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ENTRY INTO FORCE: THE TEST OF OUR PREPARATIONS

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A new world will dawn on 29 April, the date on which the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction enters into force. Since its opening for signature in 1993, we at the Preparatory Commission have been preparing for this first internationally verifiable treaty aimed at eliminating an entire category of weapons of mass destruction. Now finally, we stand poised between the familiar world of preparations and the uncharted world of actual implementation. 29 April will represent a brave step forward into a brave new world, the realisation of long-held dreams and the reward of determined persistence.

How prepared is the Preparatory Commission to present a working organization, staffed, trained and equipped, to the international community? What has been achieved since 1993? In retrospect, the years have proved to be more difficult than most of us had expected. Nevertheless, it is my view that despite all the trials and tribulations, the Preparatory Commission has more or less accomplished the mandate set down in the Paris Resolution in 1993 in that the basic structures are in place to allow the Organisation for the Prohibition of Chemical Weapons (OPCW) to meet the challenges it will surely face.

Ultimately, the success of this Convention will depend on the workability of its verification system, built on the twin pillars of declarations by states parties and on-site inspections by the OPCW. In these fundamental areas, the Preparatory Commission was tasked with developing detailed procedures for implementation and, although not all the mandated tasks have been discharged, enough have been accomplished to allow implementation to start on 29 April. In addition, a *Declaration Handbook*, which will incorporate a series of forms to be used by states parties in compiling and forwarding their declarations to the OPCW, although incomplete in some respects and still without formal approval of the Preparatory Commission, is in fact being used by many member states in their preparations. An Information Management System has been installed at the Secretariat and will ensure the confidentiality of electronic information received and automate the processing of most kinds of data. Staff are already in place, preparing for the receipt of the first declarations in May.

The situation with procedures to implement the inspection provisions of the Convention is similar to that of declarations. Transforming the inspection provisions of the Convention into practical procedures is incomplete, for example, in areas such as old chemical weapons (in particular the problems associated with usability), conversion of chemical weapons production facilities and model facility agreements. Training of future OPCW inspectors started in January of this year, and is expected to be completed, for this first group, shortly after entry into force. Initial quantities of most types of the equipment to be used for on-site inspections have already been procured for training and evaluation purposes and can be provided to the first inspection teams. Therefore, although many of the finer details of inspection procedures remain unresolved, the OPCW will have the basic tools it requires to start inspections.

These key tasks of inspections and declarations will need an extensive infrastructure, much of which is already in place. Construction is well advanced on the OPCW building, which is due to be completed in January 1998. The OPCW Laboratory and Equipment Store, located in Rijkswijk just outside The Hague, is now operating. *Draft OPCW Financial Regulations* have been developed, as have *Draft OPCW Financial Rules*. The Preparatory Commission has agreed on a *Draft OPCW Health and Safety Policy* and supplementary regulations. The *Draft OPCW Confidentiality Policy* and *Draft OPCW Media and Public Affairs Policy*, which together will guide the OPCW activities in the areas of protection of confidential information

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and release of information for the public, have also been approved by the Preparatory Commission.

Thus, taking an overall view, the Preparatory Commission has succeeded to a large degree in its mandate of preparing for the entry into force of the Chemical Weapons Convention and its work will allow the OPCW to take its first faltering steps into this new world. However, it would be less than honest to pretend that we will leave all the old uncertainties and ambiguities behind. Despite the fact that the Commission or its subordinate bodies have been in continuous session since 1993, a number of significant tasks remain unresolved. The gaps in the draft *Final Report* currently being prepared by the Commission are testament to this reality. These problems will not simply disappear at entry into force but will be inherited by the OPCW.

There were hopes that the Preparatory Commission would have completed all of its mandated tasks, particularly given that the preparatory period extended twice as long as anticipated. Why did these expectations not bear fruit? Was the optimism at that time misplaced? Were the tasks assigned to the Preparatory Commission unworkable? Fair questions perhaps. First, it is true that the text of the treaty was adopted by the Conference on Disarmament in Geneva in a time of hope and optimism. The Cold War had just ended and barriers, both real and perceived, were falling, paving the way for precisely this type of treaty — a symbol of the new world. But it would be a gross oversimplification to dismiss the Convention as a mere product of its time and thus bound for failure in the aftermath of post-Cold War euphoria, where cautious pragmatism has replaced enthusiastic idealism. No-one intimately involved in the process ever believed that the road to entry into force would be easy. Indeed, the comment was made on these very pages, shortly after the opening for signature of the treaty, that “the Prep-Com will also have the awkward, not to say perilous, task of repressing attempts to renegotiate the treaty while at the same time agreeing whatever interpretations are necessary for the formulation of practicable working rules.” (CWCB 19, March 1993, p 1)

Second, the treaty is not unworkable. It can and it will work. In Geneva, after more than 20 years of negotiations, common ground on some issues still could not be found. In seizing the optimism of the time, many of those issues were put aside to be worked out by the Preparatory Commission. The tasks were not inherently impossible although they have proved difficult and arduous. To be perfectly frank, the difficulties have been more of a political than technical nature. This is not just my personal observation but is a point which member-states’ representatives themselves frequently underline in Commission meetings. Nonetheless, we should recognise that the decision to defer these intricacies allowed the treaty, complete with its uncertainties and ambiguities, to go forward. Should we have waited for the perfect compromise at that time? And today, on the eve of entry into force of the Convention, should we wait for the perfect compromise on all unresolved issues of implementation before proceeding to implement the Convention? Having worked for this treaty for more than twenty years, my answer is an emphatic “no”.

These difficulties, which pre-existed the advent of the Preparatory Commission, were compounded by uncertainties about the date of entry into force of the Convention which understandably did not lend a sense of urgency to the process of resolving outstanding issues. Even when entry into force was triggered with the deposit of the 65th instrument of ratification, the Commission still faced a serious uncertainty: ratification by the two declared chemical weapons possessor states, the Russian Federation and the United States of America. Given the Convention’s disarmament goals, it has always been understood that these two countries would be party to the Convention — an understanding formally reflected in working assumptions adopted by the Preparatory Commission early on in its work and reinforced by repeated statements by the two governments.

It is a fair and important question to ask how we arrived in a situation where the two most important players have still not ratified the treaty just one month prior to entry into force. Both states are essential not only because of their

Forthcoming events

The CWC will enter into force on 29 April.

The first session of the Conference of the States Parties to the CWC will open in The Hague on 6 May.

In the Czech Republic, the Purkyne Military Medical Academy at Hradec Kralove will host a symposium on chemical and biological medical treatment during 26–30 May. Information—fax: +1 207 829 3040.

The US Defense Special Weapons Agency 6th *Annual International Conference on*

Controlling Arms will take place in Norfolk, Virginia during 2–5 June.

The seventh workshop of the Pugwash Study Group on Implementation of the CBW Conventions, *The CWC at Entry into Force*, will take place during 6–8 June in Noordwijk.

In Finland, the Defence Forces Research Centre will be holding its second international symposium on NBC defence during 10–12 June at Hyvinkää.

A NATO Advanced Study Institute, *New Scientific and Technological Aspects of Verification of the Biological and Toxin Weapons Convention (BWC)*, will take place in Budapest on 6–16 July 1997. For details, see box on page 18.

The BWC Ad Hoc Group will reconvene for its seventh session on 14 July–1 August, and its eighth session on 15 September–3 October, in Geneva.

possession of huge arsenals of chemical weapons but also because of their role in global security and their technical expertise. A significant part of the answer lies in the domestic situations of both countries. In Russia, indications are that there are no serious criticisms against the Convention on military or security grounds; the arguments about the economic and related environmental consequences of implementation clearly dominate the debate. While the point can be made that these weapons are destined for destruction with or without the Convention, the estimated US\$3.7 billion cost of destroying its chemical weapons clearly indicates the need for financial assistance. In the United States, the Convention has become enmeshed in domestic politics and is being held ransom to unrelated internal issues, despite the fact that recent polls showed that it has the support of the overwhelming majority of Americans. News from both capitals as this article goes to press, gives cause for continued optimism that their ratifications will be forthcoming in time for them both to play their proper role in the OPCW.

The uncertainties which have plagued the Preparatory Commission's work in The Hague also cast a shadow on preparations in member states, with two consequences. First, the rate of ratification has been slower than was expected and many member states are not yet in a position to deposit their instrument of ratification. Second, many countries which have ratified the Convention are less than fully prepared to implement it immediately it enters into force.

Although time has almost run out, it is not too late to be among the original states parties. The first months of the OPCW's life were always going to be important, with decisions such as composition of the Executive Council, appointment of the Director-General, rules of procedure of the Conference of the States Parties and the Executive Council. In addition to these important issues, recent months have seen much debate in the Commission about how to proceed in the absence of Russia and the United States and any decision to be made will be taken by the Conference of the States Parties at its first session. Only those states which have deposited their instruments of ratification before 29 April 1997 can participate in these decisions. I have explained this on numerous occasions and I take this last opportunity to stress it again.

But an additional word of caution: ratification without effective implementation at the national level is fraught with danger. The nature of the Convention's regime is such that national implementation is crucial to ensure its efficacy. As Executive Secretary, I have serious concerns that many countries, which have either ratified the Convention or are close to doing so, have not invested enough in their processes of national implementation. If national procedures are not in place in time, states parties could actually find themselves in inadvertent breach of provisions of the Convention. This situation could erode confidence in the Convention, unnecessarily complicate political relations as well as committing already scarce resources to deal with unintentional non-compliance. At the same time, it will be important to resist any temptation to manipulate technical

CWC Non-Signatory States

Antigua & Barbuda	Macedonia, FYR of
Barbados	Yugoslavia [Serbia &
Belize	Montenegro]
Grenada	
Jamaica	
Suriname	
Trinidad & Tobago	Bhutan
	Iraq
	Jordan
Angola	Kiribati
Botswana	Lebanon
Egypt	Niue
Eritrea	North Korea
Libya	Palau
Mozambique	Solomon Islands
Sao Tome & Principe	Syria
Somalia	Taiwan
Sudan	Tonga
	Tuvalu
Andorra	Vanuatu

As of 1 March, 161 states have signed the CWC, 70 of which have deposited instruments of ratification

or minor mistakes or omissions and instead to clarify potential errors quietly and responsibly.

The Secretariat has offered all possible help to assist states in these preparations, providing background information on the Convention and its infrastructure, as well as preparing updates on the preparatory work being undertaken. Seminars, workshops and training courses have comprised an important part of the work of the Secretariat. We will continue to do this up to entry into force, and because the need will not disappear at that time, the OPCW should continue to pay serious attention to the issue, not only to states parties but also to those states continuing to struggle with ratification and preparation for implementation. In all of this work, we have been greatly assisted by the Harvard Sussex Program which has worked tirelessly to promote the Convention, both through independent projects and through a programme of cooperation with the Provisional Technical Secretariat. For my part, I look forward to this relationship continuing through from our preparatory work today to the actual implementation of the Convention.

Just as we have faced challenges in the past, there is no doubt that the way ahead will pose its own challenges. But just as we have persevered in the past, it is my belief that we are equal to the challenges of the future. Before we begin that journey, we should all take time at entry into force to pause and reflect on the extraordinary achievement that is the Chemical Weapons Convention. □

Building the Organization for the Prohibition of Chemical Weapons

This is the last Quarterly Review of the work of the Preparatory Commission before the Chemical Weapons Convention enters into force on 29 April 1997 and before the first Session of the OPCW's Conference of the States Parties is convened on 6 May. The Commission will hold its sixteenth, and final, session from 9 to 15 April, during which, in addition to the usual work of considering the intersessional work of its subsidiary bodies, the Commission must adopt its Final Report and Recommendations to the First Session of the Conference of the States Parties (FSCSP) and must recommend the first draft budget for the OPCW. The essential elements for the new organization's operations are already in place, or will be by late April, and the FSCSP will decide how to deal with any incomplete work of the Commission.

Actions by the Preparatory Commission

Ambassador Marin Buhoara of Romania chaired the fifteenth, and penultimate session of the Preparatory Commission, attended by 90 member states and held during 16–20 December 1996. Given the short time remaining for the Commission to complete its work, the small number of recommendations put forward for approval was disappointing. Nonetheless some timely and important decisions were taken: the Commission approved its 1997 Budget and agreed that the FSCSP should be convened on 6 May.

Non-ratification by Russia and the United States

Ratification by Russia and the United States continued on from the fourteenth session as the dominant theme. Once again, both countries re-assured the Commission of their commitment to being among the original states parties to the Convention. The Russians, although acknowledging their special responsibility for the success of the Convention, indicated that Russian ratification "will largely depend upon the concrete contribution of other states to assisting Russia" in destroying its chemical weapons.

Again in line with the Commission's fourteenth session, other member states were united in their wish to see both declared possessor states ratify the Convention before 29 April. However, at that point, consensus splintered into divergent views as to how best to ensure that goal. At one end of the spectrum, although ratification by the two declared possessor states is seen as a priority, any proposal to somehow defer, dilute or partially implement the Convention until such time as the declared possessor states have ratified the Convention is rejected. Those with views at this end of the spectrum point out that the Convention makes no provision for a partial or suspended implementation, regardless of which states have not ratified. A different view, while recognising the importance of ratification by Russia and the United States, favours "successful" rather than immediate implementation. On this view, the long term success of the

Convention should prevail over its immediate implementation. Such a view is manifested in a proposal put to the Commission suggesting various possibilities, including postponing entry into force, implementing the Convention in a limited form, or even suspending implementation altogether.

The Commission deferred the discussion to its sixteenth session, agreeing to review at that time "the status of ratification of the Convention by all possessors of chemical weapons, chemical weapons production facilities or chemical weapons development facilities, and in this context the status of ratification in the Russian Federation and the United States of America and the implications of that to the universal and comprehensive nature of the Convention, and to make appropriate recommendations to the First Session of the Conference of the States Parties." To that end, the Commission requested the Executive Secretary to present to it a comprehensive background report and possible scenarios. This task will be extremely difficult for the Secretariat, not only because of the political sensitivity surrounding the issue, and the often diametrically opposed positions of member states, but also because neither the Secretariat, nor even the Commission as a whole, has a mandate to assess any state, signatory or non-signatory, as regards potential or actual possession of chemical weapons or related facilities. The Secretariat has been able to take into account possession of chemical weapons by the Russian Federation and the United States, because those states openly declared possession. This allowed the Commission to include it as one of its budgetary assumptions. Although those same assumptions provide that one other state party might be a possessor state, the Secretariat has no authority to go beyond that and enquire into the chemical weapons status of other signatory states.

Bilateral Destruction Agreement In addition to ratification by Russia and the United States, another working assumption of the Commission has been that the agreement of June 1990 between the Soviet Union and the United States *On Destruction and Non-Production of Chemical Weapons and on Measures to Facilitate the Multilateral Convention on Banning Chemical Weapons* (to which the Russian Federation formally succeeded) would be operational by entry into force. Several delegations referred to the essential nature of the BDA in the course of their statements to the Commission. The prevailing view is that, in its absence, any attempt to transfer the costs of verification to the OPCW, not in accordance with the provisions of the Convention, would be unacceptable.

Financial Matters An important achievement for the Commission was the approval of its budget for 1997. The Expert Group on Programme and Budget had recommended earlier that the Commission approve the budget, a

step widely understood to be a formality. However, prior to the plenary, Italy formally indicated that it had some concerns regarding the IMS part of the budget, announcing that in the absence of further explanations, it would be unable to join the consensus to approve it. If this had happened, the Commission would have been forced to operate without a budget from January and, further, it would have run the risk of the entire compromise on which the budget was based disintegrating. In the event, the objection was withdrawn, allowing the Commission to proceed as planned. The budget as approved is Dfl 27.3 million, prorated on a five-twelfths basis (as explained in CWCB 34, p 11). The Commission requested member states to pay their contributions in full within thirty days of the receipt of the communication from the Executive Secretary requesting the contribution.

Another important financial question facing the Commission was how best to prepare the first budget of the OPCW, on which the Expert Group of Programme of Work and Budget, as previously mandated, had already been working. In the light of increasing concerns that the basic assumptions adopted by the Commission may not be borne out, Working Group A recommended that specific time be allocated to consider the problem in the course of its fifteenth session. The problem lies in the Commission's inability to deviate from its previously agreed working assumptions until such time as they are formally amended, a course of action for which there is no consensus at this stage. Thus, the budget could only be prepared on the basis that the Russian Federation and the United States are states parties at entry into force. (In fact, the formal assumption was that these states would be among the first 65 states to deposit their instruments of ratification.) At the same time, member states acknowledge the possibility that both states will not have ratified by entry into force.

In response to the dilemma, the Executive Secretary proposed that the Commission adopt a modular approach to the budget. Thus, instead of working to a single set of inflexible assumptions, which may or may not be correct, the starting point for work is a baseline budget, which will be appropriate in the event that all the working assumptions of the Commission are satisfied. From there, alternatives, or modulars, will be defined and assessed for their respective budgetary requirements.

Article XI National and regional group statements to the Commission frequently referred to the importance of implementing Article XI, reflecting that it continues to be a high priority for many member states. In line with previous sessions of the Commission, there were warnings that if the careful balance between disarmament and non-proliferation on the one hand and coöperation and free trade on the other was disturbed, the result might be damage to the legitimacy and credibility of the Convention. Meanwhile, many members of the Australia Group affirmed that Article XI would be implemented in line with the Group's policy statement of 1992, in which its members undertake to review, "in the light of the implementation of the Convention, the measures that they take to prevent the spread of chemical substances and equipment for purposes contrary to the objectives of the Convention, with the aim of removing such measures for

the benefit of States Parties to the Convention acting in full compliance with their obligations under the Convention". It is not entirely clear that the statement meets the demands of the developing countries because it is ambiguous as to whether it constitutes a commitment to remove trade restraints on entry into force of the Convention.

Chemical Weapons Production Facilities The debate over the declaration, verification and destruction requirements for chemical weapons production facilities was conspicuous by its absence. The only exception was a short statement of the Western European and Others Group (WEOG) reiterating the view that all chemical weapons production facilities that a state party has or has had after 1 January 1946 must be declared and subjected to the systematic verification, destruction and conversion provisions of the Convention, irrespective of the status and condition of the facilities. The Russian Federation, which holds a different view, did not refer to the issue in its statement, nor did it respond to the WEOG statement.

Method of Work In July 1995, the Commission agreed to a more informal method of work, whereby in addition to, and sometimes instead of, formal expert group meetings, consultations were to be conducted by the chairs of the expert groups, with the aim of identifying possible points of consensus. At that time, some delegations argued that the method of work was not the obstacle to more speedy progress, but rather a lack of political will to resolve issues. This does seem to have been correct because the intervening time has not resulted in any dramatic leaps forward. Nevertheless, the Commission revisited its working method at this session, adopting an even more informal approach, in the hope that it might encourage progress in the light of the short time remaining before entry into force.

As a result, the Commission allocated time to "Working Group A Issues" and "Working Group B Issues" instead of to specific expert groups. The working groups then determine what issues, or clusters of issues should be set down for consultations, with the understanding that if some consensus emerges, an expert group meeting can be convened to formalize any agreement. Further, the Commission did not map out all the work for the entire intersessional period, but rather fixed meetings up to the end of February and scheduled a Combined Meeting of Working Groups A and B to review progress on 3 March. At that time, the remainder of the intersessional period was mapped out, with a large proportion of the time available being assigned to the draft OPCW budget and to preparations for the FSCSP. In addition, time was set aside for other consultations, with a mechanism whereby any agreements on unresolved issues, or even any agreements as to how a disagreement should be described, can be put to the Committee on Preparations for the FSCSP for inclusion into the draft Final Report of the Commission.

Election of Officials Mr Ian Kenyon's appointment as Executive Secretary was renewed from 11 February 1997 until one month after the person appointed to be Director-General of the Technical Secretariat of the OPCW has taken up the post. (The Commission, at its first session in

February 1993, had affirmed the understanding that should the Executive Secretary be drawn from a developed country, as indeed was the case, the Director-General of the Technical Secretariat appointed at the FSCSP should be drawn from a developing country.) Ambassador Gustavo Eduardo Figueroa of Argentina was elected to be Chairman from 8 February 1997 to the end of the life of the Commission. The Vice-Chairmen elected were from Brazil, Pakistan, Poland, the United States and Zimbabwe representing their respective regional groups.

Actions by the Secretariat

The Executive Secretary met with senior government officials from Slovakia on 29 November, 18 December 1996 and 24 January. He met with Japanese officials from the capital on 9 and 12 December. Also in December, on the 18th, Mr Kenyon met with a senior official of the Finnish Ministry of Foreign Affairs. On 22 January, the Acting Foreign Minister of Bulgaria met with Mr. Kenyon and advised that legislation relating to implementing the Convention would soon be presented to Parliament. Ratification by the Russian Federation and the United States was raised in the course of discussions. On 27 January, the Minister of Foreign Affairs of Australia paid a visit to the Executive Secretary when the importance of ratification by the Russian Federation and the United States was discussed. The same issue was on the agenda when, on 6 February, the Executive Secretary called on the Minister of State for Foreign Affairs of Mali. In addition to the role of the Russian Federation and the United States, the Minister also emphasised the importance for Mali in developing co-operation in the peaceful application of chemical industry. On 3 March the Secretary-General of the United Nations, Mr Kofi Annan, visited the Secretariat and had talks with the Chairman of the Commission and the Executive Secretary. Again a focus of discussions was the importance of Russian and American ratification.

Staffing On 5 March Dr Félix Calderón, the Legal Advisor to the Preparatory Commission, submitted his resignation effective 7 April 1997. He has taken annual leave for the intervening period. Mr Johan Rautenbach is now acting Director of the PTS Legal Division.

Regional Seminar The Secretariat will conduct a regional seminar, hosted by the Government of Hungary, during 2–4 April in Budapest. The seminar is expected to focus on legal and administrative aspects of implementing the Convention.

Meeting on a Common Transmission File Structure

The Secretariat held a meeting during 21–22 January to discuss developing a common file structure for the communication of declaration information from states parties to the Secretariat in electronic form. The meeting was attended by experts from member states familiar, not only with the databases of their national authorities, but also with the type of information to be transmitted in national declarations. Participation at this level of expertise allowed the meeting to concentrate on detailed technical aspects of transferring

information. The Secretariat subsequently issued a rapporteur's report.

A follow-on meeting took place on 26–27 February to complete work on developing a prototype transmission file structure and a data dictionary for those states wishing to transmit their industry declarations in automated form. These tasks were successfully completed and the Secretariat is to circulate the file structure (Version 1.0) and the related data dictionary to all member states. It was also agreed that the fourth Communications Workshop, originally scheduled for mid-March, should be postponed as the Verification Division will then be in the process of moving into interim accommodation. Participants at the meeting agreed that the next essential step for member states was to establish their national authorities, administrative procedures and technical installations, if this has not been done already.

National Authority Training Courses The Provisional Technical Secretariat held a three-week training course for personnel of national authorities during 10–28 February in Ypenburg, the Netherlands. This was the second of three courses funded by the Government of the Netherlands. 27 participants from as many countries attended the course. The third course funded by the Netherlands, scheduled to take place in March over three weeks, was subsequently shortened to a five-day course because of indications that member states would be unable to release personnel for three weeks so close to entry into force. The course will take place during 18–24 March in Woensdrecht in the Netherlands.

Training On 17 January, the General Training Scheme was officially opened at the Royal Military School of the Dutch Air Force, in Woensdrecht, marking the start of what the Executive Secretary described in his welcoming address as the single most important project of the Preparatory Commission. The ceremony took place at the end of the first week of training for the first group of 150 inspector trainees. Original plans to split the trainees into four groups for Module 1 training in France, India, the Netherlands and the United States had to be revised when, shortly before training was scheduled to begin, difficulties emerged which did not allow training to take place in the United States. The Secretariat, with the co-operation of the other three states, responded by distributing affected students to other courses. A short time later, it became apparent that Module 2 training, which began on 3 March, presented the same difficulties.

While these developments required the Secretariat and the other states offering training to make certain re-adjustments, they should not be construed as indicating a change in the support of the United States government. No official statements have been issued to explain the situation, but the problem may lie in the inability of the United States to provide training to some non-US citizens.

Module 2 training began on 3 March and will run until 9 May. Training is taking place in Finland, Germany, the Netherlands, Russia, Switzerland and the United Kingdom.

Harmonised Coding of Scheduled Chemicals The Secretariat published a list of the Schedule 2 and 3 chemi-

cals with their corresponding 6-digit HS Code Subheading as well as their 8-digit Combined Nomenclature Code of the European Union, which itself is based on the 6-digit WCO Harmonised System. The codes can be used by importers, exporters, forwarding agents, customs authorities and National Authorities and may facilitate compiling statistical data on exports and imports as well as implementing trade regulations in accordance with the Convention.

Proficiency Testing for Laboratories In December, the Executive Secretary released the results of the Commission's first official proficiency test, which took place from 21 May to 5 June 1996. Some objections were made about how the Secretariat had evaluated the test. This was somewhat surprising as the Secretariat had been allowed little discretion in the evaluation process, having had to adhere to strict guidelines. Problems also arose with the timing of the third proficiency test, the Commission being unable to agree on a start date. Some states wishing to participate in the proficiency testing were also involved in the training of analytical chemists in Module 2 of the General Training Scheme which, on the initial proposal, would have been taking place at the same time. Thus, the affected states would be unable to participate in both activities. This conflict had not been foreseen as it had been supposed that the third proficiency test would have taken place earlier.

The problems were resolved in February, with Working Group B instructing the Secretariat to re-evaluate the results of the first test and with agreement that samples for the third test would be sent out during 21–26 April, except for those countries offering Module 2 training for analytical chemicals, which would receive samples on 12 May. (See below, Expert Group on Inspection Procedures.)

Brussels Activities

In Brussels, work continued in assisting states with preparations for implementing the Convention. During this inter-sessional period, there had been a particular focus on preparations for the FSCSP. The Vice-Chairman of the Commission from the African Region has invited the Executive Secretary to brief all of the Brussels-based ambassadors on preparations towards implementing the Convention. In line with past plenaries, the Secretariat plans to hold a briefing on the activities of the Commission in Brussels.

Actions by Member States

Bosnia and Herzegovina signed the Convention on 16 January, bringing the number of signatory states to 161. In addition, during the reporting period, four more instruments of ratification were deposited: Philippines on 11 December 1996; Belgium on 27 January 1997 and Bosnia and Herzegovina and the Lao People's Democratic Republic on 25 February 1997. By March there were 70 ratifications and more are expected prior to entry into force. According to media reports, the National People's Congress in China ratified the Convention at its plenary session in December and, on 26 February, the Iranian cabinet unanimously approved the ratification bill which has since been presented

to Parliament for consideration. Luxembourg, as the only member state of the European Union yet to ratify, is expected to deposit its instrument of ratification well before entry into force. At the Commission's fifteenth session, the Turkish government advised that it has submitted the Convention for ratification to Parliament and confirmed that other preparations are underway. Kenya advised the Commission that its cabinet is expected to meet soon to consider ratification. Burkina Faso, Mali, Niger and Tunisia are also expected to deposit their ratification instruments soon.

National Seminar in Spain The Spanish Ministries of Foreign Affairs, Defence and Industry and Energy organised a National Seminar on the Chemical Weapons Convention in Madrid on 24 February, attended by senior government officials from the Ministries which will be involved with the National Authority. Representatives of the National Association of the Chemical Industry also participated. Following that seminar, a three-week Training Course for National Authority Officials and Escorts started on 25 February, the aim of which was to prepare future personnel of the National Authority. Officials from the Ministries of Industry and Energy, Economics, Health, Interior and Defence participated in the course. Future staff members of the National Authority could be recruited from among the participants.

Workshop in Turkey As part of its preparations for implementing the Convention, the Chemicals and Chemical Products Exporters' Association of Turkey invited Secretariat officials to conduct a workshop for the Turkish chemical industry. The workshop took place in Istanbul during 26–27 November 1996 and focused on the provisions of the Convention which will affect chemical industry. Attention was mainly drawn to the identification of declarable activities and to declaration requirements. A demonstration exercise was conducted on how to define plants and plant sites, and how to complete the declaration forms. Officials from the Ministries of Foreign Affairs, Industry, Treasury and Foreign Trade attended, and also representatives of chemical industry and chemical industry trade associations. The practical focus of the workshop illustrated the determination of the government, and the chemical industry sector, which is significant, to implement the Convention.

