acoustic resonance spectroscopy device because they are to be used in conjunction with munitions and some members of the CWC (e.g., Iran and Cuba) are considered by the State Department to be state sponsors of terrorism. US Department of State, *Patterns of Global Terrorism* (Washington, DC: US Government Printing Office, 1997); *International Traffic in Arms Regulations*, Office of Defense Trade Controls, Bureau of Political-Military Affairs, 22 CFR 120-30 (Washington, DC: US Department of State).

¹⁷⁵ "Joint Report on the Challenge Inspection Exercise Carried Out at the Royal Air Force Valley Military Airfield, Anglesey, United Kingdom of Great Britain and Northern Ireland," Document S/53/98 (The Hague: Organization for the Prohibition of Chemical Weapons, 12 June 1998).

specialist, “the only thing there is right now to put teeth into the CWC are the inspectors’ eyeballs and brains.”¹⁷⁶

DOMESTIC LEGAL DIFFICULTIES

The CWC requires members of the treaty to pass domestic legislation to promulgate the CWC’s prohibitions to individuals and corporate entities, including the specification of penalties for those that violate the accord’s prohibitions.¹⁷⁷ Of the 117 countries to join the CWC by September 1998, only 37 had taken this step.¹⁷⁸ Some countries, such as China, apparently regard the act of ratification as sufficient to make the CWC’s prohibitions the law of the land.¹⁷⁹ However, the Technical Secretariat has pressed all members to enact the requisite legislation consistent with their treaty obligations and with existing domestic laws.

In some cases, countries have other laws in place that contradict some of the matters that are involved with implementing the CWC. Some states, for instance, have very strict laws governing the importation of nuclear materials. One piece of inspection equipment, the photon-induced neutron spectrometer, contains a nuclear source, which has created difficulties when the inspectors need to take it to these countries. The Technical Secretariat’s inspectors have arrived in other countries have found that some pieces of their equipment (e.g., gas masks) are on a nation’s export control lists. Customs officials are sworn to uphold export control laws, which has created some difficulties for inspection teams working in these nations. Other problems are likely to arise because countries have passed incomplete implementing legislation. For instance, even though the CWC mandates the issuance of multiple-visit visas valid for at least two years to facilitate inspections,¹⁸⁰ some state’s implementing laws do not yet provide for these visas. These errors reflect the complexity of the CWC and the intricate laws that states must craft to implement it. Nations that have already passed implementing legislation will have to tie up such loose ends. The remainder of the CWC’s members should learn from these lessons and move

¹⁷⁶ Interview with the author, 12 August 1998.

¹⁷⁷ Chemical Weapons Convention, Article VII, paragraph 1.

¹⁷⁸ The number of states having enacted implementing legislation was provided by the Technical Secretariat in a telephone interview on 9 September 1998.

¹⁷⁹ In 1994, the Chinese government promulgated export controls by executive decree, updating this policy in 1996. Information Office of the State Council of the People’s Republic of China, “China: Arms Control and Disarmament,” *Beijing Review* 38, no. 48 (27 November–3 December 1995): 10; “Rules on Import, Export of Chemicals,” *Guoji Shangbao*, 15 April 1994, FBIS–CHI–94–092, 12 May 1994, 26-8. Also, a May 1997 decree established China’s national authority, which would prepare a case for public prosecutors if a violation took place. See also, Information Office of the State Council, *White Paper*, People’s Republic of China (Beijing, July 1998).

¹⁸⁰ Chemical Weapons Convention, Verification Annex, Part II, paragraph 10.

swiftly to pass their own legislation. The Executive Council should not permit countries that neglect this important treaty obligation to go without censure indefinitely.

Another potentially very serious type of implementing problem looms on the horizon—the enactment of legislation that would negate some of the treaty’s monitoring provisions. The United States is on the verge of instituting implementing legislation that has three exemptions that would undercut the CWC’s verification regime. First, the US law would allow the President to refuse a challenge inspection on the grounds that it “may pose a threat” to US security interests. Second, this legislation specifies that no samples collected during an inspection can leave US territory for analysis. A third measure in the US law would narrow the number of industry facilities that declare activities involving mixtures or solutions that contain proliferation-risk chemicals.¹⁸¹ Should other nations emulate these examples, they would block challenge inspections, deny inspectors permission to send chemical samples abroad for detailed analysis at independent laboratories, and decrease considerably the number of industry facilities worldwide that are declared and subsequently opened to routine inspection.

At first glance, decision makers at home and abroad may be inclined to see these exemptions as the handiwork of the US chemical industry. Jumping to such a conclusion, however, would be a mistake because the US chemical industry has a history of strong, consistent support for the thorough and equitable implementation of the CWC. Led by the Chemical Manufacturers Association, the US chemical industry has played a laudable, constructive role in helping to design the CWC’s verification regime. The US industry was a stalwart supporter of the CWC’s ratification, repeatedly describing the treaty’s reporting and inspection burdens as “reasonable and acceptable.” See Box 1 for more detail. The US chemical industry worked closely with Congress and the Clinton Administration to ensure the reasonable interpretation of the treaty in the United States. However, the chemical industry *did not* ask Congress or the Clinton Administration to slip measures into the implementing legislation to reduce the monitoring of US industry facilities. Since industry did not ask for these protections, Senator Pete Domenici (R—New Mexico) has concluded that “The provisions in the US implementing legislation protect those who want to cheat on this treaty.”¹⁸²

The Clinton Administration, however, has downplayed the possible negative consequences of enacting the above-listed measures. Some in the Executive Branch contend the national security exemption is simply boilerplate language that will protect US interests in the event that frivolous

¹⁸¹ In the Senate’s bill, S.610, these exemptions are contained in sections 307, 304(f)(1), and 402(a)(2). Almost identical language is the bill drafted by the House of Representatives, H.R. 2709. The pertinent sections are 237, 234(f), and 252(a)(2). Note that the origins of the exemption prohibiting the sample analysis outside of US territory are in condition number 18 of the Senate’s Resolution of Ratification, S.Exec.Res. 75, which the Senate passed on 24 April 1997.

¹⁸² Remarks of Senator Pete Domenici, *Congressional Record* (22 May 1998): S5389.

challenges are requested. Or, they have argued that this exemption is harmless because it will never be activated. Both of these contentions are false.

The national security exemption negates the treaty obligation to accept a challenge inspection at any US location. The CWC already contains provisions to deter and punish abuse of the right to request challenge inspections. Furthermore, as Senator Domenici observes, “If there is no intention to use it, then including this provision merely opens the door for other nations to follow our lead and diminishes our capacity to catch cheaters.”¹⁸³ In short, the US precedent, whether dormant or not, invites replication. In that event, the CWC’s inspectors will be severely handicapped in their ability to catch cheaters. The CWC’s chief inspector, Bustani, told the *New York Times* that restrictions on inspections would “seriously undermine the implementation of this [C]onvention.”¹⁸⁴

Box 1: Chemical Manufacturers Association Chemical Weapons Convention Fact Sheet

\$ The CWC primarily affects producers of certain chemicals—all businesses that use, process or consume chemicals are not affected by the treaty. The industry successfully negotiated thresholds and exemptions that mean small businesses are not unduly burdened by the CWC. The costs associated with CWC are reasonable and manageable.

\$ Some 2,000 facilities throughout the United States are likely to have CWC obligations. Less than 200 facilities will be subject to on-site inspections. Producers of “discrete organic chemicals” will only be required to fill out a one-page declaration form. Field tests of the draft declaration system by chemical companies have indicated few problems in meeting their reporting obligations. The CWC reporting burden is considerably less than required under existing environmental programs.

\$ The industry provided important input in the development of the on-site inspection procedures. Routine inspections of chemical facilities can quickly and efficiently verify compliance with the Convention, with little or no disruption in production activities. A number of chemical companies volunteered their facilities in order to test the on-site inspection procedures under the CWC. In short, the industry tested the CWC systems, found the problem areas, and corrected them.

\$ Commercial interests will be best protected if the US implementing legislation is adopted quickly. . . . Quick action on the legislation is also required to assure that the United States can take a leadership role in implementing the Convention worldwide.

