



# THE CBW CHRONICLE

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A periodic newsletter about international and domestic events related to the control and elimination of chemical and biological weapons

## MOSCOW RELEASES MORE DETAIL ON POISON GAS CAPABILITIES

Partly to encourage additional international contributions to its stagnant chemical weapons destruction program, Moscow recently made more information publicly available about twenty-four former Soviet chemical weapons production facilities. The newsletter of the Organization for the Prohibition of Chemical Weapons, *Synthesis*, ran an article by staffers from three Russian bureaucracies in its November-December 1999 issue. After detailing previous activities at Russia's poison gas factories, the trio of authors contends that Russia will be able to finance just 10 percent of the estimated \$110 million needed to demilitarize these former production facilities.

According to *Jane's Intelligence Review*, State Department officials characterized the information in the article as consistent with Russia's January 1998 declaration to the Hague-based international chemical weapons inspection agency. As shown in Figure 1, two dozen chemical agent production and munition filling facilities were identified at five separate sites in Russia: five at Novocheboksarsk,

eight at Volgograd, three at Chapaevsk, seven at Dzerzhinsk, and one at Berezniki. International inspectors have already certified three facilities as destroyed, as noted in Table 1; two other destruction certificates are expected soon, while a third additional facility will probably not be destroyed until 2004.

Russia plans to convert ten production facilities at Novocheboksarsk

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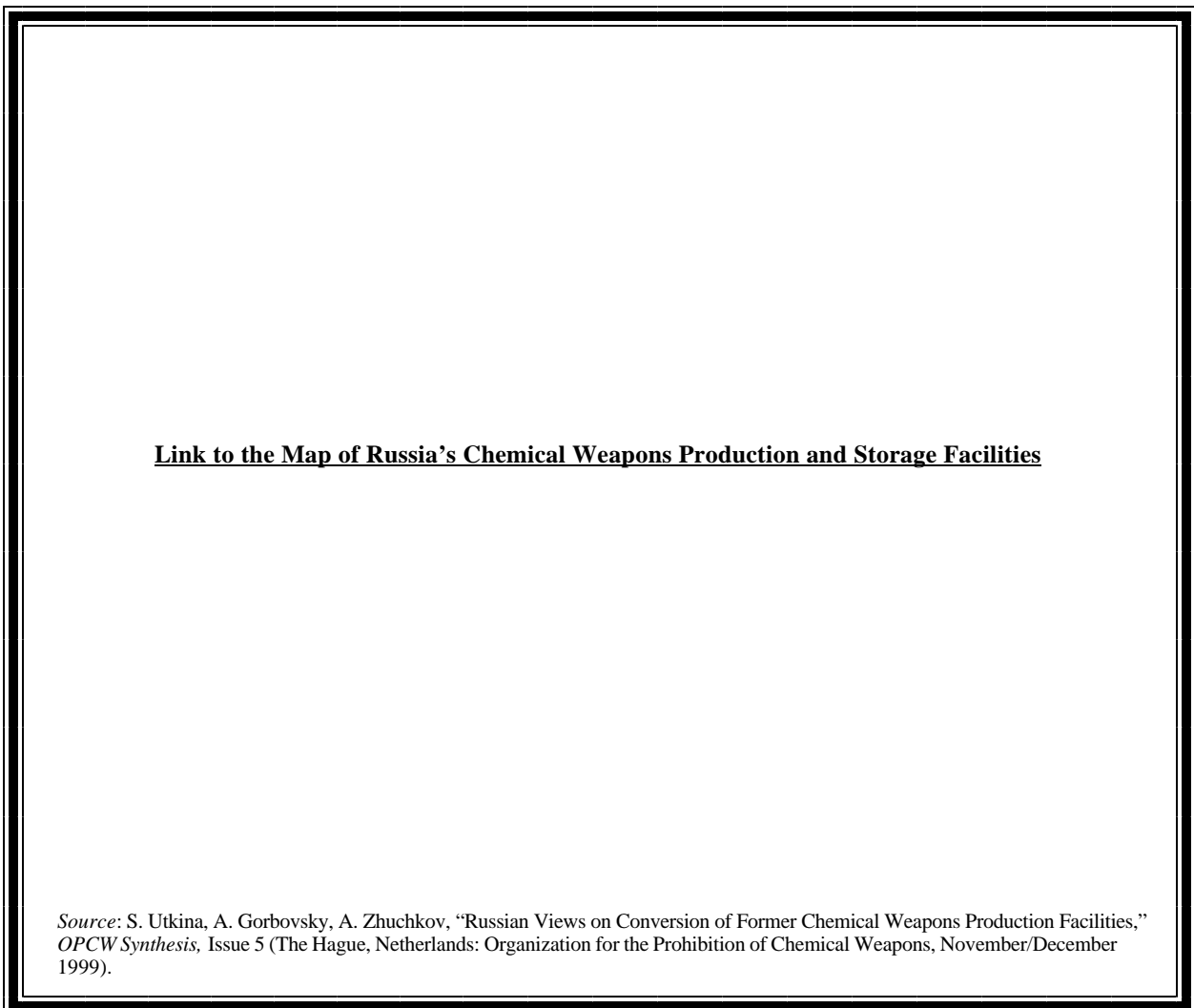
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and Volgograd to peaceful uses, a lengthy process that the Chemical Weapons Convention (CWC) allows in exceptional cases of compelling need. Thus far, the United States and Great Britain have gained approval for conversion of former production sites into peaceful applications. Demilitarization of these two large sites in Russia involves tasks ranging from the destruction of specialized equipment (e.g., pipelines, ventilation systems, and concrete bunkers) to the demolition of buildings. The tab for cleaning up Novocheboksarsk alone

