THE NECESSITY FOR NON-CHALLENGE VISITS

by Graham S. Pearson

Introduction

1. In the discussions that have taken place over the past six years since the establishment by the Third Review Conference[1] in 1991 of the Ad Hoc Group of Governmental Experts, known as VEREX, to identify and examine potential verification measures from a scientific and technical viewpoint, there has been an increasing debate about the role of non-challenge visits in a regime for a strengthened Biological and Toxin Weapons Convention (BTWC). The arguments as to why on-site investigations are an essential and central element to such a strengthened regime were addressed in the Briefing Paper issued[2] in July 1997. In this Briefing Paper, the necessity for non-challenge visits is addressed drawing upon the previous VEREX, Ad Hoc Group (AHG), Chemical Weapons Convention (CWC) and United Nations Special Commission (UNSCOM) experience. The advantages and disadvantages of a regime containing non-challenge visits are considered and the conclusion is reached that the advantages far outweigh the disadvantages and that non-challenge visits are an important element which could contribute significantly to the effectiveness of a future legally binding instrument to strengthen the BTWC.

VEREX Considerations

2. The VEREX considerations took place during the period immediately after the Conference on Disarmament had completed the negotiation of the Chemical Weapons Convention (CWC) with its verification regime comprising both routine and challenge inspections and whilst the United Nations Special Commission (UNSCOM) on Iraq was carrying out on-site inspections of both chemical and biological facilities in Iraq using experts from many of the States Parties to the BTWC to carry out these inspections and when UNSCOM was developing and implementing its ongoing monitoring and verification (OMV) plan[3].

3. VEREX in its identification and examination of potential verification measures from a scientific and technical standpoint met twice in 1992 and twice in 1993 before producing its final report in September 1993[4]. Some 21 measures, both off-site and on-site were examined:

Off-site Measures

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[1] United Nations, *The Third Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Geneva, 9–27 September 1991, BWC/CONF.III/23, Geneva 1992.

[2] Graham S Pearson, *The Importance of On-Site Investigations*, Briefing Paper No. 1, Department of Peace Studies, University of Bradford, July 1997.

[3] United Nations Security Council, *Report of the Secretary General submitting the plan, revised pursuant to the adoption of Security Council resolution 707(1991), for future monitoring and verification of Iraq's compliance with the destruction or removal of weapons specified in Security Council resolution 687(1991),* S/22871/Rev.1, 2 October 1991.

[4] United Nations, *Ad Hoc Group of Governmental Experts to Identify and Examine Potential Verification Measures from a Scientific and Technical Standpoint*, Report BWC/CONF.III/VEREX/9, Geneva 1993.

- Surveillance of publications
- Surveillance of legislation
- Data on transfers, transfer requests and on publication
- Multilateral information sharing
- Exchange visits (off-site)
- Declarations
- Surveillance by satellite
- Surveillance by aircraft
- Ground based surveillance (off-site)
- Sampling and identification (off-site)
- Observation (off-site)
- Auditing (off-site)

On-site Measures

- Exchange visits - international arrangements
- Interviewing (on-site)
- Visual inspection (on-site)
- Identification of key equipment (on-site)
- Auditing (on-site)
- Sampling and identification (on-site)
- Medical examination (on-site)
- Continuous monitoring by instruments (on-site)
- Continuous monitoring by personnel (on-site)

4. The mandate for VEREX was to identify and examine from a scientific and technical standpoint measures which could determine:

- Whether a State Party is developing, producing, stockpiling, acquiring or retaining microbial or other biological agents or toxins, of types and in quantities that have no justification for prophylactic, protective or peaceful purposes;

- Whether a State Party is developing, producing, stockpiling, acquiring or retaining weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

These measures were to be examined in terms of six main criteria:

- Their strengths and weaknesses based on, but not limited to, the amount and quality of information they provide, and fail to provide;

- Their ability to differentiate between prohibited and permitted activities;

- Their ability to resolve ambiguities about compliance;

- Their technology, material, manpower and equipment requirements;

- Their financial, legal, safety and organizational implications;

- Their impact on scientific research, scientific cooperation, industrial development and other permitted activities, and their implications for the confidentiality of commercial proprietary information.

5. As already noted in Briefing Paper No. 1 on *"The Importance of On-Site Investigations"* issued in July 1997, there was widespread support for the concept of international on-site inspections from the outset of VEREX. However, the question as to whether such on-site investigations should be to investigate compliance concerns or to confirm compliance was not addressed. Rather the VEREX examination was of the measures that might be used in on-site inspection such as interviewing, visual inspection, identification of key equipment, auditing and sampling and identification.

6. Thus in VEREX I, an Indian working paper[5] addressed the concept of on-site investigations without specifying whether these would be challenge or other inspections. The working paper stated:

> "The visits of the verification team need not be announced in advance. The team may visit any site both declared or undeclared of production or research and development and should have full access to all parts of the establishment in question .....The number of visits .... should be left to the discretion of the inspecting team.... The team may also interview any of the workers in the establishment .... The visiting team may submit a report as soon as possible regarding (a) compliance, or (b) incomplete compliance, or (c) no compliance, or (d) inconsistency or ambiguity of replies received or of the observed facts regarding the capabilities of the site, the activities conducted or the agents handled.".

7. Also at VEREX I, the idea of annual routine monitoring was included in a paper by Iran[6] who said that:

> "The WHO may carry out annual routine monitoring on all declared biological facilities, being single or multi-purpose".

Peru identified[7] the need for both follow-up visits and challenge inspections:

> "In short, Mr Chairman, whatever potential verification measures we succeed in identifying and examining, the final result can only be a simple verification system..... founded basically on **declarations and follow–up visits, challenge inspections** and monitoring of transfers."[Emphasis added]

8. At VEREX II Brazil stated[8] that:

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[5]United Nations, *A preliminary approach to the verification regime for the Biological Weapons Convention,* Working Paper by India, BWC/CONF.III/VEREX/WP.29, 9 April 1992.