* This box presents excerpts from a Chemical Manufacturers Association Fact Sheet, the full text of which can be found at www.cmahq.com/news1.html#topofpage.

US officials have also suggested that the United States can thwart or diminish a negative international reaction to the sampling analysis exemption by purchasing one or more mobile laboratories and donating them to the inspectorate. According to this view, a mobile lab developed by the Department

¹⁸³ Ibid.

¹⁸⁴ Steven Lee Myers, “Senate Backs Bill Limiting Chemical Arms Ban,” *New York Times*, 23 May 1998, A3.

of Defense would be used for analysis of samples in the United States as well as in countries of proliferation concern. This approach is unlikely to work.

A mobile laboratory is not currently on the approved list of equipment, nor is such a laboratory likely to be approved for use in the near- or long-term future—even if one were donated. A major addition to the approved equipment list such as a mobile laboratory would require the consent of the Executive Council and Conference of States Parties. Numerous countries have already backed modifications that “dumbed down” the inspectors’ field analytical equipment, so they are likely to object strenuously to a proposal that the Technical Secretariat field a sophisticated, US-equipped mobile laboratory.

Furthermore, the analysis of US samples from such a laboratory will not be recognized internationally because the Defense Department’s mobile laboratory does not have accreditation from the Technical Secretariat. Other governments are likely to question the impartiality of US analysis of a US sample. US authorities would surely question test results in the event that a suspected cheater conducted sample analysis in its own laboratories. Conversely, if the Technical Secretariat were to ship the mobile laboratory to another CWC member state during an inspection, that country would have the right to refuse use of the laboratory because it is not approved equipment. Thus, a mobile laboratory is a false solution for canceling the negative consequences of the sample analysis exemption.

Senator Joseph Biden, Jr. (D—Delaware), has characterized the sampling exemption as one that “opens a huge loophole for countries that may violate this [C]onvention.... I dread the stain upon our collective conscience if a future violator of this treaty should ever make use of the exemption we are carving out, and then use those illegal chemical weapons against US forces or innocent civilians.”¹⁸⁵ Samples can provide the strongest evidence of an illicit chemical weapons program, and this exemption could prevent inspectors from determining what is truly going on in countries of proliferation concern. Off-site analysis could be particularly crucial to identifying the contents of an inspection sample given the incompleteness of the Technical Secretariat’s analytical database and the way that the GC/MS and other analytical equipment have been handicapped.¹⁸⁶

Finally, the US implementing legislation redefines a term in such a way that fewer US Schedule 3 commercial facilities would have to declare their activities and therefore be subject to inspection. The term in question, discussed above, is the low concentration of a chemical mixture or solution.

¹⁸⁵ Remarks of Senator Joseph Biden, Jr., *Congressional Record* (22 May 1998): S5378.

¹⁸⁶ The Technical Secretariat’s designated laboratories will be able to perform a thorough structural analysis to identify the chemical(s) in the sample. Further analysis will clarify whether a sample that the GC/MS identified as a “yes” chemical contains a precursor on Schedules 2 or 3 or an actual chemical agent. Laboratory analysis will also reveal whether a “no” sample contains a Scheduled chemical that was not yet in the Technical Secretariat’s analytical database.

Representatives of the US chemical industry and US government officials informally agreed with other governments and the Technical Secretariat that 30 percent was a suitable ratio, but the implementing legislation elevates the low concentration threshold to 80 percent. By any reasonable assessment, 80 percent is a high concentration in a chemical mix. Should this figure become the standard in the United States, other nations, already indignant over the delay in inspection of US commercial facilities, will contemplate replicating this 80 percent figure and making fewer of their commercial facilities liable to routine inspection.

Experience in Iraq and the former Soviet Union has shown a pattern wherein the commercial industry is used as a facade for the proliferation of weapons of mass destruction.¹⁸⁷ The routine presence of inspectors at a broad range of commercial facilities will give the CWC's members a clearer picture of the chemical activities taking place around the globe, particularly in countries of proliferation concern.

Therefore, narrowing the scope of routine inspections serves neither US security interests nor the security interests of other CWC members. When fewer industrial facilities working with low concentrations of proliferation-risk chemicals are declared, the CWC's inspectors will not gain routine access to as many commercial facilities overseas. The bottom line, according to Senator Domenici, is that "We thereby increase the likelihood that proliferators will use industrial facilities to mask chemical weapons activities, averting detection."¹⁸⁸

¹⁸⁷ Salmon Pak, Al Manal, and Al Hakam were three of the purportedly commercial facilities at the center of Iraq's biological weapons program. In the 1970s, the USSR created an extensive civilian research organization, known as Biopreparat, to mask its biological weapons programs. On Iraq's biological weapons program, see Raymond A. Zilinskas, "Iraq's Biological Weapons; The Past as Future?" *Journal of the American Medical Association* 278, no. 5 (6 August 1997): 418–24. For the latest assertions about the extent of Russia's biological weapons program, which has yet to be opened to outside inspection, see Tim Weiner, "Defector Claims Soviets Had Chemical Warfare Plan," *New York Times*, 25 February 1998, A1 and Richard Preston, "Annals of Warfare: The Bioweaponers," *New Yorker* (9 March 1998): 52-65.

¹⁸⁸ Remarks of Senator Domenici, *Congressional Record* (22 May 1998): S5389.

Observations and Recommendations

An ambitious undertaking of the CWC's complexity and high security stakes cannot be expected to have a flawless start. Difficulties were bound to ensue as governments labored to put the necessary bureaucratic infrastructure in place, collect the requisite data, and train facilities previously closed to outsiders to open their doors for inspection. In one light, some of the difficulties encountered in the CWC's early days can be attributed to the learning process that countries must undergo to become more experienced in fulfilling their obligations and the seasoning the Technical Secretariat must gain to become more practiced at conducting inspections. In another light, however, the CWC's members are taking purposeful actions on an individual and collective basis that threaten to rupture the CWC's hull. The first type of problems are understandable and repairable, the latter disturbing and laden with far more lasting implications for the eventual success or failure of this path-breaking international endeavor.

Presumably, scores of nations did not spend more than two decades at the negotiating table and thereafter join the CWC only to disable the treaty once in force. The investment in the CWC creation aside, each CWC member has something very tangible to gain—enhanced national security and international peace—should this disarmament and nonproliferation mechanism prevail. However, this report concludes that the CWC's members are not being careful custodians of the accord. Many governments are promoting implementation of the treaty in a manner that they believe shields their immediate national and industrial interests from harm. In the long run, this short-sighted approach is likely to backfire, weakening first the inspectorate and the CWC's verification regime, then the treaty's behavioral norm against chemical weapons possession.

THE CONFERENCE'S BACKDOOR AMENDMENTS

Whether unwittingly or on purpose, the Conference of States Parties adopted several decisions that are incompatible with the CWC. Legal scholars may debate what should happen when a body established by a treaty contradicts it, but the CWC charts the course for changing the treaty's text quite clearly in Article XV. Substantive amendments to the articles of the CWC are to be accomplished by convening a special Amendment Conference; changes to the CWC's verification provisions of technical and administrative nature can be enacted through the Executive Council, with subsequent consideration by the Conference.

Thus, the debate will center around whether the Conference decisions discussed above are of a substantive or technical nature. At one level, these decisions are the very definition of "devilish detail" and can be viewed as having a technical character. At another, these Conference decisions singly and cumulatively tilt the treaty's balance of inspection rights away from the Technical Secretariat and toward member states. The fundamental rights of the inspectors and the member states are rooted in the CWC's

articles. Arguably, therefore, the Conference has amended the CWC through the backdoor, circumventing important steps in the amendment process elaborated in the treaty. For instance, no Amendment Conference was called. Before these substantive amendments took effect, they were not ratified by the national legislatures of all states casting positive votes for the amendment.¹⁸⁹

If the CWC's members yield to substantive changes to the treaty's text outside of the process enumerated in Article XV, then they will have consigned the CWC to a dismal future. The amendment process was created to force states to make a conscious decision at the highest levels of government to alter the treaty's core principles. The decisions approved by the Conference were framed by the PrepCom's junior diplomats, who became absorbed with minutia and emphasized short-term interests to the detriment of long-term security gains. Therefore, the Conference's questionable decisions should either be revised to restore the CWC's original balance or an Amendment Conference should convened so that these modifications can be weighed seriously by senior governmental officials. The CWC is far too important a security mechanism for governments to stand by while junior diplomats unravel the treaty.