Other activities France held a training session for French-speaking National Authorities from 25 November to 13 December 1996 and Italy held a seminar in Milan on 23–24 January dealing with implementation of the Convention.

Actions by Subsidiary Bodies of the Commission

Committee on Preparations for the First Session of the Conference of the States Parties Prior to the fifteenth session of the Commission, the Committee provisionally agreed that the First Session would open on 6 May, an agreement subsequently endorsed by the Commission. At this stage, it is anticipated, but not yet formally agreed, that the First Session will run for three weeks with the first four days being devoted to high-level debate in an open ple-

nary session. Invitations have been sent out to all member states of the Commission and some international organizations and specialised agencies. At its meeting on 28 January, the Committee recommended that non-governmental organizations, with a demonstrable interest in a field relevant to the object and purpose of the Convention should be invited. In line with that agreement, although the proposal has yet to be formally approved by the Commission in its forthcoming sixteenth session, the Secretariat has started outreach activities, inviting NGOs to apply to attend the session. The Committee recommended that there should only be a right to attend the open sessions of the plenary and that in any event, there should be no right of address. Space will be set aside outside the plenary hall for interested parties to distribute relevant literature.

In addition to deciding on participation, the Committee faces a number of complex tasks, as reflected in its intensive schedule of meetings. Following the fifteenth session, the Committee met on the following dates: 8-10, 13-14, 17, 24, 28 and 31 January; 7 and 21 February; 10 and 13 March. Further meetings are scheduled for 17, 21 and 26 March 1997.

One important task is to prepare the final report of the Commission. Paragraph 15 of the Paris Resolution requires that the Commission prepare "a final report on all matters within its mandate for the first session of the Conference of the States Parties and the first meeting of the Executive Council". The draft report, in its current form, is divided into four sections. The first section describes the work of the Preparatory Commission and the Provisional Technical Secretariat. Section two contains all the recommendations to the Conference of the States Parties. Section three consists of recommendations for consideration and action by the Executive Council. The final section will contain a guide to facilitate cross-referencing between the conference agenda and draft decisions.

Another important task of the Committee is to draft the rules of procedure for the FSCSP and for the Executive Council. An important question in this regard is the scope of participation for states which have not deposited their instruments of ratification by the time of entry into force — which is to say, 0000 hrs, New York time, 29 April. Those signatory states which have done so may participate in the Conference as states parties. However, the scope of participation of others has yet to be determined.

Committee on Relations with the Host Country The Committee met on 17 December 1996 in the course of the fifteenth session of the Commission and authorized the Executive Secretary to sign a sublease agreement with the International Criminal Tribunal for the Former Yugoslavia (ICTY) for the available space in the Aegon Building. The Agreement was duly signed on 9 January. The Secretariat's Verification Division will move into the building in the course of March. This will alleviate the pressure on space and office resources in the premises at Laan van Meerdervoort.

Following the December plenary, the Committee met on 29 January to review progress on matters under its purview. In particular, the Executive Secretary briefed the Committee on interim accommodation. The Committee heard that

construction of the new building is still on target and within budget. The Deputy Executive Secretary briefed the Committee about arrangements for the FSCSP, mentioning, in particular, space requirements, costs and the physical adequacy of the facilities. A Friends of the Chair meeting was held on 25 February to discuss the furnishing of the OPCW building

On 12 March, the Committee held another formal meeting and again was briefed on work under its purview. The Committee was advised of plans to hold a "topping off" ceremony at the new building on 18 March. The meeting spent time discussing the preparations for the FSCSP and in particular working out precisely the accommodation being offered by the Host Country. There are concerns that the facilities being offered will not be sufficient. However, following discussions at a subsequent meeting, it now seems that all the Commission's requirements will be met and no further problems with the venue are anticipated.

Working Group A Working Group A met on 31 January to receive reports on work under its purview, a particularly important overview given that, in this intersessional period, much of the work is proceeding in consultations, as opposed to in formal expert groups. The group endorsed the recommendations in the *Report of the Formal Consultations on Visa Matters*, requesting the Secretariat to approach the UN Secretariat to initiate negotiations on the terms and conditions on which the United Nations Laissez Passer can be used. This was the only formal report available to the group but it received oral reports on consultations on agreements, consultations by the Administrative, Financial and Personnel Matters Expert Group, data systems, and the OPCW budget.

The group met for the second time on 28 February and again received oral reports on work under its purview. In accordance with the authority delegated to it by the Commission at its fifteenth session, the group conditionally approved the draft protocol dealing with the transfer of assets, liabilities, records and functions between the Preparatory Commission and the OPCW. The group, noting that the Commission had decided that the Draft Headquarters Agreement would become final if no objection had been received by 10 January, decided to inform the Commission that no such objection had been received and that its approval of the draft agreement has become final.

Working Group B A meeting of Working Group B was scheduled for 8 January to discuss a date for starting the third proficiency test because (as noted above) the Commission had been unable to agree on this in the course of its plenary session. The January meeting met with no more success. However, at a subsequent meeting on 26 February, it was agreed that the third proficiency test would start in April except for those states also involved in Module 2 training for analytical chemists, for which the test could start on 12 May at their discretion.

At its February meeting, the group received oral reports of the work of the Expert Group on Old and Abandoned Chemical Weapons, the Expert Group on Challenge Inspections and the Expert Group on Technical Cooperation and Assistance. The group also received formal reports from

the Expert Group on Inspection Procedures, Expert Group 1 on Chemical Weapons Issues and the Expert Group on Chemical Industry Issues. A formal report was presented by Expert Group 2 on Chemical Weapons Issues which made two recommendations, one relating to procedures for non-continuous chemical weapons destruction operations and the other relating to criteria for toxicity and corrosiveness. However, the working group was not in a position to endorse the recommendations.

Combined Meeting of Working Groups A & B In accordance with the decision of the Commission in December, a combined meeting of working groups A and B met on 14 February and 3 March and agreed on a schedule of meetings for the period 10-26 March. It was also decided that any agreements could be forwarded to the Committee on Preparations for the FSCSP for inclusion in the *Final Report of the Commission*.

Working Group A Issues

Expert Group on Headquarters and other Agreements

This group met on 4 December and continued its work on the Draft OPCW Headquarters Agreement, provisionally approving it, including a Separate Arrangement between the OPCW and the Host Country. Some concerns were expressed about certain tax exemptions for OPCW staff below the grade of P-5, on the basis that the original idea of tax privileges was to facilitate and enable the operations of international organisations and not to establish extended privileges for their staff. At the fifteenth session, the Commission provisionally approved the draft as requested, deciding that the approval would become final if no objection was received by the Secretariat by 10 January. The Commission also requested the Host Country to implement the Agreement, together with the Separate Arrangement on a provisional basis after entry into force of the Convention, pending approval by the Conference of the States Parties.

In early January, Pakistan raised a number of detailed concerns about the draft in correspondence with the Secretariat. In particular, these concerns related to whether the Headquarters Agreement is in conformity with the regime of the Convention on the Privileges and Immunities of the Specialised Agencies of 1947 (as required by the Paris Resolution), the role of the International Court of Justice in dispute resolution and the issue of concurrent jurisdiction. It seems that the correspondence did not constitute an objection to formally approving the Agreement because when Working Group A met on 28 February, formal approval of the draft Agreement was confirmed.

At the expert group's December meeting, in addition to provisionally approving the draft Headquarters Agreement, the group considered the revised draft Agreement between the United Nations and the OPCW as well as the draft bilateral Agreements on Privileges and Immunities of the OPCW, agreeing that both should be finalised during the next intersessional period. Following the December plenary, consultations have been held to deal with the outstanding tasks, but, in line with the new method of work, no formal expert group meeting has been convened.

Consultations on Visa Matters Formal consultations were convened for the sixth time on 16 January. The Chairman presented a paper outlining the results of the contacts made with the UN Secretariat in New York explaining that the UN requires an agreement to be concluded with another organisation before it will issue any type of travel documents. (Such a formal agreement is being negotiated under the aegis of the Expert Group on Headquarters and Other Agreements.) The issue, although procedural, is an important one in that it may take some considerable time to complete a formal agreement, but the OPCW inspectors will need the travel documents soon after entry into force. The Consultations requested the Secretariat to initiate negotiations on the terms and conditions under which the OPCW can acquire, purchase and use the United Nations Laissez Passer (UNLP) and a meeting is scheduled to take place with the appropriate UN officials on 21 March. The Secretariat is also working on preparing an OPCW Sticker which is to be affixed inside the UNLP to distinguish it from other documents. A proposed sticker has been circulated with descriptions of its security features. Delegates can forward this information to their governments for approval or comments to be received by the Secretariat no later than 24 March 1997.

Expert Group on Administrative, Financial and

Personnel Matters Prior to the fifteenth session of the Commission, this group met on 2, 3 and 5 December 1996 and provisionally approved the "Draft Protocol Regarding the Transfer of Assets, Liabilities, Records and Functions from the Preparatory Commission for the Organisation for the Prohibition of Chemical Weapons to the Organisation for the Prohibition of Chemical Weapons". At its fifteenth session, the Commission delegated to Working Group A the authority to approve the Draft Protocol, which finally it did at its meeting of 28 February on the understanding that all letters referred to in Annexes 2 & 4 of the Draft Protocol be made available to delegations, and that no objections are received by the Secretariat within seven days after circulation of the said letters.

The group also discussed possible misconduct by members of an inspection team and was facilitated in that regard by a Secretariat paper entitled "Misconduct" dated 2 December 1996. The group initiated discussion on termination of employment for medical reasons. The group continued to discuss the *Draft OPCW Financial Rules* and the *Draft OPCW Staff Regulations*, agreeing to return to the work after the fifteenth session. The top structure of the future Secretariat was discussed, and, as requested at the previous meeting, the Executive Secretary presented to the group a "Tabulation of Main Elements of Different Options of the OPCW Top Structure".

Following the December plenary, the work of this group was structured more informally and therefore there have been no formal meetings. However, consultations have been held on several different issues. On the issue of misconduct by members of an inspection team, consultations were held on 20 January. One aspect of discussion is whether such misconduct should be seen as part of the broader issue of possible misconduct by staff members of the OPCW, or whether it is inherently different. Consulta-

tions on the *Draft OPCW Financial Rules* were held on 21 January and 13 March, with Staff Regulations being the subject of consultations on 24 January and 28 February. On 30 January, the group held consultations to continue discussions on the top structure of the future Secretariat.

Expert Group on Programme of Work and Budget

Prior to the fifteenth session, the group met on 6 December to continue discussions on the draft OPCW 1997 budget. As explained above, no account was being taken of the possibility that one or more of the basic working assumptions of the Commission may not be borne out. In response, the Commission decided at its plenary session that a modular approach to the budget should be adopted, whereby it would consist of a baseline budget, in addition to different scenario budgets to better reflect the prevailing situation. The group started consultations again in the new year to work on the baseline budget, and met on 22–23 and 27–30 January, 14 and 25–27 February and 4–7 and 12 March. Further meetings are scheduled for 24–25 March.

Despite the group's intensive schedule of meetings, there are doubts as to whether even a baseline budget can be agreed in time to submit to the forthcoming sixteenth session. The budget will be divided into two chapters, one relating to administrative and other costs and one relating to verification costs. Although it is impossible to anticipate at this stage the precise parameters of the final budget, the current draft provides for a total of Dfl 101 million (for an eight month period: May–December), divided into Dfl 32 million for administrative and other costs and Dfl 69 million for verification costs.

Expert Group on Data Systems This group met on 30 January but did not issue a report. However, despite the lack of recorded progress within the expert group, there has been progress in establishing the Information Management System in the light of impending entry into force. The information system is to be divided into two parts. The first, designated "security non critical", will contain the administrative files, document management and archives. Some modules are already in production, for example the Budget and General Ledger Modules, or will be in the near future, for example, Human Resources and Inventory Management and Control Modules. The second part of the system, designated "security critical", will contain the Verification Information System (VIS) and the Inspection Planning System. The VIS, in turn, will be divided into two components: an electronic document management system (EDMS) and a relational database management system (RDBMS). The EDMS will be fully operational at entry into force, supporting the primary verification activities of the Secretariat, namely the registration, processing and archiving of all incoming declarations from states parties, support for validating, evaluating and assessing declarations and support for planning and executing inspections. The RDBMS will support the comprehensive analysis and reporting of all declaration data and accept declarations from States Parties in a predefined electronic file format. Because it will need to be integrated with the EDMS, it will not be developed any further until the design and architecture of the VIS EDMS are complete, which is expected to be mid-March 1997.

The expert group held consultations on 4 March and discussed a Chairman's draft non-paper assessing the development of the IMS, making proposals to ensure a smooth continuation of the system after entry into force and identifying recommendations which could be put to the Conference of the States Parties.

Working Group B Issues

Expert Group on Inspection Procedures This group met on 26–28 November 1996 and made a number of recommendations to the Commission for adoption at its fifteenth session in December. These included the contents of the administrative package for the biomedical module of the alleged-use sample collection kit, the results of the evaluation of the gas chromatography data and the inclusion of analytical data in the OPCW Analytical Database for the test chemicals. The group also agreed on operational requirements and technical specifications of two items of occupational health equipment, the individual heat stress monitor and the portable acetylcholinesterase activity monitor. There was less progress as regards two other items of occupational health equipment, namely the radiation monitor and the chemical hazard monitor. The group's record of its discussion in its formal report, illustrates the level of disagreement, with the group not even able to "agree whether there was no agreement on whether these two items of equipment should be discussed in the future." The group did agree that there should be at least two months' advance notice of the starting date for each proficiency test.

Problems arose with the proficiency tests when, at the fifteenth session, Israel registered its concerns about the results of the First Official Inter-Laboratory Proficiency Test. Israel held the view that the agreed criteria for evaluation, which were meant to apply from the second proficiency test onwards, were retroactively and wrongfully applied to the first test as well. The Secretariat, however, explained that the evaluation was carried out in strict accordance with the criteria set out in PC-XV/B/WP.9, para 4.1(b) as approved by the Commission in PC-XV/25, para 8.3(d). In a subsequent paper, Israel further expanded on its objections.

The expert group later re-examined the criteria at its formal meeting on 17–20 February and agreed to a relaxation of some aspects of the criteria solely for the first test. On that basis, the group recommended that the results be re-evaluated and requested the Secretariat to carry this out using the interpretation of the criteria set out in the group's report. These recommendations were adopted by Working Group B at its meeting on 26 February.

At its November meeting, the group had recommended that their understandings on the "Scope of activities of designated laboratories and the role and status of other laboratories" be approved. However, this recommendation was not adopted by the Commission, and Working Group B subsequently directed the expert group to review the understandings again. At the expert group's meeting on 17–20 February, the group returned to the issue as directed. Following discussions, the group revised the understandings to clarify some key issues. First, it is clearly stipulated that only designated laboratories can analyse samples taken off-site from inspections. Second, the tasks which other labora-

tories, apart from designated laboratories may perform are set out. Third, the understandings reiterate that both designated and other laboratories must be from states parties.

The group also considered the reports of its three task forces in the course of its February meeting, making a number of recommendations to Working Group B on the basis of that work, which are detailed in the group's report. Finally, the group considered a number of other outstanding issues but was unable to record any further agreements in relation to them, including the issue of approved equipment, the principles governing the selection of equipment for routine inspections, and procedures for inclusion in the inspection manual concerning the security, integrity and preservation of samples and ensuring the protection of the confidentiality of samples transferred for analysis off-site.

Expert Group on Old and Abandoned Chemical Weapons This group met during 10–13 February to continue its work, but, consistent with its last two meetings, the group did not issue a report or record any further agreements. This is unfortunate given that there are still a number of significant tasks to be completed. The group concentrated on three of these tasks: first, guidelines to determine the usability of chemical weapons produced between 1925 and 1946, an important issue because it will determine, in turn, the declaration and inspection requirements relating to such weapons; secondly, the group spent time discussing destruction and verification requirements for abandoned chemical weapons, also an issue which has received considerable attention by the group in the past, with no discernible progress; and thirdly, discussion of declaration requirements for abandoned chemical weapons, during which the group considered the relevant sections of the *Declaration Handbook*.

Expert Group I on Chemical Weapons Issues This group met during 11–13 February and spent its time on the issue of chemical weapons buried by a state party on its territory after 1976 or dumped at sea after 1984. An understanding, which is set out in Annex I of the group's report, was reached on the terms used in the Convention "buried by a State Party on its territory" and "dumped at sea". The understanding states, *inter alia*, that "buried by a State Party on its territory" means buried on the land territory of a state party and in its internal waters and that "dumped at sea" means dumped at all parts of the sea including the territorial sea of a state party. (Thus, chemical weapons buried anywhere inside the baseline falls into the first category, burial on a state party's territory, not dumped at sea.) The group recommended that this understanding be adopted by the Commission at its sixteenth session. The group also agreed that chemical weapons buried on a state party's territory after 1976 must be included in its declarations as must sea dumping of chemical weapons after 1984. Declarations should be based on the provisions of Article III.1(a) and Verification Annex Part IV(A), that is, those for chemical weapons.

The Chairman distributed several papers addressing other tasks of the group, including proposals for model facility agreements for CWDFs and CWSFs. Revised discussion papers were distributed on procedures for installation

of monitoring instruments as well as implementation of paragraphs 11 & 12 of Part III of the Verification Annex (regarding the use and installation of instruments to verify the destruction of chemical weapons). Although the group discussed these issues, it did not record any agreements.

Expert Group 2 on Chemical Weapons Issues This group met during 11–13 February and returned to developing procedures for non-continuous chemical weapons destruction operations. The Convention makes no distinction between continuous and non-continuous destruction and thus does not address the situation when destruction is carried out for brief periods, for example, when destruction technologies are being developed and when mobile destruction technology is in use. Therefore, the group tried to develop appropriate understandings, which would enable the Secretariat to verify such destruction processes in an efficient and cost effective manner. The understandings provide, *inter alia*, that mobile destruction equipment and development installations for the testing of destruction technologies should be declared separately. Except in exceptional circumstances, the state in question will notify the Secretariat not less than 30 days in advance of activities so that they can be monitored by the Secretariat during the active destruction phase or the destruction documentation can be examined by the Technical Secretariat.

The group also recommended that the Commission approve criteria for "toxicity, corrosiveness and, if applicable, other technical factors" in accordance with Part V, Paragraph 71(b) of the Verification Annex (relating to the production of highly toxic chemicals in converted chemical weapons production facilities). The Chairman's draft format for the declaration of chemical weapons production facilities was distributed to the group.

When Working Group B considered the report of this group at its meeting of 26 February, it was unable to endorse either recommendation. The group held informal consultations on 11 March.

Expert Group on Chemical Industry Issues This met on 3–6 February and provisionally agreed on guidelines to assess the risk to the object and purpose of the Convention posed by Schedule 1 facilities. The guidelines, presented in an attachment to the group's report, set out the criteria to be taken into account when assessing the factors listed in the Convention, that is, "relevant chemicals", "quantities of chemicals produced", "characteristics of the facility" and "nature of the activities carried out at the facility".

The group also discussed and made considerable progress in developing a draft *Model Facility Agreement for Schedule 1 Facilities*. This group still has a number of outstanding tasks on its agenda. In an effort to resolve as many as possible before the Commission approves its Final Report, the chairman of the group issued a letter setting out the outstanding tasks and attaching proposed text in respect of the outstanding issues in the hope that this approach might expedite resolution.

Expert Group on Technical Assistance and Cooperation This group met on 24–25 February to continue its work but did not issue a report. The Chairman is-

sued a new draft paper on proposals for implementing Article XI. The paper identifies three areas for discussion: International Cooperation, Protective Equipment for Assistance Purposes, and Trade Regulations. No formal agreement could be recorded by the group although it seems that there is a possibility of consensus in some areas.

Despite some initial delays, an experimental information service has now been set up by the Secretariat, the aim of which is to facilitate information exchange in relation to Article XI. The service will cover only information on the dangerous properties of chemicals and on producers and suppliers of chemicals and will be drawn from commercial and other publicly available sources. A *Note by the Executive Secretary* provides more information about the service.

Expert Group on Confidentiality There were consultations regarding confidentiality on 17 January and 14 March, although no formal meeting of the expert group was convened. A revised version of the Chairman's "Draft Guidelines for the Application of National Jurisdiction and Compensation for Losses in Cases of Breaches of Confidentiality by the OPCW Officials or Any Natural or Legal Person in Relation to the CWC" has been circulated for discussion.

dentiality by the OPCW Officials or Any Natural or Legal Person in Relation to the CWC" has been circulated for discussion.

Expert Group on Challenge Inspection This met during 18–20 February to continue its work but did not issue a report. Revised versions of the documents "Illustrative Elements of the Document on Preliminary Factual Findings" and "Illustrative Elements of the Preliminary/Final Challenge Inspection Report" were distributed to the group for discussion. The group held consultations on 11 and 13 March during which a revised version of the Preliminary Factual Findings document was issued as well as chairman's proposals on "Cost Aspects of Abuse", "Operational Requirements for Inspection Equipment in Challenge Inspection", "Timing of the Notification of Challenge Inspection" and "Composition of the Inspection Team".

This review was written by Treasa Dunworth, the HSP researcher in The Hague.

Signatures of the CWC that still await full ratification

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|--------------------------------------|------------------------------------|--|
| Afghanistan — 14 January 1993 | Guyana — 6 October 1993 | Panama — 16 June 1993 |
| Azerbaijan — 13 January 1993 | Haiti — 14 January 1993 | Qatar — 1 February 1993 |
| Bahamas — 2 March 1994 | Holy See — 14 January 1993 | Republic of Korea — 14 January 1993 |
| Bahrain — 24 February 1993 | Honduras — 13 January 1993 | Russian Federation — 13 January 1993 |
| Bangladesh — 14 January 1993 | Iceland — 13 January 1993 | Rwanda — 17 May 1993 |
| Benin — 14 January 1993 | Indonesia — 13 January 1993 | Saint Kitts and Nevis — 16 March 1994 |
| Bolivia — 14 January 1993 | Iran — 13 January 1993 | Saint Lucia — 29 March 1993 |
| Brunei Darussalam — 13 January 1993 | Israel — 13 January 1993 | Saint Vincent and the Grenadines — |
| Burkina Faso — 14 January 1993 | Kazakhstan — 14 January 1993 | 20 September 1993 |
| Burundi — 15 January 1993 | Kenya — 15 January 1993 | Samoa — 14 January 1993 |
| Cambodia — 15 January 1993 | Kuwait — 27 January 1993 | San Marino — 13 January 1993 |
| Cape Verde — 15 January 1993 | Kyrgyzstan — 22 February 1993 | Senegal — 13 January 1993 |
| Central African Republic — | Liberia — 15 January 1993 | Sierra Leone — 15 January 1993 |
| 14 January 1993 | Liechtenstein — 21 July 1993 | Singapore — 14 January 1993 |
| Chad — 11 October 1994 | Lithuania — 13 January 1993 | Slovenia — 14 January 1993 |
| China — 13 January 1993 | Luxembourg — 13 January 1993 | Thailand — 14 January 1993 |
| Colombia — 13 January 1993 | Madagascar — 15 January 1993 | Togo — 13 January 1993 |
| Comoros — 13 January 1993 | Malawi — 14 January 1993 | Tunisia — 13 January 1993 |
| Congo — 15 January 1993 | Malaysia — 13 January 1993 | Turkey — 14 January 1993 |
| Cuba — 13 January 1993 | Mali — 13 January 1993 | Uganda — 14 January 1993 |
| Cyprus — 13 January 1993 | Malta — 13 January 1993 | Ukraine — 13 January 1993 |
| Djibouti — 28 September 1993 | Marshall Islands — 13 January 1993 | United Arab Emirates — 2 February 1993 |
| Dominica — 2 August 1993 | Mauritania — 13 January 1993 | United Republic of Tanzania — |
| Dominican Republic — 13 January 1993 | Micronesia, Federated States of — | 25 February 1994 |
| Equatorial Guinea — 14 January 1993 | 13 January 1993 | United States of America — |
| Estonia — 14 January 1993 | Myanmar — 14 January 1993 | 13 January 1993 |
| Gabon — 13 January 1993 | Nauru — 13 January 1993 | Venezuela — 14 January 1993 |
| Gambia — 13 January 1993 | Nepal — 19 January 1993 | Viet Nam — 13 January 1993 |
| Ghana — 14 January 1993 | Nicaragua — 9 March 1993 | Yemen — 8 February 1993 |
| Guatemala — 14 January 1993 | Niger — 14 January 1993 | Zaire — 14 January 1993 |
| Guinea — 14 January 1993 | Nigeria — 13 January 1993 | Zambia — 13 January 1993 |
| Guinea-Bissau — 14 January 1993 | Pakistan — 13 January 1993 | Zimbabwe — 13 January 1993 |

On 1 March, 91 of the 161 signatory states had not yet deposited an instrument of ratification with the UN Secretary-General

The guidelines proposed at the start of this article were published in CWCB 24. Now that the CWC is to enter into force, with signatory states preparing their declarations, the supporting analysis is presented in full for its possible utility in the practical application of the Convention's requirements as regards riot control agents and other toxic chemicals.

PROPOSED GUIDELINES ON THE STATUS OF RIOT CONTROL AGENTS AND OTHER TOXIC CHEMICALS UNDER THE CHEMICAL WEAPONS CONVENTION

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There has been some controversy as to the status of riot control agents under the Chemical Weapons Convention. In fact, however, the status of these agents is clear from the Convention's text. Every "riot control agent", as defined in Art. II(7), is also a "toxic chemical", as defined in Art. II(2). Thus, riot control agents are subject to the General Purpose Criterion of Article II(1)(a), which applies by its terms to "toxic chemicals". Under that provision, riot control agents are "chemical weapons" *"except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes"*. The definition of "purposes not prohibited under this Convention" appears in Art. II(9); it includes both II(9)(c), "military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare", and Art. II(9)(d), "law enforcement purposes including domestic riot control". If toxic chemicals, including riot control agents, are produced, held or transferred for purposes other than these permitted purposes, or in types or quantities inconsistent with those purposes, then they are "chemical weapons" and are subject to the Convention's declaration and destruction requirements. For instance, a stockpile of 105mm howitzer shells loaded with a riot control agent would be a "chemical weapon" and be subject to the Convention's restrictions. But, although riot control agents can be chemical weapons under certain circumstances, many uses of them are permitted by the Convention, including, for example, virtually all currently intended US uses.

A number of questions of interpretation may arise with respect to the Convention's provisions on riot control agents and other toxic chemicals. The following statements can be thought of as guidelines to help resolve practical problems of application. They are referred to in this article as "proposed guidelines".

1. The term "law enforcement" in Art. II(9)(d) means actions taken within the scope of a nation's "jurisdiction to enforce" its national law, as that term is understood in international law. When such actions are taken in the context of law enforcement or riot control functions under the authority of the United Nations, they must be specifically authorized by that organization. No act is one of "law enforcement" if it otherwise would be prohibited as a "method of warfare" under Art. II(9)(c).

2. The uses of toxic chemicals prohibited as "methods of warfare" include any use of toxic chemicals by virtue of their toxic properties against enemy combatants (whether regulars or irregulars), and any use of toxic chemicals by virtue of their toxic properties against noncombatants if designed to advance a specific military objective in war.
3. A toxic chemical used by virtue of its toxic properties is only of a type consistent with the purpose of law enforcement, in the sense of Article II(1)(a), if it meets the Convention's definition of a "riot control agent" in Article II(7). Thus, such chemicals must be "not listed in a Schedule" and must "produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure". However, any chemical not on Schedule I may be used in carrying out the sentence of a duly constituted tribunal against a natural person.