[6]United Nations, *Elements of biological weapons monitoring systems,* Working Paper by Islamic Republic of Iran, BWC/CONF.III/WP.25, 7 April 1992.

[7]United Nations, *Statement by the head of the delegation of Peru, Dr Felix Calderon to the Ad Hoc Group of Governmental Experts to Identify and Examine Potential Verification Measures from a Scientific and Technical Standpoint set up under the Convention on the Prohibition of Bacteriological (Biological) and Toxin Weapons,* Working Paper by Peru, BWC/CONF.III/WP.22, 6 April 1992.

[8]United Nations, *Preliminary Aspects on the Evaluation of the Potential Verification Measures as they were proposed during the First meeting of the Governmental Expert Group,* Working Paper by Brazil, BWC/CONF.III/WP.54, 25 November 1992.

> "On–site inspections are, of course, the more difficult task. Preparation of previous informations, and multi–disciplinary teams for on site inspections, rules of procedure to guide inspections, confidentiality regulations, standardization of sampling and identification methods, **procedures for routine and at short notice inspections**, and finally inspection reports will be needed."[Emphasis added]

9. The summary report[9] of VEREX II included the reports of the rapporteurs, which had been appointed to examine each of the measures identified, noting that "These summaries, which are not considered to be exhaustive and might be further specified during evaluation, were thoroughly discussed by the Group, producing consolidated texts to serve as a basis of the beginning of the evaluation". One of these summaries noted that many facilities had routine or regular visits:

> "On–site visit to facilities and establishments with activities of potential relevance to the objectives of the Convention is generally carried out by various national and international institutions and under different legislations in almost all countries. The inspectors of WHO have already routine visits to biological and industrial centres. These centres and facilities are used to and in practice are under the obligation to accept visits by responsible national authorities, particularly when they implement GMP, GLP and Biosafety type regulations. It can therefore be concluded that such a visual inspection is not uncommon or unusual for such establishments.
>
> (Mohammadi, BWC/CONF.III/VEREX/WP.82/Rev.1)

whilst another noted that on-site inspections might be to confirm declarations:

> "An essential part of an on–site inspection is the assessment of a facilities capacities and the equipment used to ensure that the equipment is not used for prohibited activities. Another aspect of on–site inspections is to confirm declarations"
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> (Bovallius, BWC/CONF.III/VEREX/WP.83/Rev.1)

10. Some of the other rapporteur summaries for off-site measures noted that these might help to build up over time a picture of microbiological activity in a State Party. Thus in the category of Information Monitoring, the capabilities included:

> "- May help in establishing patterns of activity
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> - Could reveal "trends" and "trendlike" developments
>
> - Provides background for further investigation, if deemed necessary."
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> (Gevers, BWC/CONF. III/VEREX/WP.71/Rev.1)

and in the same paper in respect of Surveillance of Publications the capabilities included:

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[9]United Nations, *Summary of the work of the Ad Hoc Group for the period 23 November to 4 December 1992*, Report BWC/CONF.III/VEREX 4, 8 December 1992

"- Could help in getting a general picture of activities and/or yield specific information on selected sites."

(Gevers, BWC/CONF. III/VEREX/WP.71/Rev.1)

A similar idea was also developed in the paper on Declarations where the capabilities included:

"-..It could help to build up a picture of approaches to microbiological work, health and safety in the country against which other measures could be judged."

(Kapur, BWC/CONF.III/VEREX/WP. 72/Rev.1)

11. The subsequent VEREX III meeting continued the evaluation of the various measures with the concept of developing a picture over time of the microbiological norm for a State Party being recognised in the context of several of the measures, both off site and on-site. Thus the measures on surveillance of information such as Surveillance of Publications included as capabilities the words:

"- General pattern of activities in a State party may be construed

- Could help in identifying inconsistencies

- May help focus on-site inspections"

(Gevers, BWC/CONF.III/VEREX/WP. 151)

with similar words "- Could help establish pattern of activity in a State Party" for each of the other three information monitoring measures -- Surveillance of Legislation, Data on Transfers, and Multilateral Information Sharing. This concept was echoed in the summary for Declarations which stated:

"Declarations, if properly structured, could be an important mechanism for building up a picture of the biological activities in a nation."

(Duncan, BWC/CONF.III/VEREX/WP.156)

The evaluation for Auditing (On-Site) said:

"It [Auditing (On-Site)] is considered to have a synergistic effect in combination with interviewing, visual inspection, identification of key equipment, sampling and identification, and medical examination, and together with information gained from off-site measures such as information monitoring and declarations could be used by an inspectorate to build up a picture of the normal activity and to assess overall consistency and coherence."

(Noble, BWC/CONF.III/VEREX/WP. 167)

12. Consequently, by the end of the VEREX process the idea of on-site inspections, without specifying whether these were challenge or routine in nature, and of the building up over time

of a picture of normal activity in a State Party to aid in the assessment of consistency had been broadly expressed.

Special Conference

13. The final report of VEREX was then considered by the Special Conference in September 1994. The report of the Special Conference[10] included in its Summary Record statements made by various delegations. These included the following remarks[11] by Mr Donald Mahley of the USA:

> "The measures set forth in the protocol should help strengthen the Convention **by establishing an official benchmark for identifying discrepancies or ambiguities pertaining to facilities or activities** and for seeking clarification, providing a mechanism for pursuing specific activities of concern and allowing for direct diplomatic engagement to resolve compliance concerns." [Emphasis added]

14. Several working papers were presented to the Special Conference. Germany speaking on behalf of the European Union proposed[12] a mandate for an Ad Hoc Working Group on Verification which included in the basic elements of a mandatory regime:

> "-on-site measures such as **information visits to declared facilities**, short-notice inspections, and investigations of alleged use."[Emphasis added].

