Order Code RL32158

Chemical Weapons Convention: Issues for Congress

November 14, 2003

name redacted
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Foreign Affairs, Defense, and Trade Division

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Summary

More than 100 years of international efforts to ban chemical weapons culminated January 13, 1993, in the signing of the Chemical Weapons Convention (CWC). The Convention entered into force April 29, 1997. One hundred fifty-three of the 178 signatories have ratified the Convention. On April 24, 1997, the Senate passed the CWC resolution of ratification (S.Res. 75, 105th Congress) by a vote of 74-26. President Clinton signed the resolution and the United States became the 75th nation to ratify the CWC Convention, and Congress retains a continuing oversight role in its implementation.

The CWC bans the development, production, stockpiling, and use of chemical weapons by members signatories. It also requires the destruction of all chemical weapons stockpiles and production facilities. Neither the United States nor Russia will be able to meet the original CWC's deadlines for destruction of their CW stockpiles, and have been granted extensions to at least 2012. The Convention provides the most extensive and intrusive verification regime of any arms control treaty, extending its coverage to not only governmental but also civilian facilities. The Convention also requires export controls and reporting requirements on chemicals that can be used as warfare agents and their precursors. The CWC establishes the Organization for the Prohibition of Chemical Weapons (OPCW) to oversee the Convention's implementation.

Chemical Weapons Convention implementing legislation (P.L. 105-277) provides the statutory authority for domestic compliance with the Convention's provisions. It sets criminal and civil penalties for the development, production, acquisition, stockpiling, transfer, possession, or use of chemical weapons. It also establishes: 1) procedures for seizure, forfeiture, and destruction of contraband chemical weapons; 2) statutory authority for record-keeping and reporting requirements relevant to the CWC; 3) various restrictions on certain chemicals, depending on their likelihood of being used to produce chemical weapons; and 4) a protective regime for confidential business information gathered from private corporations. The legislation also provides detailed procedures to be used for on-site inspections by the OPCW, including limitations on access and search warrant procedures, should they be required.

CWC advocates continue to express concerns over so-called "treaty-breaking "sections of the implementing legislation, and lobby for their amendment. Of particular concern are provisions that allow the President to block challenge inspections, and that prohibit the OPCW inspectors from sending chemical samples outside the United States for analysis. These provisions are intended to protect U.S. national security interests and proprietary commercial information. CWC supporters, however, believe that blocking a challenge inspection violates a basic premise of the convention, and that forcing inspectors' analysis to be conducted within the United States undermines confidence in the verification regime. These provisions may also provide an excuse for other nations to adopt similar positions. This report will be updated as events warrant.

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CWC Ratification and Implementation

Ratifying Legislation (S.Res. 75, 105th Congress)

The United States signed the Chemical Weapons Convention in the last days of the first Bush Administration (1/13/93), and the Convention was submitted to the Senate for its advice and consent in the midst of the 103rd Congress (11/23/93). In the 103rd, 104th, and 105th Congresses, an extensive series of 13 hearings were held by the Foreign Relations, Armed Services, Intelligence, and Judiciary Committees, complemented with classified briefings from the intelligence community. (See **For Additional Reading**) Under a unanimous consent agreement, the CWC ratification resolution was to have been brought to the Senate floor in mid-September 1996. However, uncertain of sufficient votes to ensure passage, its supporters postponed its consideration.

In his 1997 State of the Union address, President Clinton pledged he would make the CWC a high priority in 1997, pressing for Senate consent early in the 105th Congress. After extensive negotiations between the White House and key Senators, and within the Senate itself, a unanimous consent agreement was reached to bring the Chemical Weapons Convention ratification resolution (S.Res. 75) to the Senate floor on April 23, 1997. The resolution contained 33 conditions, 28 of which were agreed to by the White House and within the Senate. Under the unanimous consent agreement, these were not subject to further amendment or motions. Five conditions were not agreed to, and each was struck by roll-call vote during floor debate, prior to passage of the resolution. The summary of the conditions below provides only the general intent of each; the ratification resolution itself should be consulted for a full understanding of the requirements each condition establishes.

The CWC ratification resolution, including agreed upon conditions:

- Asserts the Senate's right under the Constitution to add reservations to the Convention.
- Assures congressional oversight of all funds provided under the CWC.
- Requires Presidential certification that the OPCW has an Inspector-General and specifies report requirements.
- Requires cost-sharing for R&D expenditures for verification.
- Establishes standards for U.S. intelligence sharing and reports to Congress.
- Requires submission of any CWC amendments to the Senate.