Applicability of the General Purpose Criterion to Riot Control Agents Some officials have suggested that the Convention's only restriction on "riot control agents" is that they not be used as a "method of warfare", Art. I(5).¹ If this claim were correct, a state could develop, produce, retain, and transfer riot control agents in any form and in any quantity, so long as it did not actually use them as a method of warfare. A large class of toxic chemicals would be exempted from the Convention's controls by this interpretation: in the words of Art. II(7), it would include all chemicals "not listed in a Schedule, which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following exposure". With respect to this group of chemicals, the situation would be little changed from that which existed under the majority interpretation of the 1925 Geneva Protocol, which similarly barred the use of chemical weapons but did not prohibit their development, production, and transfer. For example, this interpretation would permit a state to produce, maintain and test a large stockpile of howitzer shells or bombs loaded with a riot control agent, even though riot control agents of such a type (howitzer shells or bombs) and in such a quantity (a stockpile) would have no application other than as a method of warfare.

The claim underlying this interpretation derives in part from Article I(5) of the Convention, which obliges states “not to use riot control agents as a method of warfare”. The only explanation for this provision, it is claimed, is that use of riot control agents as a method of warfare is not barred by any other provision of the Convention.

This explanation is incorrect both as a matter of history and as a matter of treaty interpretation. As a matter of history, there is a better explanation of Article I(5). The provision’s authors almost certainly intended it to resolve the question of the international legal status of the use of riot control agents in warfare, a question raised by the position of the United States that the use of such agents in warfare was entirely outside the 1925 Geneva Protocol. In order to ensure that a similar question did not arise with respect to the Chemical Weapons Convention, the Convention’s authors reiterated a rule that was already implicit in the Convention’s text.

As a matter of treaty interpretation, this claim would exempt riot control agents from the Convention’s central provision, the “general purpose criterion” of Article II(1)(a). That provision defines as “chemical weapons” subject to the Convention’s restrictions “*toxic chemicals and their precursors, except where intended for purposes not prohibited under this Convention, as long as the types and quantities are consistent with such purposes*”. The Convention also includes, in Article II(9), a specific and exclusive listing of “purposes not prohibited under this Convention”, which includes, for example, agricultural, industrial, and medical purposes.

Given the General Purpose Criterion’s central role in the Convention, it would be surprising to find that the Convention exempted certain categories of toxic chemical from its terms altogether. And, in fact, it did not. The General Purpose Criterion states clearly that it applies to all “toxic chemicals”. The Convention’s definition of “toxic chemicals”, in turn, specifically includes chemicals that cause “temporary incapacitation”. Compare this to the definition of “riot control agents” in Article II(7): “any chemical not listed in a Schedule, which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure”. All chemicals that produce “sensory irritation or disabling physical effects” necessarily produce “temporary incapacitation”. Thus, “riot control agents” are by definition a subset of “toxic chemicals”, and so are subject to the General Purpose Criterion, including its restrictions as to types and quantities of chemicals.² The specific inclusion of “law enforcement and domestic riot control purposes” (emphasis added) in Article II(9)’s list of “purposes not prohibited by the Convention” further underscores the fact that riot control agents are subject to the General Purpose Criterion.

An interpretation of the Convention that excluded riot control agents from the “types and quantities” restrictions of the General Purpose Criterion would also be deeply inconsistent with the purposes of the Convention. As a matter of treaty interpretation, this inconsistency weighs strongly against the validity of the proposed interpretation.³ As observed above, the proposed interpretation would exempt riot control agents from the Convention’s restrictions on development, production, acquisition, stockpiling, retention

and transfer, as well as its restrictions as to “types and quantities”. Moreover, because “riot control agents” could never be “chemical weapons”, they would be exempted from most of the Convention’s declaration requirements, which are framed in terms of chemical weapons (Art. III (1) (a)–(d)).⁴

Because this interpretation exempts riot control agents from so many of the Convention’s core provisions, it poses the danger of a partial return to the mutual suspicion and security dilemmas that drove chemical weapons acquisition before the Convention. By eroding the norm against the possession of toxic agents for use in warfare, and by encouraging national military establishments to include the use of toxic chemicals in their training and doctrines, this situation might in turn permit a gradual return to the development and production of a broader range of toxic chemicals for military purposes.

To illustrate the application of the Convention’s provisions on riot control agents, consider the example, introduced above, of a stockpile of howitzer shells loaded with a toxic chemical meeting Art. II(7)’s definition of a riot control agent. Because a riot control agent causes temporary incapacitation, it is a “toxic chemical” in the sense of Art. II(2). Thus, by the terms of Art. II(1)(a), it is subject to the general purpose criterion articulated in that section. Under the general purpose criterion, a toxic chemical is a “chemical weapon” unless it is “intended for a purpose not prohibited under this Convention, as long as the types and quantities are consistent with such purposes”. Turning to the listing of purposes not prohibited by the Convention in Art. II(9), we may proceed through the four purposes not prohibited by the Convention.

The first, “industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes”, does not appear to encompass a stockpile of howitzer shells. The second, “protective purposes, namely those purposes directly related to protection against toxic chemicals and to protection against chemical weapons”, might conceivably permit a small number of howitzer shells intended for use in training troops to operate in an environment containing toxic chemicals, but would not permit a stockpile of such shells. The third, “military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare”, appears to be inapplicable. Training, as discussed above, would not require a stockpile of shells, and there is no obvious other military application for a stockpile of howitzer shells that would not amount to use as a method of warfare. Finally, there appears to be no legitimate application of howitzer shells for “law enforcement including domestic riot control purposes”, the last of the purposes not prohibited under the Convention.

Thus, a state possessing a stockpile of shells of this type would be required to treat the shells as chemical weapons, and they would be subject to the Convention’s prohibitions on production, acquisition, retention, use, and transfer, and to the Convention’s provisions on declaration and destruction, if still in existence when the Convention enters into force.

“Law Enforcement”: What Law, Where Enforced?

The Convention does not state clearly what law states may enforce when they invoke the Convention’s law enforcement provisions, or where and under what circumstances they may enforce that law. This creates considerable scope for confusion. For instance, may a state use toxic chemicals in enforcing its national law in the territory of another state, without the latter state’s consent? May it invoke this provision whenever it judges international law has been violated? Further, the Convention does not clarify the relationship between its limited exception for military purposes and its exception for law enforcement purposes. Might an activity that would be barred if considered under the military purposes exception qualify as law enforcement, and so be permitted? For instance, could a state use riot control agents in fighting a civil war, claiming that enemy forces were violating its national law, international law, or both? Number 1 of the proposed guidelines attempts to address these questions by providing clear standards for when and where states may claim to be engaging in law enforcement. It provides:

The term “law enforcement” in Art. II(9)(d) means actions taken within the scope of a nation’s “jurisdiction to enforce” its national law, as that term is understood in international law. When such actions are taken in the context of law enforcement or riot control functions under the authority of the United Nations, they must be specifically authorized by that organization. No act is one of “law enforcement” if it otherwise would be prohibited as a “method of warfare” under Art. II(9)(c).

Enforcement of National Law The proposed guidelines for the enforcement of national law are derived from background rules of international law. “Enforcement” of national law is a term of art in international law; there are reasonably well-defined rules as to the circumstances in which a state has jurisdiction to enforce its national law.⁵ Therefore, according to the rules of treaty interpretation, the Convention’s references to law “enforcement” should be interpreted in light of this international standard.⁶ For example, international law provides that a state may enforce its own law within its own territory⁷ or against its own citizens,⁸ but that it may not enforce its national law in the territory of another state without that state’s consent.⁹ The proposed guidelines make clear that the same rules apply to the use of toxic chemicals in law enforcement.

International legal rules also govern states’ authority to enforce their laws in areas beyond any state’s territorial jurisdiction, as on the high seas, in contested areas, and in the air. For instance, the only state that may ordinarily enforce its laws against a vessel is that vessel’s flag state. Again, the same rule applies to the use of toxic chemicals in law enforcement. In a small number of instances, the precise international legal rules governing nations’ jurisdiction to enforce national law in areas outside any state’s territorial jurisdiction are in some dispute. In those cases, the rules governing nations’ ability to use toxic chemicals in law enforcement will be clarified as broader questions as to the scope of national enforcement jurisdiction are resolved.

Enforcement of International Law The Convention also does not state explicitly what sources of law states may enforce in invoking Art. II(9)(c). It seems possible, therefore, that states might wish to invoke international law to justify their “law enforcement” activities. The purposes of the Convention and background norms of international law itself demonstrate that such claims should be permitted in only the narrowest of circumstances. Permitting states to judge and enforce violations of international law themselves, without the consent of the world community, would be an invitation to anarchy. Moreover, states are prohibited by the United Nations Charter from unilaterally using force except in cases of self-defence against an armed attack.¹⁰ The Charter bars states from pursuing international disputes in a manner which “endanger[s] the maintenance of international peace and security”, and instead requires them to settle their disputes by “peaceful means”.¹¹ Instead, the Charter provides that both the Security Council and the General Assembly shall have a role in the settlement of international legal disputes. Although the Charter reserves to states the right to use force in self-defence, acts of self-defence are not acts taken to enforce international law. Instead, they are acts of warfare, and are regulated by the Convention’s provision on “military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare”.

Thus, the proposed guidelines contain only a very narrow provision on enforcement of international law. This provision applies only to states acting in the context of “law enforcement or riot control operations under the authority of the United Nations”, and, in recognition of the United Nations’ ultimate authority over such operations, requires that the United Nations grant “specific” approval for the use of toxic chemicals. The requirement that the approval be “specific” is intended to prevent states from invoking broad statements appearing in a resolution of a United Nations body, such as “all necessary means”, as permission to act under this provision.

Relationship between “Law Enforcement” and “Methods of Warfare” Article II(9)(c) of the Convention defines the circumstances in which the use of toxic chemicals for military purposes is not prohibited as “military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare” (emphasis added). It seems clear that the restriction on using the toxic properties of chemicals as a method of warfare applies with equal force to actions under Art. II(9)(d), the “law enforcement” provision. If it did not, states could circumvent the restriction on using the toxic properties of chemicals as a method of warfare by merely asserting that they were enforcing their national law, for instance in fighting a war on their own territory. Such an outcome would be entirely inconsistent with the purposes of the Convention. For this reason, the proposed guidelines state that “no act is one of ‘law enforcement’ if it otherwise would be prohibited as a ‘method of warfare’ under Art. II(9)(c)”.

The Uses of Toxic Chemicals That Constitute “Methods of Warfare” The Convention does not prohibit the use of toxic chemicals for “military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare”. States might claim that they should be permitted to use toxic chemicals, particularly riot control agents, in a range of situations under this provision. The most prominent examples of such applications, are, in the words of United States Executive Order 11850, use “in defensive military modes to save lives”. It is not immediately clear when uses justified in such terms would amount to use as a “method of warfare”.

The proposed guidelines attempt to answer this question, or at least to clarify the Convention’s standard. They provide that:

The uses of toxic chemicals prohibited as “methods of warfare” include any use of toxic chemicals by virtue of their toxic properties against enemy combatants (whether regulars or irregulars), and any use of toxic chemicals by virtue of their toxic properties against noncombatants if designed to advance a specific military objective in war.

This guideline applies different standards to uses of toxic chemicals on combatants and on noncombatants. Uses on enemy combatants are barred outright, irrespective of purpose; uses on noncombatants are barred when they are “designed to advance a specific military objective in war”. The standard for uses on noncombatants merely recasts the Convention’s “method of warfare” language in terms of the purpose for which the toxic chemicals are used, an approach that occurs throughout the Convention.

Uses on enemy combatants are, however, barred irrespective of purpose. This is so because uses of toxic chemicals on enemy combatants will virtually always be designed to advance some military objective. Even if the state using toxic chemicals intends in part to save the lives of enemy combatants, it also intends to harass or immobilize them, a military objective, and so is using the toxic properties of chemicals as a method of warfare. As to the vanishingly small class of cases in which the objective of harassment might be absent, it is appropriate to set aside these cases in order to avoid encouraging states to make self-serving claims about their intentions towards enemy combatants. It may seem paradoxical that uses on combatants should be held to a higher standard than uses on civilians. In fact, such a difference in standards is not especially anomalous; for instance, states are held to a higher standard in a number of respects in their treatment of prisoners of war than of their own civilians. Note that the distinction between combatants and noncombatants is neither unusually difficult to apply nor new to international law. It is drawn from the First and Second Protocols Additional to the Geneva Conventions.¹²

Since the promulgation of Executive Order 11850 in 1974, much of the controversy on these questions in the United States has focused on the particular situations it cites as permissible military uses of riot control agents. Thus, it is useful to consider the way in which Number 2 of the proposed guidelines would apply in those situations.

“Use of riot control agents in riot control situations in areas under direct and distinct [national] military control, to include controlling rioting prisoners of war” Such uses of riot control agents would generally be permitted under the Convention and proposed guidelines. First, it should be noted that, as discussed above, this use of riot control agents is subject to the General Purpose Criterion, and so must be for one of the purposes listed in Art. II(9). In fact, two of II(9)’s clauses apply. Art. II(9)(c)’s “military purposes” provision applies directly. The prisoners of war are noncombatants, and so the use of riot control agents on them is permissible under Number 2 of the proposed guidelines unless it is “designed to advance a specific military objective in war”. The military objective at stake in controlling rioting prisoners of war is, at best, highly attenuated, so this use is permissible.

Alternately, this use of riot control agents might be justified under Art. II(9)(d)’s “law enforcement” provision. Assuming that the state using riot control agents is operating on its own territory, or is an occupying power, or has secured the consent of the state in whose territory it is operating, it has jurisdiction to enforce its national law. Of course, it may not do so in a way that would amount to use as a “method of warfare” (which, as discussed above, this application does not).

“Use of riot control agents in situations in which civilians are used to mask or screen attacks, in the hope of reducing or avoiding civilian casualties” Such uses of riot control agents would be prohibited. The proposed guidelines very clearly bar the use of all toxic chemicals, including riot control agents, on enemy combatants. Removing civilian cover from military forces, whether or not done for humanitarian reasons, serves a military objective, just as would denying the enemy another form of cover or a tactical advantage.

Situations of the type described above are very rare in any case. Civilians ordinarily avoid combat situations when possible. Moreover, civilians disabled by toxic chemicals will have difficulty finding shelter or otherwise protecting themselves from fire, calling into question the humanitarian benefits of this policy. Finally, a right to use toxic chemicals for “humanitarian” purposes may be misused, either deliberately or inadvertently (thanks to the “fog of war”), posing a significant danger of escalation.

“Use of riot control agents in rescue missions in remotely isolated areas, to rescue downed aircrews and passengers or escaping prisoners” Such action is permitted in some situations and prohibited in others. Again, there is a separate analysis for “law enforcement” and for “military purposes”. To begin with “law enforcement”, if the “remotely isolated areas” are within the territorial jurisdiction of the state using riot control agents, or within the jurisdiction of a consenting state, then the conditions of Number 1 of the proposed guidelines are satisfied. Of course, the enforcement action may not depend on the use of the toxic properties of chemicals as a method of warfare, as defined further in Number 2.

If the “remotely isolated areas” are within the jurisdiction of an unconsenting state, then it is possible that limited

use of riot control agents might be permitted under the “military purpose” provision, Art. II(9)(c). Rescuing downed aircrews and passengers and recapturing escaping prisoners by using riot control agents on noncombatants has a broad “military purpose”, but is not “designed to advance” any more concrete “military objective”. Provided that no riot control agents are used against enemy combatants, their use against noncombatants in such situations may be permitted by the Convention.

“Use of riot control agents in rear echelon areas outside the zone of immediate combat to protect convoys from civil disturbances, terrorists, and paramilitary organizations” Once again, addressing the legality of this use requires an investigation of both the “military purposes” and the “law enforcement” provisions. Each exception seems likely to permit such use in some circumstances. The “law enforcement” exception applies, as in the rescue missions just considered, when the act of enforcement is taken within the nation’s jurisdiction to enforce, and when the act does not constitute a “method of warfare”.

Under either the “law enforcement” or the “military purposes” provision, we then conduct an inquiry into whether the act involved constitutes a “method of warfare”. If the terrorists or paramilitary forces involved are acting as part of a “war”, either civil or between states, then they are “combatants”, and any use of riot control agents in this manner is prohibited. (It is difficult to define a “war” precisely, but the term generally refers to hostilities on a comparatively large scale between forces with at least some internal organization or discipline.) Otherwise, they are noncombatants, and we must ask whether the use of riot control agents in question is “designed to advance a specific military objective in war”. In the case at hand, protecting convoys does have a military objective (maintaining supply lines), but it is sufficiently attenuated to render this use of riot control agents permissible.

Types of Toxic Chemicals Permissible for “Law Enforcement” Although Art. II(9)(d) states that “law enforcement, including domestic riot control” is a “purpose not prohibited by the Convention”, it does not state in detail which “toxic chemicals” may be used for this purpose. The Convention does provide one explicit restriction: the exclusion of “law enforcement” purposes from the list of permitted applications of Schedule I chemicals in Verification Annex VI(A)(2) implies that Schedule I chemicals may *not* be used for “law enforcement” purposes. However, states might assert that the Convention’s lack of other restrictions permitted them to develop, produce, acquire, transfer and use for anti-personnel purposes any other toxic chemicals, including chemicals listed on one of the other Schedules, provided that they could claim that they were doing so for “law enforcement purposes”.

This claim would be both harmful and incorrect. It would be harmful because it is difficult to monitor states’ invocation of the Convention’s provision on “law enforcement purposes”. The Convention’s section on declarations imposes only the weakest of requirements on chemicals intended for law enforcement purposes. Under Article

III(1)(e), states must declare the chemical identity of all toxic chemicals that they hold “for riot control purposes”. If a state decides that it intends to use a toxic chemical for law enforcement purposes, but not for purposes of riot control, it need not make any declarations with respect to that chemical at all.

The threat of this apparent loophole is particularly acute because a number of states currently have active development programs directed at producing new, technologically advanced disabling chemicals, many of which might be claimed to be intended for law enforcement purposes, but not for riot control. These chemicals are unlikely to be listed on a Schedule; thus, the General Purpose Criterion is the principal restriction on their development, production, ownership and use. Because states need not disclose the identity of these chemicals, however, it is likely to be difficult or impossible to subject states’ claims as to their “purposes” to international scrutiny. States will inevitably assume that other states’ claims as to their “purposes” are self-serving and question their sincerity, giving rise to precisely the sort of self-reinforcing cycle of mutual suspicion that the Convention was intended to eliminate. Further, developing countries, many of which may find these technologically advanced chemicals out of their reach, are likely to see the Convention’s failure to regulate them as evidence of an unfair double standard, harming the legitimacy of the Convention in their eyes.

Yet these harmful consequences all flow from an incorrect interpretation of the Convention. Certainly, it cannot be the case that every state is permitted to judge for itself whether a particular “purpose” is one “not prohibited by the Convention”. If that were so, the General Purpose Criterion would have little force: States could construe medical, industrial, or law enforcement purposes very broadly, and so evade the Convention’s restrictions altogether. Rather, as the General Purpose Criterion states, toxic chemicals “intended for purposes not prohibited under this Convention” are not chemical weapons only “as long as the types and quantities are consistent with such purposes”. Number 3 of the proposed guidelines provides a focus for discussions that might resolve this problem. It reads:

A toxic chemical used by virtue of its toxic properties is only of a type consistent with the purpose of law enforcement, in the sense of Article II(1)(a), if it meets the Convention’s definition of a “riot control agent” in Article II(7). Thus, such chemicals must be “not listed in a Schedule” and “produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure”. However, any chemical not on Schedule I may be used in carrying out the sentence of a duly constituted tribunal against a natural person.

Under this proposed guideline, an irritant or paralytic chemical with effects that do not endure beyond a short time would be of a “type” suited to law enforcement purposes, but sarin (which is listed in a Schedule) or any paralytic chemical with long-term effects would not. Any chemical not on Schedule I could be used to carry out a death sentence imposed by a duly constituted tribunal. The requirement that the sentence of the tribunal be imposed on a natural person bars invocation of this provision to justify

the use of toxic chemicals against a national group or ethnic minority.

This interpretation is derived from the purposes of the Convention and from international human rights standards, both recognized instruments of treaty interpretation. Most importantly, the Convention's purposes clearly require that states be precluded from retaining large quantities of toxic chemicals with enduring toxic effects with no other justification than asserted law enforcement purposes, particularly if the chemical identities of these toxic chemicals are unknown to the other parties to the Convention.

Further, applicable human rights standards support the interpretation in Number 3 of the proposed guidelines.¹³ Customary international law rules prohibit the use of chemicals with long-term effects by states on civilian populations, whether or not such use is characterized as "law enforcement", except when such use is in accordance with the decision of a duly constituted tribunal. More generally, the Universal Declaration of Human Rights and the Covenant on Civil and Political Rights both bar governments from depriving citizens of their liberty other than after a full and fair trial. The Universal Declaration of Human Rights is widely agreed to have largely passed into customary international law, and the Covenant on Civil and Political Rights has over 100 states parties and is also strong evidence for international custom. In light of these international human rights standards, the Chemical Weapons Convention's references to "law enforcement" must be understood as entailing some minimal guarantees of fair process. Accordingly, the proposed guidelines embody such a standard.

Notes

We wish to thank R Justin Smith for his assistance with legal research while an HSP Fellow in 1995–96.

1. See Statement for the Record by Ambassador Stephen J. Ledogar, US Representative to the Conference on Disarmament, for the US Senate Foreign Relations Committee, 13 April 1994 ("RCAs are defined in a section separate from chemical weapons to indicate that while the Convention prohibits their use as a method of warfare, they themselves are not considered chemical weapons").
2. The definitions also suggest a possible reason for this difference in terminology: the definition of "riot control agents" is narrowed from that of "toxic chemical" by the requirement that the effects be produced rapidly and by the greater specificity of the requirement that their effects be temporary, two properties that are particularly important in toxic chemicals intended for use on rioters.
3. The Vienna Convention on the Law of Treaties provides that "[a] treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose". Art. 31(1) (emphasis added).
4. The only declaration requirement applicable to riot control agents, Art. III(1)(e), merely requires that states specify the chemical identity of chemicals that they hold "for riot control purposes".
5. See generally Ian Brownlie, *Principles of Public International Law* (1990), pp 298–321.
6. See Vienna Convention on the Law of Treaties, Art. 31 (3)(c) (directing that treaties be interpreted in light of "any relevant rules of international law applicable in the relations between the parties").
7. See Brownlie, *supra*, p 300. See also American Law Institute, *Restatement (Third) of Foreign Relations Law of the United States*, § 432 (1).
8. See Brownlie, *supra*, p 303.
9. See Brownlie, *supra*, p 307 ("The governing principle is that a state cannot take measures on the territory of another state by way of enforcement of national laws without the consent of the latter"). See also American Law Institute, *supra*, § 432 (2) ("A state's law enforcement officers may exercise their functions in the territory of another state only with the consent of that state, given by duly authorized officials of that state").
10. See United Nations Charter, Art. 51.
11. See United Nations Charter, Art. 2(3) ("All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered"). See also Art. 2(4) and Art. 33 (1).
12. The definition in Protocol I (1977) Additional to the Geneva Conventions (1949) is:
"1. The armed forces of a Party shall consist of organized armed forces, groups and units which are under a command responsible to that Party for the conduct of its subordinates, even if that Party is represented by a government or an authority not recognized by an adverse Party. Such armed forces shall be subject to an internal disciplinary system which, *inter alia*, shall enforce compliance with the rules of international law applicable in armed conflict.
2. Members of the armed forces of a Party to a conflict ... are combatants, that is to say, they have a right to participate directly in hostilities".
A similar definition, emphasizing effective internal discipline, appears in Protocol II (1977) Additional to the Geneva Conventions (1949), Article 1, which states that the Protocol "shall apply to all armed conflicts which are not covered by Article 1 of ... [Protocol I] and which take place in the territory of a High Contracting Party between its armed forces and dissident armed forces or other organized armed groups which, under responsible command, exercise such control over part of its territory as to enable them to carry out sustained and concerted military operations and to implement this Protocol".
13. As noted, the Vienna Convention on the Law of Treaties requires that relevant rules of international law be taken into account in interpreting treaty provisions. See Art. 31(3)(c).

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What follows is taken from the CBW Events data-base of the Sussex Harvard Information Bank, which provides a fuller chronology and more detailed identification of sources. See Progress in The Hague (above) for coverage of OPCW-related developments. The intervals covered in successive Bulletins have a one-month overlap in order to accommodate late-received information. For access to the data-base, apply to its compiler, Julian Perry Robinson.

1 November In Japan, Aum Shinrikyo vacates its compound on the slopes of Mount Fuji [see 23 Mar 95 and 22 Apr 95]. The compound is handed over to the official receivers, who are liquidating the cult's assets in order to pay compensation [see 2 Sep] to the cult's victims. {London *Daily Telegraph* 2 Nov}

1 November In Canada, the National Council of Veteran Associations urges the government to pay a basic minimum pension to all Canadian military personnel who served in the Gulf War (about 4,500 people) and who have medical problems [see 21 Feb 95]. The NCVA quotes the report on Gulf War illness which the Department of National Defence had commissioned from an epidemiologist at the University of Toronto, Dr A B Miller. This report, submitted to DND on 31 January 1996, had found that no unique 'Gulf War Syndrome' could yet be characterized, but had recommended that the Canadian government should not delay action pending the results of further studies, such as those being undertaken in the United States. NCVA chairman Cliff Chadderton states: "It was the conclusion of the National Council that our country could gain considerable international recognition by awarding a basic pension to Gulf War veterans and, in so doing, acknowledge that the unusual circumstances of military service in the Gulf were such that normal standards of adjudication in pension applications could not be applied". {Canada NewsWire 1 Nov}

1 November University of Washington researchers report in *Nature Genetics* {vol 14 pp 334-6} that ability to withstand exposure to the nerve-gas sarin is genetically controlled. Chemist Charles Furlong and his team have found that the enzyme paraoxonase, which everyone has in their blood (apparently for purposes of cholesterol metabolism), can protect test animals against the lethal effects of sarin, but the form of the enzyme which some people make has no such protective effect; the trait is genetic. Populations may thus contain individuals who are genetically more vulnerable to sarin than are others.

1 November In Langley, Virginia, CIA Executive Director Nora Slatkin conducts an on-the-record televised news briefing in reaction to the allegations by former CIA analysts Paul and Robin Eddington that the CIA is hiding cables and logs indicating exposure of US troops to Iraqi CW agents during the Gulf War [see 30 and 31 Oct]. She announces that the Director of Central Intelligence has asked the CIA Inspector General to investigate the allegation, which she denounces in some detail. She also announces that the documents which the Eddingtons cited — 58, rather than the 59 stated by the *New York Times* — will, all but one of them (which "belongs to another government"), be released on GulfLink; so will all the documents that had earlier been withdrawn from GulfLink [see 31 Oct].

As for the CIA's own inquiry into Gulf War illnesses [see 25 Sep and 1 Oct], Director Slatkin says she has 20 people devoted to it from the Office of Scientific and Weapons Research

in the Directorate of Intelligence, plus contract assistance on computer-modelling from Science Applications International Corporation. The modelling of the Khamisiyah episodes continues [see 22 Oct]. {Federal News Service transcript}

4 November President Clinton, as required under the FY 1997 Defense Authorization Act [see 23 Sep], reports to the Congress on the capability of the United States for preventing the illegal importation of nuclear and CBW weapons into the United States and its possessions. {US Newswire 6 Nov}

5 November In Beijing, the visiting US Under Secretary of State for Arms Control and International Security Issues, Dr Lynn Davis, concludes two days of talks with Chinese officials [see also 7–9 Oct]. {*International Herald Tribune* 6 Nov}

5 November Iran proposes, in a plenary-level paper for the OPCW Preparatory Commission, a means for reconciling the export-control regime implicit in the CWC with the regime applied by countries of the Australia Group [see 14–17 Oct]. The Iranian paper includes the following:

"4. The CWC has not envisaged any export restriction in chemical trade between States Parties. The Convention has established a system with equal duties and responsibilities for all States Parties based on the principle of equal treatment of all States Parties.

"5. Some developed countries, however, have argued for a necessity of keeping some kind of export control regulations against the States Party to the Convention. This is clearly contrary to the letter and spirit of the Convention. By the entry into force of the Convention, the States Parties should abide by the provisions of the CWC and abolish existing export control regimes against States Parties in order to render their national regulations in the field of trade in chemicals consistent with the obligations undertaken under the Convention.