Many States Parties, including Canada, associated themselves formally with the EU proposed mandate in its entirety. A Brazilian working paper[13] said**:**

> "The large number of facilities that should probably have to be included in national declarations makes it necessary to limit the use of routine inspections to a minimum. Only the most sensitive facilities (eg those working with defensive military programs, military vaccination and genetic manipulation of listed pathogens) should be routinely inspected."

and went on to say:

> "Alongside short notice inspections, it seems useful to **establish a mechanism of validation visits,** which would be part of cooperation programs between the organization and national authorities. **Such visits would help in the process of preparing, checking, updating and improving national declarations** and would lead to recommendations by the secretariat to national authorities and facility

[10]United Nations, *Special Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction,* Final Report, BWC/SPCONF/1, 19 - 30 September 1994, Geneva.

[11]United Nations, *Special Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction,* Final Report, Part IV, Page 89, BWC/SPCONF/1, 19 - 30 September 1994, Geneva.

[12]Federal Republic of Germany on behalf of the European Union, *Proposal for a Mandate for an Ad-Hoc Working Group on Verification*, BWC/SPCONF/WP. 1, 20 September 1994.

[13]Brazil, Strengthening the BWC; *Elements for a Possible Verification System*, BWC/SPCONF/WP.4, 21 September 1994.

operators, including recommendations on biological safety practices."[Emphasis added]

The United States working paper[14] in a draft mandate included as one of the basic elements of the regime:

> "- **Any on-site measures should** be designed to, among other things, **strengthen confidence in information exchanged among States parties**..."[Emphasis added]

Australia in its working paper[15] also supported the concept of information visits by identifying basic elements in the mandate as including:

> "- **On-site measures such as information visits to declared facilities**, short notice inspections and investigations of allegations of use."[Emphasis added].

15. The report of the Special Conference noted that the VEREX report had considered that "some combinations of some potential verification measures, including **both off-site and on-site measures**, could provide information which could be useful for the main objective of the Biological Weapons Convention." [Emphasis added]. The Special Conference agreed to establish a further Ad Hoc Group with the objective being to consider appropriate measures, including possible verification measures, and draft proposals to strengthen the Convention, to be included, as appropriate, in a legally binding instrument, to be submitted for the consideration of the States Parties.

CWC Inspections

16. The CWC[16] which opened for signature on 13-15 January 1993 and entered into force on 29 April 1997 comprises a regime of comprehensive declarations together with both routine and challenge inspections as well as provisions for the investigation of alleged use and the monitoring of the destruction of declared chemical weapons and chemical weapon production facilities. The relevance of the provisions of the CWC to the BTWC is three fold. First, both Conventions prohibit the development and production of weapons which attack people -- in the one case by non-living materials (chemicals) and in the other by living materials (micro-organisms) and their non-living products (toxins). Second, there is an overlap -- and rightly so -- between the two Conventions in that both cover toxins. Thus the CWC and its verification regime applies to toxins -- and examples of toxins, such as saxitoxin and ricin, are listed in the CWC Schedules -- as does the BTWC. Third, the CWC is the arms control treaty that is of greatest relevance to the BTWC; it is much more closely relevant than the NPT (Nuclear Non-Proliferation Treaty), the CTBT (Comprehensive Test Ban Treaty) or the IAEA (International Atomic Energy Agency) 93 + 2. The structure and provisions of the CWC are thus well worth examining as in order to reach agreement on the CWC, the negotiators had to resolve many issues which will arise in similar, if not always identical, form in the BTWC context.

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[14]United States of America, *Consideration of VEREX Report*, BWC/SPCONF/WP. 10, 22 September 1994.

[15]Australia, *Further Action to Strengthen the Biological Weapons Convention -- Australian Views on the Form of Future Negotiations*, BWC/SPCONF/WP.12, 22 September 1994.

[16]United Nations, *Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction*, United Nations 93-05070, 1993.

17. One of the provisions in the CWC is that for routine inspection to carry out "on-site verification" of declared facilities: there are seven broad types of such facilities; the chemical weapons storage facilities (Part IV), chemical weapons production facilities (Part V), chemical weapons destruction facilities (Part IV), Schedule 1, 2 and 3 facilities where Schedule 1. 2 and 3 chemicals are consumed, processed and/or produced (Part VI, Part VII and Part VIII respectively); and, not liable for inspection until three years after entry into force, facilities producing "unscheduled discrete organic chemicals"(Part IX). For the purposes of this Briefing Paper, particular attention is given to the provisions for the verification of Schedule 1, 2 and 3 and other chemicals facilities in respect of "Activities not prohibited under this Convention in accordance with Article VI".

18. The output of the routine inspections is information to validate declarations. Some of this is disseminated to States Parties, thereby enabling them to be better able to assess the good faith of other States Parties. Potential cheaters will be able to gain insight into the risks of abusing facilities subject to routine verification and may in consequence be driven out of such facilities[17]. For each type of facility, the Convention lays down different declaration validating procedures to be used by the Technical Secretariat; for some types of facility, a "facility agreement" is required which limits the threat to confidential proprietary information and national security information whilst guaranteeing the essential access to the inspectors. The different provisions are summarised below (after Table IV in ref. 17):

Facility Type	**Facility Agreement**	**Threshold for Reporting**	**Threshold for Inspection**	**Frequency of inspection**
Schedule 1	Mandatory	100 g	100 g	To be decided
Schedule 2	Mandatory unless agreed to be waived	1 kg BZ 100 kg Sch 2A 1 tonne Sch 2B	10 kg BZ 1 tonne Sch 2A 10 tonne Sch 2B	Up to 2 per year per plant site
Schedule 3	Optional	30 tonne	200 tonne	Up to 2 per year per plant site, within overall limit
Other chemicals	Optional	30 tonne PSF* 200 tonne other	200 tonne PSF* 200 tonne other	Up to 2 per year per plant site, within overall limit

* An unscheduled discrete organic chemical containing the elements phosphorus, sulfur or fluorine referred to in the Convention as "PSF-plants" or "PSF-chemical".