will run \$99 million, due largely to the challenge of dealing with a severely contaminated VX production and filling facility. Volgograd's demolition and clean-up will cost another \$4 million. Aiming for international assistance, the authors highlighted recent Russian laws that offer tax and customs benefits to aid donors.

For the time being, U.S. financial assistance has been suspended, pending Moscow's ability to provide the socio-economic improvements that it promised to the seven communities in Russia where

**Figure 1: Russia's Chemical Weapons Production and Storage Facilities.**



**Table 1: Status of Russian Chemical Weapons Production Facilities.**

<i>Location</i>	<i>Total Production Facilities</i>	<i>Facilities Certified as Destroyed</i>	<i>Facilities Awaiting Destruction Certification</i>	<i>Former Production Facilities Not Requiring Further Demilitarization</i>	<i>Former Production Facilities To Be Demilitarized</i>
Novocheboksarsk	5				5
Volgograd	8	1		2	5
Chapaevsk	3	1		2	
Dzerzhinsk	7	1	3	3	
Berezniki	1			1	
<b>TOTAL</b>	<b>24</b>	<b>3</b>	<b>3</b>	<b>8</b>	<b>10</b>

Source: S. Utkina, A. Gorbovsky, A. Zhuchkov, "Russian Views on Conversion of Former Chemical Weapons Production Facilities," *OPCW Synthesis*, Issue 5 (The Hague, Netherlands: Organization for the Prohibition of Chemical Weapons, November/December 1999).

chemical weapons are stored. Figure 1 also shows these storage sites. In the fall of 1999, Congress axed \$130 million in Cooperative Threat Reduction funds slated for a pilot chemical weapons destruction facility at Shchuchye, which houses artillery munitions filled with the nerve agents sarin, VX, and soman. The 2000 Defense Authorization Act instead directed a maximum of \$20 million to security improvements at Russia's chemical weapons storage facilities. Italy's recent decision to contribute \$7.6 million to socio-economic improvements at Russia's poison gas storage sites may pave the way for the resumption of U.S. aid to construct the pilot facility at Shchuch'ye.

With Russia's economy in shambles, Moscow has made virtually no progress on the destruction front. Barring a miracle, observers believe that Russia will not meet the 2007 CWC deadline for destroying its chemical arsenal. Even though other countries are beginning to increase contributions to the destruction effort,

including the Netherlands and the European Union, some experts wonder whether even a five-year deadline extension will prove sufficient for Russia to eliminate its 40,000 ton chemical arsenal.

CWC observers welcomed the release of more details about Russia's chemical weapons capabilities, but Moscow has remained silent about charges first raised in 1991 that the USSR and Russia developed an entirely new generation of nerve agents in the late 1980s and early 1990s. A 26-year veteran of the Soviet chemical weapons complex, Dr. Vil Mirzayanov, blew the whistle on the program code-named *novichok*, wherein experimental quantities of several novel, highly lethal, binary nerve agents were developed, tested, and produced in experimental quantities. The *novichok* agents, which are based on agro-chemicals, are not yet on the CWC's list of banned warfare agents since their formulas are not known.