"6. In order to promote transparency in the chemical trade, the States Parties may agree on arrangement for exchanging the end-user certificate related to chemical exports in a manner that will entail no restrictions or impediments on access to chemicals, equipment or technological information by all States Parties. This would replace all existing regulations in the chemical trade at the time of entry into force of the Convention for the States Parties.

"7. An end-user certificate may be required from the recipients, stating in relation to the transferred chemicals or chemical manufacturing facilities and equipment (as stated in the attached Annex) the following: (a) That they will only be used for purposes not prohibited under this Convention (for the States not party to the Convention). (b) That they will not be re-transferred without receiving the authorisation from the supplier(s). (c) Their types and quantities. (d) Their end-use(s) and (e) The name and address(es) of the end-user(s). The States Parties should resolve suspicions arising from such transfers through

the process of consultation and clarification in accordance with Article IX of the Convention....”

The annex of the paper lists certain types of chemical processing equipment, types that are also identified in the Australia Group chemical-equipment control list. And it lists the 20 chemicals on the AG Precursor Control List that are not also on the CWC schedules. {PC-XV/B/WP.6}

5 November President Clinton is reelected president of the United States. Republicans remain in the majority in both houses of Congress.

6 November The Executive Secretary of the OPCW Preparatory Commission announces the arrangements for OPCW-inspector training, which, following trigger point [see 31 Oct, Hungary] can now be initiated. Training of people in Training Group A will commence on 13 January in the Netherlands (with ‘week zero’ starting on 6 January) and on 20 January in other training centres (in China, Czech Republic, Finland, France, Germany, India, Italy, Japan, Romania, Russia, Slovakia, Switzerland, the UK and the USA). It will end on 30 May 1997. For Training Group B, early September, rather than late May, 1997 is seen by the Secretariat as an advantageous time for commencement. {PC-XV/B/10, *OPCW Synthesis* Nov}

8 November At the US State Department, ACDA Director John Holum gives a press briefing on the CWC. He urges US ratification before 29 April 1997, the date on which the treaty enters into force [see 31 Oct, Hungary], saying: “If we do not become an original party, US leadership in nonproliferation could be undermined. Our chemical industry could suffer as a result of restrictions on trade with non-member countries. United States citizens would not be eligible to serve in either leadership or implementing capacities with the international organization that will be set up to implement the treaty, and US citizens who are now working there would be dismissed, and we would not be a member of the Executive Council and would have to live with decisions, should we subsequently ratify, that the Executive Council made in our absence. And there are many decisions by the council still to be made that will determine the effectiveness of the treaty.” He says that he will push for ratification “immediately”, adding: “This will be — this is a top legislative priority of the administration. It’s something that needs to be done quickly so we need action early in the year.”

On Russian ratification of the CWC, he says that the United States and Russia are in somewhat comparable positions “in the sense that both have made determinations that we’re going to eliminate our chemical weapons stockpiles”. He says that Russia has not linked ratification to any other issues, including NATO extension [see 7 Oct].

On the BWC, he speaks of US and EU agreement that a “verification protocol” should be completed by 1998. He says that he will be participating in the imminent Fourth Review Conference and is hopeful that one of its decisions will be “to regularize the negotiations [on strengthening the treaty] and to spend considerably more time next year in dealing with this”.

Ending his briefing, he reiterates his remarks about leadership for US ratification of the CWC: “It will have to involve all of us, and I think from very early on. And we’ve had some discussions at senior levels. We’ll have more in order to lay out the specifics of the strategy. But I think the president has sent the signal in his UN speech [see 24 Sep], and again right after the election, that this is something we’ll all be heavily engaged in the first part of next year.” {Federal News Service transcript}

8–10 November In Germany, the Bonn International Center for Conversion (BICC) convenes an international conference, *Destruction of Chemical Weapons in Russia: Arms Control, Economic and Environmental Aspects*, at the Gustav Stresemann Institute in Bonn with funding from the Volkswagen Foundation and with the co-sponsorship of the Stockholm International Peace Research Institute (SIPRI). The press statement subsequently released by the co-sponsors says: “The outcome of the discussions revealed that the challenge to destroying the CW stockpiles which are located in seven different sites in Russia is a complex and multifaceted problem that requires transparency in decision making processes, coordination of approaches by different groups who are involved in the plans for destruction (State Duma, Ministry of Defense, environmental agencies, local communities, non-governmental organizations, external donors, etc.) and improvements to public education and general awareness of the problem among policymakers and those residing in areas situated close to the CW stockpiles.” The proceedings of the conference are to be published in 1997, in both English and Russian. {PR Newswire 13 Nov}

9 November In Russia, at the Shikhany test area in Saratov, tests with nerve gas of a new mobile chemdemil incinerator are scheduled to take place later in the month, according to the London weekly *New Scientist* {9 Nov}. Initial tests have been held at Kaliningrad on the outskirts of Moscow. The incinerator operates at temperatures in the range 2000 to 3500 °C and uses a liquid-fuelled rocket motor. It can process waste at a rate of one tonne per hour, and could in principle be scaled up to a permanent installation operating at 2.5 tonnes per second. Its designer is Anatoly Papusha, head of the ecological division of the Central Scientific Machine-Building Research Institute of the Russian Space Agency.

11 November From the Udmurt Republic of the Russian Federation, where, at Kambarka [see 14–15 May] and Kizner, more than 30 percent of the declared Russian CW-agent stockpile is held, an appeal is distributed to members of the Russian State Duma asking for faster passage into law of the federal chemical-weapons destruction bill [see 21 May]. The appeal is from the Administration and deputies of the Kizner district, and expresses satisfaction with the bill. It observes that, under “the existing conditions of socio-political instability, the lack of necessary legal basis for chemical weapons destruction is of particular concern to the people of our republic”. The appeal refers to the parliamentary hearings that had been held during May on the chemdemil programme and says: “There seems to be a general consensus concerning the need to destroy chemical weapons, but the positions, assessments and approaches to the issue of the adoption of the federal chemical weapons destruction bill on the part of certain committees of the State Duma are not coordinated and differ considerably”.

11 November In Russia, the chief of the Ministry of Defence RKhB Troops, Col Gen Stanislav Petrov, says in an interview with Itar-Tass that Russia wants chemical weapons to be destroyed as soon as possible but will need international financial aid in order to reprocess its stocks. The amount of aid Russia needs is \$100 million, he says, “less than one might think”. He observes that “less than one-tenth of that sum has actually been received from European states as technical assistance” [see also 27 Sep]. He continues: “Most of it has come from Germany, and letters of intent have been signed with the Netherlands. If these are implemented in the near future, Russia will

receive 30 million guilders.” He states that European aid to the extent of \$100 million would make it possible to build a special factory to destroy chemical weapons, but Russia would, nevertheless, have to draw mainly on its own resources. He warns that, if, after entry into force of the CWC in April 1997, Russia had no international chemdemil assistance, that would “make it much harder to implement the federal [chemical-weapons destruction] programme and have unpleasant repercussions”. {Itar-Tass 11 Nov in BBC-SWB 13 Nov}

11 November In New York, at the 51st UN General Assembly, the First Committee (Disarmament and International Security) adopts by consensus a draft resolution (L.2) on the Biological Weapons Convention. Initiated by Hungary, the draft resolution would, among other things, have the Assembly provide such services as may be required for implementation of Review Conference decisions.

The committee also adopts, by a vote of 132-0-10, a draft resolution (L.41) on measures to uphold the authority of the 1925 Geneva Protocol. Initiated by Colombia on behalf of the Non-Aligned Movement, the draft resolution would have the Assembly call upon those states that continue to maintain reservations to the Protocol to withdraw them. It would also require a report from the Secretary-General on its implementation in time for the 1998 General Assembly. The abstaining states include Russia, five former Soviet republics, and the United States. {GA/DIS/3069, *Disarmament Times* 17 Dec}

11 November President Clinton says: “I want to assure all of you that we will leave no stone unturned in our efforts to investigate Gulf War illness and to provide our Gulf War veterans with the medical care they need. There are mysteries still unanswered, and we must do more.” He is speaking during a Veterans’ Day observance at Arlington National Cemetery. The Chairman of the Joint Chiefs of Staff, General John Shalikashvili, reiterates this pledge on television, and rejects the accusation that the Defense Department has been covering up an inadequate investigation. {*New York Times* 12 Nov}

Next day, US Deputy Defense Secretary John White announces that he is increasing the size of his department’s Persian Gulf Illnesses Investigative Team from 12 to 110 people. He says that the expanded team, comprising “representative elements of critical DoD components” and now headed by Assistant Navy Secretary Bernard Rostker [see 25 Sep] who he names as Special Assistant for Gulf War Illnesses, will “aggressively increase our outreach to those who served in the Gulf War and ... ensure they are aware of and receive appropriate medical care”. {Federal News Service transcript}

11–18 November In Iraq, UNSCOM conducts its 43rd biological-weapons inspection, UNSCOM 163. {*Arms Control Reporter* 701.B.163}

12 November In Russia, the draft law *On the Destruction of Chemical Weapons* [see 11 Nov, Udmurt Republic] whose second reading is imminent in the State Duma is described as “directed against mankind and against nature” by the president of the Union for Chemical Safety (Russia), Professor Lev Fedorov, speaking at a press conference in Moscow. He accuses the Defence Ministry of ignoring safe chemdemil technologies. He predicts that the R 16,600 billion which the federal chemdemil programme is set to cost will lead to a doubling in size of the Defence Ministry RKhB Troops. But the deputy head of the RKhB Troops, Major-General Viktor Kholstov, subsequently

tells Itar-Tass that “any talk of squandering is, to say the least, unfounded” because the “expenditure of this money is strictly supervised by a special government commission headed by Yuriy Baturin” [see 9 Nov 95]. General Kholstov also says that the technologies to be used in the programme had been selected on the advice of eminent scientists, and he states his opinion that the destruction process envisaged in the programme is being implemented at a rate and in volumes determined by the level of finance provided.

In a news-sheet distributed at the press conference, Professor Fedorov states that storage facilities at Shchuchye contain “strategic missiles with gas in multiple re-entry vehicles”. He also reports that the Russian military have at their disposal several hundred two-tonne containers of war gas which could be delivered “to some far-flung countries” by means of strategic bombers. These statements are subsequently described as “sheer fantasy” by General Kholstov. {Itar-Tass 12 Nov in BBC-SWB 14 Nov}

12 November In Berlin, during court proceedings in the *Mykonos* case (in which four people stand accused of the bombing of a Berlin restaurant in 1992 in which the Secretary-General of the Kordestan Democratic Party of Iran, Sadeq Sharafkandi and three associates died), Federal prosecutor Ronald Georg reportedly says that the “Committee for Special Affairs” in Iran which had approved the Berlin killings — killings that were believed to have been ordered by Iranian Intelligence Minister Ali Fallahian — included Ayatollah Ali Khamenei and President Ali Akbar Hashemi Rafsanjani. Federal prosecutor Bruno Jost later tells reporters that the trial had cast light “for the first time on Iranian state terrorism”. The German ambassador to Iran, Horst Bächmann, is summoned to the Iranian Foreign Ministry to receive a strong protest. There are large demonstrations outside the German embassy, with several hundred armed police maintaining order in front of it. {*Tehran Times* 16 Nov in FBIS-NES 16 Nov, AFP 16 Nov, Voice of the Islamic Republic of Iran 17 Nov in BBC-SWB 18 Nov, Xinhua 17 Nov}

Iranian commentary on the case had long been vigorous, especially after the appearance in the Berlin court in August of former Iranian President Abolhassan Banisadr to give evidence for the prosecution. It was then that Iranian news media began to comment on the possibility of retaliation against Germany, for example action against German businesses or against German officials who had approved exports to Iraq of dual-use chemical technology at the time of the Iraq–Iran war {DPA and Reuter 28 Aug}. In September, Iranian Foreign Minister Ali Akbar Velayati had said in interview: “If the Iranian government is convicted by this court, it is possible that Iranian courts will raise the matter of German assistance to the Baghdad regime for the manufacture of chemical weapons during the imposed war” {IRNA 24 Sep in BBC-SWB 25 Sep}. President Rafsanjani, too, spoke in October of such a linkage {*Der Spiegel* 14 Oct}. Now, the threat is taken a stage further. The head of the Iranian judiciary, Ayatollah Mohammad Yazdi, announces that families of Iranians killed by chemical weapons during the Iraq–Iran war are filing complaints against the German government. The speaker of the Iranian parliament, Ali Akbar Nateq-Nuri, declares that it was Germany “who supplied the Iraqi regime with chemical weapons, thereby enabling it to create the Halabjah tragedy”. An Iranian radio commentary says: “The Iranian government is absolutely determined to follow the case of Germany’s crime of arming the Iraqi regime with chemical weapons in both Iranian and international courts of law, and will use all means at its disposal to make the German case a lesson for such future crimi-

nals to come". {Voice of the Islamic Republic of Iran 15, 16 and 20 Nov in BBC-SWB 16, 18 and 22 Nov 96}

12 November In the UK, a complaint of maladministration is lodged with the Parliamentary Ombudsman against the Ministry of Defence over its exposure of servicemen to organophosphate (OP) pesticides during the Gulf War [see 4 Oct]. The complaint is made by Liberal-Democrat Member of Parliament Paul Tyler, chairman of the all-party House of Commons group on OPs. His claim is that the ministry failed to heed warnings from other government departments about the dangers of using OPs. {London *Financial Times* 13 Nov}

More than a thousand UK Gulf War veterans have now registered with the ministry's Medical Assessment Programme investigating service-related illness [see 4 Oct]. The lawyer acting on behalf of some of them, Hilary Meredith, says that the first writs against the ministry claiming compensation [see 27 Jul 95] are expected to be issued early in the new year. {London *Daily Telegraph* 13 Nov}

The Gulf War Inter-Parliamentary Group publishes the results of a fact-finding tour of the United States made by Dr Norman Jones to assess the latest medical research into the illness. The tour had been sponsored by the Royal British Legion, the Army Benevolent Fund and the Ex-Services Mental Welfare Society. {London *Independent* and *Guardian* 13 Nov}

12 November President Clinton extends Executive Order 12938 for a further year, declaring that the state of emergency which necessitated both it and its predecessors [see 8 Nov 95] still existed, namely the continuing threat posed by proliferation of weapons of mass destruction.

He also transmits to the Congress a report on activities under the order. This notes that on 17 November 1995 "sanctions were imposed under the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991 on Russian citizen Anatoliy Kuntsevich for knowingly providing material assistance to a foreign chemical weapons program" [see 20 Oct 95].

On the Chemical Weapons Convention the report says: "Further delay in securing US ratification of this vital treaty serves only the interests of proliferators and terrorists. Delay may well also endanger the international competitiveness of the chemical industry, one of our largest exporters. In the interim, pressures are increasing in unstable regions to acquire and use chemical weapons. We need to ratify this convention urgently to strengthen our own security, affirm our leadership in nonproliferation and to protect our chemical industry. Ratification must be a top priority of the new Congress in early 1997." {White House release 12 Nov}

12 November The US Air Force awards a \$1.1 billion 5-year contract to a team led by Boeing for development of an airborne laser system for high-altitude destruction of theatre ballistic missiles. The system is to comprise a high-energy (presumably megawatt-range) laser and beam-control apparatus mounted in a Boeing 747-400F freighter, having an effective range of hundreds of miles. {*Defense Daily* 13 Nov, *Baltimore Sun* 15 Nov}

13 November Czech Deputy Defense Minister Vladimír Šuman announces details of his ministry's expanded investigation of Gulf War veterans' illnesses [see 22 Oct]. Health re-examinations are to be completed by the end of March 1997. Complaints concerning other issues are to be evaluated by the end of June. {*Prague Post* 20 Nov} Some 40 veterans of the

200-strong Czechoslovak chemical defence unit that served in the Gulf are reported to be ill. {*Prague Mlada Fronta Dnes* 22 Nov in FBIS-EEU 22 Nov}

13 November President Clinton's Advisory Committee on Gulf War Veterans' Illnesses [see 9 Oct] convenes in Washington for a final public session, during which it hears from CIA Executive Director Nora Slatkin [see 1 Nov], CIA investigator Sylvia Copeland [see 19 Sep], Deputy Defense Secretary John White [see 12 Nov] and Assistant Defense Secretary Stephen Joseph [see 25 Sep]. Director Slatkin tells the committee that, on "the basis of a comprehensive review of the intelligence that we have, we continue to conclude that Iraq did not use chemical or biological weapons during the Gulf War". Much is said about the Khamsiyah demolitions and the problems of modelling the conceivable agent releases [see 1 Nov]. Secretary White tells the committee that the Defense Department has asked the Institute for Defense Analyses to convene a panel of independent experts to advise on applicable modelling techniques, furnishing an progress report by mid-December. {Federal News Service transcript}

The committee also considers a draft of its final report, due in December. The draft, which had been leaked to news organizations during the previous week, reportedly still states [see 5 Sep] that the Defense Department has now lost so much credibility in its investigation of Gulf illnesses [see 11 Nov, President Clinton] that the investigation should be taken away from it. The draft is also quoted as concluding from the current scientific evidence that "it is unlikely the health effects reported by Gulf War veterans today are the result of exposure" to CW agents. {*New York Times* and *Los Angeles Times* 8 Nov, *Washington Post* 9 Nov}

The committee has already seen the two large government studies, one by the Defense Department, the other by the Department of Veterans Affairs, published next day in the *New England Journal of Medicine* {vol 335 pp 1498-1513}. These show that, through September 1993, rates of mortality and hospitalization among US Gulf War veterans had not been substantially different from those of US veterans of the same era who did not serve in the Gulf War.

13 November In Washington, a roundtable on *Chemical Weapons Destruction* is organized for Congressional staff by Global Green USA, the non-governmental organization that is the US affiliate of Green Cross International [see 8 Oct]. There are presentations from the teams that have recently published studies of non-incinerative options for destruction of the bulk-stored CW agent at Aberdeen and Newport: the National Research Council committee [see 24 Sep and 25 Oct], the US Army Materiel Systems Analysis Activity [see 17-28 Sep] and the US Army Program Manager for Chemical Demilitarization [see 3 Oct]. There are also presentations on the chemdemil incinerator operations at Tooele [see 22 Aug] and from developers of alternative technologies. A Defense Department decision on the Aberdeen and Newport options is due soon.

15 November In the European Union, extensive amendments come into force concerning the dual-use goods that are subject to export control under the EC regime approved in 1994 [see 19 Dec 94]. On 22 October 1996, the Council of the European Union had taken the decision {96/613/CFSP} to replace the original control lists by a new set that reflected recent agreements under the Wassenaar Arrangement (succeeding CoCom), the Missile Technology Control Regime, the Nuclear

Suppliers Group and the Australia Group. So the changes relax controls on machine tools, computers and telecommunications, but tighten those on chemicals. The lists that are now entering into force occupy more than 200 pages of the *Official Journal of the European Communities* {L 278}. The Australia-Group controls, though not yet the latest to be agreed, are at 1C350, 1C351, 1C352, 1C353, 1C354, 2B350, 2B351, 2B352 and 2E301. They remain the only reflection yet of export controls required under the Chemical Weapons Convention.

17 November In Israel, Defence Minister Yitzhak Mordechai says on the wireless: "We know that chemical products are prepared in Syria for military use. This includes the VX gas mentioned in the report, which is produced with Russian assistance. I hope Syria never uses these materials, especially not against us; we cannot, however, ignore it." The report he is referring to is an account published in today's London *Sunday Times* of an interview he had given to that newspaper in which he had said that Syria could use Scud missiles, of which it had several hundred, "to carry the nerve gas in specially adapted warheads to centres of Israeli population". He says that when his interviewer had asked him how Israel would react if such weapons were used against it, going on "to note the recent threats by the Syrian defence minister", he had replied that "if anyone dares to use such weapons against us, then clearly Israel will use all the means at its disposal to retaliate strongly against Syria, and the regime in Damascus will also be imperilled". {Voice of Israel 17 Nov in BBC-SWB 19 Nov}

The Israeli ambassador to Russia, Aliza Shenhar, subsequently tells reporters in Moscow that what Minister Mordechai had actually said about Russian assistance was: "There are Russian specialists who are helping develop the chemical weapons potential in Syria" {Official Kremlin Int'l News Broadcast transcript 20 Nov}. The Russian Foreign Ministry had just described as "absolutely groundless" the statement that Russian experts were involved in Syrian production of chemical weapons {Interfax 19 Nov in BBC-SWB 21 Nov}

18 November In Tanzania, a three-week training course for personnel of CWC National Authorities begins in Dar es Salaam supported by the government of Ireland {PC-XV/B/4}. The course is organized by the OPCW Provisional Technical Secretariat which, together with Sweden, Switzerland and the Harvard Sussex Program, provides course instructors.

18 November In New York, at the 51st UN General Assembly, the First Committee succeeds (after failing to do so in previous years) in adopting a draft resolution (L.48/Rev.1) on the Chemical Weapons Convention. Iran [see 5 Nov] had agreed to join a compromise in place of its own draft (L.49) after revised language about the OPCW Preparatory Commission — urging it to intensify efforts to complete its remaining work — had been negotiated. The compromise draft is adopted by consensus, but with Egypt indicating that it had not joined the consensus. Egypt reiterates its position that it would not sign the CWC until Israel joins the NPT. {GA/DIS/3075}

18–20 November In Moscow, there is an international workshop on *Destroying Chemical Weapons: Technical Responses to Safety, Health and Environmental Concerns* in which 32 Russian governmental and nongovernmental specialists participate, as well as 26 people from outside Russia, including specialists from Germany, the Netherlands, Sweden, Switzerland and the United States. Among the Russian participants is

Academician Anatoly Kuntsevich [see 12 Nov, President Clinton], the criminal charges against whom [see 16 Jan] had been withdrawn the month previously {Moscow *Nezavisimaya Gazeta* 15 Oct}. The meeting is co-directed by Vladimir Orlov, director of the Moscow-based Centre for Policy Studies in Russia (the PIR Center), and, from the US-based Potomac Foundation, Phil Peterson and Tom Wander. It is organized and funded as a NATO Advanced Research Workshop, and had originally been scheduled for September 1994. {ASA Newsletter 11 Oct}

19 November In Strasbourg, the Committee of Ministers of the Council of Europe adopts a *Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine*, otherwise known as the Convention on Human Rights and Biomedicine {Reuter 19 Nov}. The treaty had been under negotiation for several years, the aim being a framework convention, open to non-member states, setting out common general standards for the protection of the human person in the context of the biomedical sciences. Its scope extends to, for example, organ transplants and the use of substances of human origin, as well as interventions on the human genome and medical research on human beings. States involved in the negotiation, besides member states of the Council of Europe (of which there are currently 40), were Australia, Canada, Japan, the United States and the Vatican. All of them may join the convention once the Committee of Ministers has opened it for signature. {Convention text and explanatory report}

19 November UK Defence Ministry guidelines on the withholding from public inspection of state papers dealing with CBW are described in *The Independent* newspaper. Among the "sensitivities" that would necessitate retention of files beyond the 30-year norm are suggestions that offensive capabilities continued beyond the mid 1950s. On this the guidelines are quoted as follows: "For various reasons, there was no sharp cut-off of offensive-related activity following the mid-1950s Cabinet Defence Committee decision to abandon offensive capabilities in CW/BW. Consequently, occasional papers of the late 1950s and early 1960s may reflect what could be interpreted as a continuing offensive policy by Her Majesty's Government". The guidelines are contained in an appendix to the Ministry of Defence manual *Instructions for Record Reviewers*, which was released, with deletions, into the public domain after an Open Government appeal by the Campaign for Freedom of Information. It is apparent that the guidelines need updating and correcting.

19–22 November At Aberdeen Proving Ground, the US Army Edgewood Research, Development and Engineering Center hosts the annual *Scientific Conference on Chemical and Biological Defense Research* [see 14–17 Nov 95].

20 November In Beijing, there are talks between Chinese Foreign Minister Qian Qichen and US Secretary of State Warren Christopher [see also 5 Nov]. Xinhua subsequently reports that the "two sides ... said they should try to have the Convention on Chemical Weapons ratified before the end of April 1997, to be original signatories of the treaty, and that they should strictly fulfil their obligations as outlined in the convention, sparing no effort to reach the goals of the convention". {Xinhua 20 Nov in BBC-SWB 22 Nov} Secretary Christopher tells reporters: "Our discussion, generally, on nonproliferation has ad-

vanced our cooperation in this area of vital interest. But we agreed we must do more to achieve our goals.” {Federal News Service transcript}

20 November Swaziland deposits with the UN Secretary-General its instrument of ratification of the Chemical Weapons Convention, becoming the 66th signatory state to do so.

21 November The North Atlantic Assembly, which is meeting in Paris for its 42nd session, adopts a resolution on CBW weapons proliferation that had been presented by its Science and Technology Committee on the basis of the report, *Chemical and Biological Weapons: The Poor Man's Bomb*, which UK member Lord Lyell had prepared for the committee. The resolution urges NAA member governments and parliaments, among other things, to ratify the CWC as rapidly as possible.

21 November Iran has recently imported CW-agent precursors from China, according to the *Washington Times* quoting what it says is a “top-secret CIA report” dated 2 October entitled *Arms Transfers to State Sponsors of Terrorism*. The newspaper states that the report records Chinese delivery in the summer to an Iranian chemical centre of “nearly 400 metric tons of chemicals, including carbon sulfide — used in production of nerve agents — and another chemical used in producing riot-control agents and tear gas”. In Beijing, a Chinese Foreign Ministry spokesman says: “This report is purely fictitious and made out of ulterior motives. It is not worth refuting.” {AFP 22 Nov} In Washington, US State Department spokesman Glyn Davies refers, during his regular news briefing, to public remarks made in Beijing the day previously by Secretary of State Warren Christopher [see 20 Nov] on the subject of US “concerns about Iran’s efforts to acquire dangerous weapons of various kinds”. He continues: “We have concerns about the reports of transfers by Chinese entities of dual-use chemicals and equipment that could be used in Iran’s chemical weapons program.” {Federal News Service transcript} Unidentified US officials are later quoted as saying that the CIA had indeed recently uncovered new information about Chinese supplies for Iranian manufacture of chemical weapons, and also that US “intelligence agencies have tracked several large Chinese shipments of chemicals to Iran that are needed in certain types of fertilizers but can also be used to produce weapons”. {UPI from Manila 23 Nov}

22 November In Moscow, *Rossiyskaya Gazeta* reports that the new Defence Council at its latest session had “broached the question of the funding of work in the destruction of chemical weapons in accordance with the commitments undertaken by Russia” {in FBIS-SOV 22 Nov}

22 November The US National Research Council has now published its assessment of the International Science and Technology Center — the institution established in Moscow by Russia, the United States, Japan and two of the European Communities as a means for redirecting weapons scientists and engineers of the former Soviet Union (FSU) into peaceful activities [see 31 Mar 95]. The assessment had been commissioned in May 1995 by the Office of the Secretary of Defense. Included in the assessment is the analogous institution in Kiev, namely the Science and Technology Center in Ukraine [see 4 Jun 92], which as of mid-1996 has Canadian, Swedish and US funding. The NRC report notes that by March 1996 the ISTC had funded 236 projects involving more than 12,000 FSU scien-

tists in 5 countries. The basic recommendation of the NRC report is that the US should continue its core-funding of the ISTC. About a thousand scientists and engineers have STCU grants.