BREAKING THE PREPCOM MOLD

In some respects, the way that the Executive Council executes its responsibilities sets the tone for how individual states approach their CWC obligations. To the extent that the Council procrastinates in its decision making duties, so too will some CWC members take their responsibilities lightly, for example by tardy submission of declarations. Similarly, when the Executive Council shapes decisions in ways that favor the rights of states over the rights of inspectors, this oversight body is not only tampering with the CWC's equilibrium, it is encouraging CWC members to emphasize protectionism over transparency and cooperation with the inspectors. The CWC is destined to be implemented in a lowest-common-denominator fashion unless the Executive Council develops the discipline to base its decisions upon what is best for the long-term viability of the CWC, not the near-term interests of individual members.

The Executive Council would probably emanate this long-term perspective more frequently if members of this forum appointed senior-level representatives to the Council. Ambassadors will find the issues before the Council no easier to contend with than their subordinates have done, but they have the seniority to keep the delegations in line and to move past debate to decisions. If all Executive Council members took their responsibilities seriously enough to designate ambassadors to it and require their attendance throughout meetings, the Council could become the active, decision making entity it was

¹⁸⁹ Article XV, paragraphs 2 and 4 (b). In fact, the Senate stipulated as a condition of ratification that a US official be present at all Amendment Conferences to represent US interests in such proceedings. The US representative is required "to cast a vote, either affirmative or negative, on all proposed amendments made at such conferences." See condition number six of the US Senate's Resolution of Ratification, S.Exec. Res. 75, which passed by a vote of 74 to 26 on 24 April 1997. The Senate's debate on the CWC can be found in the April 23rd and 24th editions of the *Congressional Record* 143, nos. 49 and 50.

intended to be. Otherwise, the Council's agenda is likely to remain clogged indefinitely with leftover, unresolved issues, and the implementation of the treaty will continue to be less than full and effective.

A key skill that ambassadors could bring to the Executive Council is sufficient managerial experience to know when to delegate complex decisions to technical experts. Arguably, the review and approval of chemical spectra for the Technical Secretariat's analytical database should have been entrusted to an international panel of experts. Instead, diplomats in the Executive Council and the Conference of States Parties unlikely to have ever seen chemical spectra will be given license to approve or deny each and every spectra for the database. The elevation of straightforward technical decisions get elevated to the CWC's policy making bodies creates endless openings for states to interfere with and delay action. An upcoming test of the Executive Council's ability to separate technical from policy decisions will be its handling of the Technical Secretariat's proposed revisions to the list of approved equipment. Some pieces of equipment will be newer models of items on the existing list, but others will improve the inspectors' health and safety equipment and monitoring capabilities. Even though the CWC stipulates that the Technical Secretariat has the authority to modify the equipment list,¹⁹⁰ these revisions could cause a polemic within the Council and also at the third Conference of States Parties. Every time the CWC's governing bodies persist in micro-managing control of essentially technical, operational matters, they will decrease the likelihood that the CWC will be smoothly and effectively implemented.

Perhaps some encouragement can be taken from the fact that the Executive Council and the Conference have already agreed to put the issue of ricin reporting in the hands of experts.¹⁹¹ This matter will be transferred to the CWC's Scientific Advisory Board, which convenes for the first time at the end of September 1998.¹⁹² Another priority issue that should be delegated to this advisory panel is the definition of discrete organic chemicals.

Furthermore, the weight of expert opinion has long been known on several issues pending before the Executive Council. During the PrepCom, industry and government experts settled upon 30 percent as the reasonable figure for low concentrations of a chemical mixture.¹⁹³ From a practical standpoint, experts quickly accepted that individual castor beans cannot be counted and therefore that declaration of

¹⁹⁰ Chemical Weapons Convention, Verification Annex, Part II, paragraph 27.

¹⁹¹ "Second Session of the Conference of the States Parties," Secretariat Brief no. 001 (The Hague Organization for the Prohibition of Chemical Weapons, External Relations Division, 10 December 1997): 5.

¹⁹² The Scientific Advisory Board consists of 20 members selected from an international list of nominees. "Statement by the Director-General," 1 September 1998, 9.

¹⁹³ The 30 percent figure rules out the most difficult indirect routes to proliferation, such as extracting the precursor chemicals from textile dyes and ballpoint pen ink.

crystallized, high concentration ricin should be required.¹⁹⁴ Similarly, technical experts also recommend a reasonable approach for the dilemma of medical kits containing minute quantities of saxitoxin—requiring advance notice for transfers that involve more than 0.5 grams of saxitoxin. The sale of these medical kits could be tracked by mandating an estimated aggregate annual notice of saxitoxin transfers and retroactive notice of transfers of less than 0.5 grams of saxitoxin. Hopefully, the wisdom of such practical solutions will not be lost upon the Executive Council, which should begin to take a more pragmatic and less politicized approach to its work.

Next, after identifying a threshold number to set a standard of declaration for aggregate national data, the CWC's governing bodies need to solicit member states to make additional efforts to strengthen the ability of governments to track imports and exports of CWC-controlled chemicals. For quite some time, the Technical Secretariat has explained to the World Customs Organization the need to assign individual tracking numbers to CWC-controlled chemicals so that customs departments can improve records on the flow of these goods across borders. The accuracy of these records has implications for the Secretariat's nonproliferation monitoring charter. However, the World Customs Organization has indicated that it is not interested in providing code numbers for individual chemicals. The Executive Council, as chief guardian of the CWC's implementation, should not be content with allowing disinterest on the part of the World Customs Organization to decide the matter. Changes in the numbering system administered by the World Customs Organization usually require about ten years, so the Council should enjoin the CWC's members to waste no time escalating this issue high on the agendas of their senior diplomatic and policy making communications with the World Customs Organization.

Perhaps a hopeful sign of things to come, the Executive Council took an important step at its September 1998 meeting to alleviate the building logjam of facility agreements, approving a model for Schedule 2 facilities. Strong model facility agreements that embody the CWC's standards of verification are essential for the equitable implementation of the treaty. These models will guide the negotiation of numerous facility agreements in the future. Model agreements are still lacking, however, for chemical weapons destruction facilities, chemical weapons production facilities, chemical weapons storage facilities, and Schedule 1 facilities.¹⁹⁵ Therefore, the Council should make it a priority to complete the passage of these other models. Once model facility agreements are in place, each of the agreements that have already been approved should be carefully scrutinized for discrepancies or inconsistencies with the CWC that would weaken the inspection regime. If necessary, the Council should direct the renegotiation of agreements so that they are brought up to the criteria established in the models.

¹⁹⁴An army of inspectors would be needed in India alone to monitor all of the home-based businesses processing castor beans.

¹⁹⁵ Model agreements for Schedule 3 and discrete organic chemical facilities are also needed, but are of a lower priority since facility agreements for these sites are optional.

CLASSIFICATION DEFLATION POLICIES

With time, governments may adjust the classification of their materials downward as the newness of participating in a cooperative security regime fades and they gain assurance in the Technical Secretariat's observance of its information handling regulations. However, the habit of over-classification could be difficult to break once it has become ingrained. No one expects the countries participating in the CWC to make every last detail about their declarations and inspections a matter of public record. At present, however, such tight holds have been put on data that very little pertinent information is reaching the other treaty members, much less the general public.

Therefore, the Executive Council and the Conference of States Parties may wish to consider instituting new policies to discourage the blanket over-classification of information. For example, countries could be required to submit declarations with paragraph markings or annexes, allowing the Technical Secretariat to excise the more highly classified information and secure it appropriately.¹⁹⁶ The practice of paragraph marking obliges the originator of a document to identify, paragraph by paragraph, the appropriate level of classification. Alternately, information at higher levels of classification could be segregated into annexes accompanying the main unclassified or restricted document. Both of these classification strategies have the potential to reduce the problem of over-classification, to improve information flow and productivity within the Technical Secretariat, and to increase the overall transparency of the CWC by making more data on the treaty's status available to member states and the general public.