- Requires the President to obtain assurances from Australia Group members that Article XI is consistent with continued export controls.
- Requires a report on the assurances offered to countries that forswear the use of nuclear weapons.
- Requires Presidential certification that restrictions on Schedule 1 chemicals do not adversely affect the chemical, biotechnology, and pharmaceutical industries.
- Requires annual country reports of CW activities, compliance, and intelligence monitoring.
- Requires the Secretary of Defense to ensure the Armed Forces are effectively equipped, organized, trained, and exercised for operations in CBW environments.
- Asserts the primacy of the U.S. Constitution.
- Requires the President to use the full range of his authority to enforce compliance.
- Requires the United States to reject any Russian effort to make its ratification contingent on U.S. financial assistance. Requires the United States to limit its CW defensive assistance under Article X, when extended to countries of concern, to medical antidotes and treatments.
- Prescribes U.S. responses to unauthorized release of confidential business information by the OPCW or other parties.
- States the sense of the Senate that U.S. negotiators should not agree to treaties that bar reservations.
- Prohibits transfer of inspection samples collected in the United States to laboratories outside the United States.
- States the Senate finding that chemical weapons terrorism is still a threat.
- States the Senate declaration that the United States should not be denied its vote in the CWC organization.
- Sense of the Senate that the U.S. On-Site Inspection Agency should provide assistance to facilities subject to routine inspection under the CWC.
- Limits U.S. assessment for OPCW to $25 million; ties increases to the Consumer Price Index; provides for certain exceptions, e.g., verification costs. Reaffirms the Senate's role in treaty interpretation.
- Reaffirms the Senate's role regarding arms control treaties.
- Requires Presidential certification that the CWC does not restrict U.S. use of riot control agents in certain specified circumstances. Requires notification and consultation when a chemical is added to CWC Schedules.
- Requires the President to explore alternative technologies for the destruction of the U.S. chemical weapons stockpile. Requires criminal search warrant for challenge inspections and administrative search warrant for routine inspections, if not permitted voluntarily.

Implementing Legislation (P.L. 105-277)

In the 105th Congress, on May 23, 1997 the Senate unanimously passed S. 610. This legislation, as reported by the Judiciary Committee, was an amendment in the nature of a substitute for the Administration's implementing legislation. CWC supporters with objections to provisions of S. 610 as reported hoped they could be resolved before final enactment, perhaps in House-Senate conference. (Congressional Record, May 23, p. S5078). However, In October 1998, the House incorporated S. 610's language, without amendment, into the FY1999 Omnibus Appropriations Act. This passed the House and Senate, and was signed into law October 20th, 1998 (P.L. 105-277; 22 USC 75)

The implementing legislation sets criminal and civil penalties for the development, production, acquisition, stockpiling, transfer, possession, or use of chemical weapons. These penalties would also apply to anyone who assists, encourages, induces, attempts, or conspires to carry out these proscribed activities. It also establishes: 1) procedures for seizure, forfeiture, and destruction of contraband chemical weapons; 2) statutory authority for record-keeping and reporting requirements relevant to the CWC; 3) various restrictions on certain chemicals, depending on their likelihood of being used to produce chemical weapons; and 4) a protective regime for confidential business information gathered from private corporations. It also provides detailed procedures to be used for on-site inspections by the OPCW, including limitations on access and search warrant procedures, should they be required.

The provisions, now enacted into law, which raise concerns from CWC supporters and the OPCW include:

- Section 213 — sets procedures for U.S. firms to seek compensation from the U.S. government, should they suffer the loss of proprietary information through the actions of OPCW employees. Critics, however, maintain that, as worded, this section does not place a high enough burden of proof on the claimants, and consequently could lead to excessive and unfounded claims against the government. Sections 237 — grants the President the right to deny a request for inspection if it "may cause a threat to U.S. national security interests." The CWC contains no provision permitting denial of an inspection, and critics note that doing so could place the United States in non-compliance. They maintain that even if never exercised, this section's existence will encourage other nations to enact similar exemptions, thereby weakening the CWC verification regime.

- Section 253 — exempts discrete organic chemicals not on the CWC control lists and incidental chemical by-products or waste-streams from reporting and inspection requirements. This is intended to ease potential burdens, particularly on paper manufacturers, but critics believe the exemption is too broadly worded and would rule out an effective non-intrusive sampling technique for inspectors. Sections 212 & 238 prohibit requiring that government contractors waive any

constitutional rights for any purpose related to the CWC. Some believe that this could hinder the CWC routine inspection regime.

U.S.-Soviet Bilateral Agreements

U.S.-Soviet Memorandum of Understanding (Wyoming MOU), September 1989. In 1989, as the multilateral negotiations slowed, the U.S.-Soviet bilateral talks took on greater importance and assumed a much higher public profile. On September 23, 1989, the United States and the Soviet Union signed a bilateral Memorandum of Understanding (MOU) agreeing to data declarations on CW stockpiles and trial inspections. U.S. intelligence officials believe that Russian declarations have been incomplete, particularly in the area of binary chemical weapons and novel chemical agents. High level consultations continue to try to resolve these discrepancies. Compliance with this agreement is a factor in the Bush Administration's decision not to provide the certification of Russia's commitment to arms control upon which further Nunn-Lugar Threat Reduction aid is contingent. The Russian chemical weapons destruction program is a beneficiary of this aid program.

U.S.-Russian Chemical Weapons Destruction Agreement, June 1990. On June 1, 1990, the United States and Russia signed an agreement covering the production of chemical weapons and the destruction of current CW stockpiles. This agreement, as yet not implemented, would permit routine bilateral monitoring and challenge inspections of the CW destruction process conducted in accordance with the provisions of the Chemical Weapons Convention. Russia has communicated to the Administration that the Bilateral Destruction Agreement (BDA) described below has "outlived its usefulness", and should be superseded by the Chemical Weapons Convention. U.S. officials, however, still support the BDA and are continuing talks on the issue. Russian cost estimates concluded that the BDA verification regime would be more expensive than OPCW monitoring and inspections.