19. The other key feature is the degree of access provided during routine inspections:

[17]Julian P Perry Robinson, *The Verification System of the Chemical Weapons Convention*, in Daniel Bardonnet (ed), "The Convention on the Prohibition and Elimination of Chemical Weapons: A Breakthrough in Multilateral Disarmament, Hague Academy of International Law, Workshop, The Hague, 24 - 26 November 1994, Martinus Nijhoff Publishers, Dordrecht 1995.

Schedule 1	Automatic access to declared facilities
Schedule 2	Automatic access to plant site and to specified areas within declared plants; beyond that to provide clarification or under managed access
Schedule 3	Automatic access to plant site and to specified areas within declared plants; beyond that as agreed to provide clarification
Other chemicals	Automatic to plant site; managed access within plants

In the case of Schedule 2 routine inspections, access is only to the specific declared Scheduled 2 plant within the declared plant site. The Verification Annex to the CWC details in Part VII, paragraph 25, that "should the inspection team request access to other parts of the plant site, access to these areas shall be granted in accordance with the obligation to provide clarification pursuant to Part II, paragraph 51 of this Annex and in accordance with the facility agreement, or in the absence of a facility agreement, in accordance with the rules of managed access as specified in Part X, Section C, of this Annex." A similar arrangement applies to Schedule 3 routine inspections where Part VIII, paragraph 20 states that "if the inspection team, in accordance with Part II, paragraph 51 of this Annex, requests access to other parts of the plant site for clarification of ambiguities, the extent of such access shall be agreed between the inspection team and the inspected State Party."

20. The provisions of the CWC for the carrying out of routine inspections of Schedule 1, 2 , 3 and other chemical facilities are relevant and could serve as a basis or a model when considering the potential role for non-challenge visits in the verification regime for the BTWC. It is, however, important to emphasise that the proposed non-challenge visits for a strengthened BTWC are definitely **not** envisaged as being routine as in the sense of the CWC inspections.

UNSCOM Inspections

21. Although the situation in respect of UNSCOM and Iraq is unique, it is relevant to consider what lessons can be drawn concerning the importance of non-challenge visits.

22. Following the Iraq invasion of Kuwait on 2 August 1990 and the coalition war against Iraq in early 1991, the United Nations Security Council adopted Resolution 687 (1991)[18] on 3 April 1991 which set out the requirements for the cease-fire. This resolution also required in Section C that Iraq was to eliminate, under international supervision, its chemical and biological weapons stockpiles and its ballistic missiles with a range greater than 150 km. Iraq was required to submit to the Secretary-General, within 15 days of the Resolution's adoption, a declaration of the locations, amounts and types of such weapons, and the Secretary-General was to develop a plan for creating a Special Commission to "carry out immediate on-site inspection of Iraq's biological chemical and missile capabilities, based on Iraq's declarations and the designation of any additional locations by the Special Commission itself" in order to take possession of these weapons and supervise their destruction. The Secretary-General was also required to develop, in consultation with the Special Commission, a plan for the future

[18]United Nations Security Council, *Security Council Resolution establishing detailed measures for a cease-fire, including deployment of the United Nations Observer Unit; arrangements for demarcating the Iraq-Kuwait border; the removal or destruction of Iraqi weapons of mass destruction and measures to prevent their reconstitution, under the supervision of a Special Commission and the Director General of the IAEA; and creation of a compensation fund to cover direct loss and damage resulting from Iraq's invasion of Kuwait,* S/RES/687 (1991), 3 April 1991.

ongoing monitoring and verification of Iraq's compliance with the ban on these weapons and missiles.

23. The plan for ongoing monitoring and verification (OMV) is based on declarations and on-site inspections primarily carried out by expert teams located at the Baghdad Monitoring and Verification Centre. The Special Commission's plan[19] for the future ongoing monitoring and verification (OMV) of Iraq's compliance with its undertaking not to retain, possess, develop, construct or otherwise acquire any of the proscribed weapons systems, requires that Iraq provide detailed declarations not later than 30 days after the adoption of the OMV plan by the Security Council and thereafter at six monthly intervals on 15 January and 15 July of each year. The elements of the plan are the provision of the declarations, the carrying out of baseline inspections of the facilities to be monitored, the creation of protocols for each facility which record the collated information about the particular facility so forming a basis which subsequent inspections can use in comparing current and past activities. As the UNSCOM report[20] of April 1995 indicated, the basic elements of the OMV system are regular inspections of relevant facilities, inventories of dual purpose items and accounting for all inventoried items until they are consumed, disposed of or no longer operable. The inspections and the establishment and maintainance of accurate inventories are underpinned by a full array of interlocking activities: aerial surveillance with a variety of sensors, remote sensors, tags and seals, a variety of detection technologies, information obtained from other sources and notifications under the export/import control mechanism. Together UNSCOM consider that these should constitute the most comprehensive international monitoring system ever established in the sphere of arms control. Currently some 86 biological sites are being regularly monitored[21] under the OMV plan with over 150 visits being carried out to these sites in a six month period[22]. The value and importance of these regular visits is evident from the observations made by UNSCOM that inaccuracies in the Iraqi declarations continue to be found; the latest UNSCOM report[21] of April 1997 states that "Iraq has still not declared all sites where dual-use biological equipment is present. The Commission's resident monitoring team continues to identify such sites that should have been declared by Iraq."

24. As the UNSCOM OMV plan is designed to monitor the compliance of Iraq with the prohibition on weapons of mass destruction and the missiles which could deliver them, it is a special case. Nevertheless, it is clear that the concept of non-challenge visits coupled with declarations lies at the heart of the OMV plan and is an essential tool for building confidence in Iraq's compliance.

25. It has also become apparent from the experience of UNSCOM in mounting inspections in Iraq that different approaches, from those adopted in countries such as the US and the UK

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[19]United Nations Security Council, *Report of the Secretary General submitting the plan, revised pursuant to the adoption of Security Council resolution 707(1991), for future monitoring and verification of Iraq's compliance with the destruction or removal of weapons specified in Security Council resolution 687(1991),* S/22871/Rev.1, 2 October 1991.