The NRC report also notes that “only 7 percent of the scientists funded by ISTC grants at the end of 1995 had a background in chemical or biological warfare research”. The report identifies potential for increasing this as well as possible international-security and industrial benefits from doing so, describing in particular the biological research institute at Obolensk [see 4 Feb 92, 27 Mar 94 and 19–21 Sep 95] and the Soviet Biopreparat organization [see 19 Sep 92 and 13 May 95]. The report points to the success of the ISTC-sponsored symposium in Pokrov in December 1995 on BW issues, this suggesting the feasibility of such expansion, notwithstanding the secrecies that are still being maintained around FSU BW programmes. The report accordingly recommends that the ISTC “should place more emphasis on involving biological and chemical warfare institutes in its activities”. {Armed Forces Newswire Service 22 Nov, *Chemical & Engineering News* 23 Dec}

22–30 November UNSCOM Executive Chairman Rolf Ekéus visits the capitals of the six Gulf Cooperation Council member states (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE) seeking continued support for UNSCOM, including additional voluntary financial support. Once UN Security Council resolution 986 (1995) is being implemented [see 20 May and 31 Aug], Iraq itself will be funding UNSCOM operations. In Kuwait, Ambassador Ekéus tells reporters that UNSCOM needs some \$30 million if it is to be able continue its work during 1997 {UPI from Riyadh 25 Nov}. In Bahrain at the end of his tour, he tells reporters: “We received, without exception, the political support we are looking for and the necessary assurances on the financial aspects” {Reuter from Manama 30 Nov}.

25 November The Syrian ambassador to Egypt, 'Isa Darwish, delivers a lecture at Alexandria University during which *Al-Ahram* {27 Nov in FBIS-NES 27 Nov} subsequently reports him as saying that “if Israel persists in threatening and hinting of hitting Syria with nuclear weapons [see 17 Nov] then the response would be severe, noting that Damascus will retaliate with chemical weapons and that Syria is preparing to confront any Israeli threat”. The report provokes angry reactions in Israel, further increasing the new tension between Syria and Israel {DPA from Jerusalem 28 Nov, IDF Radio 28 Nov}. An unidentified senior Israeli intelligence official is quoted as saying that “Israel has known for a long time that Syria was making efforts to obtain chemical weapons and we are preparing for such a possibility”, noting that this was “the first time that a Syrian official confirmed that Damascus has a non-conventional option and threatened to use it against Israel” {AFP from Jerusalem 28 Nov}. However, Ambassador Darwish denies that he had made the statement attributed to him, and tells the Syrian news agency SANA that the “Arabs do not possess or threaten anybody with weapons of mass destruction” {SANA 28 Nov in BBC-SWB 30 Nov}.

25 November Iraq communicates to the UN Secretary-General its acceptance of all the conditions set out in the draft memorandum of understanding that will enable the UN to implement Security Council resolution 986 (1995), thereby allowing Iraq to export limited quantities of oil to fund purchases of food [see 22–30 Nov] {London *Independent* 26 Nov} once it and the UN Security Council Sanctions Committee have also accepted the proposed oil-pricing formula. This happens two days later. {Reuter from Manama 30 Nov}

25 November In Brussels, representatives of member-states of NATO and its Partnership for Peace are briefed on the Chemical Weapons Convention by the Chairman and the Executive Secretary of the OPCW Preparatory Commission. Secretary Kenyon, in his presentation, welcomes the recent decision by the authorities of the former Yugoslav Republic of Macedonia to "join our family". FYROM is the only one of the 43 NATO/PfP members that has yet to sign the Convention.

25 November In Geneva, states parties to the Biological Weapons Convention begin their fourth review conference on the operation of the treaty. The conference is to end on 6 December. Ambassador Michael Weston of the UK is appointed president and Dr Sola Ogunbanwo of the UN Centre for Disarmament Affairs is confirmed as Secretary-General. Of the 139 states currently parties to the BWC, 77 participate (12 more than participated in the Preparatory Committee [see 9–12 Apr]), namely: Albania, Argentina, Armenia, Australia, Austria, Bangladesh, Belarus, Belgium, Bosnia & Herzegovina, Brazil, Brunei Darussalam, Bulgaria, Canada, Chile, China, Colombia, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Ecuador, El Salvador, Ethiopia, Finland, France, Germany, Ghana, Greece, Guatemala, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Italy, Japan, Jordan, Kenya, Kuwait, Libya, Liechtenstein, Luxembourg, Malaysia, Malta, Mauritius, Mexico, Mongolia, the Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Romania, Russia, San Marino, Saudi Arabia, Senegal, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Turkey, Turkmenistan, Ukraine, the UK, the USA and Vietnam. Also participating are three states that have signed but not ratified the BWC, namely Burma, Egypt and Morocco. Observer status is granted to four non-signatory states, namely Algeria, Israel, Kazakhstan and the former Yugoslav Republic of Macedonia, and also to the International Committee of the Red Cross. UNIDIR and UNSCOM participate, and 16 non-governmental organizations and research institutes attend.

Among the documents prepared for the conference by its secretariat are a detailed tabulation of data on the participation of states parties in the agreed confidence-building measures since the Third Review Conference {BWC/CONF.IV/2}, a compilation of data provided by states parties about their own compliance with the convention {BWC/CONF.IV/3}, and a compilation of information provided by states parties on new scientific and technological developments relevant to the convention {BWC/CONF.IV/4 plus Add.1}.

25 November Iran proposes that the Biological Weapons Convention be formally amended so that its title and its Article I expressly prohibit use of biological weapons {BWC/CONF.IV/CRP.1}. The proposal is made to the Fourth BWC Review Conference, which, following a South African proposal {BWC/CONF.IV/COW/WP.1}, subsequently decides to include the following in its *Final Declaration*: "The Conference reaffirms that the use by the States Parties, in any way and under any circumstances, of microbial or other biological agents or toxins, that is not consistent with prophylactic, protective or other peaceful purposes, is effectively a violation of Article I of the Convention". The *Final Declaration* also "reaffirms the undertaking in Article I never in any circumstances to develop, produce, stockpile or otherwise acquire or retain weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict, in order to exclude completely and forever the possibility of their use." The

Declaration notes that the Iranian proposal is being formally communicated by the depositaries to all states parties in case a majority of them wish to convene an amendment conference. {BWC/CONF.IV/9}

25 November France, in a plenary statement to the Fourth BWC Review Conference, announces that it is withdrawing both of its reservations to the 1925 Geneva Protocol {DC/2566}. Ireland, in a statement on behalf of the 15 member-states of the EU and its 14 associated states, calls on all other such reserving states that have not already done so to withdraw their reservations [see also 11 Nov, New York]. Later in the conference, two further states announce withdrawal. One is South Africa, which states that it had withdrawn its reservation on 11 July. The other is Belgium.

25 November Libya "will continue trying to achieve self-sufficiency in the production of chemical weapons and will continue building an underground chemical production plant near Tarhunah [see 30 Jul] that could become operational by the year 2000", so says the 1996 edition of the secret NATO paper MC 161, *The General Intelligence Estimate: Strategic Overview*, according to excerpts published in a Madrid newspaper. MC 161/96 is also reported to say that Colonel al-Qadhafi's medium-term objective is to promote Libya as a regional power through possession of nonconventional weapons and ballistic missile systems. Further, the document is said to predict that, by 2006, al-Qadhafi's regime will have medium-range ballistic missiles fitted with nuclear, chemical or bacteriological warheads. {Madrid *El Mundo* 25 Nov in FBIS-WEU 25 Nov}

However, the Washington weekly *Defense News* {16 Dec} later reports that "US officials believe Libya has stopped work on its massive chemical weapon plant at Tarhunah". The officials are not identified; but one of them is quoted as saying that Libya may simply be building a chemical plant elsewhere, in which regard *Defense News* reminds its readers of the theory that the 1990 fire at the Rabta facility [see 26 Feb] was a Libyan deception intended to conceal the withdrawal of plant equipment to a safer location.

26 November Pakistan, in a plenary statement to the Fourth BWC Review Conference, recalls that Islamic laws of war forbid the use of poisonous weapons. Continuing this statement, Ambassador Akram says: "For Pakistan, the 1925 Geneva Protocol and the Biological and Toxin Weapons Convention is a manifestation of a moral and cultural ethos that is over 1400 years old. Violations of the prohibition against the production or use of poisonous weapons should be treated with equal determination in all cases, without selectivity or discrimination."

26 November President Yeltsin signs a decree instituting a reform process in the Russian army. His decree instructs the government to define, before 1 March 1997, a "guaranteed level of appropriations to finance the defence, security and law enforcement activities of the state for the period up to the year 2001"; and it instructs the Defence Council to produce a concept for army reform over the period up to 2005. The decree apparently impacts on the Russian chemdemil programme, for it reportedly requires 15 percent cuts in various paramilitary structures, including people engaged in destroying chemical weapons. {*Kommersant-Daily* in *Russian Press Digest* 27 Nov}

26 November Russia, in a plenary statement to the Fourth BWC Review Conference by delegation-leader Ambassador

Grigori Berdennikov, makes the following declaration: “[T]he Russian Federation complies unswervingly with all provisions of the Biological Weapons Convention. Russia has never developed, produced, stockpiled, or stored biological weapons. States parties should have no doubts concerning the implementation of the Convention by the Russian Federation.”

Earlier, USACDA Director John Holum [see 8 Nov] had spoken as follows in his own plenary statement to the conference: “In 1992 ... President Yeltsin publicly and bravely acknowledged and then renounced the massive offensive biological weapons program Russia had inherited from the Soviet Union. The challenge to demonstrate full eradication of that program still remains.”

Director Holum subsequently tells reporters that his government suspects 12 countries of having biological weapons programmes. He declines to identify them, but names the 7 that were listed in an ACDA report to the US Congress earlier in the year [see 7 Aug], namely China, Egypt, Iran, Iraq, Libya, Russia and Syria. {Reuter from Geneva 26 Nov}

China tells the conference that it “faithfully fulfils its obligations assumed as a state party” to the BWC, continuing: “China does not develop, produce, stockpile or otherwise acquire or retain biological agents, toxins, weapons, equipment or means of delivery prohibited under Article I of the Convention”. Neither Egypt nor Iran [see 25 Nov] make any such statement during their interventions in the general debate. Iraq says it has destroyed all its weapons in the biological field {DC/2569}. Libya does not speak during the general debate. Syria is neither a participant nor an observer.

26 November In the United States, two new government studies [see also 13 Nov] are reported by the *New York Times* to show that Gulf War veterans “are far more likely to suffer from a variety of serious health problems than troops who did not serve in the war”. One is by the Centers for Disease Control and Prevention, begun in November 1994. The other is by the Navy. Neither study has yet been published. The CDC study, of the health of some 4000 military personnel including nearly 1200 Gulf War veterans, is said to display resemblances between some veterans’ health problems and Chronic Fatigue Syndrome. The Navy study, of the health of some 1500 sailors, is still undergoing expert review.

26 November In Utah, state officials release a memorandum detailing safety risks at the Tooele Chemical Demilitarization Facility (TOCDF) and which characterizes the incinerator as an unsafe facility that poses a threat to workers and public. The memorandum had been written by Gary Millar, who had recently been dismissed from his position as general manager of the contractor that is operating the chemdemil facility for the US Army, and was addressed to his former employer. Both the Army and state authorities are now investigating the allegations [see also 27 Mar 95], and the Kentucky-based Chemical Weapons Working Group [see 4 Apr and 13 Aug] is preparing a new attempt to win a stay of the incinerator’s state permit. Meanwhile, the test burns which began three months previously at TOCDF [see 22 Aug], and which have not yet been conducted at full capacity, have by now destroyed some 30 tons of sarin nerve-gas contained in M55 rockets. {*Salt Lake Tribune* 27 Nov and 6 Dec, *Los Angeles Times* 27 Nov}

26 November In New York, Commodore Applied Technologies Inc announces that Major-General (retired) Gerald G Watson, formerly the US Army’s chief chemical officer, is to be

president and chief executive officer of Teledyne-Commodore LLC, the joint venture recently formed [see 9 Aug] to apply the ‘solvent electron technology’ process to the destruction of chemical weapons. The company estimates the global chemdemil market to be on the order of \$60 billion, of which the United States accounts for \$23 billion (this including at least \$10 billion in “non-stockpile opportunities”). The technology uses the powerful reducing agent that is obtained by dissolving metallic sodium in liquid ammonia. {*Industrial Environment* 1 Dec, PR Newswire 6 Feb}

27 November In Egypt, military manoeuvres are under way in an exercise (‘Majd-1’) involving Second Field Army mechanized infantry and artillery units. Describing the manoeuvres, the official news agency reports: “Chemical warfare elements also showed ability to perform their mission of protecting the forces against possible chemical activity by the enemy and concealing the advance of the forces by the production of smokescreens.” {MENA from Ismailia 27 Nov in BBC-SWB 30 Nov}

27 November In Russia, the Deputy Head of the Regional Administration of Bryansk, Lyudmila Komogortseva, criticises the draft law *On the Destruction of Chemical Weapons* that is shortly to receive its second reading in the Duma [see 12 Nov]. She tells a press conference in Bryansk that the latest draft of the law contained none of the amendments which the regional administration had called for in the interests of protecting the local population. {Itar-Tass 27 Nov}

27 November In Geneva, there is an informal session of the Fourth BWC Review Conference [see 25 Nov] during which non-governmental presentations are made. The speakers are: Barbara Rosenberg (Federation of American Scientists), Martin Kaplan (Pugwash), Graham Pearson (University of Bradford), Oliver Thränert (Friedrich-Ebert Stiftung), Kathryn Nixdorff (INES), Erhard Geissler, Jean Pascal Zanders (SIPRI), David Atwood (Friends World Committee for Consultation), W J Appleyard (British Medical Association [see 22-26 Oct]), Gillian Woollett (Pharmaceutical Research & Manufacturers of America) and, again, Graham Pearson (CBACI).

27 November In the UK, 25 of the 43 Home Department police forces have decided to issue their officers with CS-spray weapons {*Hansard (Commons)* written answers 27 Nov} following the 6-month street-trials that had been conducted earlier in the year [see 21 Aug] on which the Home Office Police Research Group has now published its report {*Police Research Series* paper 21}. Meanwhile, Surrey police are working with Pains-Wessex to develop an alternative CS-spray device that uses water as the solvent rather than the methyl isobutyl ketone used in the present, French-made weapon {*London Sunday Telegraph* 1 Dec}.

27 November Allergan Inc, the California-based pharmaceutical company [see 16 Apr], announces that Japanese authorities have arrested three company employees in connection with bribery allegations associated with the company’s efforts to gain Japanese approval for one of its drugs — Botox, a preparation of type A botulinum toxin. The company wishes to market Botox in Japan as a treatment for eye-muscle disorder, for which application the US Food and Drug Administration had approved the drug in 1989. The US Commerce Department investigation of the company’s earlier unlicensed exporting of the toxin is still pending. {*Los Angeles Times* 28 Nov}

28 November The UK Scottish Office releases the final survey report on the Beaufort's Dyke sea-burial site in the Irish Sea where more than a million tons of explosive munitions have been dumped over the years, including chemical weapons [see 8 Jan]. The survey confirms the presence of dumped munitions a considerable distance outside the charted boundary of the site. But no chemical contamination had been found, either of surface seabed sediments, or of the edible flesh of commercially exploited fish and shellfish species. {*Hansard (Commons)* written answers 28 Nov, *Glasgow Herald* 29 Nov}

29 November In the UN General Assembly, the Sixth Committee (on legal matters) recommends that a diplomatic conference be held in 1998 to complete and adopt a convention on the establishment of an International Criminal Court. Italy has offered to host the conference in Rome. {*Reuter* and *AFP* from the UN 29 Nov, *Radio Vaticana* 11 Feb in *FBIS-WEU* 11 Feb}

30 November In Jordan, Prime Minister Abd al-Karim al-Kabari says in interview that Jordan is reconsidering its decision not to sign the Chemical Weapons Convention {*Defense News* 9 Dec}.

30 November In Russia, Yabloko leader Grigoriy Yavlinskiy, during an address warning the fifth congress of his reformist movement that a dangerous clan oligarchy is now pushing the country towards fascism, observes: "We do not have any public control over bacteriological weapons, chemical weapons, and all the huge arsenals which were accumulated in Soviet times, and which remain in our country today, but society has no idea what is happening to them." {*Moscow NTV* 30 Nov in *BBC-SWB* 2 Dec}

December Sweden is allocating SKr 2.6 million (US \$0.35 million) this year to the second phase of its assistance for the Russian chemdemil programme. It had provided SKr 1 million during 1993–94, for risk-assessment work at Kambarka. {*Chemical Engineering* Dec}

2 December A US Defense Department report predicts that, by 2010, Syria, Iran and China will all have cruise missiles possessing some stealth capability and both chemical and biological warheads, according to *Aviation Week & Space Technology*.

2–8 December In Iraq, UNSCOM conducts its 42nd biological-weapons inspection, UNSCOM 160. {*Arms Control Reporter* 701.B.163}

3 December Israeli Defence Minister Yitzhak Mordechai [see 17 Nov], responding in the Knesset to a motion about the threat posed by Iran, says that Iran has been receiving assistance from Syria and North Korea; that Syria can already produce Scud-C missiles having a range of about 1500 km; and that a great advance is also discernible in Syrian ability to produce chemical weapons owing to help from scientists of the former Soviet Union. That help, the minister says, may also reach Iraq and Iran. {*Voice of Israel* 3 Dec in *BBC-SWB* 5 Dec}

3 December Israeli scientists report in *Nature Medicine* {vol 2 pp 1382–5} that extreme stress renders the blood-brain barrier permeable to drugs that normally act only on the peripheral, not the central, nervous system. Their work had been stimulated by the observation that, in 213 Israeli soldiers who had taken

pyridostigmine [see 7 May Texas] during the Persian Gulf War as a prophylactic against nerve-gas poisoning, there had been a threefold increase in the frequency of such central-nervous-system symptoms as headaches and impaired capacity to conduct simple calculations.

3 December In Tuzla during the war in Bosnia-Herzegovina, 120mm mortar projectiles had been filled with chlorine for use by government forces, according to a Bosnian Muslim journalist writing under the pseudonym Enis Dzanic in the forthcoming (January 1997) issue of *Jane's Intelligence Review*. The writer does not say whether the chemical projectiles were actually used, but another British publication, *Defense & Foreign Affairs Strategic Policy*, is reported to say that chlorine-filled 120-mm shells were fired against Bosnian Serbs during August 1993 [see also 6 Aug 93]. {*New York Times* 4 Dec} [Note: At 20 °C, the vapour pressure is seven times greater than atmospheric pressure, which would not make its containment within usable mortar projectiles easy. The report is probably incorrect.]

3 December The US Justice Department announces that it is placing 16 Japanese citizens on a watchlist of people to be denied access to the United States. The watchlist was established in 1979 in order to keep suspected World War II war criminals out of the country and contains some 60,000 names. The 16 people are not publicly identified, but they are said to include persons who had participated in the medical experiments conducted on prisoners of war for biological-weapons purposes by Unit 731 [see 15 Aug 95] of the Japanese Imperial Army. {*Washington Post* 5 Dec, *Newsweek* 16 Dec}

3 December The US Army Corps of Engineers awards a contract to the Ralph M Parsons Corporation of Pasadena, California, for design and construction of the chemdemil facility at Shchuch'ye which the United States is providing to Russia under the Cooperative Threat Reduction (Nunn–Lugar) Program [see 27 Sep]. As much as \$600 million in task-orders may ultimately be issued under the contract. Parsons will begin operating project offices in Moscow and the United States in January 1997. Three bids for the contract had been submitted, the unsuccessful bidders being teams led by Bechtel Group Inc and Walk-Haydel & Associates. Parsons, which has been designing all the US chemdemil incinerators, is to oversee development of a bench-scale demonstration facility to test the Russian chemdemil technology that is to be used. It will work with GosNIIOKhT to refine the technology and with the Volgograd Design Institute to design the facility; most construction will be subcontracted to Russian firms. The Corps of Engineers project manager, Joseph Conn, says that the "whole purpose is to jump start their capability so they can destroy their chemical weapons". Construction of the Shchuch'ye plant is to begin in 2000, with operations scheduled to start in 2004. Parsons subcontractors in the United States include EG&G Inc (which is running the Tooele chemdemil facility [see 26 Nov, Utah]), Morrison Knudsen Corp, Science Applications International Corp, and El Dorado Engineers. {*Washington Post-Soviet Nuclear & Defense Monitor* 9 Dec}

4 December In Beirut, German extradition proceedings against Berge Balanian, wanted by German authorities for smuggling CW-related equipment to Libya [see 14 Oct], fail. He is later released on bail pending trial on a charge of "spoiling Lebanon's relations with a foreign state". {*UPI* from Beirut 4 Dec, *AFP* from Beirut 11 Dec, *Frankfurter Rundschau* 13 Dec}

4 December In Tehran, the acting head of the Mostazafan and Janbazan Foundation, Hoseyn Zarif-Manesh, says that the Iranian Ministry of Justice has established a new branch in order to cope with the complaints which more than a thousand Iranian war veterans wounded by Iraqi chemical weapons have filed against Germany and about 80 German chemical companies [see 12 Nov, Berlin]. He says that thousands more complaints are expected to be filed with the branch in the future. {IRNA from Tehran 4 Dec in FBIS-NES 4 Dec} The Secretary-General of the Association for Helping Victims of Iraq's Chemical Warfare with Iran, Abdollah Mazandarani, had earlier issued a press statement accusing 84 German companies, and also "some 18 American and British firms", of supplying the Iraqi chemical-weapons programme during the 1980–88 war. His statement says that 25,000 Muslim combatants had been killed by Iraqi chemicals during the war and another 65,000 civilians injured by them. {IRNA from Tehran 1 Dec in FBIS-NES 1 Dec}

Attributing "intelligence service reports", the German weekly *Der Spiegel* {16 Dec in FBIS-WEU 16 Dec} soon afterwards describes how some of the same German companies that had supplied Iraq had since been supplying Iran. It quotes a BND paper as saying that, since 1989, Iranian "purchases were lagging only one or two years behind those of Iraq".

4–5 December In Washington, the US–Israeli Joint Political Military Group convenes for one of its twice-yearly sessions. The Israeli side is headed by Defence Ministry Director-General Ilan Biran and ministry adviser David Ivry. The *Jerusalem Post* {2 Dec} quotes unidentified officials as saying that Iran and Syria will continue to be major topics of discussion, including "what Israeli defense officials assert is a newly acquired capability by Syria to produce chemical and biological warheads and place them on Scud surface-to-surface missiles". On this the newspaper goes on to say: "The officials say Syria has received the help of Russian scientists in its chemical and biological weapons program, which is conducted in fortified, underground facilities. The program includes the manufacture of sarin, VX nerve-gas and anthrax, a lethal bacteria." [See also 25 Nov Syria, 2 Dec and 3 Dec Israel]

5 December Turkey is using chemical weapons, most recently in Sason and Sirvan in the Iraq border area, during its operations against the ARGK (Peoples Liberation Army of Kurdistan), according to an ARGK representative interviewed by telephone from northern Iraq for MED Television in London {in FBIS-WEU 5 Dec}. Later, when releasing six Turkish soldiers held captive for the previous 17 months, the ARGK commander again tells MED that Turkey has been using chemical weapons, in the Bitlis and Batman regions, and also napalm bombs {in FBIS-WEU 9 Dec}.

5 December Sixty former generals and admirals from 17 countries, more than half of them from the United States and Russia, issue a call for the nuclear powers to begin moving towards abolition of nuclear weapons and the creation of a nuclear-weapons-free world. Their declaration has been organized by the State of the World Foundation in San Francisco, described as an offshoot of the Gorbachev Foundation. {<http://www.healthnet.org/MGS>}

Speaking to reporters in Washington, a former commander-in-chief of the US Strategic Air Command, General Lee Butler, says he is aware of the claim that nuclear weapons deterred Saddam Hussein from resorting to CBW during the Gulf War, but feels "acute unease over the renewed assertion of the utility

of nuclear weapons, especially as regards response to chemical or biological attack". He says that those who think nuclear weapons are usable do not "fully grasp the monstrous effects of these weapons ... poisoning the earth and deforming its inhabitants". {London *Times* and *Chicago Tribune* 5 Dec}

6 December In Geneva, the Fourth BWC Review Conference [see 25 Nov] closes after six plenary sessions and six meetings of a Committee of the Whole. It adopts by consensus a Final Document {BWC/CONF.IV/9}. This includes a strong *Final Declaration* which, among other things [see also 25 Nov, Iran], reaffirms the general purpose criterion in the following terms: "[T]he Convention unequivocally covers all microbial or other biological agents or toxins, naturally or artificially created or altered, as well as their components, whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes", stating, too, that this also applies to "any applications resulting from genome studies". Later, the *Final Declaration* "reaffirms the commitment of States Parties to take the necessary national measures [of implementation] under this Article [IV] ... in order, *inter alia*, to exclude use of biological and toxin weapons in terrorist or criminal activity". The *Final Declaration* does not, however, prescribe content for the legally binding instrument to strengthen the Convention on which the Ad Hoc Group is working, nor does it set a target-date for completion of that work [see 8 Nov], although it does welcome the Group's decision to intensify its work. The *Final Declaration* "emphasizes the increasing importance of the provisions of Article X [(economic and technological development)]" and, in regard to the relationship of that article to Article III (non-transfer), notes that the "Conference discussed the question of whether multilaterally-agreed guidelines or multilateral guidelines negotiated by all States Parties to the Convention concerning the transfer of biological agents, materials and technology for peaceful purposes to any recipient whatsoever might strengthen the Convention".

8–11 December In Baghdad, UNSCOM Executive Chairman Rolf Ekéus conducts another of the bimonthly rounds of talks with senior Iraqi officials [see 19–21 Oct] that had been agreed during his June visit [see 19–22 June]. On the agenda is a new dispute arising from Iraq's refusal to permit UNSCOM to take missile components out of the country for analysis in the United States. The components, including some 60 rocket-engines for missiles of a range prohibited to Iraq under the Gulf-War ceasefire terms, had been retrieved from burial sites around Baghdad, and are said by Iraq to be remnants of the missiles it had itself destroyed in 1991 and 1992. Ambassador Ekéus says that UNSCOM is still unable to account for a significant number of operational longer-range ballistic missiles, primarily because of its discovery that Iraq had been capable of producing its own missiles. The talks end in agreement to defer the problem until the next round of the political-level talks, in February. Ambassador Ekéus subsequently reports to the UN Security Council on his visit. The Council eventually issues a mildly worded presidential statement deploring Iraq's refusal to allow removal of the missile engines. {Reuter from Baghdad 4 Dec, *Chicago Tribune* 8 Dec, Reuter from Baghdad 11 Dec, *International Herald Tribune* 20 Dec, SC/6308 of 30 Dec}

9 December In Japan, 14 Chinese citizens file suit in Tokyo District Court seeking Yen 200 million (about US \$1.78 million) from the Japanese Government in damages suffered from

chemical weapons abandoned in China by Japanese troops after World War II [see 29 Oct] {Kyodo from Tokyo 9 Dec in FBIS-EAS 9 Dec}. This action follows a petition to the Prime Minister of Japan presented by ten Chinese plaintiffs some four months previously, seeking an apology and Yen 20 million [see 14 Aug]. The Court subsequently decides to accept the case, and sets a hearing date of 30 January. {AFP from Beijing 20 Jan 97}

9–11 December In Washington DC, the Museum of the Holocaust convenes a symposium on aspects of medical ethics and World War II. A contrast is drawn between what happened to German and Japanese medical practitioners who were engaged during the war in experiments on unwilling human subjects [see also 3 Dec, US Justice Department].