Provisions of the Chemical Weapons Convention

More than 100 years of international efforts to ban chemical weapons culminated January 13, 1993, in the signing of the Chemical Weapons Convention (CWC). The CWC bans the development, production, stockpiling, and use of chemical weapons (CW) by its states parties. It also requires the destruction of all chemical weapons and production facilities. The Convention provides the most extensive and intrusive verification regime of any arms control treaty, extending its coverage to not only governmental but also civilian facilities. The verification package includes instrument-monitoring, both routine and random onsite inspections, and challenge inspections for sites suspected of CW storage or production. The Convention also requires export controls and reporting requirements on chemicals that can be used as warfare agents and their precursors.

Administratively, the Convention established the Organization for the Prohibition of Chemical Weapons (OPCW), located in The Hague, Netherlands, to

oversee the Convention's implementation. It is a permanent international organization charged with ensuring compliance with the Convention, and monitoring the chemical industry worldwide. The OPCW has three components: 1) the Conference of States Parties, comprising all signatories; 2) the Executive Council, composed of 41 signatories chosen in a rotation based upon geographic region and significance of commercial chemical production; and 3) the Technical Secretariat, which will conduct day-to-day administration of the Convention. Each signatory also designates a National Authority to be the liaison with the OPCW, and administer the implementation of the CWC domestically. On June 25, 1999 President Clinton issued an Executive Order designating the State Department as the National Authority for the implementation of the CWC, and establishing an interagency group [http://www.cwc.gov/] comprising the Secretaries of State, Defense, Commerce, and Energy, and the Attorney-General to coordinate the implementation.

Declarations required from each state party by the CWC include:

- Location and detailed inventory of all chemical weapons storage sites.
- Location and capacities of all chemical weapons production and research facilities.
- All transfers of chemical weapons and CW production equipment since 1946. A detailed plan and schedule for the destruction of chemical weapons and CW production facilities. Location and activities of any facilities using or producing controlled chemicals.

These declarations, and ensuing reports to the OPCW are released only to other States Parties to provide evidence of treaty compliance. Other information obtained by the OPCW, e.g. through inspections, is neither published or otherwise released without the permission of the countries concerned.

Destruction of chemical weapons agents, munitions, and production facilities is to be completed within 10 years of the Convention's entry into force (1997) or a State Party's ratification date, whichever is earlier. In "extraordinary circumstances", this deadline can be extended for up to 5 years, with the approval of two-thirds of the states parties. Both the United states and Russia have applied for and been granted extensions.

The Convention establishes three lists (Schedules) [http://www.opcw.org/html/db/chemind_frameset.html]of chemical warfare agents and their precursor chemicals arranged in order of their importance to CW production and range of legitimate peaceful uses. These chemical Schedules are to be updated as needed by the OPCW Technical Secretariat. Above certain quantitative thresholds, these chemicals' production, use, or transfer must be projected and subsequently reported annually to the OPCW. All facilities capable of producing, or that use scheduled chemicals must be registered. In addition, all facilities that produce over 30 metric tons of a discrete chemical containing phosphorous, sulphur, or fluorine must be registered.

For the chemicals included in the Schedule 1, there is a total ban on transfers to States not Party to the Convention. There is also the obligation to notify the OPCW

of any transfer of the compounds to States Parties, irrespectively of the quantity, and retransfer is prohibited. In keeping with the CWC's provisions, there has been a ban on transfers of Schedule 2 chemicals to non-State Parties place since the 29th of April 2000. Additionally, the State Parties shall declare annually the total quantities transferred among of them, by chemical and by country. For the chemicals included in Schedule 3, the Convention establishes the same obligation in terms of declaration of the total annual imports and exports per country and per chemical, and there is also the obligation to require an export licence, called an End Use Certificate for exports to non-State Parties. It is currently being discussed in the OPCW whether other kinds of restrictions or a total ban of these transfers will be put in place in the future. For the United States, the export controls are administered by the Department of Commerce's Bureau of Industry and Security [http://www.bxa.doc.gov/], which maintains an informational website — U.S. Chemical Weapons Web [http://www.cwc.gov/] to assist U.S. industry in compliance with these controls

The OPCW's facility inspection regimes vary, depending on the type of facility:

- Declared CW production, storage, or destruction sites: systematic on-site inspection and continuous instrument monitoring.
- Declared non-CW chemical facilities: routine or random inspections, depending on the Schedule and amounts of chemicals produced or used.
- All other facilities: on-site challenge inspections upon request of a state party, and approval of the OPCW Executive Committee.

CWC Issues for Congress

The CWC raises a variety of issues for congressional consideration. Although the vast majority of the world's nations have signed the CWC, some nations suspected of having chemical weapons have not — Egypt, Iraq, Libya, North Korea, Syria. What effect does this lack of universality have upon the value of the Convention? The CWC's verification provisions are extensive, but they have not stilled the debate over whether they are effective enough to deter violations. And, if violations are detected, are enforcement procedures and sanctions sufficiently stringent? Because the CWC extends its provisions to the civilian sector, the impact of inspections, reporting requirements, and export controls on commercial enterprise raises concerns unique to arms control treaties. The destruction of the U.S. chemical weapon stockpile, though congressionally-mandated independently of the CWC, presents technical, environmental, and financial challenges. Issues deserving attention can be grouped in six general areas: 1) universality; 2) verification; 3) impact on U.S. industry; 4) enforcement; 5) technology transfer; 6) destruction of chemical weapons here and in Russia; and 7) costs.