AVOIDING THE GENEVA PROTOCOL'S FATE

The CWC will not be more than a piece of parchment unless members regard it as a dynamic mechanism to help ensure national security and international peace. If the CWC's members consider the simple act of joining the treaty and the less comfortable process of meeting its declaration and inspection requirements to be the ultimate measures of the treaty's success, then they will have taken for granted the treaty's available tools to determine and enforce compliance. Neglecting to police compliance with the CWC will attenuate the treaty's behavioral norm against chemical weapons possession, just as the Geneva Protocol's ban against the use of poison gas was diminished when the international community took no punitive measures against Iraq, a flagrant violator of the Protocol during the mid-1980s.¹⁹⁷ Compliance

¹⁹⁶ In addition, member states might also benefit from the adoption and publication of guidelines that illustrate the types of information that would normally fall within the CWC's different levels of classification.

¹⁹⁷ Initially, governments weakened the Geneva Protocol by placing significant reservations on the accord when they ratified it, down grading this Protocol into a no-first-use treaty. The behavioral norm against chemical weapons was further weakened when Iraq used chemical weapons with impunity numerous times during its 1980s war with Iran. The international community did not enforce the protocol. At a special conference convened in Paris in 1989 to consider what to do about this blatant violation, the 149 countries in attendance condemned the use of chemical weapons, but did not even name Iraq as a

enforcement requires effort and inevitably generates controversy, but the CWC's members will in part owe their national security to their performance as stewards of this treaty's prohibitions.

Until member states make the effort to review declarations and demand to access the final reports from inspections, they will be in no position to ascertain whether other states have accurately declared their military and civilian chemical capabilities. Nor will they be able to assess the completeness of those same declarations. Given members' suppression of inspection reports, perhaps it is not surprising that no state has requested a challenge inspection of another.

The treaty's challenge inspection provisions were designed to detect and deter noncompliance, but no one really knows how well they will work in practice.¹⁹⁸ No other multilateral treaty contains such a strong inspection tool, including the unambiguous obligation for CWC members to cooperate with a challenge inspection. Perhaps there is no such thing as an ideal time—too soon versus too long after the CWC's activation—to launch the first challenge inspection. One thing, however, is certain: Detection and deterrence are unlikely to occur if this inspection tool remains dormant. In The Hague, a number of government representatives have begun to express suspicions of noncompliance, openly whispering about the incompleteness and inaccuracy of some declarations, as well as the uncertainties clouding the aftermath of some inspections. Yet, no government has activated the CWC's Article IX investigative procedures. Such behavior helps to subvert the challenge inspection process from a tool that was included in the CWC to be used to a concept that members think of only in hypothetical terms. All of the CWC's members share the responsibility for enforcing the treaty's bans. No one country can accomplish that task alone. Should governments fail to assume this responsibility, the CWC will fall short of its potential as a security-enhancing mechanism and atrophy into the worst of all possibilities—an intrusive, but hollow accord.

violator of the Protocol. Although participants "recall[ed] their serious concern at recent violations as established and condemned by the competent organs of the United Nations," no specific reference to the Iraqi situation was made. Excerpt taken from the Final Declaration of the Final Act of the Paris Conference of States Parties to the 1925 Geneva Protocol and Other Interested States, 11 January 1989. For discussion of the Paris Conference, see Adams, *Chemical Warfare*, 117–8; Utgoff, *Challenge of Chemical Weapons*, 123–5. Iraq also used chemical weapons against its own Kurdish population. See *Iraq's Crime of Genocide: The Anfal Campaign against the Kurds*, Human Rights Watch/Middle East (New Haven: Yale University Press, 1995).

¹⁹⁸ Some policy makers expect a challenge inspection team to return with "smoking gun" evidence of noncompliance, others fear that challenge inspections will be little more than overt spying expeditions, and still others think the whole concept will flop. The truth probably lies somewhere in between. While there is no guarantee that an inspection team will uncover absolute evidence of cheating, the results of an inspection will undoubtedly shed more light upon what has happened at a suspect site. The treaty has built-in penalties to discourage frivolous challenge inspection requests. Chemical Weapons Convention, Article IX; Article XII; Verification Annex, Part X.

MATTERS OF MONEY AND MORALE

Problems with the financial well-being of the inspectorate should receive proper scrutiny from the CWC's members. The habitual failure to pay assessments and reimburse costs owed for monitoring the destruction of chemical weapons capabilities will ultimately weaken the Technical Secretariat. As the CWC enters its third year, the Executive Council and Conference of States Parties should consider enacting penalties, such as the loss of a seat on the Executive Council or the loss of voting privileges within the Conference, for states that do not provide the requisite financial support for the CWC's implementation.

To date, the CWC's members have displayed admirable control in seeing that the costs of implementing the CWC are kept to a minimum. No one needs another bloated international bureaucracy, and the Technical Secretariat does not appear to be headed in that direction. Because the CWC's members have consistently emphasized that the Technical Secretariat must keep operational costs low, performance incentives are not being employed. Such rewards can be vital to motivating continued high staff productivity, and they can be established for fairly little additional cost to CWC members. Therefore, the Executive Council and Conference of States Parties should consider initiating a modest incentive program for the inspectorate's junior staff ranks. Absent step pay increases and financial awards for excellent job performance among the inspectorate's rank and file, morale and high performance within the inspectorate will be difficult to sustain.

FILLING IN THE BLANKS

If CWC members are delinquent in fulfilling the treaty's basic requirements to declare their military and industrial chemical capabilities, then it is a harbinger that these same countries are unprepared for the CWC's more demanding inspection requirements. The CWC's declaration forms, particularly for states with no offensive weapons capability and a small chemical industry, amount to little more than a filling-in-the-blanks exercise. While reminding members of their treaty obligations, the Technical Secretariat has gone to great lengths to help governments scale the treaty's learning curve. The time is fast approaching when unfamiliarity with the treaty's declaration requirements and tardiness in establishing the requisite governmental authorities and capabilities can no longer be deemed acceptable. Nations that continue to ignore the CWC's declaration requirements should begin to experience the rebuke of the CWC's members in good standing. The Executive Council took the first step toward censure, asking the Technical Secretariat to name countries that have not submitted declarations in its September 1998 meeting.¹⁹⁹ Before long, the enactment of more severe punishments should be

¹⁹⁹ "Executive Council Meets For Its Tenth Session in The Hague," Secretariat Brief no. 006 (The Hague: Organization for the Prohibition of Chemical Weapons, External Relations Division, 25 June 1998).

considered and the list of delinquents should also be made public. Violation of the CWC's rudimentary obligations cannot be allowed to become the norm.

If the Technical Secretariat is to mature into an effective nonproliferation watchdog, then the member states need to work with the inspectorate to find ways to make their industry declarations more complete without compromising proprietary business data. One strategy to remedy the under-declaration of down-line chemical processors and consumers is for the CWC's governing bodies to enact a requirement that all members pass a law ordering chemical producers to send information with all controlled chemicals sold that informs down-line processors and consumers of the CWC's reporting and inspection requirements. Processors and consumers should also be directed to pass this notification on to other down-line consumers. This approach will prompt the customers to contact governments, avoiding the need for chemical manufacturers to surrender their customer lists.

UPHOLDING THE INDEPENDENCE AND RIGOR OF THE CWC'S INSPECTION REGIME

Given the enormous difficulty of monitoring the CWC's prohibitions, the treaty's designers astutely armed the Technical Secretariat with independent, strong inspection capabilities. In the CWC's opening months, the inspectors have been deployed without the equipment required to do their job, handicapping their ability to monitor the CWC's prohibitions effectively. Therefore, the gaps in the Technical Secretariat's monitoring and analytical equipment capabilities need to be filled. The inspectors should be provided with a full suite of non-destructive evaluation equipment. In addition, the Executive Council and the Conference of States Parties should consider the disadvantages of blinding the capabilities of inspection equipment. Ostensibly, the CWC's members expect the inspectors to return from the field with more answers than questions. The present operational constraints increase the odds that inspection teams will be unable to meet those expectations.