[20]United Nations Security Council, *Seventh Report of the Secretary-General on the status of the implementation of the plan for the ongoing monitoring and verification of Iraq's compliance with relevant parts of Section C of Security Council Resolution 687 (1991),* S/1995/284, 10 April 1995.

[21]United Nations Security Council, *Report of the Secretary-General on the activities of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Resolution 687 (1991),* S/1997/301, 11 April 1997.

[22]United Nations Security Council, *Report of the Secretary-General on the activities of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Resolution 687 1991,* S/1996/848, 11 October 1996.

which have provided the Chief Inspectors for many of the BW Inspections, are taken by Iraq to the handling of pathogenic organisms. More generally, Iraq in its weapons of mass destruction programmes has used both some novel approaches and other older approaches, which have been discarded as inefficient by other countries. For example, in its nuclear weapons programme, Iraq used cyclotrons to enrich uranium, an approach which had long ago been superseded by newer techniques. And in its chemical weapons programme, Iraq had produced the nerve agent, GF, which had been regarded as being insufficiently stable for chemical weapons which required to be stockpiled for possible retaliatory use. It has therefore been particularly important that UNSCOM gained an accurate appreciation of the way in which Iraq approaches microbiological safety and the handling of microbiological pathogens in order for UNSCOM to be able to reach correct assessments of the significance of Iraqi activities in the microbiological area.

Ad Hoc Group

26. The Ad Hoc Group (AHG) under the chairmanship of Ambassador Toth of Hungary held a procedural meeting on 3 - 5 January 1995[23] and then substantive meetings on 10 -21 July 1995[24], 27 November - 8 December 1995[25], 15 - 26 July 1996[26], 16 -27 September 1996[27], 3-21 March 1997[28] and 14 July - 1 August 1997[29]. During these Ad Hoc Group meetings there has been much discussion of the nature of the regime and what provisions should be made for on-site inspections.

27. **The AHG meeting in July 1995**, which was the first substantive meeting, saw the presentation of a number of working papers which addressed on-site measures. The paper by Cuba[30] identified "Validation and Inspection Visits" as a main element of the verification regime. The working paper identified three categories of visits : validation visits, routine inspections and challenge inspections. In respect of validation visits and routine inspections, the paper said that:

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[23] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/3, 6 January 1995.

[24] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/28, 24 July 1995.

[25] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/29, 12 December 1995.

[26] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/31, 26 July 1996.

[27] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/32, 27 September 1996.

[28] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/34, 27 March 1997.

[29] United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/36, 4 August 1997.

[30] Cuba, *Elements for a Possible Verification regime in the Framework of the Convention on Biological Weapons*, BWC/AD HOC GROUP/8, 9 July 1995.

"Validation visits

> As a complement to the yearly declarations and notices, visits should be paid to validate what is declared....

Routine inspections

> This kind of inspection should be limited to the least possible and should be applied in those declared facilities which are most relevant for the Convention...."

It was made clear that the future organization should have a reasonable degree of autonomy in selecting which facilities should be subject to routine inspections which would include the following

> "- facilities that participate in military programs of research for defense
>
> - facilities that genetically manipulate pathogens included in the lists under control
>
> - facilities that manipulate biological agents included in 3.A Category (agents that should be subject to certain additional restrictions) of the list of agents extremely important for the Convention."

28. A UK working paper[31] on the role and objectives of information visits provides a comprehensive insight into what these would entail and achieve. The paper noted that:

> "It is highly unlikely that agreement could ever be secured for a protocol based exclusively on challenge inspections.... A mechanism with only a challenge provision would set an unnecessary high threshold for the on-site measures that could be taken to pursue non-compliance concerns. There are also grounds for doubting whether such an arrangement could be as effective as a package of interrelated measures consisting of declarations, short notice validation/information inspections/visits, challenge inspections and procedures for investigating alleged use."

The paper identifies some five interrelated benefits:

> "(i) providing an opportunity to validate declarations in the context of the site and hence encourage State Parties to make accurate declarations;
>
> (ii) facilitating transparency of national microbiological activities related to the BTWC;
>
> (iii) providing an understanding of how national safety, genetic engineering, quality control, GMP etc rules and regulations operate and how they are implemented in practice;

[31]United Kingdom, *The Role and Objectives of Information Visits,* BWC/AD HOC GROUP/21, 13 July 1995.

(iv) facilitating the relationship between the State Party and the Organisation on issues such as national requests for assistance on declarations; and an opportunity to review declaration procedures with individual States Parties;

(v) contributing to deterring potential proliferators."

Each of these is elaborated in detail before conclusions are drawn which include the following:

"The nature of BW means that it is not practicable to approach the design of verification measures purely in terms of quantitative criteria.... Simple "bean counting" of dual use agents and equipment will not strengthen the Convention. Instead inspectors have to make qualitative judgements about the consistency and plausibility of the information obtained.

A protocol based solely on challenge inspection would not be negotiable, nor indeed as effective as an integrated package of measures as outlined here. It would, moreover, be expensive to keep a cadre of full-time inspectors on stand-by against the day that a challenge inspection might be requested.

Industry has an overriding preference for full-time professional inspectors as they pose a much lesser risk to commercial confidentiality. In fact this is paralleled by a governmental benefit in respect of the protection of national security information.

Full-time inspectors enable the conduct of timely and effective inspections: they also ensure that the system of visits and its attendant benefits are fully exploited. Such inspectors are much more likely to be competent as an organisation can better maintain high and uniform approaches. Furthermore, teams can be assembled quickly from a pool of experienced personnel, well versed in inspection techniques, trained to the same standard, and possessing the necessary vaccinations."