## AGRICULTURE DEPARTMENT HEIGHTENS COUNTERTERRORISM ACTIVITIES

Though it has always been a technical resource, the U.S. Department of Agriculture (USDA) has begun to take a much more active role in Washington's expanding efforts to counter non-conventional terrorism. USDA has asked for \$215 million over the next three years to upgrade the veterinary research facilities at Plum Island, New York, to investigate large animal diseases that could possibly affect humans. The requested boost would make Plum Island the country's first Biosafety Level 4 laboratory for livestock. Currently, only four level 4 labs—the highest level of containment—exist in the United States.

When President Bill Clinton issued directives in 1995 and 1998 relating to non-conventional terrorism, policy makers focused first on the threat to the human population. With the passage of time, however, the vulnerabilities of the U.S. agricultural and food supply system to a covert germ attack have begun to be recognized more widely. Thus, USDA now sits on the National Security Council's Weapons of Mass Destruction Preparedness Group, chairing a subgroup on food and crop safety issues.

U.S. agriculture is a sizable and valuable industry, comprising about 13 percent of the country's annual gross domestic product. Agriculture exports total some \$140 billion each year, while agriculture production generates 22 million American jobs. The industry is also highly centralized, with just 2 percent of the nation's feedlots producing three quarters of its cattle. Given this high degree of crop and livestock concentration, experts worry that an attack could quietly wreak sizable economic havoc without leaving behind any obvious fingerprints. Even though the threat

to U.S. agriculture may be remote, concerns have heightened because other countries are known to have included anti-crop and animal agents in their germ arsenals. According to Dr. Ken Alibek, a senior defector from the USSR's bioweapons program, the Soviet Union directed at least 10,000 scientists to study plant and animal diseases. United Nations inspectors also uncovered Iraqi capabilities with anti-crop and -animal pathogens.

In 1998, USDA articulated goals to protect the nation's food supply. The department aims to research improvements to counterterrorism capacities, safeguard agriculture and the food supply system, and improve domestic and international cooperation to both prevent and respond to terrorism. USDA created a high-level policy group in 1999 to strengthen the coordination of the department's counterterrorism work both internally and externally.

USDA has also segued into threat reduction efforts, initiating collaborative research projects with former Soviet bioweaponeers using funds apportioned under the Freedom Support Act. A 1998 trip by USDA officials to Russia yielded four collaborative projects with Russian scientists. Dr. Floyd Horn, who heads the Agricultural Research Service, told Congress in October 1999 that the department expects to boost the number of collaborative project to about fifteen this year.

The Plum Island initiative marks USDA's latest push to bolster its counterterror programming. Once an Army Chemical Corps facility, the island has been a site for animal disease study for more than fifty years. Sixty scientists now staff the laboratory, along with 240 additional employees, at an annual cost of \$14.5 million. Already subject to strict containment rules, employees work behind sealed doors in negative pressure to ensure that potentially dangerous microbes do not

escape. Those proposed improvements would tighten these measures—to include the use of special pressurized suits, for example—to Biosafety Level 4.

<p><b>Ad Hoc Group Meetings in 2000 on the Biological and Toxin Weapons Convention</b></p> <p>17 January to 4 February 13 to 31 March 10 July to 4 August 13 to 24 November</p> <p><i>Total: 12 Weeks</i></p>
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### **U.S. CASE FOR AL SHIFA ATTACK DISINTEGRATES**

Controversy lingers over an August 1998 U.S. attack on a Sudanese pharmaceutical plant suspected of producing a key chemical precursor for the nerve agent VX. Some government officials have expressed concern about the manner in which a handful of policy makers ultimately made the decision to target this facility, and the Clinton administration’s evidence used to link the plant to terrorist activities has all but fallen apart.

On 20 August 1998, the United States sent thirteen cruise missiles into Sudan as part of an unprecedented attack on international terrorism. The Tomahawk missiles effectively leveled Al Shifa Pharmaceutical Industries, located in an industrial section of Khartoum. U.S. officials asserted that Al Shifa was manufacturing a nerve agent precursor chemical and was tied to terror mastermind Osama bin Laden. Salah Idris, a Saudi businessman who had purchased Al Shifa five months earlier, vigorously contested these charges.