10 December In Ahwaz, Iran, ten days of military manoeuvres begin. They are to involve 51 battalions of the Islamic Revolution Guards Corps and focus on defence against chemical and biological warfare. {Xinhua from Tehran 16 and 24 Dec}

10 December In Ukraine, Emergency Situations Minister Valerii Kalchenko warns of problems confronting the country from the need to destroy chemical weapons abandoned by the former Soviet Union. UNIAN reports him as speaking of 4000 wagon-loads of shells near Kerch in Crimea that had exceeded their shelf life. {OMRI Daily Digest 11 Dec}

10 December The UK Ministry of Defence volunteers a statement to Parliament on Gulf War illness. Minister of State for the Armed Forces Nicholas Soames announces the recommendations of the Medical Research Council concerning the “major, independent, peer-reviewed research programme” on Gulf War illness which, almost a year previously, he had said his department would fund [see 30 Jan]: “The MRC has considered in great detail a large number of research proposals. It advises that the only scientifically sound way to proceed is by conducting epidemiological studies to address two specific questions: are British Gulf veterans suffering more ill health than they would have done had they not served in the Gulf, and if so, what is the nature and magnitude of the phenomenon; and are British veterans finding disproportionate difficulties in having children, or are their offspring suffering from an unusual number of birth defects, and if so, what is the nature and magnitude of the risk? The MRC’s recommendation is to proceed with two studies, which I am pleased to be able to announce today. They will be led by Professor Nicola Cherry at Manchester University and by Dr Patricia Doyle of the London School of Hygiene and Tropical Medicine. The costs, which will amount to about £1.3 million, will be met by the Ministry of Defence. ... The projects will be carefully co-ordinated with a major United States funded epidemiological study, which is being conducted in parallel at King’s College, London, by Dr Simon Wessely [see 20 Jun].” Minister Soames goes on to speak of links between the US and the British research efforts. The two UK epidemiological studies will begin in January and are expected to take about three years to complete. Both will, it is later announced, compare 3,000 of the 50,000 UK Gulf-War veterans with 3,000 matched service personnel who did not go to the Gulf {*Nature* 19 Dec, *Times Higher Education Supplement* 20 Dec, *New Scientist* 21 Dec}.

Continuing his statement, Minister Soames repeats his apology to the House of Commons for having misled it about the scale on which organophosphate pesticides had been used within the Gulf War theatre of operations, and announces find-

ings from the inquiry into the matter [see 4 Oct]. The inquiry, conducted by an ‘Organophosphate Pesticide Investigation Team’ comprising four ministry officials, had investigated the circumstances in which OP pesticides had been used during Operation Granby. Minister Soames copies to parliament that part of the *OPPIT Report* which describes these circumstances. OPPIT had also been mandated to investigate the subsequent provision to ministers of advice on the matter. Here Minister Soames states that ministers had been given “flawed advice arising from a failure within one area of the Department; and that the original flawed advice was repeatedly resubmitted in answer to further parliamentary questions”. He announces that a separate departmental investigation into the reasons is being set in hand and that the House of Commons will be informed of its findings at the first opportunity.

A third disclosure made by Minister Soames in his statement is the nature of the vaccination programme used in protecting UK forces against possible Iraqi biological weapons during the Gulf War. Details of the programme are given in a separate written memorandum. Remarkable here is the fact that there had been a difference of assessment between the US and the UK concerning plague: both countries inoculated their troops against anthrax, but, based on UK intelligence assessment, a vaccination programme against plague as well was initiated for British troops [see 2 Feb 91]. Pertussis vaccine, purchased in France, was used as an adjuvant to increase effectiveness of the anthrax vaccine. As for botulinal toxin, which Iraq was assessed to have stockpiled, the available supplies of vaccine had been inadequate, so production of antitoxin serum, for use as a post-attack treatment, had been authorized instead.

Finally, Minister Soames assures the House of Commons that there were no UK units within the “footprint of potential danger” at Al-Khamisiyah at the time of the US demolitions of Iraqi munitions there [see 13 Nov President Clinton]. He also says that his Department has thus far traced around 100 incidents of reported CBW use during the war, and that every one of them has proved unfounded.

During his responses to questions, Minister Soames rejects the suggestion that some interim compensation payment might be made to those Gulf veterans who are suffering from, as he had earlier expressed it, “sickness which medical science has so far found it difficult readily to explain”. {*Hansard (Commons)* 10 Dec} Afflicted veterans would instead have to take the government to court. He phrases this position rather differently writing later in a newspaper: “We will do all in our power to find out the truth. And if we are liable through our own actions for negligently harming our men and women, then of course we must pay compensation. We will not hesitate to do so.” {*News of the World* 14 Dec}

10 December The UN General Assembly at its 51st session adopts resolutions on the report of the First Committee, including resolutions on the 1925 Geneva Protocol [see 11 Nov] {A/RES/51/45P}, on the impending entry into force of the CWC [see 18 Nov] {A/RES/51/45T}, and on the BWC [see 11 Nov] {A/RES/51/54}. The Geneva Protocol resolution is adopted by a vote of 165–0–7, the abstaining states being Belarus, Israel, Kazakhstan, Russia, South Korea, Tajikistan and the USA. The other two resolutions are adopted without vote. {GA/9216}

10 December The UN Office of Disarmament Affairs reports that the number of countries submitting data this year under the BWC confidence-building measures has now reached 52 [see also 26 Aug]. {*Arms Control Reporter* 701.B.162}

10 December The US Army Department solicits proposals, in *Commerce Business Daily*, for research into the possible health impacts of low-level exposure to CW agents such as sarin nerve-gas. Two types of proposal are being sought: one for epidemiological study of people in the vicinity of Khamisiyah at the time of the chemical-weapons demolitions there; and the other for animal studies designed to assess the possible long-term or delayed clinical effects of low-level or subclinical exposures (exposures insufficient to cause acute signs or symptoms). At a Defense Department news-briefing, a spokesman says that these studies are expected to cost about \$2.5 million and that the decision to fund low-level-exposure studies had been taken in September [see 25 Sep], \$5 million being designated in October for the studies. Although the Department's Persian Gulf Illnesses Investigative Team had previously concluded from a literature review that such work would not be worthwhile [see 8 Aug], a contrary opinion had subsequently been received from the Armed Forces Epidemiology Board, and that opinion coincided, moreover, with ones which had been expressed by the National Academy of Sciences and by the US Institute of Medicine. {DefenseLink transcript}

The *Washington Post* {2 Jan} later reports that there are now 104 government-funded studies, planned or underway, that seek to answer questions about the health of Gulf-War veterans. For 1996, the Defense Department had budgetted \$12.6 million, and the Veterans Administration another \$3.6 million {Pittsburgh *Post-Gazette* 19 Jan}.

10 December In Utah, the US Army investigation of recent claims of safety flaws at the Tooele chemdemil incinerator [see 26 Nov] is now finished. Army safety director Brigadier Thomas Konitzer announces that he has found no risk to public safety or to safety of the environment. {*Rocky Mountain News* 28 Dec}

10–11 December In the US House of Representatives, there are new hearings on Gulf War illness before the Subcommittee on Human Resources and Intergovernmental Relations, chaired by Congressman Shays [see 25 Jun], of the Committee on Government Reform and Oversight. The first day's hearing is entitled *Intelligence on Chemical/Biological Exposures*. Testimony is taken from three US servicemen, two of whom had served with Fox NBC reconnaissance vehicles during the Gulf War and who had reported detections of CW agent: Major Michael Johnson, who reported that a storage tank examined in Kuwait in August 1991 during a joint US/UK mission gave positive readings for mustard gas, phosgene and phosgene oxime [see also 7 Oct 94, US Senate, and 24 Jun 95, UK]; and Sergeant George Grass, who had reported a detection of nerve agent while crossing a minefield at the start of the ground war [see also 24 Feb 91] and later several detections of two types of mustard gas and also "benzene bromide". Both witnesses believe that their reports were ignored or dismissed by their superiors. Testimony is also taken from former CIA analyst Patrick Eddington [see 1 Nov], who says in his prepared statement: "I have watched in anger for nearly three years as senior officials of both the Department of Defense and the Central Intelligence Agency have repeatedly misled the American public, the veterans of the Gulf War, and the Congress regarding these facts. To this day, neither the Congress nor Gulf War veterans have all of the information available regarding the known or suspected locations of Iraqi chemical or biological munitions in the Kuwait Theater of Operations. Until the Executive Branch adopts a policy of full disclosure with regards to the operational and intelligence records of the Desert Storm period, neither the

Congress nor Gulf War veterans will be able to know with any certainty the true magnitude of potential chemical or biological agent exposures among American forces during the Gulf War."

The Defense Department subsequently arranges a Fox vehicle demonstration for reporters, explaining the procedures for validating positive chemical detections by the reconnaissance instrumentation. {Federal News Service transcript}

The second day's hearing, entitled *The Impact of Chemical Exposure Disclosures on VA Health Care*, includes testimony from sick Gulf-War veterans, one of whom, Julia Dyckman, a nurse, asks: "Do we all have to die before you believe us that we are suffering? And a lot of Persian Gulf vets are suffering. And what we end up doing is dealing with is a system, both federal and VA, that doesn't believe us." {FDCH hearing transcript} Testimony, mostly oral, is also taken from Veterans Administration officials.

10–12 December In Chicago, there is an Illinois Institute of Technology Research Institute *International Workshop on Chemical and Biological Agents*. Chaired by IIT Professor K S Rajan, the workshop discusses recent developments in CW agent detection, protection and decontamination. A follow-up meeting is planned for July 1997. {*ASA Newsletter* 7 Feb}

11 December The Government of the Philippines deposits with the UN Secretary-General its instrument of ratification of the Chemical Weapons Convention [see 20 Aug], becoming the 67th signatory state to do so.

11 December The Australian Security Intelligence Organization warns in its annual report of a risk that Australian technology is being used covertly by foreign governments to make nuclear or chemical weapons. Of the 16 people who, on ASIO insistence, had been denied entry to the country during the past year, it reports that one had been suspected of trying to obtain technology for weapons of mass destruction. {Radio Australia 11 Dec in FBIS-EAS 11 Dec}

11 December In Russia, the State Duma adopts in the second reading the draft Federal Law of the Russian Federation *On the Destruction of Chemical Weapons* [see 27 Nov] {PC-XV/15}.

11 December In the UK House of Commons, the Defence Committee in public session takes evidence on Gulf War illness. Group Captain Bill Coker, who until last month headed the Defence Ministry's Medical Assessment Programme [see 12 Nov], says that 20 percent of the 921 veterans thus far examined under the programme have symptoms that cannot be explained. He also says that 54 of the veterans are being re-examined either because they are now known to have been exposed to organophosphate pesticides or because they have symptoms suggesting such exposure. {London *Independent* and *Guardian* 12 Dec}

In private session later, the committee is reportedly told by the Surgeon-General, Vice Admiral Tony Revell, that British troops in the Gulf-War theatre had been given five or six vaccinations in addition to the four BW vaccinations already disclosed [see 10 Dec]. {London *Independent* 24 Dec}

11 December In Indianapolis, Global Green USA [see 13 Nov Washington] hosts a forum on chemical weapons destruction in Indiana. About 60 people participate, including state and US Army officials and local citizens. The aim of the forum, like that

of the seven further ones which the ChemTrust project of Global Green USA plans for the other US chemdemil locations, is, in the words of the project, "to create greater understanding and build consensus on the environmentally responsible and cost effective destruction of the chemical weapons stockpile by bringing together the military, state and local government, and citizens". {*Indianapolis Star* 12 Dec}

12–17 December In Iraq, UNSCOM conducts its 44th biological-weapons inspection, UNSCOM 167. {*Arms Control Reporter* 701.B.163}

15 December In Japan, two recently arrested Aum Shinrikyo cultists [see 1 Nov], Yasuo Hayashi and Satoshi Matsushita, have been helping police to recover caches of toxic chemicals, in one case a bottle containing 40 ml of VX, in another 1.5 kg of buried sodium cyanide {*International Herald Tribune* 13 Dec, London *Guardian* 16 Dec}.

15 December The US Army has now reached its decision on which of the alternative chemdemil technologies it will be pursuing further, subject to Defense Department approval, at its two bulk-agent-only chemical-weapons storage sites [see 13 Nov Washington]. For the mustard gas at Aberdeen, it has selected neutralization plus bioremediation; for the VX at Newport, neutralization plus mineralization. {Baltimore *Sun* 10 Dec, *Indianapolis Star* 15 Dec, *Chemical & Engineering News* 23 Dec} The Defense Department later endorses the decision. {Baltimore *Sun* 23 Jan 97}

16 December Libya is continuing its efforts to develop biological weapons [see also 26 Nov Russia], according to the Washington weekly *Defense News*, quoting "several US officials" but identifying none of them. The report continues: "Although work is continuing on biological agents, the program has been of less concern because Libya is not yet able to put the biological agents in weapons, a capability it has with chemicals. Nor is there clear evidence about the locations of facilities that manufacture biological agents."

16 December In Moscow, Russian Prime Minister Viktor Chernomyrdin and Netherlands Prime Minister Wim Kok sign a joint statement of intent concerning Dutch assistance for the destruction of Russian chemical weapons [see 20 May]. In this connection, Prime Minister Kok is subsequently reported to have signed a contract involving a sum of Dfl 25 million over the next 3–5 years. {ITAR-TASS 16 Dec, *Telegraaf* 17 Dec, Rotterdam *Algemeen Dagblad* 17 and 18 Dec}

16–20 December In England, at Wiston House, there is a Wilton Park conference on *Preventing the Proliferation of Weapons of Mass Destruction: Is this an Achievable Goal?* There are 76 participants, from 19 countries (Belgium, Canada, China, Egypt, Finland, France, Germany, Greece, Israel, Japan, the Netherlands, Pakistan, Poland, Russia, South Africa, Sweden, Switzerland, the UK and the USA).

16–21 December In The Hague, the OPCW Preparatory Commission reconvenes [see 22–27 Jul] for its 15th session. Representatives of 90 of the 160 member states participate. [For further details, see *Progress in The Hague* above]

17 December In Beijing there are talks between Chinese and Japanese governmental delegations on the chemical weapons

abandoned by Japan in China [see 29 Oct]. The Chinese delegation is led by the director of the Foreign Ministry Asian Affairs Department, Wang Yi. The Japanese delegation is led by Ryozo Kato, the director-general of the Foreign Ministry Asian Affairs Bureau.

After the talks, Xinhua news agency {18 Dec} reports that both sides have agreed to form a joint working group as soon as possible to discuss specific matters. Ryozo Kato tells reporters that China is no longer insisting that Japan remove the abandoned chemical weapons from Chinese soil. He says that China has instead agreed in principle to allow Japan to neutralize the weapons in China — provided Japan guarantees the safety of Chinese people and their environment during the process, and provided the process complies with the Chemical Weapons Convention. Details of the operation are to be discussed, he says, within the joint committee, which is to be established before the end of March 1997. {Kyodo and Jiji from Beijing 17 Dec}

Before the talks, it had been reported from Tokyo that Japan would be seeking Chinese agreement to build a chemdemil facility at a location some 1000 km north-east of Beijing {UPI from Tokyo 14 Dec}. Also, a government source had speculated that it would be difficult to complete the destruction within 10 years, meaning that Japan would be seeking the five-year extension allowable under the Chemical Weapons Convention {Tokyo *Sankei Shimbun* 10 Dec in FBIS-TEN-97-001}.

17 December The US Government has asked China to broaden the weapons-antiproliferation export controls which it has agreed to apply domestically so that they extend not only to nuclear-related technology, and not only to state-owned companies. An unidentified administration official tells reporters that Washington has proposed a bilateral expert-level meeting on the subject, to be held early in 1997, and that the talks then could resolve the problems that have arisen over exports from China to, for example, Iran [see 21 Nov]. {Kyodo from Washington 18 Dec}

17 December In Brussels, NATO defence ministers meeting as the NATO Defence Planning Committee agree on goals for countermeasures against the "growing potential problem" posed by CBW weapons, so US Under Secretary of Defense Walter Slocombe tells reporters. He says that the agreed goals include improved intelligence capabilities, improved agent detection, access to vaccines, and ballistic missile defences. {AFP from Brussels 17 Dec}

18 December The US Defense Department receives from the Institute for Defense Analyses a progress report on the latter's independent evaluation of the CIA modelling of the Khamisayah CW-agent releases [see 13 Nov]. The CIA has been using *NUSSE 4*, an agent transport and diffusion model developed by the US Army Chemical and Biological Defense Command. Since the model is not valid for downwind distances greater than 25 km, the IDA panel has recommended use of other models as well. It has also commented on the sparseness of the applicable data and recommended a search for additional meteorological data. The final IDA report is not expected for several months. {Defense Department release 20 Dec}

20 December In the United States, the Chemical and Biological Arms Control Institute (CBACI) announces publication of its monograph *Terrorism with Chemical and Biological Weapons: Calibrating Risks and Responses*. The monograph draws from

a CBACI-sponsored conference earlier in the year [see 29 Apr]. Among its chapters is an exceptionally informative analysis of the technical constraints on biological terrorism; its author, Colonel (retired) Karl Lowe, had set out “to inject balance into contemporary thinking about the ability of terrorists to carry out attacks with biological pathogens”.

24 December In Washington, Congressman Christopher Shays, chairman of a House subcommittee that has long been investigating Gulf War illness [see 10–11 Dec] and calling the administration to account for its treatment of sick Gulf War veterans, speaks to reporters of his doubts about the impending final report from the Presidential Advisory Committee on Gulf War Veterans’ Illnesses [see 13 Nov]. He says he fears that the report will be “practically meaningless” because of the committee’s failure to consult widely enough, especially among veterans. He also announces that he will be inviting a former member of the Presidential Advisory Committee, Jonathan Tucker [see 25 Jun] now of the Monterey Institute of International Studies and formerly of the US Arms Control and Disarmament Agency, to testify to his subcommittee during its next hearing. {Reuter from Washington 24 Dec} Dr Tucker had been summarily dismissed by the presidential committee in December 1995, reportedly because he had refused to limit his investigation to evidence gathered only from government agencies {*New York Times* 24 Dec}.

26 December The former Yugoslav Republic of Macedonia accedes to the Biological Weapons Convention, bringing the total number of states parties up to 140.

27 December In Tokyo, unidentified Japanese government sources tell reporters that, at the first meeting of the new joint China–Japan working group on abandoned chemical weapons in China [see 17 Dec, Beijing], Japan will be proposing that it build chemdemil plants in Jilin Province and other places in China. It will cite the experience of chemical weapons disposal in Europe, and it will propose the setting up of two subcommittees, one on possible environmental impacts of disposal operations, the other on technical problems. A Japanese ministry official reportedly expresses doubts about whether the disposal process will go smoothly, observing that the ministry has not yet arrived at a firm figure for the number of abandoned chemical weapons or their whereabouts. Nor have details yet been agreed on how the weapons should be transported to the disposal plants. {Jiji from Tokyo 27 Dec}

27 December In Russia, the Duma meets in extraordinary plenary session and adopts the draft law *On the Destruction of Chemical Weapons* [see 11 Dec] by a vote of 345–0 with one abstention. The legislation now passes to the upper chamber — the Federation Council — of the Russian parliament. It would require that chemical weapons on Russian soil be destroyed, and it would provide the legal framework for the Russian chemdemil programme and for protection of the environment and of public safety during implementation of the programme. Its drafting had involved 16 federal bodies. Some 270 amendments had been considered, most of them being taken into account, during the Duma’s reworking of the draft. The annual costs of the Russian chemdemil programme are estimated at between R 93 billion and R 129 billion, depending on where the facilities are located. {Interfax from Moscow 27 Dec in FBIS-SOV 27 Dec, Itar-Tass from Moscow 27 Dec}

28 December In Russia, Prime Minister Viktor Chernomyrdin signs a government decree approving the Chemical Weapons Convention and its presentation to the President for submission to the State Duma for ratification. {*Rossiyskaya Gazeta* 29 Jan in FBIS-SOV 29 Jan}

30 December In China, the Standing Committee of the National People’s Congress during its 23rd session decides to approve the Chemical Weapons Convention [see also 20 Nov] {Xinhua 30 Dec in FBIS-CHI 30 Dec}. Chinese Vice Foreign Minister Li Zhaoxing had given an account of the treaty to the committee at the opening of the session six days previously {Xinhua 24 Dec in BBC-SWB 31 Dec}.

1 January In the UK, the licensing procedure under the Chemical Weapons Act [see 16 Sep 96] is now in force, as is *The Chemical Weapons (Licence Appeals Provisions) Order 1996* which the government had laid before Parliament on 4 December {SI 1996/3030}. Any one under UK jurisdiction who possesses a CWC Schedule 1 chemical, in no matter how small a quantity, is committing an offence if that has not been authorized by the government. In quantities up to 5 grams, an open general licence procedure operates, requiring notification of possession or use; above 5 grams, individual licences must be obtained. Two such individual licenses are issued over the next fortnight {*Hansard (Commons)* written answers 13 Jan}. Meanwhile the Department of Trade and Industry, which is the UK National Authority under the CWC, has contacted some 7000 companies that may be affected when the CWC enters into force, and the Chemical Industries Association is convening meetings around the country to familiarize companies with their CWC-related obligations {*Chemistry in Britain* Jan}. Explanatory literature about the CWC and its projected implementation in the UK is being disseminated by these bodies.

2 January In Libya, death sentences are executed on six senior military officers and two civilians reported to have been convicted by a military tribunal on charges of spying for the United States. According to a press communiqué, one of them, Colonel Muftah Muhammad Garum, had in March 1994 “admitted to having had contacts during a stay in Switzerland with Libyan residents abroad who in turn had contacts with Americans seeking information on the Rabtah plant and on a Libyan missile development programme”. {AFP from Tripoli 2 Jan in BBC-SWB 4 Jan}

4–5 January In Tunis, there is a meeting of the Arab League Council of Interior Ministers, after which a statement issued on behalf of the 20 assembled ministers announces adoption of a strategy to combat “terrorism”. Council Secretary General Ahmed Assalem tells reporters that the agreement had been under negotiation for more than two years, and that it obligated member states “to take effective and firm measures to ban and fight whatever form of terrorism” might exist in their countries. The full text is not released, but it is described as a “fundamental and solid base for an efficient cooperation”. {Reuter from Tunis 5 Jan}

6 January In the United States, Altus Biologics Inc has been awarded a \$500,000 grant by the Defense Department to develop high-performance catalysts for neutralizing nerve agents using the company’s Cross-Linked Enzyme Crystal technology. Under a previous grant, the company had successfully developed a prototype catalyst by crystallizing and cross-linking the

enzyme organophosphorus hydrolase obtained from the bacterium *Pseudomonas diminata*. The new grant is to support scale-up work for producing OPH CLEC in quantities sufficient for field-testing. {PR Newswire 6 Jan}

7 January President Clinton announces his acceptance of the report of his Advisory Committee on Gulf War Veterans' Illnesses [see 13 Nov 96]. He also announces that he has asked the Secretary of Health and Human Services, of Veterans Affairs and of Defense to report to him within 60 days with "concrete, specific action plans" for implementing the recommendations of the report; that he has asked the Advisory Committee "to stay in business for nine more months to provide independent expert oversight of DOD's efforts to investigate chemical exposure, and also to monitor the government-wide response to the broader recommendations"; and that he has asked Veterans Affairs Secretary Jesse Brown to report on the possibilities for new legislation extending the now-expired two-year period within which veterans returning from the Gulf must file for illness-related disability payments.

President Clinton also says: "As we continue to investigate Gulf War illnesses, let me again take this opportunity to urge the Congress to ratify the [CWC], which would make it harder for rogue states to acquire chemical weapons in the future, and protect the soldiers of the United States and our allies in the future." {Federal News Service transcript}

In its report, the Presidential Advisory Committee offers the following conclusions on the nature and causes of the veterans' illnesses:

— "[A]mong the subset of the Gulf War veteran population examined in the ongoing clinical and research programs, many veterans have illnesses likely to be connected to their service in the Gulf.

— "[C]urrent scientific evidence does not support a causal link between the symptoms and illnesses reported by Gulf War veterans and exposures while in the Gulf region to the following environmental risk factors assessed by the Committee: pesticides, chemical warfare agents, biological warfare agents, vaccines, pyridostigmine bromide, infectious diseases, depleted uranium, oil-well fires and smoke, and petroleum products.

— "[S]tress is known to affect the brain, immune system, cardiovascular system, and various hormonal responses. Stress manifests in diverse ways, and is likely to be an important contributing factor to the broad range of physical and psychological illnesses currently being reported by Gulf War veterans."

The numerous specific recommendations put forward in the report follow from its generally positive assessment of the administration's efforts thus far: "Currently, the extent of service-connected illness among Gulf War veterans is unknown, but the Committee anticipates [that] results from the large, population-based epidemiologic studies now underway will shed light on this issue. ... Although somewhat slow to act at the end of the Gulf War, the government is now providing appropriate medical care to Gulf War veterans and has initiated research in the areas most likely to illuminate the causes of their illnesses. The Committee identified ways to fine-tune those efforts, but found that, for the most part, the government has acted in good faith to address veterans' health concerns." The report is, however, severely critical of the government's performance in investigating the possible exposure of US troops to CBW agents in the Gulf, characterizing it as "superficial and unlikely to provide credible answers to veterans' and the public's questions". On the Defense Department's recent order-of-magnitude increase in its Persian Gulf Illnesses Investigative Team [see 11 Nov 96],

the report says that this could "begin to restore public confidence in the government's investigations", provided these efforts are "combined with independent, high-quality oversight". The Department's previous refusal to finance research into the long-term health effects of low-level exposure to chemical agents [see 10 Dec 96, US Army] the report says "has done veterans and the public a disservice". The Committee has also considered how similar situations might best be avoided in the future. Here, too, its report has specific recommendations. {Final Report}

Committee chair Joyce Lashof tells reporters that although causal links between individual factors and veterans' illnesses had not been established, the possibility of synergistic effects required further research, for example combined effects of pesticides and pyridostigmine. Asked about the alleged CIA cover-up of documents [see 10–11 Dec 96], she says: "We reviewed those documents and do not see that they present any evidence that the Iraqis used [chemical] weapons during the war". {White House release 7 Jan}

The Defense Department tells reporters that, at first glance, it finds nothing significant in the Committee's report that "we either are not doing or do not intend to do".

When asked why veterans object so strongly to being told, as the report does, that their illnesses may be stress-related, the Assistant Defense Secretary for Health Affairs, Dr Stephen Joseph, replies: "I think our veterans are a reflection of our entire society ... [which regards stress-related illness as] somehow less than legitimate, that someone who has physical symptoms on the basis of psychological causation or stress-related physical symptoms, is somehow less ill or less worthy of concern. That's just not true. We are not yet mature enough as a society to really accept that. ... Not real or the doctor told me it was all in my head, or somehow not worthy of support or medical care or compensation or whatever. We've got to get over that. My own view is that this may be the most important thing ... to come out of this whole Gulf War Illness business."

On why the 1991 UNSCOM report on the presence of chemical weapons at Khamisiyah [see 3 Nov 91] did not surface until 1996, the Defense Department Special Assistant for Gulf War Illnesses, Dr Bernard Rostker, tells reporters: "The DIA analyst who saw the original report discounted it. It was not credible in his eyes because the UN was led to the spot by the Iraqis." {DefenseLink transcript}

8 January In Denmark, the army is commissioning an epidemiological study to elucidate the health problems which a preliminary study has found among nearly half of the 840 Danish troops and civilians who served in the Gulf War theatre. A preliminary report is expected by the end of the year. {AFP from Copenhagen 8 Jan}

8 January The European Commission adopts a Communication to the Council of Ministers and to the European Parliament describing the success and value of the International Science and Technology Centre in Moscow [see 22 Nov 96] and recommending its continued funding by the EU under the TACIS Programme. The Commission intends to begin providing financial support for the Science and Technology Centre in Ukraine. {European Commission press release 21 Jan}

8 January From Dallas, a team of medical researchers at University of Texas Southwestern Medical Center led by epidemiologist Robert Haley [see 2 Nov 94] releases the findings of a three-part study of Gulf War illness that is to be published in

next week's issue of the *Journal of the American Medical Association* {vol 277 no 3 pp 215–37}. The study, based on a survey of 249 veterans who had served in a Reserve Naval Mobile Construction Battalion plus neurological examination of subsets of those veterans, suggests that Gulf War illness can be understood as a cluster of different conditions, all of them caused by exposure to particular chemicals or combinations of chemicals during Gulf-War service. The chemicals include nerve gas, the nerve-gas pretreatment drug pyridostigmine bromide, and the insect-repellent DEET [see also 16 Apr 96]. The team writes: "The findings of our study provide, to our knowledge, the first epidemiologic evidence of associations between environmental risk factors and systematically defined syndromes in Gulf War veterans". {*Nature* 16 Jan} Dr Haley says at a news conference in Washington: "Illness from the Gulf War is real. The syndromes are due to subtle brain, spinal cord and nerve damage — but not stress." {*Los Angeles Times* 9 Jan} His papers, however, are more tentative in their conclusions, and their evidence open to differing interpretations.