The paper concluded that "visits should not impose an unreasonable burden on legitimate activities....It is *essential* to see visits as part of an integrated package; the benefits are mutually reinforcing, but they will not work in isolation. Their utility must be viewed in conjunction with other elements of the compliance protocol."[Emphasis in original].

29. A Brazilian paper[32] addressing the implementation of Article X makes the point that "Some of the [Article X] cooperative measures could be implemented in connection with validation or information visits, during which the organization would also collect relevant information on biotechnological activities at one or several geographically close facilities....."

30. A Swedish paper[33] addressed some possible elements in a verification protocol which included in a section on on-site inspection:

"Minimum requirements for a verification regime are, a well-focussed declaration system, on-site inspections and multilateral information systems. These measures are required, as there must be a mechanism to verify the accuracy of the information

[32]Brazil, *Specific Measures for Implementation of Article X in the Context of a Compliance Regime for the BWC,* BWC/AD HOC GROUP/22, 13 July 1995.
[33]Sweden, *Some Possible Elements in a Verification Protocol,* BWC/AD HOC GROUP/25, 14 July 1995.

supplied in the declarations and for this some type on on-site inspection is required ....In comparison with the CWC it is proposed that on-site inspections of a routine type for validation of declarations and information gathering for the BTWC should be strongly restricted in frequency and intensity to a small number of inspections/visits per year to keep inspectors and an inspectorate well trained and give them adequate experience but at the same time limiting the costs."

31. The Friend of the Chair paper on Compliance Measures annexed to the July 1995 procedural report included the following[34] in respect of non-challenge inspections:

"- Validation/information visits. Their main purpose could be to check the accuracy of declarations, encourage active demonstration of compliance and enhance credibility of declarations. Such visits could provide information related to that in declarations, they could be arranged in advance and limited in number.

- Routine visits/inspections. Their purpose could be to help demonstrate compliance at particular declared facilities. Such visits could be limited to specific facilities, which might include military biodefence facilities, facilities that genetically manipulate listed agents, and facilities working with particular pathogens and toxins. Such visits could provide information related to declarations and be limited in number.

- Further consideration could be given to the possibility of merging validation/information visits and routine inspections, and what period of notice would be appropriate."

Whilst this captures many of the points made in the working papers, it does not fully reflect the valid points outlined in paragraph 27 above about the benefits from such visits made in the UK working paper.

32. **The AHG meeting in September 1995**, which was the second substantive meeting, saw further working papers which addressed non-challenge visits. A further working paper by Sweden[35] put forward proposals that:

"- Two main types of on-site visits/inspections are required. One would be a short notice on-site information visit and the other would be a short notice on-site inspections. There would be no need for a separate type of routine visits/inspections.

- Short notice on-site information visits would be what is referred to as "validation/information visits/inspections" in the FOC paper. A selection of the most relevant facilities/activities from those declared for short notice information visits should be made, on the basis of elaborated modalities, in order to achieve an appropriate limitation in the number of such visits.

[34]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/28, 24 July 1995: Annex III/2, page 3.

[35]Sweden, *Short Notice On-Site Information Visits and Inspections as Parts of a verification Regime for the BTWC,* BWC/AD HOC GROUP/WP. 15, 29 November 1995.

- Short notice on-site inspections could be undertaken with respect to questions of non-compliance with the BTWC, including allegation of use." [Emphasis in original]

The proposed on-site information visits "would be to allow demonstration of compliance including that ongoing and/or planned activities are in accordance with the information provided in declarations and that there are no other declarable activities/items (within the facilities declared) which ought to be declared."

33. A working paper by Cuba[36] elaborated ideas for a potential verification regime which in a section entitled "On-Site Verification by Inspections" stated:

"Inspections for the validity of what have been declared shall be carried out as a complement to the annual declarations and notifications. These may be:

Routine inspections

Challenge inspections

As a premise, all the facilities that have submitted one or other type of declaration must be subject to an initial visit in order to validate what has been said and in which the following measures shall be fulfilled:

1. Data on transfers, requests for transfer and production of biological agents controlled by the Convention (Measure 1)

2. Visual inspection (Measure 15)

3. Identification of equipment controlled by the Convention (Measure 16)

4. Preparation of the model of agreement between the Body of Inspectors, the national Authority and the Facilities subject to verification.

After the initial visits have been carried out, a process where routine investigations shall be applied, shall start. The amount of agents, toxins and controlled equipment, the research and development programs for biological defense, the production and release of aerosols to the environment will define, more accurately, the frequency of these inspections."

34. Brazil[37] in a further working paper said that "information/Validation visits could be an important element of a future BWC verification system, providing both deterrence and transparency, and could harness several cooperation activities... Information/validation visits could follow a programme established by the future organization in consultation with donor and recipient countries, as well as with multilateral international organizations providing cooperation."

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[36]Cuba, *Elements for a Potential Verification Regime within the Framework of the Convention for the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons Convention and on their Destruction (Biological Weapons Convention),* BWC/AD HOC GROUP/WP. 22, 30 November 1995.

[37]Brazil, *Recent Trends in the Biology of Infectious Agents and Cooperation as an Element of the BWC Compliance Regime,* BWC/AD HOC GROUP/WP. 24, 1 December 1995.