Universality

How many nations are willing to ratify the CWC and, more importantly, which nations are not? 153 nations have ratified the Convention, 24 nations have signed but not ratified the Convention, and 15 nations have not signed. (See Appendix 1)

Examining the signatory list, most are heartened to see China, Iran, Israel ,and Russia — nations known or believed to have, or be developing, significant CW capability. However, Israel has not ratified the Convention, and China, Iran, and Russia remain under suspicion with regard to compliance. (See **Verification and Compliance**) Some particularly troublesome nations, such as Iraq, Libya, North Korea, and Syria have not signed. In addition, a number of middle eastern states, notably Egypt and Jordan, have refused to sign, linking their participation to the removal of Israel's suspected *nuclear* capability.

At the April 2003 CWC Review Conference, the U.S. delegation called for "powerful incentives - both positive and negative — to those states remaining outside the Convention to join", pointing particularly to Libya, North Korea, and Syria.[1]

Critics of the CWC believe that its value is significantly reduced if all nations with the capability to develop and use chemical weapons are not parties, particularly in a region as volatile as the Middle East. The rationale is that even one nation having chemical weapons will create an incentive for its neighbors to follow suit. They believe that it is unwise for the United States to relinquish its chemical weapons capability while other nations retain theirs. Some also maintain that the possibility of retaliation in kind, i.e. with chemical weapons, could be an important component of CW deterrence.

CWC supporters, while agreeing to the importance of persuading all CW-capable nations to join, believe that a small number of hold-outs does not pose a sufficient threat to justify not ratifying the Convention. They note that in the first Persian Gulf War (1990-1991), the United States forswore retaliation with chemical weapons, even if Iraq were to use them against coalition forces. This decision was based on the assessment that the U.S. arsenal was adequate for both limited or massive retaliation without the use of chemical weapons. CWC supporters further argue that without the Convention there would be even greater incentive to acquire chemical weapons, and it would be easier to accomplish. They assert that CWC now provides an international regime of export controls and a widely accepted international norm, to which all nations — signatories or not — can be held.

Verification and Compliance

Verification of compliance is undoubtedly the thorniest issue. Devising an acceptable verification regime was the most difficult task for CWC negotiators and is the most challenging for those implementing the Convention. The CWC provides for the most intrusive and extensive verification regime of any arms control agreement to date. The regime, for the first time in arms control, provides for routine monitoring and inspection not only of military facilities but also of certain civilian chemical facilities. In addition, challenge inspection provisions expand compliance verification to suspect facilities of any sort. The Organization for the Prohibition of Chemical Weapons [http://www.opcw.org/]oversees the Convention's compliance verification.

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[1] *United States of America National Statement to the First Review Conference of the Chemical Weapons Convention. April 28, 2003 (as delivered)*. p. 2

The most serious question is whether the OPCW will be able to detect all clandestine production or stockpiling of chemical weapons. Ironically, the CWC's supporters and detractors generally agree: the answer is no. Acknowledging that the verification regime will not be absolute carries differing significance for the Convention's critics and advocates. Those who question the Convention's value believe that if compliance verification cannot be guaranteed, and undetected CW possession may be possible, the Convention is not worth the cost and effort. Worse, perhaps, they are concerned that the Convention would engender a false sense of security. They point out that in certain circumstances, the selective use of relatively small amounts of chemical weapons could be significant militarily, particularly against unprotected personnel. Consequently, would-be violators need not produce or stockpile vast amounts.

Advocates argue that, though CWC may be imperfect, it can provide the most intrusive and extensive verification regime in the history of disarmament and represents a notable improvement over current CW non-proliferation regimes. For signatories, this fact could change the cost/benefit analysis of CW production or stockpiling enough to deter violations. Provision for challenge inspections creates the likelihood that violations would become public breaches of the international norm, something not possible without the CWC.

The most difficult challenge is to detect existing chemical weapons that a nation does not declare and continues to store clandestinely. Detecting illicit transfers of controlled chemicals is also a challenging task. Covert production of chemical warfare agents and the subsequent manufacture of chemical munitions are higher-profile activities and consequently more vulnerable to detection. This assessment assumes that the OPCW and signatories' national intelligence resources will seek to uncover Convention violators. Consequently, the extent of intelligence sharing has a significant impact on the CWC's effectiveness. It is not clear, however, to what extent the States Parties are sharing relevant intelligence information with the OPCW. It is possible that concerns over possible leaks or compromising intelligence sources have weighed more heavily than the desire to assist the OPCW in its mission.