Immediately after the strike, Secretary of State Madeline Albright,

Secretary of Defense Richard Cohen, and National Security Adviser Samuel R. “Sandy” Berger staunchly defended Operation Infinite Reach, a two-pronged mission that simultaneously sent sixty-six cruise missiles into suspected bin Laden strongholds in Afghanistan. U.S. officials described Al Shifa as a secret component of the Sudanese military industrial complex, guarded tightly by military personnel. They also emphasized the circulation of Iraqi poison gas experts through the factory. Within four days, the Treasury Department froze Idris’ assets.

The U.S. case against Al Shifa centered largely on physical evidence, particularly a soil sample swiped by a U.S. intelligence asset in December 1997 from the Al Shifa compound. The sample showed the presence of the chemical EMPTA in amounts two and a half times greater than trace levels. EMPTA, short for ethyl methylphosphonothionate, is used in the production of the super toxic nerve agent VX. U.S. officials stated at the time of the attack that EMPTA had no commercial uses, but international treaty inspectors soon countered that EMPTA had possible peaceful applications, for instance in fungicides and anti-microbial agents.

In October 1999, the *New York Times* reported that a number of government officials worried that the Al Shifa links to bin Laden and chemical weapons were tenuous at best. They also were troubled that the decision to strike the factory was so secretive that it excluded experts on terrorism and chemical weapons and omitted the Joint Chiefs of Staff until the day before the strike. Even the soil sample, considered the smoking gun that gave credibility to the operation, was called into question. The Clinton administration balked at providing details on exactly how the Central Intelligence Agency obtained the sample and the chain of custody that was used to transport it.

In a campaign to clear his name and regain control of \$24 million frozen in Bank of America accounts, Idris hired a top Washington law firm to investigate the charges levied against him and his company. In January 1999, the investigation firm Kroll Associates issued a 300-page report based on interviews with sixty people throughout the Middle East, showing no connection between Idris and bin Laden. The report concluded that Al Shifa was a legitimate pharmaceutical factory, primarily involved in the repackaging of imported pharmaceutical products. Idris also sent a series of additional controlled samples from Al Shifa to two of the world's top laboratories, which found no trace of EMPTA.

In February 1999, Idris filed suit against the U.S. government for freezing his assets without officially designating him a terrorist. Some three months later, the Treasury Department opted not to contest the lawsuit and quietly unfroze his bank accounts. The White House reiterated concerns about Idris and the factory, but elected not to elaborate, stating the need to protect intelligence sources.

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### **THE U.S. CHEMICAL WEAPONS DESTRUCTION PROGRAM: PROGRESS AMIDST CONTROVERSY**

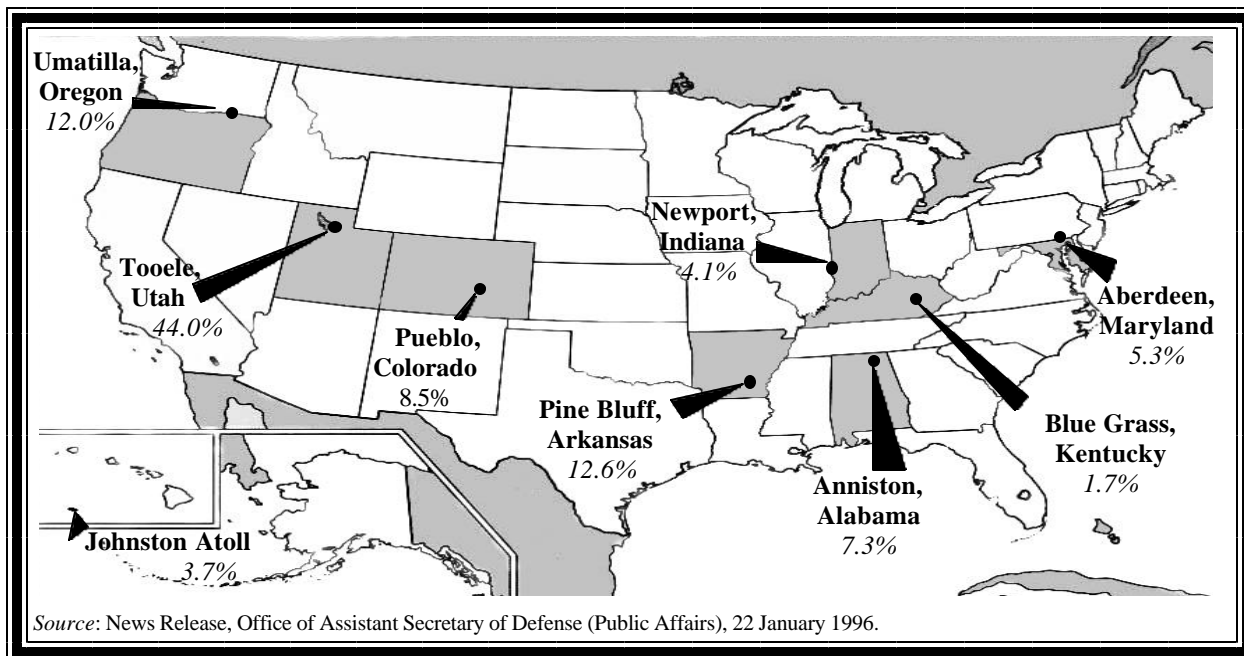
**D**estruction of the U.S. chemical weapons stockpile gained momentum in the latter half of 1999. The Army's incinerators on Johnston Atoll in the South Pacific and in Tooele, Utah had destroyed just over 17 percent of the 30,000-ton chemical arsenal. However, criticism of the