35. The FOC on compliance measures produced two working papers[38] during the AHG meeting which touched on the role of non-challenge visits. The FOC paper[39] annexed to the procedural report said

> "Other, non-challenge visits, might also have a role to play. Consideration was given to the possible justification for them. Two broad justifications were identified:
>
> > (i) Non-challenge visits might have a deterrent role. They could be used to seek clarification where concerns fell short of those which would justify a claim of possible non-compliance with the BWC. For example, they could be used to resolve any uncertainties about declarations. This would be useful as a means of confirming the accuracy of declarations. This would help create confidence and build transparency. For maximum effectiveness, such visits should be at short notice.
> >
> > (ii) Some non-challenge visits could be used to convey information to a State party about other relevant matters, including Article V and Article X issues.....
>
> .....It was also recognised that a main advantage of non-challenge visits was that they were much less politically sensitive than challenge inspections, and that this political neutrality should be preserved...." [Emphasis in the original]

36. **The AHG meeting in July 1996**, which was the third substantive meeting, saw further working papers which addressed non-challenge visits. A working paper[40] by South Africa sought to categorize the facilities involved and affected by declarations and inspections into four types with the inspections for each specified:

> "Category 1: Purely teaching, education linked research or diagnostic laboratories:
>
> > These facilities would primarily be involved in confidence building or exchange visits
>
> Category 2: Commercial and production units
>
> > Regular inspections under "managed access" of declared facilities would be expected. All these facilities could, however, be included in a system of confidence building visits.
>
> Category 3: Epidemiology and disease control units (including biohazard research units)

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[38]Friend of the Chair for Compliance Measures, *Proposed Revision of paragraph 6 of FOC July Paper,* BWC/AD HOC GROUP/WP. 17, 30 November 1995. Friend of the Chair for Compliance Measures, *On-Site Measures,* BWC/AD HOC GROUP/WP. 37, 5 December 1995.

[39]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction,* Procedural Report, BWC/AD HOC GROUP/29, 12 December 1995: Annex III/2, page 28.

[40]South Africa, *Classification of Facilities Involved and Affected by Declarations and Inspections,* BWC/AD HOC GROUP/WP. 53, 15 July 1996.

Regular inspections would be expected and exchange visits should be encouraged

Category 4: Defensive BTW units.

Regular inspections would be expected"

Another South African paper (South Africa, *A System of Confidence Building Visits,* BWC/AD HOC GROUP/WP. 64, 16 July 1996) addresses a system of confidence building visits which have the aim of "promoting confidence between States parties, as well as in a future BWC Organization". However, participation in the system was envisaged as being voluntary, and the participants would not be inspectors but rather experts nominated by States Parties. Consequently such visits would not contribute to the understanding of the future BTWC Organization and its inspectorate nor would it contribute to enhancing international confidence in compliance.

37. A Canadian paper[41] described a practice non-challenge visit to a bio-defence facility which demonstrated that such visits were indeed practicable. The conclusion was reached that "cross-referencing of data was not only the most effective way to proceed in clarifying any apparent discrepancies, it was also the most effective way to address confidence overall." Although not explicitly stated, the paper leaves the clear impression that the practice visit had confirmed the value of such non-challenge visits which were shown to interlock with declarations and notifications. It was stated that "well-designed, coherent, and integrated declaration forms will be central to a successful visit."

38. The European Union also produced a working paper[42] on non-challenge visits which noted "In particular, the deterrence value against non-compliance of short-notice non-challenge visits, even if such visits are relatively limited in number, would make a significant contribution to a future verification Protocol." The paper sets out the justification for non-challenge visits as follows:

"The main justification for such visits is that they would help to strengthen confidence in compliance by helping to resolve uncertainties about declarations and confirm their accuracy. They would do this by creating a deterrent against non-compliance, provided they are notified at short notice (24 hours notice). Non-challenge visits would be a way of providing confidence that all States parties were taking their obligations seriously. The following points are relevant:

A. Although the eventual compliance regime should include a provision for challenge inspections, these will have a politically sensitive character. A system of non-challenge visits would therefore provide an extra deterrent against non-compliance, provided that these visits are notified at short notice, by ensuring that a State could never be confident that its activities would not be subject to inspections.

[41]Canada, *Practice Non-Challenge Visit of a Defence Research Establishment,* BWC/AD HOC GROUP/WP. 60, 15 July 1996.

[42]Ireland on behalf of the European Union, *European Union discussion paper regarding short notice non-challenge visits,* BWC/AD HOC GROUP/WP. 67, 16 July 1996.

B. Exclusion of the possibility of non-challenge visits would place the entire burden of the regime on declarations and challenge inspections. There would always be scope for a proliferator to submit false declarations, in the expectation that he was ever likely to be faced with a challenge.

C. Non-challenge visits would help to build transparency and could clarify concerns which might otherwise lead to false judgements being made. A system of non-challenge visits would enable the future BTWC organisation to verify declarations and to resolve uncertainties about declarations.

D. A proliferator is likely to prefer legitimate cover for his activities, in the absence of non-challenge visits. He might therefore want to use a declared site if possible. This would help him to obtain the necessary equipment, materials and expertise. The possibility of non-challenge visits to declared sites would make a proliferator's task more difficult. He would then have to take additional precautions to conceal his tracks.

E. A non-challenge visit might catch a proliferator off guard. In a challenge inspection, the proliferator would probably have had a clear indication of the specific compliance concern and might be able to take rapid measures to cover his tracks.

F. The likelihood of a non-challenge visit uncovering concrete evidence of BW-related activities is low. But inspectors might uncover information that could arouse suspicion. Such information might, for example, come from inconsistencies in accounts given by staff about activities at the site, or the use of equipment, material, etc. Such inconsistencies would provide clear grounds for suspicion which could then be followed up. Non-challenge visits also have value as a means of facilitating any subsequent challenge visits, which would be more effective if inspectors had prior knowledge of the site.

G. To achieve a deterrent effect, non-challenge visits should be notified at short notice, e.g. 24 hours....

H. Non-challenge visits could also serve other objectives of the BTWC, namely development of technological cooperation under Article X...."

39. The Brazil and UK produced a joint working paper[43] on a joint UK/Brazil practice non-challenge visit carried out at the Instituto Butantan, Sao Paolo. The following general observations were made:

"NCVs ... are practicable and useful in addressing two interrelated objectives. Firstly, they may provide some reassurance of compliance, mainly through transparency and openness, by facilitating access to information that would not otherwise be available from the visited institutions declaration, no matter how detailed and comprehensive. Secondly, NCVs can create a working environment that may be conducive to international cooperation in various fields, especially in those that may have a direct

[43]Brazil and the UK, *Report of a Joint UK/Brazil Practice Non-Challenge Visit,* BWC/AD HOC GROUP/WP. 76, 18 July 1996.

bearing on the visited State's capacity to demonstrate compliance with the BTWC. An NCV can help determine whether the state can ensure adequate control over all relevant activities in the biological field on its territory or under its jurisdiction or control."