Another factor that affects the OPCW's verification capabilities is the amount and reliability of its funding by the Convention's signatories. Without adequate funding to maintain the technological and personnel resources necessary to monitor the international chemical industry and government activities, the rigor of the verification regime suffers. Budgetary difficulties have plagued the OPCW for the last several years. The United States has not supported requested budget increases in the past two years sought by the OPCW Administration to maintain inspection schedules, but rather directed the OPCW instead to establish " more efficient, appropriate, cost-effective approaches". [2] However, with a new Director General overseeing the OPCW, the United States has now approved an overall OPCW budget increase of 6.7% for 2004, raising the total budget to $86.5 million. In 2002, the United States negotiated a reduction of its OPCW dues to 22% of the operating budget, which amounts to $19.03 million for 2004. Delinquent dues and inspection

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[2] *United States of America National Statement to the First Review Conference of the Chemical Weapons Convention. April 28, 2003 (as delivered)* p. 4.

reimbursements still remain a significant problem for the OPCW, amounting in total to about $4.2 million as of July 2003.

The Arms Control and Disarmament Act (22 USC 2551) requires an annual report from the State Department titled *Adherence to and Compliance with Arms Control and Nonproliferation Agreements and Commitments.* [3] The most recent of these reports (August 2003) assesses that China, Iran, Russia, and Sudan are carrying out "activities inconsistent with the CWC" as follows:

- China — Maintains an active offensive R&D program, a possible CW stockpile, and undeclared CW-related facilities
- Iran — Is retaining and modernizing elements of its CW program, including R&D, an undeclared stockpile, and an offensive production capability.
- Russia — Has not made complete declarations regarding CW production, CW development facilities, and CW agents/weapons.
- Sudan — Has established an offensive R&D program.

At the CWC's First Review Conference (April, 2003), Assistant Secretary of State for Arms Control Stephen Rademaker reiterated U.S. assertions against Iran and Sudan. Though Secretary Rademaker said that the OPCW "must not shrink from the task of confronting those States Parties that are violating the Convention", the United States did not request formal OPCW action regarding these allegations.[4] Responding to those who questioned why the U.S. did not avail itself of the CWC's challenge inspection provisions to address its suspicions, the U.S. delegation maintained that challenge inspections would be ineffective in finding illicit weapons, and could falsely exonerate nations.[5] No specific reference was made to concerns over Russia or China in Secretary Rademaker's presentation to the OPCW Review Conference.

With regard to Russia, the concerns over verification are primarily focused on Russia's failure to acknowledge research and development on binary chemical weapons (binary chemical weapons use two non-lethal chemicals that combine to form a lethal agent after launching). The United States worked on developing binary weapons sporadically from the 1950s, ending the effort in 1992, when the signing of the CWC became imminent. U.S. intelligence has long believed that Russia was undertaking a similar program. In 1992, a Russian scientist, Vil Mirzayanov, publicly claimed that Russia had developed a binary agent significantly more effective than current nerve agents. He also asserted that the Russian military

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[3] *Adherence to and Compliance with Arms Control and Nonproliferation Agreements and Commitments*, Department of State, August 2003. p. 33.

[4] *United States of America National Statement to the First Review Conference of the Chemical Weapons Convention. April 28, 2003 (as delivered)* p. 4.

[5] *The CBW Conventions Bulletin*. June 2003. p. 29;

leadership continued the program after President Gorbachev declared Russia's chemical weapons development at an end. Concern over this Russian program rekindled in 1997 with the leaking of a classified DOD report to the press. Written at the U.S. Ground Intelligence Center, the report supposedly maintains that the new agent can be manufactured in significant amounts in modified pesticide plants from chemicals not covered by the CWC. (*Washington Times*, February 4, 1997, p.1) CWC opponents believe this information highlights the difficulties of verification and the lack of Russian trustworthiness. CWC supporters have responded that without the CWC such a program is legal, but with the CWC and accession to it, it would be illegal and suspect facilities would be subject to inspection.

The United States, having specifically requested an accounting of the Russian binary program and received inadequate responses, is continuing discussions to resolve these discrepancies. Although the current data exchange is independent of the CWC, Russian recalcitrance on this issue could adversely affect support for the Convention. If Russia is unwilling to be forthright in what is generally judged to be an "open secret," it raises the question of how seriously it considers the prohibitions of the CWC, and consequently places greater emphasis on effective verification. The Bush Administration has highlighted this point by its decision not to provide the certification of Russia's commitment to arms control, upon which Nunn-Lugar Threat Reduction aid is contingent, unless Russia provides further information on these programs (See below, Chemical Weapons Stockpiles and Facilities Destruction).

Impact on U.S. Industry

Many U.S. enterprises do not meet the CWC threshold requirements for reporting, and others may have minimal obligations (e.g. one-page reports) because of the nature of the chemicals they handle. For the most part, the heaviest burden (annual reports on production/consumption/transfer and at least one initial inspection) falls upon enterprises that deal with substantial amounts of chemicals that could be very useful in the production of CW warfare agents.

Implementing legislation for the CWC addressed some issues that are novel for arms control agreements. The Convention grants the OPCW inspection rights (routine, random, and challenge) over purely civilian, privately owned facilities. These inspection rights are harmonized with U.S. constitutional protections against unreasonable search and seizure through procedures for obtaining administrative or criminal search warrants if necessary. (22 USC 6725)

Loss of Proprietary Information (Trade Secrets). Potential loss of trade secrets is of great concern to private industry. And, the question arises whether forced or incidental disclosure of such information during a CWC inspection would constitute a "seizure" under the Fourth Amendment. Implementing legislation addressed this issue by restricting information collection, providing non-disclosure protection, and penalties for unauthorized disclosure of Convention-related information. To date, there have been no prosecutions for unlawful disclosures. Chemical industries emphasize that it is essential to protect proprietary information (or trade secrets) to maintain a competitive advantage in the marketplace. And, the CWC, through its enforcement and verification procedures, will require a greater

level of openness regarding production processes and rates, product composition, and market distribution. However, the U.S. chemical industry — represented through the Chemical Manufacturer's Association (now the American Chemistry Council) and the Pharmaceutical Manufacturers Association — strongly endorsed the Convention's confidentiality measures and supported the CWC's ratification.