Hopefully, the Technical Secretariat will not be forced to depend indefinitely on analytical equipment loaned to inspection teams while on site. Should borrowing equipment evolve from a temporary fix into a more permanent practice, proper safeguards should be created to preserve the independence and credibility of the analysis conducted on a CWC member's equipment. For example, the Technical Secretariat's staff should be allowed to familiarize themselves with the host state's procedures and the full operation of the equipment. The Technical Secretariat should also certify the equipment beforehand using the inspectorate's reference standards. Moreover, during the inspection the Technical Secretariat's analytical database should be used and the equipment should be calibrated with blind quality assurance samples that the inspectors bring for that purpose. Such procedures will increase confidence in the results of analysis run on a host country's equipment, but ideally the inspectorate will be able to obtain its own full field analytical capabilities.

Finally, it is unreasonable to anticipate that the inspectors will be able to operate some pieces of equipment impeccably since they use them so infrequently. As the adage goes, practice makes perfect. Hence, other members should follow the United Kingdom's example of hosting a mock challenge inspection for training purposes. During such exercises, the inspectors will be able to employ all types of equipment to sharpen their operational skills. Only under realistic operational circumstances will the inspectors be able to hone their craft.

While it appears that several of the problems initially experienced with equipment have been settled, some linger. Inspired perhaps by Conference decisions inconsistent with the treaty, some countries have systematically refused to allow the inspectors to use approved equipment. Appropriately, the Technical Secretariat has been attempting to work these problems out with the nations concerned. However, if these countries continue to reject equipment, the matter should be brought formally to the attention of the Executive Council.

In a similar vein, member states cannot remain idle when a country denies inspectors the right to retain key documents or gain access to relevant areas of a facility. Recently, Germany and France have taken the position during policy discussions that the inspectors should be allowed to review records while at a facility, but barred from copying and transporting any documents off the premises. According to the treaty, the inspectors and an inspected country can agree to leave sensitive documents on site in a locked, sealed box as a point of reference for future inspection teams.²⁰⁰ However, the CWC's inspectors must be allowed to take off site any records that could indicate inconsistencies with a country's declaration, ambiguities, or noncompliance.²⁰¹ Should inspectors be precluded from removing documentation and other important evidence from a facility, nations would have to base their compliance assessments on the word of inspectors versus the host government's account. Such untenable circumstances would again shift the CWC's original balance between the rights of inspectors and the inspected, making it more difficult to resolve compliance concerns.

²⁰⁰ Chemical Weapons Convention, Verification Annex, Part III, paragraph 9.

²⁰¹ Documents, it should be recalled, have played a central role in the ability of UNSCOM inspectors to unveil the extent of Iraq's nuclear, chemical, and biological weapons programs. UNSCOM inspectors has a series of clashes with the Iraqi government as they tracked the trail of papers detailing Iraq's nuclear program. In September 1991, UNSCOM inspectors were forced to sleep in a parking lot upon discovery of key documents and videotape supporting allegations of a surprisingly advanced Iraqi nuclear program. John M. Goshko and Ann Devroy, "Iraq Holds UN Inspectors for 13 Hours, Seizes Data," *Washington Post*, 24 September 1991, A1; R. Jeffrey Smith, "Inspectors Got Details On Iraqi Nuclear Effort," *Washington Post*, 25 September 1991, A21; and Michael Z. Wise, "UN Team Finds New Evidence of Iraqi Cover-up," *Washington Post*, 1 October 1991, A14. Additionally, the "chicken farm documents"—so named for the spot in which they were discovered in August 1995 following the defection of Saddam Hussein's son-in-law Hussein Kamal—have proven instrumental in corroborating suspicions about Iraq's biological weapons program. Approximately 500,000 pages found in boxes and steel trunks on Kamal's farm gave detailed information Iraq's pursuit of biological weapons. William J. Broad and Judith Miller, "How Iraq's Biological Weapons Program Came to Light," *New York Times*, 26 February 1998, A1; Khidhir Hamza, "Inside Saddam's Secret Nuclear Program," *The Bulletin of the Atomic Scientists* 54, no. 5 (September/October 1998): 26–33. For an overview of Iraq's efforts to foil UNSCOM, see David A. Kay, "Denial and Deception Practices of WMD Proliferators: Iraq and Beyond," *The Washington Quarterly* (Winter 1995):85–105.

The Conference and Executive Council decisions on inspectors' notebooks has given countries the *illusion* of being able to ensure that the inspection process does not compromise sensitive or proprietary data,²⁰² but these decisions are likely to inflict genuine damage to the ability of the inspector corps to monitor the treaty effectively. To re-establish the treaty-mandated inviolability of the inspectors' notebooks, the Technical Secretariat should create a new operational procedure that guides the inspectors to differentiate between two categories of information while they are in the field. The inspectors would record the first category of information—the typical data gathered about a facility—on standardized worksheets. The inspectors would reserve their notebooks for a second category of data, namely their personal reflections on the inspection experience (e.g., observations about ambiguities, questions concerning noncompliance, and the level of cooperation received). These private notebooks would remain inviolable, as the CWC directs, but the inspectors would be able to give the standardized work sheets to host officials to copy.

The Technical Secretariat should also institute another operational policy to resolve a related inspection quandary. In the event that controversy arises during an inspection as to whether the inspectors have captured on their recording devices information that is unrelated to the CWC, the inspectors should not erase the data in question or forfeit their equipment. Rather, the item(s) should be placed under seal and returned to The Hague under strict chain of custody. The seals would be broken in the presence of a representative of the inspected state and the Technical Secretariat's director. Should these parties be unable to settle the dispute directly through consultations at the inspectorate's headquarters, the matter would be forwarded to the Executive Council for resolution.

Finally, the Technical Secretariat should revise another of its policies, in this case, an unwritten one. Reportedly, the Technical Secretariat's internal policy is not to push other states to accept the use of a piece of equipment or an inspection technique once one of the CWC's participants strongly protests it. The Technical Secretariat serves the CWC's members, which closely watch and at times attempt to constrain the inspectorate's activities.²⁰³ Moreover, the Technical Secretariat operates on the principle that it will not conduct its business using double standards—all members get treated the same, whether a state has a robust economy or is developing, has chemical weapons or lacks a sizable chemical industry. While this equal-treatment-for-all philosophy is laudable, the Technical Secretariat should not allow any one member's refusal to dictate its inspection practices and set the precedent for how inspections are to be conducted in other countries. Rather, the Technical Secretariat should endeavor to fulfill its inspection charter equally, executing inspections in all countries to the complete extent of its CWC rights and

²⁰² A key data point does not have to be written down to be remembered. No rule, no matter how restrictive, can control what the inspectors retain in their minds.

²⁰³ To paraphrase the words of more than one close observer of the CWC's implementation, the Technical Secretariat is not a "sovereign state" and is therefore somewhat subject to the whims of member states. Interviews with the author, 1 September 1998, 7 September 1998, and 8 September 1998.

recording uncooperative or obstructionist behavior when necessary. When countries misbehave egregiously or continuously during inspections, the Technical Secretariat should bring the matter to the attention of the Executive Council, which can penalize the offending member(s) or initiate a revision of the policy that is being challenged, as appropriate.

THE UNITED STATES AND THE BURDEN OF LEADERSHIP

Washington frequently shows signs of an internal conflict with its role in global affairs, alternately seeking and shirking the mantle of leadership. Most US policy makers and citizens believe that their country has by several measures—unparalleled military strength, the world’s largest economy, cultural and moral traditions—earned a singular place in the international community. Yet, some of those same individuals complain mightily when the responsibilities of this unique status loom large. In some instances, however, the United States must not hesitate to put its full weight consistently behind the thorough implementation of an international policy. Nowhere is that need more urgent than when it comes to policies to reduce the threat of weapons of mass destruction.

To say that the United States has set a poor example under the CWC would be a vast understatement. The portrait of US CWC behavior begins with its standing as a violator of the treaty, and then moves on to a record of delinquency in the payment of bills, failure to deliver promised equipment to the Technical Secretariat, misguided conduct during inspections, and drafting of implementing legislation spiked with treaty-weakening exemptions. For the past 18 months, the United States has been the malignancy in the midst of the CWC.