8 January Before the US Senate Foreign Relations Committee during a hearing on her nomination as Secretary of State, Madeleine Albright speaks of the administration's foreign-policy plans: "Our earliest priority is ratification of the Chemical Weapons Convention before it enters into force in late April. The CWC is no panacea, but it will make it more difficult for rogue states and others hostile to our interests to develop or obtain chemical weapons. We will be having a robust battle plan to work with you and other members of the Senate so that we can, in fact, get this convention ratified." {AFP from Washington 8 Jan, Reuter from Washington 9 Jan} Later, during one of a succession of public statements on this same theme, she says that failure to ratify would put the US "on the side of the thugs". {Reuter from Washington 30 Jan}

9 January In Japan, unidentified government officials have been speculating to reporters about the nature of the payload-carrying balloons that have been arriving in the country from North Korea. According to *Sankei Shimbun* {10 Jan in FBIS-EAS 10 Jan}, the officials say: "There is a high possibility that the DPRK is conducting experiments for launching terrorist attacks using biological and chemical weapons and, at the same time, issuing warnings or threats of a political nature against the Japanese Government".

9 January In the US Senate, the Committee on Veterans Affairs under its new chairman, Senator Arlen Specter, begins a series of hearings on Gulf War Syndrome. Testifying are Veterans Affairs Secretary Jesse Brown, Acting Director of Central Intelligence George Tenet, CIA Executive Director Nora Slatkin, CIA staffer Sylvia Copeland, the chair of the Presidential Advisory Committee on Gulf War Veterans' Illnesses, Joyce Lashof, and Advisory Committee member Philip Landrigan. {*Los Angeles Times*, *Newsday* and *New York Times* 10 Jan, *Nature* 16 Jan}

9 January US Arms Control and Disarmament Agency Director John Holm, speaking at a Congressional Research Service seminar on arms control, says: "Some 20 countries — many hostile to us — have chemical weapons programs; another 15 have the capability and motivation". {London US Embassy *Official Text* 28 Jan}

9–20 January In Iraq, UNSCOM conducts its 45th biological-weapons inspection, UNSCOM 169.

11 January A Moscow weekly publishes an interview with Lt-Gen (retired) Anatoliy Kuntsevich [see 18–20 Nov 96], the former chairman of the Presidential Committee on CBW Convention Problems, in which he speaks of the future of the Chemical Weapons Convention. On the possibility of the United States not joining, he asks: "What is the matter? Does this mean there are some kind of new aspects of chemical weapons unknown to all other states and this forced the United States to keep chemical weapons in the arsenal of means of warfare? An exceptionally complicated situation will arise..." The Russian delay he attributes solely to the financial and economic burden of the requisite chemdemil programme. He then urges the United States to assume the obligation of building two turnkey chemdemil facilities in Russia, saying that just such a commitment would have been announced in the joint statement from the January 1994 Clinton–Yeltsin summit but for the opposition of "our domestic 'patriots'". He deplores the fading influence of the Presidential Committee, observing that the military "cannot accomplish the exclusively industrial tasks of destroying obsolete kinds of chemical weapons". Here he continues: "But the fact is that under the concept now accepted in Russia, the Ministry of Defense exercises the functions of state client, executor and inspector for the development and implementation of the federal program for destroying chemical weapon stockpiles". If international assistance for the programme is not forthcoming, Russia will have to "declare a 10–20 year moratorium on its participation" in the CWC. {*Nezavisimoye Voyennoye Obozreniye* 11 Jan in FBIS-UMA 18 Jan}

11 January French troops serving in the Gulf War were not vaccinated against anthrax, nor were they required to take pyridostigmine pills as a precaution against nerve-gas poisoning, nor were their encampments sprayed with organophosphate pesticides, according to a London weekly, *The Economist*, quoting French army doctor and Gulf War veteran Colonel Françoise Rota. France sent 13,500 troops to the Gulf War, and not one of them has complained of Gulf War Syndrome, despite, as the *Economist* puts it, "apparent efforts by the French armed forces to conduct random studies and health tests of their troops".

13 January Iraq may have developed plague as a biological weapon, according to a UK intelligence assessment which, so the UK Defence Ministry tells Parliament, is still current [see also 10 Dec 96] {*Hansard (Commons)* written answers 13 Jan}. [Note: There is no mention of plague by UNSCOM in its published reports thus far on Iraqi biological weapons, the most recent of which has been the memorandum made available in November 1996 to participants in the Fourth BWC Review Conference by the Executive Chairman of UNSCOM.]

13 January In Mali, where the National Assembly debated and approved ratification of the Chemical Weapons Convention on 16 December, President Komare duly signs the law authorizing ratification.

13 January President Clinton, on the fourth anniversary of the signing of the Chemical Weapons Convention by Secretary of State Eagleburger on behalf of President Bush, issues a statement on the importance of the US joining the treaty before the end of April. His statement ends: "I urge the Senate to act

promptly to ensure that the United States remains at the forefront of international efforts to combat the spread of weapons of mass destruction and the US chemical industry maintains its international competitiveness. I look forward to working with the Senate leadership to get the job done.” {White House release 13 Jan}

The president has already broached the issue with the Senate Majority Leader, Senator Trent Lott, who had afterwards written to him, in a letter dated 8 January, to say that the bipartisanship advocated by the president had to be “a two-way street”. The letter continued: “Your Administration has now restarted a public campaign to gain Senate advice and consent for the Chemical Weapons Convention [see 7 Jan and 8 Jan]. As you seek bipartisan cooperation, you must understand our expectation for such cooperation on ABM multilateralization, ABM demarcation, and CFE flank limits. ... I am sure you understand that it will be very difficult to explore the possibility of Senate action on the Chemical Weapons Convention without first addressing legitimate security and Constitutional concerns on other important arms control issues.” {Reuter from Washington 18 Jan} Senator Lott has subsequently met with the president’s Acting National Security Adviser, Sandy Berger, and later establishes a task force of nine Republican senators to pursue matters further with the administration and within the Senate.

14 January The United States has just recently decided that it will not, after all, be providing Module 1 training for future OPCW inspectors. Trainees accepted for the US course are being reassigned to Module 1 courses elsewhere. *ASA Newsletter* {7 Feb} attributes this last-minute decision to discovery by the State Department that the training content necessitated by the course outline approved by the OPCW Preparatory Commission would conflict with US public law on the transfer of militarily sensitive technology. A compromise acceptable to the OPCW Provisional Technical Secretariat, to the United States and to other CWC signatory states has not been found. Decisions remain to be taken on Module 2 and 3 training, also included in the US training offer accepted by the Commission.

15 January In Moscow, Russian Foreign Ministry spokesman Gennadiy Tarasov speaks of the Chemical Weapons Convention at a news briefing and says that Russia continues “to adhere to its aims and tasks and ... [intends] to be among the initial participants”. He expresses the hope that the treaty will soon be submitted for discussion in the Russian parliament [see 28 Dec 96] and ratified in the light of the recently adopted Duma law on the destruction of chemical weapons [see 27 Dec 96]. The likelihood of early ratification is, however, discounted by the Deputy Chairman of the Duma Committee for International Affairs, Nikolay Stolyarov, in a press interview. He says: “Prospects for the Russian parliament’s ratification of START-2 and other disarmament treaties will remain questionable until a reasonable compromise is found with respect to NATO eastward expansion”. {Interfax from Moscow 16 Jan in FBIS-SOV 16 Jan}

15 January From Iowa City, a team of medical researchers affiliated with the University of Iowa College of Medicine led by Dr David Schwartz publishes a population-based study of Gulf War illness in *Journal of the American Medical Association* {vol 277 no 3 pp 238–45} alongside the Dallas study [see 8 Jan]. From a sample of 4886 military-personnel study subjects from Iowa, half of them Gulf War veterans, the study concludes that military personnel who participated in the Gulf War have a higher self-reported prevalence of medical and psychiatric conditions than

contemporary military personnel who were not deployed to the Persian Gulf. The study had been made public in Washington a week previously. {*National Journal’s* Congress Daily 8 Jan}

16 January Bosnia & Herzegovina signs the Chemical Weapons Convention, becoming the 161st state to do so.

17 January In the Netherlands, at the Royal Military School of the Air Force at Woensdrecht Air Base, the training course for the first group of future OPCW inspectors [see 6 Nov 96] is formally opened. The course will run until 30 May. Module-1 training courses are also being taught in France and India [see also 14 Jan]. A total of 150 candidate trainees from 56 states have accepted offers to join the first group, the nationality breakdown being as follows: Algeria (1), Argentina (2), Australia (2), Austria (2), Bangladesh (2), Belarus (2), Belgium (1), Brazil (6), Bulgaria (1), Canada (4), Chile (2), China (7), Côte d’Ivoire (2), Croatia (2), Cuba (1), Czech Republic (4), Ecuador (3), Finland (3), France (3), Germany (4), Hungary (1), India (16), Indonesia (1), Iran (6), Italy (2), Japan (2), Kenya (1), Mexico (2), Mongolia (1), Morocco (1), Nepal (1), Netherlands (7), New Zealand (3), Nigeria (4), Norway (1), Pakistan (2), Panama (1), Peru (1), Philippines (1), Poland (6), Romania (3), Russia (7), Slovak Republic (1), South Africa (3), South Korea (1), Spain (1), Sri Lanka (1), Sweden (1), Switzerland (2), Turkey (1), Uganda (1), Ukraine (2), UK (4), USA (6), Vietnam (1) and Zimbabwe (1). Module-2 training is set to begin on 3 March. If trainees successfully complete the training course, they may be offered fixed-term contracts with the OPCW when the CWC enters into force on 29 April, provided their countries have ratified the treaty by then. The second group of trainees, 80 of them, will begin their training after entry into force. {OPCW/PTS release 17 Jan}

20 January China may unwittingly be aiding biological-weapons abroad, according to information received by the US Senate Foreign Relations Committee from the US State Department. A written question to Secretary of State Madeleine Albright during her recent confirmation hearing had asked whether there was “any indication, no matter how slight, that Chinese companies are assisting biological warfare programs in Iran, Syria or Libya”. The State Department now replies that it is “not aware of any credible evidence” to that effect, but continues: “We have received reporting regarding transfers of dual-use items from Chinese entities to Iranian government entities which raise concern. ... We have encouraged China to adopt comprehensive and rigorous national export controls to help assure that no such cooperation will occur.” {Reuter from Washington, 20 Jan} [See also 17 Dec 96]

20 January Iraq has hidden weapons containing aflatoxin in underground depots in the desert, according to unidentified intelligence sources quoted in *Frankfurter Allgemeine Zeitung*, which says that Iraqi production of aflatoxin had been substantially higher than the 2200 litres mentioned in UNSCOM documents. The newspaper also says that President Saddam Hussein had ordered trials of the toxin to be conducted on donkeys, monkeys, sheep and some 20 opponents of his regime. {AFP from Frankfurt 19 Jan}

21 January In the US Senate, Senator Lugar submits a Sense of the Senate resolution reproducing the draft resolution of ratification of the Chemical Weapons Convention which had been adopted and reported out by the Foreign Relations Committee during the previous Congress [see 25 Apr 96] {SR 17}.

21 January In the US House of Representatives, there are more hearings on Gulf War illness before the Government Reform and Oversight Subcommittee on Human Resources and Intergovernmental Relations [see 10–11 Dec 96], chaired by Congressman Shays [see 24 Dec 96]. Particular attention is paid to the studies recently published by Dr Robert Haley in Texas [see 8 Jan] and Dr David Schwartz in Iowa [see 15 Jan], both of whom are among those testifying. Also testifying is Dr Frank Duffy of the Harvard Medical School who, on the question of effects of low-level exposure to nerve gas, describes the studies he had conducted for the Army during 1976-79 regarding factory workers at Rocky Mountain Arsenal, where sarin had been manufactured. {Gannett from Washington 21 Jan} And the Defense Department Special Assistant for Gulf War Illnesses, Dr Bernard Rostker, refers in his testimony to the Czechoslovak detections of CW agents during the Gulf War. He says: "Czech detectors were more sensitive than US equipment, which may help explain why we could not confirm their reports". {FDCH transcript}

22 January The French and Iraqi governments have been working to formulate a proposal for the lifting of sanctions which Iraq would present at the United Nations with full French backing and expectation of Russian and Chinese support, so the Jordanian weekly *Al-Bilad* reports [in BBC-SWB 23 Jan]. The provisions contained in a draft of the proposal which relate to activities with which UNSCOM is tasked are, according to *Al-Bilad*: "1. Iraq would hand over to an international committee, which will comprise the UN Security Council's permanent member states and an Arab League representative, all the documents and information pertaining to the Iraqi weapons dossier, including the nuclear, chemical and biological weapons and long-range ballistic missiles. Iraq would allow that committee to visit all the Iraqi sites it wishes to inspect them within a specified timetable. ... 7. All forms of foreign presence on the Iraqi territory will be removed."

23 January In Russia, the Federation Council rejects the draft federal law *On the Destruction of Chemical Weapons* which the Duma had approved a month previously [see 27 Dec 96]. The prevailing view in the Council is reported to be that the proposed legislation "does not provide sufficient guarantees for ecological safety". {Moscow NTV 23 Jan in FBIS-SOV 23 Jan} The legislation now passes to a joint Duma-Council committee. [Note: The option remains open under the Constitution of the Russian Federation for the bill to be brought back to the Duma for another vote, when it would pass if there were at least a two-thirds majority in favour.]

24 January In the United States, a federal grand jury in Portland, Oregon, charges a Las Vegas businessman and a former business partner with conspiracy to violate the US trade embargo on Iran by seeking to sell to an Iranian company, for \$288,000, 18 tonnes of "impregnated alumina". This chemical, the indictment says, is primarily used as a catalyst in the plastics and rubber industry but can also be used to make phosphorus oxychloride, from which nerve agents can be made. The two are subsequently released on bail. Their trial is set for 1 April. {Las Vegas *Review-Journal* 30 Jan, *ASA Newsletter* 7 Feb}

24 January In the US Defense Department, Ann Davis from the Office of the Air Force General Counsel takes over from Colonel Edward Koenigsberg as head of the Persian Gulf

Illnesses Investigative Team [see 9 Jul 96 and 11 Nov 96]. {Hartford *Courant* 25 Jan, *Los Angeles Times* 31 Jan}

26 January In Sudan, where internal fighting has recently intensified, the Secretary-General of the opposition National Democratic Alliance, Mubarak al-Mahdi, issues a statement which includes the following: "In the past few days, Iran has supplied Sudan with large amounts of heavy and light weapons, goods and chemical weapons to use against the rebels" [see also 18 Oct]. The weapons are reportedly being flown in to Khartoum from Iran. {Reuter from Cairo 26 Jan} The leader of the Sudan People's Liberation Army, John Garang, says to the Egyptian newspaper *Al-Ahram*: "we have information that the Iranian regime has supplied the regime of the Islamic Front with weapons including chemical ones" {MENA from Cairo 2 Feb in BBC-SWB 4 Feb}. The report is denied by Sudanese Vice President al-Zubair and by Iranian President Rafsanjani during the former's visit to Tehran, though the latter later states that Iran is reviewing a request from Sudan for military equipment in order to fight a newly launched opposition offensive {AFP from Tehran 12 Feb}.

26 January In Utah, the Tooele chemdemil incinerator [see 10 Dec 96] is shut down following detection of low levels of nerve gas in observation corridors. After remedial action the plant is restarted. It has now destroyed 11,000 rockets containing nearly 81 tonnes of sarin nerve gas as well as 39 1-ton containers of the agent. {*Salt Lake Tribune* 3 Feb}

27 January Belgium deposits with the UN Secretary-General its instrument of ratification of the Chemical Weapons Convention [see 20 Aug], becoming the 68th signatory state to do so.

27 January Australian Foreign Minister Alexander Downer meets in The Hague with OPCW Preparatory Commission Executive Secretary Ian Kenyon. According to the subsequent news release, he reaffirms the determination of his government to contribute to the "full and effective implementation" of the provisions of the CWC. {OPCW/PTS release 28 Jan} [Note: Because of the growing possibility of the CWC entering into force without Russia or the United States having completed their ratification processes, some delegations to the Commission have been voicing suggestions that, to begin with, the Conference of the States Parties should agree to suspend or attenuate certain provisions of the treaty. Opposition to such ideas is also finding expression.]

28 January In Sofia, President Stoyanov is urged by visiting UK Foreign Secretary Malcolm Rifkind to provide clarification of Bulgarian involvement in the assassination of Georgi Markov in London in September 1978 [see 30 Mar 94]. The murder weapon had been a pellet containing ricin fired from a device mounted in the tip of an umbrella. In London, the Metropolitan police force says that it continues to work with Bulgarian authorities on the case, which is still open, and that "we are also liaising with the relevant authorities in other countries". {London *Guardian* 27 Jan}

29 January In Korea, an unseasonal malaria-mosquito infestation of the demilitarized zone separating North from South is being investigated by a medical unit of US Forces Korea as possibly being associated with North Korean testing of biological weapons [see also 9 Jan]. An alternative explanation is that flooding in North Korea has caused a spread of the mosquitoes.

{Seoul KBS-1 Television 29 Jan in FBIS-EAS 29 Jan} North Korean radio subsequently says that the suggestion of biological-weapons testing is groundless: "We have no biological weapons, nor do we produce them. Accordingly, we have never tested them." {KCNA from Pyongyang 4 Feb in FBIS-EAS 4 Feb}

29 January In South Africa, Brigadier (retired) Wouter Basson [see 10 Jun 96], formerly head of the South African Defence Force 7th Medical Battalion, is arrested while allegedly selling a thousand Ecstasy tablets to undercover police. Dr Basson is reported to have been the manager of the now defunct but still largely secret clandestine CBW activity known variously as Project B and Project Coast [see 21 Aug 96]. Aspects of Project Coast have been under investigation since 1993 by the Office for Serious Economic Offences. The chief investigator for the Truth and Reconciliation Commission, Dumisa Ntsebeza, is quoted as saying that Dr Basson is on the verge of being subpoenaed to testify on the CBW programme. The Commission had recently received from the government a report, written by Lt-Gen Pierre Steyn at the end of 1992, which includes, according to a leaked summary of its contents, lurid particulars of apartheid-era CBW operations by South African clandestine units. {*Washington Post* 1 Feb, *London Observer* 2 Feb} Such operations are said to have included the poisoning of Rev Frank Chikane {*Johannesburg City Press* 16 Feb in FBIS-AFR 16 Feb.} Dr Basson is later reported to have been dismissed during a purge of the military in the aftermath of the Steyn Report, but re-hired in October 1995 {*Johannesburg Sunday Times* 23 Feb.}

29 January In the US Senate, the Committee on Veterans Affairs continues its new series of hearings on Gulf War Syndrome [see 9 Jan], today taking evidence from retired General Norman Schwarzkopf [see 20 Jan 91] and from Assistant Navy Secretary Bernard Rostker, who is the Defense Department Special Assistant for Gulf War Illnesses [see 11 Nov 96].

Asked about the Chemical Weapons Convention, General Schwarzkopf says: "We don't need chemical weapons to fight our future wars, and frankly, by not ratifying that treaty, we align ourselves with nations like Libya and North Korea, and I'd just as soon not be associated with those thugs on this particular issue. So I'm very, very much in favor of ratification of that particular treaty." {*Voice of America* 4 Feb}

31 January In Japan, the Public Security Commission rules unanimously against a government proposal that Aum Shinrikyo [see 15 Dec 96] should be outlawed under the 1952 Subversive Activities Prevention Law. The Commission finds that, although the cult had indeed been a most serious menace, and although it still embraced dangerous doctrines, it no longer posed sufficient threat. Its legal status as a religious entity has been lost; it has been declared bankrupt; its overseas branches are gone; and its leaders are either facing multiple murder charges or have fled and are being hunted down. {*International Herald Tribune* 1 Feb}

2 February In Germany, the president of the Federal Intelligence Service, Hans Jörg Geiger, is interviewed live on television about the future role of the BND. On the subject of Middle East rearmament he says: "It is remarkable that countries which at the time of the Cold War would never have thought — or, at least, the respective superpower would have prevented them from developing their own missiles or building their own bacte-

riological weapons — that these countries are now trying to develop missiles and to build up their own production capacities. If we are realistic, we must assume that some countries will have missiles that will be able to reach Central Europe at the end of the next decade at the latest, that is, by 2008 or 2010, and that some of these countries want to develop nuclear, biological and chemical weapons." {*Mainz ZDF Television* 2 Feb in FBIS-WEU 2 Feb}

3 February In the UK, Foreign and Commonwealth Office Minister of State Jeremy Hanley writes as follows in the *Independent* newspaper: "Before the Gulf war Iraq possessed enough chemical and biological weapons to destroy the world's population several times over. Saddam's plans to procure and produce such lethal weapons pose a severe risk to the security of the region. They must be foiled for good. Until they are, sanctions must stay. The UN Security Council is unanimous on this." [See also 22 Jan]

3 February US Senate Foreign Relations Committee Chairman Jesse Helms, who once again [see 7 Dec 95] has partial control of when the Senate can consider the Chemical Weapons Convention, has written to Senate Majority Leader Trent Lott [see 13 Jan] with his recommendations for the "top Republican priorities" that the Senate should address ahead of the CWC. His letter, which is dated 29 January and which he now releases, identifies his preferences as: (1) "enactment of legislation fundamentally restructuring the antiquated foreign policy agencies of the US"; (2) "enactment of legislation that ensures comprehensive reform of the United Nations"; (3) "submission of ABM and CFE Treaty modifications to the Senate for advice and consent"; and (4) "enactment of legislation to deploy a national missile defense". He states, further, that he expects the resolution of ratification which his committee eventually approves for the CWC to provide certain "key protections" in regard to "pariah nations", verifiability, riot control agents, "international bureaucracy", and "liberalization of chemical trade restrictions on Cuba, China and Iran". He writes: "I believe that the starting point for any further discussions on the CWC must be the resolution of ratification which I presented to the Foreign Relations Committee on April 25, 1996 [q.v.]. That resolution contained many conditions essential to ensuring that the Chemical Weapons Convention enhances, rather than reduces, our national security."

The *Washington Post* typifies much of subsequent commentary on this letter when it describes Senator Helms as holding an international treaty "hostage to his own foreign policy agenda".

Senator Lott is said by his staff to have declined a request from the White House next day to intervene with Senator Helms {*Washington Times* 6 Feb}. His task force of nine Republican senators [see 13 Jan] including Senator Helms had, however, met with National Security Council director Sandy Berger on 29 January for a meeting subsequently described as "constructive", and with another such meeting expected {*Chemical & Engineering News* 10 Feb}.

4 February UNSCOM Deputy Chairman Charles Duelfer says in interview: "we've drawn the conclusion that Iraq is retaining a coherent weapons program, not just bits and pieces that they failed to inform us about. ... We remain concerned that the Iraqis have an operational missile force. If they have, then it's likely they have warheads — both chemical and/or biological — to put on them." {*Los Angeles Times* 5 Feb}

4 February In Washington, an article about Russian chemical weapons in the classified US Defense Department publication *Military Intelligence Digest* is quoted in the *Washington Times*. The article, said to be from the 24 January issue of MID, is reportedly by James W Poarch of the National Ground Intelligence Center. It relates information first publicized in 1992 by Russian whistleblower Vil Mirzayanov [see 31 Oct–1 Nov 95] concerning a purported Soviet/Russian programme, codenamed Foliant [see 8 Dec 93], for development of novel CW agents, such as ones as yet publicly identified only as 'A-232' [see 25 May 94] and 'A-234'. The *Washington Times* states that the leaked article indicates that Russia is producing a new generation of deadly chemical weapons, suggesting that, in doing so, Russia is somehow "using materials, methods and technology that circumvent" the terms of the Chemical Weapons Convention. The newspaper does not explain this last claim, but, citing the leaked article, it says: "Under a program code-named Foliant, a Russian scientific research organization has created a highly lethal nerve agent called A-232, large quantities of which could be made "within weeks" through covert production facilities". The newspaper provides the following verbatim quotations from the leaked article:

— "These new agents are as toxic as VX, as resistant to treatment as soman, and more difficult to detect and easier to manufacture than VX".

— A-232 and its delivery means have "passed Moscow's rigorous military acceptance testing and can be quickly fielded in unitary or binary form".

— A-232's "key components are not covered by the Chemical Weapons Convention".

— "By using chemicals not specified in the CWC schedules, the Russians can produce A-232 and its ethyl analog A-234 in unitary and binary forms within several chemical complexes".

— The binary version of the new agent is made from acetonitrile and an organic phosphate "that can be disguised as a pesticide precursor"; in another version, alcohol is added to form the agent.

— Russia can produce the new agent in "pilot plant" quantities of 55–110 tons per year.

— A factory in Novocheboksarsk "is capable of manufacturing 2,000 to 2,500 metric tons of A-232 yearly".

— Several pesticide plants "offer easy potential for covert production... For example, substituting amines for ammonia and making other slight modifications in the process would result in new agents instead of pesticide."

A spokesman for Senator Helms [see 3 Feb], Marc Thiesen, soon tells reporters that the existence of A-232 "shows the Russian military is completely opposed to ending its chemical weapons program and is aggressively working to circumvent the Chemical Weapons Convention". {*New York Times* 5 Feb}

4 February In the United States, the Institute for National Strategic Studies of the National Defense University publishes its *Strategic Assessment 1997: Flashpoints and Force Structure*. Its main conclusions include the following: "The U.S. must be prepared to defeat a rogue regime in a major regional conflict while successfully deterring and preparing to defeat a second such regime. The United States must be prepared to defend and liberate territory by using heavy ground-maneuver units under risk of nuclear, biological, and chemical weapons attack. It must also be prepared to operate in concert with ad hoc coalitions, in which some participants contribute substantial military assets while others are represented more for their political effect." {DefenseLink release 4 Feb}

4 February Japanese use in China of an air-delivered plague weapon in August 1942 near Congshan village [see 1 Jul 96] in Zhejiang Province is described by the *New York Times* from interviews in Congshan. The BW operation, apparently an experimental one, had initiated an epidemic of plague which reportedly killed 392 of the 1200 Congshan residents over a two month period [see also 30 Dec 93 and 2 Aug 95].

4 February President Clinton, in his State of the Union address, says: "Now, we must rise to a new test of leadership: ratifying the Chemical Weapons Convention. Make no mistake about it, it will make our troops safer from chemical attack; it will help us to fight terrorism. We have no more important obligations — especially in the wake of what we now know about the Gulf War. This treaty has been bipartisan from the beginning — supported by Republican and Democratic administrations and Republican and Democratic members of Congress — and already approved by 68 nations. But if we do not act by April the 29th — when this Convention goes into force, with or without us — we will lose the chance to have Americans leading and enforcing this effort. Together we must make the Chemical Weapons Convention law, so that at last we can begin to outlaw poison gas from the Earth."

5 February In the US Senate, Acting Director of Central Intelligence George Tenet testifies on threats to US national security, during which he addresses the proliferation of weapons of mass destruction. In his prepared statement he has written: "About 20 countries, among them Iran, Libya, and Syria, have or are actively developing chemical and biological weapons" [see also 9 Jan USACDA]. He has also written: "Iran has an increasingly active chemical weapons program. Over the last year, it has sought the capability to produce not only the chemical agents themselves, but also the precursor chemicals, making it less vulnerable to export controls of its foreign suppliers." He also testifies on terrorist interest in weapons of mass destruction, stating: "We are increasingly seeing terrorist groups looking into the feasibility and effectiveness of chemical, biological, and radiological weapons". In his oral testimony, he says the following about the Chemical Weapons Convention: "This is not a treaty that will be perfectly verifiable. But there are tools in this treaty such as data exchanges and on-site inspections which will help us verify." {*Washington Times* 6 Feb}

5 February The US Senate Committee on Veterans Affairs appoints special counsel for its investigation of issues surrounding Gulf War Syndrome [see 29 Jan]. The appointee is Michael J Rotko, a partner in the Philadelphia law firm Drinker, Biddle & Reath and previously a US Attorney. The committee is also seeking to establish a Gulf War Syndrome Investigative Unit which Special Counsel Rotko would direct. {States News Service from Washington 5 Feb}

5 February Former US Army Chief Chemical Officer Gerald Watson [see 26 Nov 96, New York] characterizes Solvated Electron Technology to the *New York Times* {7 Feb} as "a really good alternative to incineration" for the destruction of chemical weapons. The joint venture — of which he is now president — that is seeking to exploit the technology for the worldwide chemdemil market, Teledyne Commodore LLC, is about to dispatch sales teams to Moscow and Tokyo. A board member of parent company Commodore Applied Technologies Inc, Kenneth Adelman, who was director of the US Arms Control and Disarmament Agency under President Reagan, tells the *Times*:

"It has no chimney stacks. ... It works, it's relatively cheap and it's portable, so you don't have to ship the bad stuff around the country. ... Without chimney stacks, Russian consumers and residents don't get excited about the bad stuff in the air."