Export Controls. The CWC requires restrictions on the export or transfer of controlled chemicals to non-States Parties. These restrictions vary in severity depending upon the chemicals involved. Also, as an incentive for nations to sign the CWC, the restrictions tighten in the years following the Convention coming into force. As noted earlier, there is a total ban on the export of chemicals on Schedules 1 & 2; there are on-going discussions on whether to apply this ban to Schedule 3 chemicals in the near future. (See above, Provisions of the Chemical Weapons Convention) The United States already had a variety of export controls on CW-related chemicals, equipment, and technology.[6] These stem from both unilateral action, and steps the United States has taken as a member of the Australia Group (AG).[7] The CWC export control provisions have consequently not engendered significant controversy domestically. The export control regime of the Australia Group remains an issue of contention with developing countries, who maintain that it inhibits legitimate technology transfer, and should not be applied to nations that are CWC States Parties. The Australia Group members have not found this argument persuasive, and remain convinced that the AG regime remains a useful complement to the CWC, particularly given that its control lists are more extensive than those negotiated for the Convention.

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[6] See CRS Report RL31559, *Proliferation Control Regimes: Background and Status*

[7] In response to the use of chemical weapons in the Iran-Iraq war in the 1980's, the United States and several other countries began to implement export controls on chemicals that could be used to manufacture chemical weapons. In 1985, Australia proposed that concerned countries meet in order to coordinate their export controls and share information to enhance their effectiveness. The first meeting took place in June 1985, and biennial meetings continue at the Australian embassy in Paris. The Australia Group first established a list of CW-related chemicals and equipment to control. In 1990, in response to growing concerns over the proliferation of covert biological weapons programs, certain biological agents and research/production equipment were added to the control list. Australia Group guidelines do not call for prohibiting the export of control list items, but rather establishing export monitoring and licensing procedures, with export denial only if there is reason to suspect potential contribution to a CBW program. The Group's list does not curtail legitimate trade. National governments administer their own export control programs. As an informal effort, it is not based on international treaty, is not affiliated with any international organization, and has no independent administrative structure. It operates entirely upon consensus of its 33 members [http://www.australiagroup.net/agpart.htm], and its decisions are not binding.

Australia Group participants are: Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czech Republic, Cyprus, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Republic of Korea, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Spain, Switzerland, Turkey, United Kingdom, the United States, and the European Commission.

Enforcement/Sanctions

The question of sanctions was addressed late in the CWC negotiations. The consultative nature of the Convention's provisions and the lack of specificity regarding sanctions to be levied against convention violators reflect the difficulty of those negotiations. It is generally anticipated that international sanctions would consist of trade and, perhaps, arms embargoes. CWC critics believe that its enforcement sanctions are too vague to be an effective deterrent. They question the effectiveness of economic and arms embargoes, maintaining that 1) embargoes are almost impossible to enforce internationally; 2) they historically have seldom achieved their foreign policy objectives; and 3) if they are effective at all, it is only over the long term. CWC supporters argue that the lack of specificity regarding possible sanctions heightens a potential violator's uncertainty about breaking the Convention. They believe that this uncertainty and the international approbation that would be generated by the enforcement procedure will sufficiently affect the "cost/benefit" analysis of chemical weapons production to deter a potential violator. They also do not accept the assertion that international sanctions are without effect, maintaining that at a minimum they significantly degrade a nation's ability to maintain a CW program. They point to the evidence that the international sanctions and inspection regime imposed upon Iraq in the 1990's apparently stymied Iraq's CW production and research to a far greater extent than initially believed by many.

Chemical Weapons Stockpiles and Facilities Destruction

The CWC mandates the destruction of all chemical weapons stockpiles and production facilities within 10 years of the Convention's coming into force (i.e. , April 2007). The Convention also specifies the order in which different types of weapons shall be destroyed, and interim deadlines. A clause permitting an extension of up to five years, upon approval of the Conference of State Parties, was included specifically in anticipation of Russia's not being able to meet the destruction deadline, given its political and economic instability in the 1990's. However, now both Russia and the United States have had to request extensions of both interim and final destruction deadlines.

U. S Chemical Weapons Destruction Program. In October, the United States acknowledged that it would not be able to destroy 45% of its CW stockpile by the interim deadline of April 29, 2004 . Of particular interest, is that the United States requested an extension of the 45% interim deadline to December 2007 — full eight months after the Convention's deadline for the destruction of the entire stockpile. This request, and its implication that the United States will not be able to meet the final destruction deadline of April 2007, reflects the many difficulties the destruction program has encountered over the last 18 years. Accepting that the United States is undertaking a good faith effort to destroy its stockpile, on October 24, the Eighth OPCW Conference of States Parties approved the extension of the 45% deadline to December 2007, and the extension of the final deadline in principle, with no date specified.