destruction program also accelerated in recent months, with renewed opposition to the incineration process and allegations of fraud dogging the Army's program. Against the backdrop of an always divisive debate about incineration as the destruction method, third-party evaluations of alternative destruction technologies proceeded as mandated by Congress.

The Johnston Atoll facility wrapped up elimination of the site's mustard and sarin stockpiles at the end of 1999. Work has now begun on the remaining 15 percent of the island's original 2,000 ton poison gas stash: the bulk containers and munitions filled with the nerve agent VX. As depicted in Figure 2, Johnston Atoll began with around 4 percent of the total U.S. chemical arsenal, and the small island facility anticipates completion of its mission in 2001. The Tooele incinerator—the only weapons destruction facility currently functioning in the continental United States—began operations in 1996. Tooele has already disposed of more than a quarter of the 27 million pound stockpile stored nearby at the Deseret Chemical Depot. The Army expects destruction work in Utah to wrap up in 2004. Table 2 shows the current status of the U.S. chemical weapons destruction efforts.

In January, however, a former Tooele employee levied fraud charges against the Army and EG&G Defense Systems, the contractor that runs the facility. At a press conference in Washington, D.C., Mr. Gary Harris, a permit coordinator at Tooele until 1996, alleged that reports had contained erroneous or misleading data. He charged the Army with failure to closely monitor emissions from the Utah facility and with concealing from state regulators

**Figure 2: Breakdown of U.S. Chemical Weapons Stockpile Prior To Destruction Operations.**



shortcomings in the incinerator’s ability to destroy chemical agent completely. Later, Harris also asserted that the brine solutions from pollution control equipment were contaminated with chemical agents, calling into question the safety of emissions from the facility. Furthermore, Harris suggested that plant officials knew that toxic nerve agent residue lingered on processed weapons parts that were subsequently forwarded to a scrap metal business. In the wake of the allegations, the metal parts company halted processing of 105 millimeter shells that it had received from the site. The Army pledged a full investigation.

The \$650 million Utah incinerator has been controversial from the outset. Harris is the fifth whistleblower to raise safety concerns about the facility. Local newspapers are periodically peppered with reports of poison gas leaks inside the depot’s bunkers. These accidents concern some officials who fear that the longer the destruction timeline stretches, the greater the

likelihood of larger leaks that may escape from the immediate storage area. To date, the spills have all occurred in contained areas and have resulted in no injuries to staff or local residents. Facility personnel report that built-in safety precautions and agent detectors have worked as intended.

The incineration process itself has also met with resistance from several groups who assert that the Army’s incinerators release harmful by-products, such as dioxins, that could pose a risk to nearby residents and the environment. Responding to such concerns, in 1996 Congress required the Army to explore destruction technologies beyond incineration. The Assembled Chemical Weapons Assessment Program established that year is separate from the Army program tasked with destroying the poison gas stockpile and has overseen the exploration of seven alternative destruction methods. The Pentagon funded demonstrations of three alternative technology options in 1999. After Senator Mitch McConnell (R-Kentucky) urged the

General Accounting Office to review the Army's chemical demilitarization expenditures in July 1999, the Army announced the availability of an additional \$40 million to test three more destruction methods.