The US CWC track record stands in sharp contrast to the words uttered by Washington’s leaders regarding the danger of chemical weapons and the CWC’s utility in addressing that threat:

- ** Chemical weapons are “particularly frightening,” with “a remarkable capacity to kill human beings,” and “produce a horrifying casualty rate,” especially when used for terrorist purposes.—*Speaker of the House Newt Gingrich (R—Georgia)*²⁰⁴
- ** The CWC provides “new tools to press signatories for compliance [and] access to sites and information [that US officials] are currently unable to examine,” and it is “the judgment of the most senior former and current military commanders [that the CWC] will make [US] soldiers, sailors,

²⁰⁴ Gingrich used these words to characterize the chemical weapons threat early in 1998 as the United States was preparing for military strikes against possible chemical and biological weapons sites in Iraq. “House Speaker Newt Gingrich’s Floor Statement on Iraq,” Press Release, *Congressional Press Releases* (Washington, DC: Federal Document Clearing House, Inc., 12 February 1998).

airmen, and marines more safe in potential battlefields and less likely to face the horrible prospect of chemical weapons.” —*Senate Majority Leader Trent Lott* (R—Mississippi) ²⁰⁵

** “We are closing a 20th century [with] an opportunity now to forge a widening international commitment to banish poison gas from the Earth in the 21st century. . . . We must have an international solution to a global problem.” —*President William Jefferson Clinton* ²⁰⁶

Obviously, there is a gap between the rhetoric of the nation’s leaders and the manner in which the United States is implementing its CWC obligations.

Washington’s lackluster performance in the CWC arena is also all the more inconsistent given the vigor with which the United States has supported the United Nations Special Commission’s (UNSCOM’s) efforts to oversee the elimination of Iraq’s weapons of mass destruction capabilities and, more recently, sought to thwart terrorists from acquiring chemical weapons. For years, the United States has underscored the importance of free and unfettered access to UNSCOM’s ability to track down the remnants of Iraq’s weapons of mass destruction programs, wherever they may be hidden. Furthermore, the most potent evidence of threatening chemical weapons activity in both Iraq and Sudan has recently come from samples. UNSCOM inspectors caught Iraq in yet another falsehood about the extent of its chemical weapons program when samples taken from missile fragments proved that Iraq weaponized the nerve agent VX. ²⁰⁷ Furthermore, the United States launched a cruise missile attack against a pharmaceutical plant in Sudan based upon soil sample analysis, which the US government held up as irrefutable proof that an international terrorist organization has manufactured a VX precursor in this facility. ²⁰⁸ Sample analysis has also provided crucial evidence in other cases of treaty noncompliance. ²⁰⁹

²⁰⁵ These thoughts capture Lott’s reasons for voting for the CWC’s ratification on 24 April 1997. Remarks of Senator Trent Lott, *Congressional Record* (24 April 1997): S3603.

²⁰⁶ Remarks were made at a White House rally in support of the CWC’s ratification on 4 April 1997. For accounts of this event, see Steven Lee Myers, “Clinton Mobilizes Bipartisan Effort on Chemical Arms: Treaty Deadline is Near,” *New York Times*, 5 April 1997, A1 Thomas W. Lippman, “White House Has Rally for Weapons Ban: Sen. Helms Offers List of Treaty Opponents,” *Washington Post*, 5 April 1997, A8.

²⁰⁷ The United Nations reported that “significant amounts” of “VX disulfide . . . and stabilizer” were found in the samples. Jim Hoagland and Vernon Loeb, “Tests Show Nerve Gas in Iraqi Warheads: Finding Contradicts Claims by Baghdad,” *Washington Post*, 23 June 1998, A1. Commenting on the implications of the VX samples, US Ambassador Bill Richardson said, “This is a very serious violation. It means Iraq won’t have the sanctions lifted.” John M. Goshko, “Iraqi Nerve Gas Tests Confirmed,” *Washington Post*, 25 June 1998, A30. An UNSCOM team returned in mid-July 1998 to take more samples from the missile fragments, which were sent to laboratories in Switzerland and France for additional analysis. Leon Barkho, “UN Team Takes Iraq Warhead Samples,” Associated Press, 13 July 1998.

²⁰⁸ Of the soil sample and the US case against terrorist activities sponsored by Osama bin Laden at the Al Shifa Pharmaceutical Plant outside of Khartoum, National Security Adviser Samuel R. Berger stated: “There is no question our minds that that facility, that factory, was used to produce a chemical that is used in the manufacture of VX nerve gas and has no other commercial distribution as far as we understand.” Steven Lee Myers, “US Offers More Details On Attack in the Sudan,” *New York Times*, 24 August 1998, A1. The chemical in question was later identified as EMPTA, short for ethyl

Free and unfettered access is to UNSCOM what challenge inspections are to the Technical Secretariat. The collection and analysis of samples are tools at the disposal of both inspectorates. Why, then, would the Clinton Administration and Congress insert provisions in the CWC's implementing legislation that would have the effect of stripping from the Technical Secretariat the very inspection tools that have been so essential to UNSCOM's success? If senior US policy makers have yet to recognize this contradiction, perhaps the time has come for them to do so.

The US government is also implementing two other complementary policies in a contradictory fashion. The Munitions Control Act and the CWC are both nonproliferation mechanisms aimed at reducing security threats, yet the interagency's US export control edicts have deprived the CWC's inspectors of some of the best equipment and training available in the world. Other countries have had to step forward at the last moment to replace the training resources that the United States pledged to make available to the Technical Secretariat, and the inspectors have had to make do without some important items of equipment. Needless to say, the Clinton Administration should focus on improving the coordinated implementation of these two policies so that the Technical Secretariat can be better prepared for its job of disarming chemical weapons possessors and guarding against the proliferation of chemical weapons.

When all is said and done, Washington has taken a very cavalier approach to the implementation of the CWC. Throughout the treaty's negotiation, the United States was one of the strongest champions of a chemical weapons ban, persuading and cajoling other countries to conclude an agreement.²¹⁰ Washington extolled the CWC as the centerpiece of international efforts to reduce the chemical weapons threat,²¹¹ but since signing the treaty in 1993 has left the CWC virtually untended. The United States dallied for more than four years with the CWC's ratification, managing to join just five days before it was activated. Throughout this ratification ordeal, some of Washington's policy makers appeared to handle the CWC less as a serious matter of security and state than as an issue of politics.²¹² Now, as detailed in

methylphosphonothionate. Steven Lee Myers, "US Says Iraq Aided Production of Chemical Weapons in Sudan," *New York Times*, 25 August 1998, A1.

²⁰⁹ For example, four years after Iraq used chemical agents against Kurdish civilians, analysis of soil samples taken from the bomb craters near the town of Birjinni proved that Iraqi forces released the nerve agent sarin and mustard gas. See "Scientific First: Soil Samples Taken From Bomb Craters in Northern Iraq Reveal Nerve Gas—Even Four Years Later," Press Release (Boston: Physicians for Human Rights and Human Rights Watch, 29 April 1993).

²¹⁰ For the tale of the CWC's negotiating end game, see Amy E. Smithson, "Tottering Toward a Treaty," *Bulletin of the Atomic Scientists* 48, no. 6 (July/August 1992): 9–11 and "Chemical Weapons: The End of the Beginning," *Bulletin of the Atomic Scientists* 48, no. 8 (October 1992): 36–40.

²¹¹ The CWC is one of several mechanisms needed to address the chemical weapons threat, the others being robust chemical and conventional defenses, strong intelligence capabilities, and sound export control policies.

Box 2, the United States again appears to be showing indifference toward this treaty. The CWC's implementing legislation has been the victim of a year and a half-long cycle of neglect and political gamesmanship.

Other nations have closely observed Washington's treatment of the CWC. With the world's second largest chemical weapons stockpile and the largest commercial chemical industry, the international community perceives the United States to have special stewardship responsibilities regarding to the CWC's implementation. Friends of the CWC hope that the United States will regain its form as a steadfast advocate of the treaty in both word and deed; foes of the CWC stand ready to contribute to the treaty's downfall, should Washington not redeem itself.