These deadline extensions notwithstanding, The United States is by far the country most advanced in its CW destruction program. In the early 1980s, DOD

declared approximately 90% of the U.S. chemical stockpile (28,000 agent tons) obsolete. This decision, coupled with a 1985 congressional directive to destroy these munitions, led DOD to begin planning a destruction program almost two decades ago. Nevertheless, it is now entirely clear that the United States will be not able to meet the 2007 CWC deadline. Until very recently, DOD estimates have called for completing destruction on time, but critics of the program have maintained for some time that these expectations were unrealistic. Indeed, in October 1998, an independent analysis commissioned by DOD and conducted by the Arthur Anderson firm estimated that none of the CW destruction facilities had even a 5% chance of meeting their destruction deadlines. DOD rebutted the audit, maintaining that it was based on old data, and did not reflect increased efficiencies.[8]

In 2001, the controversy arose again when the Senate Appropriations Subcommittee on Defense obtained an internal Army report — *Operations Schedule Task Force 2000-Final Report*, — that first indicated that it was doubtful that even an extended final deadline of 2012 could be met. The report detailed the actual munition destruction rates at the Johnston Atoll depot, showing them to be much lower than previous official estimates, and indicated that substantially the same destruction rates should be expected at other incineration facilities. If so, the CW stockpile destruction program would extend beyond 2014. DOD initially contended that the report was a "worst case scenario," but then the DOD Selected Acquisition Report, released in April, 2002, revealed an 80% increase in the destruction program's costs owing specifically to "revised destruction rates" and "schedule extensions."

The *Task Force 2000-Final Report* reflects the challenges at depots where incineration is the destruction method (Anniston Army Depot, AL; Pine BluffArsenal, AR; Tooele Army Depot, UT; and Umatilla Depot Activity, OR). At the Lexington-Bluegrass Army Depot, KY and Pueblo Depot Activity, CO, neutralization methods developed at congressional direction (P.L. 104-28) through the Assembled Chemical Weapons Assessment Program [http://www.pmacwa.army.mil] have just entered the pilot-plant phase. The remaining two storage depots, Aberdeen Proving Ground, MD and Newport Army Ammunition Plant, IN, house only agent in bulk tanks, which will also be destroyed through chemical neutralization. However, the neutralization process still produces a chemical residue which must be treated as a hazardous material, and its safe disposal has become an issue of public concern.[9]

Among the factors DOD has identified as contributing to the delays are: revised destruction rates, new environmental regulations, worse-than-expected stockpile condition, and unanticipated emergency preparedness requirements. In addition to these factors, which are mostly out of DOD's control, there has been fairly consistent criticism of the destruction program's management almost since its inception. The

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[8] "Report Sees Overruns of 34 Months, $2.89 billion in Weapons Disposal", *Associated Press.* October 8, 1998.

[9] "Firms Bid to Get VX Hits New Snag", *Dayton Daily News*, October 5, 2003; "Indiana: Army to Delay Nerve Agent Destruction", *New York Times*, August 15, 2003

General Accounting Office has issued several program assessments, with the most recent continuing to emphasize significant administrative problems:

> "The Chemical Demilitarization Program remains in turmoil because a number of long-standing leadership, organizational, and strategic planning issues remain unresolved. The program lacks stable leadership at the upper management levels. For example, the program has had frequent turnover in the leadership providing oversight. Further, recent reorganizations have done little to reduce the complex and fragmented organization of the program. As a result, roles and responsibilities are often unclear and program actions are not always coordinated. Finally, the absence of a comprehensive strategy leaves the program without a clear road map and methods to monitor program performance. Without these key elements, DOD and the Army have no assurance of meeting their goal to destroy the chemical stockpile in a safe and timely manner, and within cost estimates."[10]

GAO issued several recommendations to improve program management, e.g.: establish long-term objectives, define roles and responsibilities of DOD and Army offices, and develop short-term performance measures. DOD has concurred with those recommendations, and has begun implementation. However, given that the U.S. request to the OPCW for destruction deadline extensions left the date for final completion unspecified, it would seem that uncertainty about the pace of the destruction program remains high.

Difficulties that the United States has encountered with the chemical weapons destruction program have been reflected in the significant cost estimate growth since its inception. In 1985, for example, DOD estimated the total program cost would be between $1.2 to $2.0 billion. These cost estimates routinely increased, reaching $13.2 billion in 2001. Then, in April 2002, acknowledging the program delays noted above, the Department of Defense Selected Acquisition Report announced a new 80% increase in the total cost estimate, raising it to $23.7 billion. For FY2004, the Defense Department requested a total of $1.65 billion for the chemical demilitarization program: R&D — $251 million, Procurement — $79 million, Operations & Maintenance — $1.2 billion, and Military Construction — $119million. Congress appropriated these funds as requested.