Also working in a congressionally mandated capacity, in August 1999 the National Research Council released an evaluation of the alternative technologies under consideration to destroy assembled munitions. The Council's academic and industry experts concluded that all seven options could destroy chemical agent with the required 99.9999 percent effectiveness. However, they also noted that many questions remained, particularly with regard to each technology's ability to handle the energetic materials of assembled munitions effectively and safely. The experts raised additional concerns about how to identify and handle the by-products generated by the complicated processes. In the end, the group urged significant additional testing for any technology ultimately selected to eliminate the U.S. stockpile.

Non-incineration destruction methods will be employed at sites in Aberdeen, Maryland and Newport, Indiana, where mustard and nerve agent stored in bulk containers will be neutralized by hydrolysis. Construction is underway at both sites, with on-site pilot testing slotted to begin around 2003.

## NORTH KOREAN CHEMICAL AND BIOLOGICAL WEAPONS THREATS ELABORATED

More information has been published about the chemical and biological weapons capabilities of North Korea, long high on the U.S. government's list of countries suspected of possessing these two types of weapons of mass destruction. On 12 October 1999, the South Korean Ministry of Defense issued a White Paper that concludes North Korea has enhanced its capacity to wage chemical and biological warfare in the last several years. Not only does Pyongyang have a significant stockpile of poison gas and germ weapons, but South Korean authorities identified six chemical weapons storage areas, three chemical production facilities, and eight chemical research centers scattered across the northern half of the peninsula. Table 3 lists these sites.

South Korean authorities estimated North Korea's chemical weapons stockpile in 1989 to be between 180 to 250 metric tons. Eight years later, Seoul stated that this arsenal had ballooned to 5,000 metric tons, not too far from a 1996 *Jane's Intelligence Review* estimate that in peacetime North Korea was capable of producing 4,500 tons of chemical weapons annually. During periods of war, *Jane's* projected that the

**Table 2: Status of U.S. Chemical Weapons Destruction (through 13 February 2000).**

Destruction Facility	Tonnage Destroyed	Percent of Original Tonnage Destroyed	Total Number of Munitions and Bulk Containers Destroyed	Percent of Original Munitions Destroyed
Johnston Atoll	1,754	86.3%	367,008	88.9%
Tooele, Utah	3,932	28.8%	378,796	33.2%
<b>TOTAL</b>	5,686	18.0%	745,804	21.6%

Source: U.S. Army Program Manager for Chemical Demilitarization, Public Outreach and Information Office.

figure could escalate to 12,000 tons of poison gas per year.

The South Korean White Paper also identified ten biological warfare agents that North Korea is also believed to possess, including anthrax, plague, botulinum toxin, and smallpox. The latter agent is of particular concern, since samples of the highly contagious smallpox virus are supposed to be tightly guarded in two official repositories, the Centers for Disease Control in Atlanta and the Russian State Research Center of Virology and Biotechnology in Koltsovo. South Korean authorities did not elaborate on the estimated size of the North Korean biological weapons stockpile.

The White Paper also highlights a number of North Korean delivery systems capable of handling non-conventional payloads, including the three-stage, Taepo Dong I intercontinental ballistic missile. U.S. intelligence officials testified this year that the Taepo Dong 1 could theoretically deliver a small chemical or biological warhead to the United States, although with considerable inaccuracies. Further development of the longer range Taepo Dong 2 intercontinental ballistic missile has been temporarily suspended due to ongoing U.S.–North Korean dialogues.

Fears about chemical and biological weapons production are not new to the Korean Peninsula. In 1992, North Korea took the unusual step of distributing gas masks to its entire population. The South Korean Foreign Ministry estimated in 1998 that if two tons of poison gas were used against unprotected civilians, 100,000 could die and another 60,000 would be injured seriously. Gas masks could reduce those numbers by as much as 95 percent. Consequently, the United States and South Korea are spending a combined \$8 million over the next five years to develop countermeasures against chemical and biological threats. Seoul, for example,

**Table 3: North Korea’s Chemical Weapons Facilities.**

<u>City</u>	<u>Type of Facility</u>
<b>Anju</b>	Production
<b>Aoji-ri</b>	Production
<b>Ch’ongjin</b>	Production
<b>Hamhung-Hungnam</b>	Research & Production
<b>Hwangchon</b>	Storage
<b>Kanggye</b>	Research
<b>Manpo</b>	Production
<b>Samsandong</b>	Storage
<b>Sanumni</b>	Storage (2)
<b>Sariwon</b>	Storage
<b>Sinhung</b>	Production
<b>Sinuiju</b>	Research & Production
<b>Sunch’on</b>	Production
<b>Wangjabong</b>	Storage