Box 2: Chronology of Events Related to the US Implementing Legislation for the CWC

29 April 1997: The CWC enters into force. A month later, the United States submits the required data declaration about US chemical weapons storage, former production, defense, and destruction facilities, opening them to international inspection. Absent the passage of implementing legislation, the US government does not file declarations on the US chemical industry's production, processing, consumption, import, and export of proliferation-risk chemicals. From this point forward, the United States is in "technical" violation of the CWC.

23 May 1997: The Senate passes legislation to implement the CWC (S. 610). Among other things, this legislation addresses the treaty's requirements to enact penalties for domestic violations of the CWC's prohibitions and establishes the regulatory guidelines for US industry to declare pertinent activities. This bill also has a handful of serious treaty-weakening measures: 1) the national security exemption on challenge inspections; 2) a repetition of the laboratory sampling analysis exemption from the Senate's CWC Resolution of Ratification (condition 18 from S.Exec. Res 75); and, 3) a redefinition of low concentration of chemical mixtures that would narrow the scope of the CWC's routine inspection regime.

10 June 1997: S. 610 is referred to the International Relations and Judiciary Committees in the House of Representatives. The Judiciary Committee defers to International Relations Chairman Benjamin Gilman (R-New York). For several months, no action is taken.

12 November 1997: Gilman attaches a clone of the S. 610 language to the Iran Missile Proliferation Sanctions Act, a bill to enact penalties against Russian companies that have been providing ballistic missile parts and technology to Iran. This combined bill, H.R. 2709, also contains the three measures that would weaken the CWC's verification regime. H.R. 2709 passes with a voice vote. The sanctions part of the bill enjoys wide bi-

²¹² During the 1996 campaign season, a vote on the CWC's ratification was aborted when the two candidates running for the presidency played politics with the treaty. On September 11th, Republican presidential candidate Robert Dole sent senators a letter advising them to beware of "illusory" arms deals. With the president's polling numbers high and foreign policy issues of little import to the outcome of the election, the Clinton White House opted not to return fire and make the Senate's vote on the CWC an election issue. The White House withdrew the CWC from consideration. Later, former Senator Dole would come to the CWC's rescue on the eve of the Senate's April 24th vote, appearing at a White House press conference to urge his former colleagues to give their advice and consent to the CWC. See Bob Dole, Letter to Trent Lott, 11 September 1996; Thomas W. Lippman, "Senate Foes Force Delay on Poison Gas Treaty," *Washington Post*, 13 September 1996, A1; Francis X. Clines, "Dole No Senator, but Might as Well Be," *New York Times*, 24 April 1997, A6. For a detailed account of the entire US ratification saga, see Amy E. Smithson, "Bungling a No-Brainer: How Washington Barely Ratified the Chemical Weapons Convention," in *The Battle to Obtain US Ratification of the Chemical Weapons Convention*, Occasional Paper 35 (Washington, DC: The Henry L. Stimson Center, July 1997): 7-34.

partisan support on both sides of the Hill, but the Clinton Administration makes it clear that the president would veto the sanctions bill. The Senate does not consider the combined legislation prior to the Christmas holiday recess.

January to April 1998: The Clinton Administration repeatedly asks Senate Majority Leader Lott to delay a vote on the combined bill, H.R. 2709, stating concerns that congressionally mandated sanctions would unnecessarily aggravate bilateral efforts already underway to address problems with the export of Russian missile technologies. Lott postpones Senate action.

22 May 1998: The Senate passes H.R. 2709 by an overwhelming margin, 90 to 4. The Senate attaches one amendment to the bill, which would make the sanctions retroactive to January 1998. This change requires the bill to be put to a vote in the House of Representatives.

9 June 1998: The House passes the revised H.R. 2709 by an ostensibly veto-proof margin, 392 to 22. The large vote tallies in the House and the Senate are more a reflection of members' support for the Russia-Iran sanctions part of the bill than for the CWC implementation component of the bill.

23 June 1998: As expected, President Clinton vetoes H.R. 2709. Override votes are predicted, with the House voting first due to the bill's origins in that chamber.

15 July 1998: The House schedules a morning veto override vote, but postpones action until two days later. In a last-ditch effort to avoid an override, Clinton announces the imposition of trade sanctions against nine Russian companies that have been aiding missile programs in Iran, Libya, or North Korea. These sanctions, which include bans on financial transactions and imports/exports with the targeted companies, are more harsh than those included in H.R. 2709. That same day, a bipartisan panel of experts, the Commission to Assess the Ballistic Missile Threat to the United States, releases its report. Among other conclusions, this panel noted that Russia's exports of enabling technologies have "greatly accelerated Iran's ballistic missile program."

17 July 1998: The House again postpones its vote. H.R. 2709 remains on the calendars of both the House and the Senate, but no date is set for an override vote.

29 July 1998: The Clinton Administration implements its unilateral sanctions against only seven Russian firms.

The first major way that Washington can recapture a leadership role is by not undercutting the CWC's verification provisions. Just as US policy makers would expect them to do in other countries, the Technical Secretariat's inspectors need to exercise their inspection powers fully at US sites. Therefore, the United States should stop hindering the use of approved inspection equipment and assume a more cooperative approach toward inspections under the CWC. Moreover, Washington cannot lead the fight against chemical weapons proliferation by seeding the US implementing legislation with measures that undermine the CWC's key monitoring provisions.

In capitals around the globe, government officials have been quick to note the exemptions in the US implementing legislation, particularly of the sampling analysis and the national security exemptions. According to Senator Domenici, "these restrictions provide a great deal more latitude within which a

rogue nation can maneuver to hide a chemical weapons program.”²¹³ Regarding the challenge inspection exemption, Senator Joseph Biden, Jr. (D—Delaware) has noted: “Even if the President never exercises this authority, the mere inclusion of this provision in the legislation will encourage other countries to deny inspections on national security grounds. If we should enact the so-called ‘national security exception,’ we can be sure that China, Iran, and other countries will seize upon the precedent we set and use it to undermine the effectiveness of the verification regime.”²¹⁴

Undoubtedly, all governments are predisposed to embrace measures that would enable them to avoid the CWC’s stringent challenge and sampling provisions and lessen the declaration and inspection burdens on their chemical industries. Two other countries, for example, have already told Bustani, the head of the CWC’s inspectorate, that they will duplicate the exemption prohibiting sample analysis abroad.²¹⁵ Some nations will copy the US exemptions because they will not tolerate the creation of a different and less intrusive standard of verification for the United States while their countries are held to the more rigorous standards established in the treaty. Other states will skillfully use the US exemptions to camouflage banned chemical weapons activities. The US government, having established these precedents, will have little recourse if other countries cite national security concerns to deflect a challenge inspection or block inspectors from sending a sample abroad for further analysis.

Should the United States persist in trying to pick and choose which treaty provisions it will adhere to, Washington will remain exactly where it is today—in a very poor position to demand strict compliance by other states. In the words of Senator Domenici, “the US cannot hold other countries to standards that we ourselves are not willing to meet.”²¹⁶ Therefore, Congress should move promptly to ensure that the United States preserves integrity of the CWC’s verification regime:

** Congress needs to expunge the national security exemption from the implementing legislation. Instead, Congress can direct the US government to utilize the full panoply of managed access procedures to safeguard national security or proprietary data in the event a US facility is challenged. The treaty already contains a withdrawal clause that would allow the United States to abrogate the CWC if any development jeopardizes supreme US national interests.²¹⁷

²¹³ Remarks of Senator Pete Domenici, *Congressional Record* (22 May 1998): S5389.

²¹⁴ Remarks of Senator Joseph Biden, Jr., *Congressional Record* (22 May 1998): S5378.

²¹⁵ Myers, “Senate Backs Bill Limiting Chemical Arms Ban,” A3.

²¹⁶ Remarks of Senator Pete Domenici, *Congressional Record* (22 May 1998): S5389.

²¹⁷ Chemical Weapons Convention, Article XVI.