Russian CW Destruction Program. Russia possesses the world's largest chemical weapons stockpile, estimated to be 40,000 to 50,000 tons. Russian officials have made it clear that both technological and financial assistance is needed to destroy its chemical weapons. As part of the comprehensive threat reduction assistance programs (often called "Nunn-Lugar" programs), the United States has appropriated approximately $437 million Between FY1992-FY2003 to assist in the design and construction of a nerve agent destruction facility in Shchuch'ye. In addition, the United States has agreed to share destruction technology and participate

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[10] *Sustained Leadership, Along With Key Strategic Management Tools, is Needed to Guide DOD's Destruction Program*, General Accounting Office, September 2003. Report No. GAO-03-1031. p. 1.

in the exchange of technical experts. To facilitate these efforts, the United States has opened a Chemical Weapons Destruction Support Office (CWDSO) in Moscow.[11]

During consideration of the FY2000 DOD budget request, both the House and Senate Armed Services Committees expressed strong reservations about Russia's ability to fund operation of the Shchuch'ye facility if constructed, and noted the relative paucity of assistance from other nations for this program. Consequently, the FY2000 DOD Authorization Act (P.L. 106-65, Sec. 1305) forbade further funding for a chemical weapons facility in Russia. DOD's efforts in the FY2001 budget considerations to have this provision repealed and $35 million appropriated for a Shchuch'ye facility met continued congressional skepticism. House and Senate Armed Services Committee conferees accepted a Senate amendment in the DOD FY2001 Authorization Act (H.R. 4205) which amended the existing statutory prohibition to permit Shchuch'ye funding *only* after DOD certification that:

- Russia has agreed to provide $25 million annually for construction and operation.
- Russia has agreed to use the facility to destroy its four other nerve agent stockpiles.
- The United States has obtained multi-year commitments from the international community to assist infrastructure improvement around Shchuch'ye.
- Russia has agreed to destroy its CW production facilities at Volgograd and Novocheboksark.

These conditions were coupled with a DOD reporting requirement on Russian and international financial contributions towards the safeguarding and destruction of Russia's nerve agent stockpiles. For FY2002 and FY2003, Congress, satisfied that sufficient progress has been made in meeting these conditions, approved appropriation of $35 million and $55 million for the Shchuch'ye facility, though these amounts were substantially below DOD's budget request. For FY2004, the Congress agreed to appropriate the Administration's full budget request of $200 million.

Even with foreign assistance, Russia will not be able to meet CWC destruction deadlines. It has requested an extension until 2012, but few believe that extension will be sufficient. Consequently, the CWC Conference of States Parties has approved an extension of Russia's interim deadline to destroy 20% of its stockpile to April 2007, and also agreed to an extension of subsequent deadlines in principle, with no date specified. The General Accounting Office has estimated that without additional destruction facilities, it could take at least 40 years for Russian to complete destruction of its nerve agent stockpile.[12]

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[11] See also, CRS Report RL31957, *Nonproliferation and Threat Reduction Assistance: U.S. Programs in the Former Soviet Union*.

[12] *Weapons of Mass Destruction: Additional Russian Cooperation Needed to Facilitate U.S. Efforts to Improve Security at Russian Sites.* General Accounting Office Report No. GAO-03-482. p. 60.

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Appendix 1: State Parties, Signatories, and Non-Signatories

States Parties

The following 153 countries have either signed and ratified or acceded to the Chemical Weapons Convention:

Albania, Algeria, Andorra, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Belarus, Belgium, Benin, Bolivia, Bosnia-Herzegovina, Botswana, Brazil, Brunei, Bulgaria, Burkina Faso, Burundi, Cameroon, Canada, Chile, China, Cook Islands, Costa Rica, Cote d'Ivoire, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominica, Ecuador, El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Finland, Former Republic of Yugoslavia, Former Yugoslav Republic of Macedonia, France, Gabon, Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Guinea, Guyana, Holy See, Hungary, Iceland, India, Indonesia, Iran, Ireland, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kiribati, Kuwait, Laos, Latvia, Lesotho, Lithuania, Luxembourg, Macedonia, Malawi, Malaysia, Maldives, Mali, Malta, Mauritania, Mauritius, Mexico, Micronesia, Moldova, Monaco, Mongolia, Morocco, Mozambique, Namibia, Nauru, Nepal, Netherlands, Nicaragua, Niger, Nigeria, Mauritania, New Zealand, Niger, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russian Federation, Samoa, San Marino, Santa Lucia, Saudi Arabia, Senegal, Seychelles, Singapore, Slovak Republic, Slovenia, South Korea, South Africa, Spain, Sri Lanka, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Sweden, Switzerland, Tajikistan, Tanzania, Thailand, Timor Leste, Togo, Tonga, Trinidad-Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, the United Kingdom, the United States, Uruguay, Uzbekistan, Venezuela, Vietnam, Yemen, Zambia and Zimbabwe

Signatories

The following 25 countries have signed, but not ratified the Chemical Weapons Convention:

Afghanistan, Bahamas, Bhutan, Cambodia, Cape Verde, Central African Republic, Chad, Comoros, Congo, Democratic Republic of Congo, Djibouti, Dominican Republic, Grenada, Guinea-Bissau, Haiti, Honduras, Israel, Kyrgyzstan, Liberia, Madagascar, Marshall Islands, Myanmar, Rwanda, Saint Kitts and Nevis, Sierra Leone.

Non-Signatory Nations

Angola, Antigua and Barbuda, Barbados, Belize, North Korea, Egypt, Iraq, Lebanon, Libya, Niue, Sao Tome and Principe, Solomon Islands, Somalia, Syria, Tuvalu, Vanuatu