*Sources:* Joseph S. Bermudez, Jr., “North Korea’s Chemical and Biological Warfare Arsenal,” *Jane’s Intelligence Review*, 1 May 1993, 225; Joseph S. Bermudez, Jr., “Inside North Korea’s CW Infrastructure,” *Jane’s Intelligence Review*, 1 August 1996, 378.

established a Chemical and Biological Defense Command in 1998. U.S. precautions against the non-conventional weapons threat from North Korea include issuing 14,000 gas masks in November 1999 to U.S. government employees and their dependents stationed in South Korea and vaccinating the 35,000 U.S. servicemen in South Korea against anthrax.

North Korea has been a priority on the U.S. defense agenda for years. In November 1998, President Bill Clinton asked former Secretary of Defense William Perry to finally lead a review of U.S. policy towards North Korea. The final report, released in October 1999, recommended a comprehensive and integrated approach between the United States, Japan, and South Korea to establish normal diplomatic ties, to immobilize North Korea’s production and export of nuclear weapons, and to create a mechanism within the U.S. government to oversee North Korean policy. The Perry report did not specifically address North

Korea's chemical and biological weapons programs.

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## NEXT CHAPTER SET TO UNFOLD IN IRAQ

More than a year after the United Nations Special Commission (UNSCOM) unceremoniously left Iraq in December 1998, the United Nations is set to launch its new Monitoring, Verification and Inspection Commission (UNMOVIC) to resume efforts to certify the elimination of Iraq's weapons of mass destruction capabilities. UNMOVIC was created by a 17 December 1999 Security Council resolution amidst Iraq's continuing objections to the resumption of inspections and with the different agendas of Security Council members on visible display. Details of the Security Council resolution are given in Box 1. Eleven council members, including the United States and Britain, voted for the resolution, while China, France, Malaysia, and Russia abstained. Some analysts have expressed concern that the United Nations ceded too much ground to reach a compromise palatable to all Security Council members.

United Nations Secretary-General Kofi Annan nominated veteran Swedish diplomat Rolf Ekeus to head UNMOVIC on 17 January. Citing his unacceptability to Iraq, China, France, and Russia vigorously opposed the appointment of Ekeus, who served from 1991 to 1997 as UNSCOM chairman. At the urging of the Security Council, Annan withdrew Ekeus from the running and instead tabled Hans Blix, head of the International Atomic Energy Agency from 1981 to 1997. The Security Council subsequently gave Blix its unanimous approval.

### Box 1: Key Points of United Nations Security Council Resolution 1284 (1999).

Paragraph 2: UNMOVIC will establish and operate a reinforced system of ongoing monitoring and verification which will address unresolved disarmament issues. UNMOVIC will identify, as necessary, additional sites in Iraq to be covered.

Paragraph 3: The Security Council reaffirms the role of the International Atomic Energy Agency (IAEA) in addressing compliance by Iraq.

Paragraph 4: Iraq shall allow UNMOVIC teams immediate, unconditional, and unrestricted access to any and all areas, facilities, equipment, records and means of transport which they wish to inspect, as well as to all officials whom UNMOVIC wishes to interview.

Paragraph 15: States can import any volume of petroleum and petroleum products originating in Iraq.

Paragraph 17: The Security Council permits Iraq to import certain humanitarian items, including foodstuffs, pharmaceutical and medical supplies, as well as basic or standard medical and agricultural equipment and basic or standard educational items.

Paragraph 33: If UNMOVIC and the IAEA report that Iraq has cooperated for 120 days after the monitoring regime becomes operational, the Security Council can suspend economic sanctions for renewable periods of 120 days.

The new plan abolishes ceilings limiting Iraqi oil sales abroad to pay for food and related humanitarian goods. Previously, Iraq had been allowed to sell a

maximum of \$5.26 billion every six months under the oil-for-food program. Furthermore, the December 1999 plan loosens restrictions on Iraqi imports, including some medical, agricultural, and educational goods. Some experts worry that Iraq will now be able to import without sufficient supervision dual-use items that could benefit its illicit weapons programs.