5-7 February In Washington, the Intergovernmental Russian-US Commission for Economic and Technological Cooperation co-chaired by Russian Prime Minister Viktor Chernomyrdin and US Vice-President Albert Gore reconvenes [see 15-16 Jul 96] for another of its twice-yearly sessions. The Commission now has eight working-groups each led by a minister on the respective sides. {State Department daily briefing 4 Feb} It is later reported from Moscow that the Commission reaches an agreement whereby the United States would allocate funds for Russia to build a chemdemil facility at Shchuch'ye [see 3 Dec 96]. The source of this information is Col Gen Stanislav Petrov, commander of the Russian RKhB Troops. {Itar-Tass 17 Feb in FBIS-SOV 17 Feb}

6 February The US Deputy Assistant to the Secretary of Defense for Cooperative Threat Reduction, Maj-Gen (ret) Roland Lajoie, briefs a committee of the US National Academy of Sciences on the government's approach to demilitarization of the BioMedPreparat facility of the former Soviet Union at Stepnogorsk [see 22 Mar 96] in Kazakstan. The facility had been visited by a US interagency team in July 1996. He identifies with numerous photographs what he calls the "buildings of concern" at the facility, by which he means buildings — long since inactive — specifically designed and built to produce, process, handle and store offensive BW agents. He speaks of the biological-weapons-specific structural features and items of equipment observable in these buildings, including buildings where bomblets could be charged with BW-agent payload. He says that the facility had been built in the early 1980s to a dual-purpose specification requiring that production of biological weapons could be brought on-stream at six months notice. He outlines the US Defense Department plans for the future of the "BW dismantlement" project at Stepnogorsk, saying that they "will serve as a template for similar CTR activities in Russia".

7 February Czechoslovak detection of CW agents in the Gulf War theatre during January 1991 [see 22 Oct 96] is described in detail by one of the officers who served with the Czechoslovak special battalion during the war, Jiri Aberle, writing in *ASA Newsletter*.

7 February In Oregon, the building of a chemdemil incinerator at Umatilla Chemical Depot, near Hermiston, receives formal approval from the state Environmental Quality Commission {Greenwire 11 Feb}. The Army thereupon awards a \$567 million contract to Raytheon to construct, operate and ultimately close down the facility over a 9-year period. In terms of total agent tonnage, Umatilla is said to contain 11.6 percent of the US inventory of chemical weapons. Raytheon, which was competing for the contract with Westinghouse and EG&G, currently operate the JACADS chemdemil incinerator in the Pacific, where some 1100 tonnes of CW agents have been destroyed over the past six years [see 15 Oct 96]. {Business Wire 12 Feb, *Boston Globe* 13 Feb}

8 February In Texas, US Secretary of State Madeleine Albright visits former US President George Bush at his residence in Houston, and both of them later speak to reporters. President Bush says: "I told Secretary Albright that she would have

my enthusiastic support in her quest for bipartisanship in foreign policy. I think Jim Baker, my esteemed friend and former colleague, told her the same thing, so it's real from us and I know she feels strongly about that. I told her I would strongly support her efforts to get this chemical weapons treaty approved. This should be beyond partisanship. I have a certain fatherhood feeling about that. But leaving that out, I think it is vitally important for the United States to be out front, not to be dragged kicking and screaming to the finish line on that question. We don't need chemical weapons, and we ought to get out front and make clear that we are opposed to others having them. So that's important." Secretary Albright says: "The Chemical Weapons Convention is not either a Republican or a Democratic convention. It's an American interest." {UPI from Houston 8 Feb} Both she and former Secretary of State James Baker had the day previously been speaking at Rice University, and both had included strong advocacy of the CWC in their speeches {Reuter from Houston 7 Feb}.

10 February The US chemdemil programme is unlikely to be finished by the end of 2004, as currently required by US law, and is likely to cost more than the \$12.4 billion currently estimated (or \$27.6 billion if the 40-year disposal programme for nonstockpile CW materiel is added in), so says the General Accounting Office in a detailed report {GAO/NSIAD-97-18} to Congressional committees. The reasons include "public concerns over the safety of incineration, compliance with environmental laws and regulations, legislative requirements, and the introduction of alternative disposal technologies".

11 February In the US House of Representatives, two hearings on Gulf War illness take place, one before the Military Personnel Subcommittee of the National Security Committee, the other before the Veterans' Affairs Committee.

12-19 February In Iraq, UNSCOM conducts its 46th biological-weapons inspection, UNSCOM 173.

13 February In the US Senate, Senator John Kerry [see 7 Dec 95] speaks at length on the Chemical Weapons Convention and on the principal arguments thus far presented on why the United States should not ratify the treaty. On costs he says: "The opponents claim that the Chemical Weapons Convention will create a massive new United Nations type international inspection bureaucracy, which will result in costs to our taxpayers of as much as \$200 million per year. The reality is that the non-partisan Congressional Budget Office has estimated the US costs to comply with declaration, inspection, and verification procedures of the CWC will average \$33 million per year, an amount which includes our annual assessment to the OPCW of \$25 million." On the claim that as many as 8,000 US companies will incur heavy uncompensated annual costs from complying with the treaty, he says: "The reality is that it will not affect 8,000, it will affect only about 2,000 companies. Approximately 1,800 of those 2,000 companies will not have to do anything more onerous than check a box on a form regarding production range. They will not even be required to specify which chemicals they produce. Most of the firms for which compliance activities will be more extensive are supporters of the treaty, and directly, or through their industry association, were consulted as the CWC provisions affecting commercial facilities were negotiated." {*Congressional Record* 13 Feb}

13 February The US Defense Department, with the concurrence of the CIA, makes public two hitherto unreleased internal documents which indicate that the Army had been warned by the CIA in November 1991 that US troops who had been in the vicinity of Khamisiyah in March 1991 could have been at "risk of chemical contamination" from the demolitions of Iraqi weapon-dumps conducted then. Redacted copies of the documents are posted on the internet, at the GulfLink website. They show the CIA informing US Army Central Command that, when UNSCOM 20 [see 3 Nov 91 and 7 Jan] had visited Tall al Lahm (otherwise known as Khamisiyah) ammunition storage depot on 26–27 October 1991, it had found the place littered with damaged and destroyed sarin-filled 122-mm rockets; and the UN inspectors had also found that the buildings there had been destroyed, not by aerial bombardment, but by demolition, and that there were signs that the demolition had been conducted by US ground troops. {*Newsday* 14 Feb, *New York Times* 25 Feb}

The Department's Special Assistant on Gulf War Illness, Bernard Rostker, later suggests to reporters that the reason why the Army had not at the time responded more inquiringly to the CIA information was because of "the very strong suspicion that the whole story was made up by the Iraqis" [see also 7 Jan]. He refers, nevertheless, to the existence of still-classified intelligence information which, in February 1991, had given reason to believe there were chemicals at Khamisiyah then. All of which prompts a reporter to ask: "Doesn't this show that the Pentagon was in a sort of state of denial? That they had just convinced themselves there were no chemical weapons, and no amount of intelligence and anecdotal reporting was going to change anybody's mind?" Dr Rostker replies: "Certainly the intelligence community up through [19]94 had the strong belief that chemical weapons were not at Khamisiyah and were brought there afterwards". He cites the 1994 Defense Science Board study [see 23 Jun 94] as evidence: the study says [on p 31] that "the site visited by the UNSCOM team ... may have been specially constructed for the UN inspectors". {DefenseLink transcript}

13–14 February In Singapore, the 12th ASEAN–EU Ministerial Meeting takes place. It is co-chaired by the Netherlands and Singapore. Viet Nam is participating for the first time; so are Austria, Finland and Sweden. The ministers subsequently issue a lengthy joint declaration. This welcomes "the conclusion of the Fourth Review Conference of the Biological and Toxin Weapons Convention that the Ad Hoc Group, which is considering a legally binding instrument to strengthen the convention, should intensify its work and conclude negotiations as soon as possible". The 16-page joint declaration also refers to various other arms-control and security matters, but makes no reference to the Chemical Weapons Convention. {Kyodo from Singapore 13 Feb}

14 February In Taiwan, the Ministry of Economic Affairs has established a working panel to prepare for entry into force of the Chemical Weapons Convention. The ministry states that, although Taiwan, which is no longer a member of the United Nations, is effectively precluded from joining the treaty, it nevertheless intends to abide by its international rules. To this end, domestic regulations are being prepared in order to implement the Convention in Taiwan. The Ministry announces that the working panel is tasked to make Taiwan's efforts known to other countries and to negotiate with them for exemption from the trade restrictions which the Convention requires its members to direct against non-members. The Ministry statement

notes that Taiwan is the 11th largest chemical trader in the world, and estimates that some NT\$50 billion (US\$1.85 billion) of product will be directly affected by the CWC, with three times that quantity indirectly affected. {Taiwan Central News Agency 14 Feb in FBIS-CHI 14 Feb}

17 February In Qatar, the GCC–EU Joint Council meets for its 7th ministerial session and issues a lengthy Joint Communiqué. In it, the ministers "welcomed the imminent entry into force of the Chemical Weapons Convention which they considered a major landmark in the process of disarmament and non-proliferation. They urged all States signatories to the Convention to complete their ratification procedures as soon as possible. They called on States which had not yet signed the Convention to do so." The Joint Communiqué also addresses the BWC, saying that the ministers attached particular importance to its effective implementation and that they "looked forward to achieving early conclusion of the work on verification, bearing in mind the commencement of the fifth Review Conference". {CE-GOLFE 3502/97 17 Feb}

17–18 February In Switzerland, an international seminar on *The Chemical Weapons Convention as a Key Part of Global Security Policy* is convened in Bern by the Forum Ost-West. Its goals include increasing the public visibility of the CWC, especially through media contacts, and building an international network of CWC-supportive nongovernmental organizations. The participants and speakers are from Italy, the Netherlands, Russia, Switzerland and the USA, as well as from the UN Secretariat and the OPCW Provisional Technical Secretariat. The focus is primarily upon the disarmament aspects of the CWC insofar as they concern Russia and the United States. There is particular attention to the Russian chemdemil programme, one of the speakers being the mayor of Kizner [see 11 Nov 96]. {Forum Ost-West seminar executive summary}

18 February In the Israeli Knesset, the newly formed Committee on Scientific Research takes evidence on the Israel Institute for Biological Research at Ness Ziona. This is a facility which Israel Radio has described as "a mysterious complex surrounded by high walls with watchdogs and armed guards to keep out inquisitive snoopers", and of which a former deputy director, Dr Marcus Klingberg [see 28 Jan 96] is serving a 20-year jail sentence for passing top-secret information to the former Soviet Union. Committee Vice Chairman Rafi Elul has instigated the hearing because of the fears for their safety that have been expressed by people living in the residential neighbourhood that has grown up around the institute since its founding 40 years ago. He tells the committee that there have been four accidents in the institute over the past 15 years, and that 3 people died and 22 were injured as a result. Institute Director Avigdor Shefer (Avigdor Shefferman, according to another report) gives an account of institute work in the fields of biology, medicinal chemistry and environmental studies; he says it conforms to international standards and is perfectly safe. Science Ministry Deputy Director-General Shmuel Brener says he is "calm" about the institute's location, but would support the idea of relocating it to a non-residential area. The Committee decides to establish a special subcommittee that would act in cooperation with the Knesset Foreign Affairs and Defence Committee, the Science Ministry and the management of the institute. Its first task would be to prepare an environmental assessment of the institute. After the hearing, a spokesman for Prime Minister Netanyahu, Shai Bazak, says there have been

"no severe work accidents" and no one killed at the institute since its inception in 1953. {Reuter from Jerusalem 17 Feb, *Jerusalem Post* 18 Feb, Tel Aviv *Yedi'ot Aharanot* 19 Feb in FBIS-NES, UPI from Jerusalem 19 Feb}

20 February In New York, where the Preparatory Committee on the Establishment of an International Criminal Court [see 29 Nov 96] has been meeting since 11 February, a draft consolidated text for a definition of 'war crimes' is produced by a working group of the committee. Through extensive use of variant language, footnotes and square brackets, the draft consolidates proposals submitted by New Zealand, Switzerland and the United States while also reflecting consultations and working-group discussions. The draft includes language which would make resort to CBW weapons a war crime. The formulation used to do so is unbracketed, but it extends not only to "using asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices" but also to "using chemical weapons [in the sense of the CWC]" as well as to "using bacteriological (biological) agents or toxins for hostile purposes or in armed conflict". {A/AC.249/1997/WG.1/CRP.2}

20–23 February In Baghdad, UNSCOM Executive Chairman Rolf Ekéus conducts another of his bimonthly rounds of talks with senior Iraqi officials [see 8–11 Dec 96]. He is accompanied by a team of ten ballistic-missile and chemical-weapons experts, including Nikita Smidovich of Russia. Agreement is reached whereby Iraq will allow export of the disputed missile remains for examination in the United States, France and a third country. The joint Iraq/UNSCOM statement recording this agreement also says: "By using the methodology of the December 1996 talks on missiles, the government of Iraq and the Special Commission began detailed revision of the chemical weapons issue on a high political level and the Commission presented its concerns regarding outstanding issues in this issue. Detailed technical discussions were held between experts from both sides, and the government of Iraq pledged to continue to take note of the concerns of the Commission. As a result, it was agreed to carry out joint and intensive efforts. A follow-up meeting will be held in this regard on the technical level in mid-March." Ambassador Ekéus tells reporters at the close of the talks that UNSCOM's "substantial and serious" concerns about chemical weapons had to do with "the counting of the warheads for chemical warfare", particularly the possibility of VX-filled warheads. {Reuter from Baghdad 20 Feb, INA from Baghdad 23 Feb in BBC-SWB 25 Feb, AFP from Baghdad 23 Feb, UPI from Ankara 26 Feb}

23 February In Iraq, UNSCOM begins its 47th biological-weapons inspection, UNSCOM 174. It is due to end on 2 March.

24 February In Beijing, where, on the eve of the memorial service for Deng Xiaoping, US Secretary of State Madeleine Albright has been holding talks with the Chinese leadership, she tells reporters that there will be US–China talks in March on the control of international transfers of CW precursor chemicals and missile technology [see also 20 Jan] {AFP and AP from Beijing 24 Feb}.

24 February In the United States, 148 members of the US National Academy of Sciences, all of them chemists or biochemists, address a letter to Senate Majority Leader Trent Lott [see 3 Feb] urging him "to work as a matter of national urgency to bring

the Chemical Weapons Convention to a vote in the Senate before April 29" {US Newswire 24 Feb, *Nature* 20 Feb}. A wide variety of other US organizations potentially affected by the treaty but previously silent on whether it should or should not be ratified have also declared their support for it. They include the Reserve Officers Association, the American Jewish Committee, the US Catholic Conference, the National Council of Churches, the Jewish War Veterans of the USA, the Veterans of Foreign Wars, B'nai B'rith and, subsequently, the Chemical Weapons Working Group (the national coalition of citizens groups from states where there are, or are to be, chemdemil facilities [see 26 Nov 96]). A week previously the vote-count in the Senate had been reckoned by one commentator to be 51 in favour of ratification, 10 against, with the remainder undecided or unknown {Forum Ost-West seminar 17–18 Feb executive summary}. Meanwhile, in the negotiations between the administration and Senate Republicans, Senator Lott's task force is now reported to have met three times with National Security Adviser Sandy Berger [see 3 Feb], who, in addressing the concerns expressed by Senator Helms, is said to have outlined 12 ways to strengthen the treaty, among them enhancing US chemical-detection capability {*US News & World Report* 24 Feb}. Another such proposed measure is said to be a public pledge by the administration to bring "overwhelming and devastating" retaliation against any enemy using chemical weapons against US troops {*Washington Post* and *New York Times* 15 Feb}. These and other such "additional actions" had been advocated earlier in the month by former National Security Adviser Brent Scowcroft and former Director of Central Intelligence John Deutch in a co-authored article in the *Washington Post* {*International Herald Tribune* 12 Feb}

25 February In Moscow, the Chernomyrdin-Gore Commission [see 5–7 Feb] working group on chemical weapons [see 9 Aug 96] reconvenes. As before, the Russian team is led by Russian Defence Council Secretary Yuriy Baturin, who chairs the Interdepartmental Commission for Chemical Disarmament, with USACDA Director John Holum leading the US team. Interfax, which has interviewed Secretary Baturin, reports that the working group is focussing on the establishment of joint Russia-US enterprises on the sites of former chemical-weapons production facilities in Volgograd. Interfax also reports that, in September, the Russian side had put forward proposals on the types of chemical product that might be manufactured by such joint enterprises, proposals which the US side had since been considering.

Another item on the Baturin–Holum working-group agenda is the financing of the Russian chemdemil programme. Interfax reports that the two sides have reached an understanding that US financial aid will be spent on the construction of a chemdemil facility at Shchuch'ye in the Kurgan region [see also 5–7 Feb] for which it says that the United States is planning to allocate \$76.3 million during 1997. Secretary Baturin has told Interfax: "It's important that this aid be of a long-term nature, and that the money granted be invested directly in the construction of facilities for eliminating chemical weapons". {Interfax from Moscow 25 Feb in FBIS-SOV 25 Feb}

Itar-Tass {27 Feb} is later told by the deputy commander of Russian RKhB Troops, Maj-Gen Viktor Kholstov, that, in addition to the \$76.3 million for Kurgan facility, the US administration is also allocating \$2.2 million "for the remodeling of a former producer of chemical weapons in Volgograd". General Kholstov also says that the federal chemdemil programme is expected to be completed by 2009.

26 February In Iran, the Cabinet approves a bill that would allow the government to ratify the Chemical Weapons Convention. {Tehran IRIB Television 26 Feb in FBIS-NES 26 Feb}

26 February In the UK House of Commons, the Defense Committee continues its investigation of Gulf War illness and takes evidence from Armed Forces Minister Nicholas Soames and Defence Ministry Permanent Under-Secretary Richard Mottram. The ministry has just submitted to the committee a memorandum on its investigation into how Parliament came to be misled for so long about the scale on which UK forces in the Gulf-War theatre had been exposed to organophosphate pesticides [see 12 Dec 96]. The memorandum acknowledges that, prior to September 1996 [see 4 Oct 96], ministers had been given flawed advice about the pesticide use, and states that this “constituted a fundamental failure of the working practices adopted by Service and Civil Service staff within the area of MoD concerned”. {*Hansard (Commons)* written answers 26 Feb} The minister tells the committee that the advice he had received had been “absolutely emphatic that no organophosphates had been used. It did not occur to me to question that.” [Note: Prior to September 1996, several newspapers had carried reports on the scale of OP pesticide use [see 27 Jun 94 and 29 Oct 94], as the Defence Ministry memorandum now notes, but these appear to have been disregarded.] Minister Soames blames, not himself, but “one particular division in the MoD”. This is reported to be the Finance and Secretariat Division of Defence Medical Services {London *Independent* 27 Feb}.

Meanwhile, sick Gulf-War veterans continue to come forward. Sergeant Angus Parker of the Royal Army Medical Corps, diagnosed as now suffering from Chronic Fatigue Syndrome, Post Traumatic Stress Disorder and renal impairment, believes that his condition originates in his service with the 1st Field Laboratory Unit, which he describes as operating vehicle-mounted laboratories that analysed airborne particles, reporting to scientists at Porton Down. He has written to the Defence Committee to suggest that Porton Down may be concealing evidence. {London *Independent* 27 Feb}

26 February In the United States, the Presidential Advisory Committee on Gulf War Veterans' Illnesses is instructed to include in its oversight efforts an assessment of the adequacy of the investigations relating to Khamisiyah now being conducted by the Inspectors General of the US Army and the CIA. President Clinton, in a memorandum to the chair of the committee, refers to the latest declassified documents [see 13 Feb] and says that they raise “two important questions ... that must be resolved by these investigations: (1) When did we have sufficient evidence to conclude that chemical munitions were present at Khamisiyah and that US forces conducting demolition activities may have been exposed to chemical warfare agents; and (2) Once we had that information, what actions were taken by whom to investigate this alarming possibility and were those actions sufficient.” The president asks for a preliminary assessment within 60 days, no later than the date he had earlier specified for an interim status report, namely 30 April. {US Newswire 26 Feb, *New York Times* 27 Feb}

26 February President Clinton transmits to the Congress a report, *Response to Threats of Terrorist Use of Weapons of Mass Destruction*, required under the FY 1997 Defense Authorization Act. The report describes in some detail the structures that have been created or expanded within and between different federal government departments, and for liaison with state au-

thorities, in order to counteract the potential of WMD terrorism within the United States.

Among the measures needed to achieve improvements, the report notes that the “first priority for additional legislation remains Senate ratification of the Chemical Weapons Convention”. The report continues: “Implementing legislation required by the CWC will strengthen legal authority to investigate and prosecute violations of the treaty and raise the level of public alertness to the threat and illegality of chemical weapons. For example, the proposed US implementing legislation [see 8 May 96] contains the clearest, most comprehensive, and internationally recognized definition of a chemical weapon available, far more precise than the term ‘poison gas’ contained in Title 18 of the Criminal Code. The definition contained in the implementing legislation will enable an investigator to request a search warrant on the basis of suspicion of illegal chemical weapons activity (such as production of a chemical weapon agent), rather than suspicion of conspiracy to commit terrorism, as exists under current US law. By providing investigators and prosecutors a more precise legal basis for pursuing the development, production, transfer, or acquisition of chemical weapons, CWC implementing legislation improves prospects for detection, early intervention, and possibly even prevention of chemical terrorism in the United States.” {*Congressional Record* 26 Feb H651-60}

Further anti-terrorism assets of the Chemical Weapons Convention are noted by US Attorney-General Janet Reno in a statement issued next day. She observes, for example, that the CWC “will improve the sharing of information among law enforcement agencies worldwide, giving American law enforcement more early warnings that can help prevent an attack and save lives”.

26 February Saudi Arabian Defense Minister Prince Sultan tells the US Gulf War commander General Norman Schwarzkopf that there have been no reports during or since the war of Saudi, Iraqi or Kuwaiti civilians suffering symptoms of exposure to war gas, so General Schwarzkopf informs the US Senate Armed Services Committee next day [see also 29 Jan]. For his part, the general testifies: “We never ever ever had a single report of any symptoms at all on the part of 541,000 Americans over there and 800,000 allies”. He continues: “So my sense of logic just says, look if we’re talking about something where one milligram can cause a fatality then certainly somewhere along the way if this stuff had affected our troops somebody would have come up with these symptoms, and they didn’t.” {Reuter from Washington 27 Feb}

27 February In South Africa, the situation of Dr Wouter Basson [see 29 Jan], who is now on bail pending a court hearing on 4 April, is the subject of a press conference in Cape Town called by the Office of the President. Deputy Defence Minister Ronnie Kasrils says that, short of keeping Dr Basson under lock and key, there could be no assurances on how he would use the knowledge he had acquired during the time he had led the project to develop chemical and biological capabilities for the former government. The Deputy Defence Minister also says that the 1992 Steyn Report had linked Dr Basson to clandestine military activities, but, having read the report, the Attorney-General had nevertheless found that no case could be made against him. According to a statement read by Cabinet Secretary Jekes Gerwel, the re-hiring of Dr Basson, as a specialist medical consultant, by the Defence Force had been in order to maintain control over his activities and movements, and to retain his spe-

cialist knowledge. Dr Basson had, during the period April 1993 to October 1995 when he was not employed by the Defence Force, travelled to countries that included Libya, according to a statement read by SANDF Surgeon-General Pierre Knobel, who also says that Dr Basson was the only person "that had full insight" into Project Coast. Dr Basson is currently in the protective custody of the intelligence services, but is reported to be free to leave if he wishes to do so. {SAPA from Cape Town 27 Feb in FBIS-AFR 27 Feb} Earlier in the month, an officer of the National Intelligence Agency had described Dr Basson as living in fear of his life, and also as having allegedly misused information he had obtained while involved in the former CBW programme {SAPA from Pretoria 5 Feb in FBIS-AFR 6 Feb, Johannesburg *Star* 6 Feb in FBIS-AFR 6 Feb}. Scientists who had worked in the programme are reported to have made substantial use of the forensic laboratories of the then South African Police {Johannesburg *Mail & Guardian* 7 Feb in FBIS-AFR 7 Feb}

27 February The Scottish software company Memex Ltd, which has been seeking to expand its business internationally, is reported as follows by *Intelligence Newsletter*: "One of its star packages, Pathfinder, is built around Memex's Information Engine and can sift large textual databases, analyzing the findings for statistical and logical probabilities. This proved to be crucial in Bosnia. When the US was on the verge of sending troops into Sarajevo in 1993 it asked a team using Pathfinder at the US National Ground Intelligence Center to make a last minute assessment of the chemical weapons threat because normal intelligence on the question was very thin. Only 24 hours before mobilization, the team began searching through patents and

published chemical research papers for documents, discovering a number that had originated from Yugoslavian sources. The team then tracked people, organizations and companies across a multitude of databases before collating intelligence that showed that chemical weapons production facilities had indeed been built and that an extensive weapons stock probably existed around Sarajevo itself. Memex says that after only 18 hours the Pathfinder team was able to report there was a high probability that warring factions could use chemical weapons against ground forces. 'The evidence was so compelling that US troops were not sent into Bosnia,' Memex maintains."

28 February In the United States, a new poll of public opinion shows overwhelming support for the Chemical Weapons Convention. When asked if the Senate should ratify a treaty which would ban the production, possession, transfer and use of poison gas worldwide, 84 percent of respondents said it should. When asked whether they would vote for a Senate candidate who felt that the United States should ratify such a treaty, 75 percent of respondents said they would. And 63 percent considered they would be better protected from the threat of chemical attack by the treaty plus military superiority, with only 13 percent preferring US possession of chemical weapons. The poll was conducted during 20-22 February on a sample of 1002 randomly selected Americans nationwide. It was commissioned by The Henry L Stimson Center. {FDCH transcripts 28 Feb, AP from Washington 28 Feb} The poll is announced by Senator Richard Lugar, who, after Senator Helms, is the senior Republican member of the Senate Foreign Relations Committee and who is working with the committee's ranking Democrat, Senator Joseph Biden, to secure ratification.

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Recently Deposited CWC Ratifications

since 31 October 1996

Swaziland — 20 November

Philippines — 11 December 1996

Belgium — 27 January 1997

Bosnia and Herzegovina — 25 February 1997

Laos — 25 February 1997

As of 1 March 1997, 70 of the 161 signatory states had deposited instruments of ratification.

The first 65 deposited ratifications were those of (in date order):

Fiji, Mauritius, Seychelles, Sweden, Norway, Australia, Albania, Maldives, Cook Islands, Spain, Bulgaria, Germany, Sri Lanka, Mexico, Turkmenistan, Uruguay, Paraguay, Lesotho, Greece, Tajikistan, Mongolia, Armenia, Finland, Oman, Romania, France, Switzerland, Croatia, Monaco, Netherlands, Denmark, Peru, Algeria, Austria, Poland, Ecuador, South Africa, Japan, Canada, Argentina, Slovak Republic, El Salvador, Georgia, Namibia, Italy, Côte d'Ivoire, Morocco, Czech Republic, Brazil, Papua New Guinea, United Kingdom, Ethiopia, Costa Rica, Ireland, Republic of Moldova, Belarus, Chile, New Zealand, Latvia, Uzbekistan, Saudi Arabia, India, Portugal, Cameroon and Hungary

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