- ** Mindful that inspectors will rarely encounter circumstances in the United States that would cause them to request sampling, Congress can also articulate its concerns about sampling without setting a damaging precedent. To do this, Congress needs to delete the sampling analysis language or replace it with a statement that underscores the treaty's protections for safeguarding sensitive and proprietary data during sample collection and analysis.
- ** In order to deter cheating within the industrial sector, a broad swath of chemical industry facilities needs to be subject to routine inspections. Therefore, Congress should define a low concentration as 30 percent of a chemical mixture. This corrective language will put the CWC's inspectors in a stronger position to monitor chemical industry facilities overseas that could be used to mask illicit chemical weapons production.

A second important way that the United States can reassert its leadership is to meet all of its obligations under the CWC. The quickest route to industry declarations and US compliance is through the enactment of implementing legislation. Short of starting over with an entirely new bill in both the Senate and the House, the most readily available options for congressional action before the fall 1998 recess are:

- ** Should both chambers of Congress override President Clinton's veto of H.R. 2709, the combined implementing/Iran missile sanctions legislation (For detail, see Box 2), then the Senate and House of Representatives should move swiftly to pass language to correct the exemptions in the US implementing legislation.
- ** Or, Speaker of the House Gingrich could divorce the CWC's fate from that of the Iran sanctions legislation by removing S.610, the Senate's original implementing bill, from the House International Relations Committee, where it has languished since mid-June 1997. After inserting language to rectify the exemptions, Gingrich could put the revised bill on the floor for a vote. Assuming passage in the House, a Senate vote on the modified House language should follow without delay.

Either of these routes would go a long way toward salvaging the US influence within the international community. However, Washington has obviously slighted the CWC in years past, displaying a tendency to play politics with the treaty. Should Congress take no action, at a bare minimum the United States will be in noncompliance well into the treaty's third year.²¹⁸

Such circumstances would have very negative implications for the health of the overall CWC regime. First, major US trading partners (e.g, China, Germany, and Japan) that have complied with the

²¹⁸ The US government will probably require at least six month's lead time to publish the regulations, gather data, and convert it into the proper form to submit to the Technical Secretariat.

CWC's industrial monitoring requirements are threatening to bar future inspections in their countries in retaliation for the lack of inspections at US commercial plants. Second, states of proliferation concern have already begun to exploit to their advantage the power vacuum created by the US predicament. Iran, for example, has spurned its obligations to declare military and industrial activities. Tehran can point to US noncompliance as the excuse for its negligent behavior, as can other nations that have filed less-than-complete declarations with the CWC's inspectorate. Third, the treaty's governing bodies have approved policies detrimental to the CWC's long-term vitality, in part because of the diminished status of the US delegation in these forums. US representatives are ill-positioned to protect the CWC's integrity when the United States is in violation of the accord.²¹⁹ Fourth, Washington is somewhat paralyzed within the CWC context, unable to demand full treaty compliance from other countries when US industry facilities are neither declared nor inspected. No challenge inspections have been launched partly because other governments are waiting for US leadership in confronting and punishing possible cheaters.

Before long, US commercial firms are likely to begin to experience some of the negative fallout from the lack of US compliance. When the United States waited until the last minute to ratify the CWC, a number of US companies received notices in the winter of 1997 from their business partners overseas, informing them that trade would cease should the United States not join the treaty. While the CWC's automatic economic sanctions will not be triggered until the spring of the year 2000, the US chemical industry, which is the country's largest exporter, may soon be penalized for Washington's postponed action on implementing legislation.

Should US policy makers default on the implementing legislation this fall, the government may look once again to the US chemical industry for assistance. During the negotiation of the CWC, the Executive Branch turned to the chemical industry for help, and the industry responded with technical expertise and constructive proposals to focus the treaty's monitoring provisions on the facilities of highest proliferation risk. Some US corporations even volunteered their plants for trial runs of inspection concepts and techniques.²²⁰ During the campaign to secure Senate passage of the treaty, representatives of the US chemical industry arrived on Capitol Hill far sooner and more frequently than did officials from the Clinton Administration. Representatives of the US industry lobbied long and hard to obtain the

²¹⁹ "Several countries have cited the United States for non-compliance with the CWC for its failure to fully comply with the declaration provisions of the convention. . . . This lack of an industry declaration compromises US effectiveness in the OPCW." *Adherence to and Compliance With Arms Control Agreements*, 1998 President's Annual Report to Congress (Washington, DC: US Arms Control and Disarmament Agency, 31 July 1998): 2.

²²⁰ For accounts of industry's activities in support of the CWC, see Will D. Carpenter, "Understanding Chemical Industry Support for the CWC and Its Implementing Legislation," in Brad Roberts, ed., *Ratifying the Chemical Weapons Convention* (Washington, DC: Center for Strategic and International Studies, 1994): 29–32; Kyle Olson, "Disarmament and the Chemical Industry," in Brad Roberts, ed., *Chemical Disarmament and US Security* (Washington, DC: Center for Strategic and International Studies, 1992): 97–105.

Senate's advice and consent to ratification and have since consistently asked Congress to approve the CWC's implementing legislation.²²¹

Regrettably, it may once again be necessary for the US chemical industry to render pivotal assistance to the CWC. Absent the passage of implementing legislation, something will need to be done to alleviate the tensions that are mounting overseas about the lack of inspections within the US private sector. A group of US chemical companies, perhaps those that hosted trial inspections in years past, should consider stepping forward to accept initial CWC inspections of their facilities. Reportedly, other several countries have allowed inspections of their industrial sites to proceed without the benefit of implementing legislation, including France and India.²²² Indeed, this is an extraordinary request to make of the US chemical industry, but the alternative may well be an international strike halting CWC inspections around the globe. If they must, the US firms that volunteer for this task can request that some additional safeguards be granted for this occasion.²²³ No special allowances, however, were made for the industry inspections that have gone forward in other nations without legislation. Officials representing those firms cooperated to the preserve their nation's stature within the CWC family and to endorse the cause of chemical weapons disarmament and nonproliferation.

Whether it would be best to have flawed implementing legislation and US compliance or no implementing legislation at all has been debated in Washington and in The Hague. The former option is worse, for once gutted, the CWC may be beyond repair. This debate, however, should be moot. Fixing *and* passing the CWC's implementing legislation are actions *well* within Congress' power and ability, even late in session and in an electoral year filled with the press of other matters. Chemical weapons proliferation is too grave a problem for Washington to continue to be derelict in what is needed to implement the CWC fully and effectively.

²²¹ The author spent a considerable amount of time in the company of US industry officials from July 1996 until late April 1997, when US ratification occurred. She credits the chemical industry's tireless work on behalf of the CWC as one of three main reasons why the Senate voted for ratification. The other two primary influences on the positive outcome of the Senate's debate were the resounding support of the nation's distinguished military leaders and the persuasive, behind-the-scenes counsel of Senator Richard Lugar (R—Indiana). For a more complete analysis, see Smithson, "Bungling a No-Brainer."

²²² France allowed inspections of industrial sites before passing implementing legislation late in the summer of 1998. India has permitted industry inspections but has not finalized its implementing law. On 2 June 1998, India's Rajya Sabha approved the legislation, but the lower chamber of India's parliament has yet vote on it. "Chemical Weapons Bill Passed in RS," *The Hindustan Times*, 3 June 1998. See also, "India Govt. To Pursue Chemical Weapons Convention Bill," *The Hindu*, 21 May 1998.

²²³ As standard practice, US chemical companies require visitors to sign an agreement not to reveal any confidential business information that they may be exposed to while on site. The Technical Secretariat's inspectors are all bound by strict confidentiality agreements and procedures not to disclose any sensitive or confidential information that they come across during the course of their duties. On a *one time only basis*, however, the US companies that volunteer to host inspections could ask that the inspectors that conduct them sign individual confidentiality agreements.

Even in the turbulent beginning phase of its implementation, the CWC has demonstrated its ability to roll back the chemical weapons threat. This success, however, has been in spite of, not because of, the US example. Washington can perpetuate the negative CWC trends taking shape or it can play a critical role in helping to reverse them by gripping the rudder and steering the CWC toward its full potential as a disarmament, nonproliferation, and cooperative security mechanism. US policy makers owe it to present and future generations to choose the latter course.