An additional twist to the new monitoring regime will freeze sanctions if Iraq cooperates with the inspectors during a 120-day test period. Should Iraq meet certain disarmament benchmarks and provide inspectors with the immediate, unconditional, and unrestricted access that the 1991 ceasefire agreement demands, the sanctions can be lifted for renewable four month periods. Specific disarmament requirements, however, have yet to be articulated.

Wranglings over the new inspection architecture come amidst intelligence reports that Iraq has rebuilt military and industrial sites damaged in late 1998 by four days of U.S. and British bombing. The attacks were thought to have slowed the Iraqi chemical and biological weapons programs by, at most, a year or two. Of particular concern are reconstruction efforts at missile production complexes, dual-use equipment applicable to chemical weapons development, and reports that Iraq may be attempting to develop a new biological agent at underground laboratory facilities.

Any efforts that UNMOVIC makes to get to the bottom of Iraq's biological program will be particularly difficult. In the 8 February 2000 edition of the *New York Times*, UNSCOM's last director, Richard Butler, observed that for "Over nine years now, Iraq has consistently made extraordinarily strenuous efforts to hide the biological program—well beyond those they made on missiles or chemicals. Why? Why? No effort was too much to prevent us from getting to the truth. That says to me it was

big and nasty." Given Iraq's track record of subterfuge, most observers expect the going to be as tough for UNMOVIC as it was for UNSCOM.

### Chemical Weapons Convention Implementation Update

The Chemical Weapons Convention now has 129 members. The three states to join most recently are San Marino (12 December 1999), Nicaragua (4 November 1999) and Liechtenstein (11 November 1999). As of 7 February 2000, a total of 632 inspections have been completed at 319 sites in 35 member states.

	<i>Number of Inspections</i>	<i>Number of Sites</i>
Abandoned Chemical Weapons Sites	14	11
Chemical Weapons Destruction Facilities	141	12
Chemical Weapons Production Facilities	150	63
Chemical Weapons Storage Facilities	91	33
Old Chemical Weapons Facilities	25	20
Schedule 1 Facilities	56	28
Schedule 2 Facilities	111	108
Schedule 3 Facilities	44	44
<b>TOTAL</b>	<b>632</b>	<b>319</b>

*Source:* Technical Secretariat of the Organization for the Prohibition of Chemical Weapons (7 February 2000).

## EDITOR'S NOTE

On New Year's Day, the world awoke to a surprising development: Russian president Boris Yeltsin had passed the baton to his prime minister of four months, Vladimir Putin. With that sudden transition came predictable follow-on questions about the political, economic, and military repercussions of this overnight power shift. Followers of chemical and biological weapons issues also have their own subset of questions as to what the unexpected transition will mean for Russia's role in the control of poison gas and germ weapons. Will Putin do what Yeltsin never did and clean out the Soviet holdovers from key posts in the chemical and biological weapons infrastructure? Or, will he entrust the peaceful transformation of Russia's formidable weapons architecture to the very personalities who continue to protect these breeding grounds from thorough outside scrutiny?

Tales of corrupt Russian government officials and their ties to the chemical and biological weapons network are not new, but recently they have grown

in both frequency and significance. The latest charges, broken by the *New York Times* in January, disclosed that small portions of U.S. aid were secretly shifted to Biopreparat, the machinery that ran the Soviet Union's germ warfare program since the early 1970s. Although this revelation proved embarrassing for the two U.S. government agencies involved, the report helped draw wider attention to the questionable figures still controlling key channels to the former Soviet weapons complexes.

A month later, former deputy director of Biopreparat Ken Alibek wondered in a *Wall Street Journal* piece whether old dogs can learn new tricks. Based on the shady track records of certain Russian officials, it seems patently obvious that, in this particular case, they cannot. Or, rather, that they will not. After several years, these individuals still show no signs of reform. Better for Putin to act decisively and wipe the slate clean, boosting his own credibility internationally and setting his country on a more constructive and pragmatic path.

### About the Newsletter, the Stimson Center, and its CBW Programming

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The Henry L. Stimson Center was founded in 1989 as a non-profit, nonpartisan institution devoted to public policy research. The Stimson Center concentrates on particularly difficult national and international security issues where policy, technology, and politics intersect.

For more information about the project, contact Amy Smithson or Leslie-Anne Levy.  
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