The conclusions were that

"An NCV offers an opportunity to discuss the declaration and correct any omissions, inaccuracies or misunderstandings. The VEREX on-site measures were of considerable value and worked exceptionally well in combination.....

Even with a short period of time available for on-site activities, it was still sufficient for the IT [inspection team] in this instance to acquire a much better appreciation of the site's activities without any detriment to any commercial concerns or undue inconvenience to the facility personnel. This achieved two things: first it helped place the declaration into its proper context; and second, the information acquired from both declaration and site visit together added significantly to transparency thereby increasing confidence that declared activities were what they claimed to be.....NCVs could contribute significantly to an overall BTWC compliance regime."

40. Another working paper by Australia[44] reported on a trial non-challenge/routine inspection of a biotechnology company. The objectives were to

"* investigate the feasibility of verifying a declaration through a routine inspection

* assess whether an inspection of this sort could have a deterrent function; and

* assess the impact of a routine inspection on the activities of a commercial facility."

The paper concluded that:

"The inspection team was satisfied that .... a routine inspection could be achieved in a manner which would not disrupt production in a commercial biotechnology facility, and by the application of appropriate managed access procedures (including random selective access of production records), would not jeopardize confidential information.

"Based on the experience of this trial inspection, we consider that a system of routine inspections on certain types of biotechnology facilities would significantly deter violations by imposing a substantial risk of discovery, and, at the same time, would provide mechanisms for demonstrating compliance that would enhance confidence that other States parties were in compliance with he BWC."

41. The FOC paper on compliance measures annexed to the procedural report of the July 1996 AHG meeting included a section[45] entitled "Other Visits" in the paper on "On-Site

[44]Australia, *Trial Inspection of a Biological Production Facility,* BWC/AD HOC GROUP/WP. 77, 18 July 1996.

[45]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/31, 26 July 1996: Annex III, page 30.

Measures". The flavour of this was similar to what had been said in the FOC paper annexed to the November/December 1995 AHG meeting, and did not appear to reflect the positive remarks made in the EU paper or the successful practice non-challenge visits reported to the AHG, in saying:

> "There was discussion of the role which visits other than those to investigate a specific concern about compliance about the BWC might play in any future compliance regime. A key question was whether they would be cost-effective and useful.
>
> Various concepts were put forward:
>
> > (i) Some non-challenge visits could be used to convey information to a State party about other relevant matters, and could therefore have a role to play in implementing Article V and Article X. It might be more appropriate to look at some aspects of this type of visit in the context of Article X.
> >
> > (ii) Random visits. These could have deterrent values. They could take place at short notice on the basis of agreed criteria. They could be conducted by experts from States Parties and/or an international inspectorate.
> >
> > (iii) Short notice non-challenge visits. These could make it more difficult for a proliferant to conceal non-compliant activity within a declared site. In addition, they could help to strengthen confidence in the accuracy of declarations, e.g. by providing a mechanism to help resolve uncertainties.
> >
> > (iv) Visits specifically to address a concern/ambiguity which fell short of a concern about compliance with the BWC itself (i.e. a concern about the accuracy of the declaration). It was pointed out that any visit designed expressly to address a concern could be regarded as close to a "challenge", and could involve similar sensitivities"

42. **The AHG meeting in September 1996**, which was the fourth substantive meeting, saw further working papers which addressed non-challenge visits. Brazil in a paper[46] addressing the implementation of Article X recalled its earlier remarks by an accurate and percipient statement that:

> "It was observed that the peculiarities of biological agents and toxins were such that a regime to ensure compliance with BWC undertakings would best be based on a cooperative relationship between a future BTW organization and the national authorities of States Parties. **Such cooperation would, inter alia, help the organization obtain full knowledge of biological activity in each State Party and throughout the world, thereby providing a strong deterrent to potential violators,** while at the same time offer the opportunity to increase the exchanges between States parties in the biological field, with all-round benefits in terms of increased confidence, enhanced biosafety practices and more reliable containment of infectious diseases. The adoption of a compliance regime along these lines would

[46]Brazil, *Article X Implementation in a BWC Compliance Regime: Aspects of a Cooperative Approach*, BWC/AD HOC GROUP/WP. 104, 17 September 1996.

moreover provide a strong incentive for as broad participation as possible in the implementation of the BWC."[Emphasis added]

The same paper refers later to: "inclusion of a cooperative dimension in non-challenge visits to biological institutions in States parties, during which information could be exchanged and recommendations made...". It goes on to say

> ".. measures such as these would bring benefits both to States parties and to the effectiveness of the compliance regime. **The BW organization would obtain a more thorough understanding of relevant activity in biology, microbiology and related areas within States Parties, strengthening its capacity to detect deviant patterns that may arouse suspicion.**"[Emphasis added].

This insight into the potential benefits of non-challenge visits appears to be soundly based and accurate.

43. A joint working paper[47] by Sweden and the Netherlands further elaborated the concept of on-site visits (other than those to investigate a non-compliance concern) to clarify the distinction between non-challenge visits and other on-site visits in cases of ambiguities as well as addressing the cost-effectiveness of NCVs. In respect of cost-effectiveness, the paper says:

> "...the aim of NCVs will be primarily to deter non-compliance and to act as a deterrent against proliferators using declared sites as a cover for non-compliant activities. Furthermore, a system of NCVs could help strengthen confidence in the accuracy of declarations..... These objectives could be achieved by a relatively small number of NCVs thereby limiting the costs and the burden on industry and science. Furthermore, a system of NCVs should be effective and non-confrontational.
>
> In order to conduct NCVs in a cost effective and professional manner, independent inspectors will be required as this would also minimize the risks for leakages of commercial proprietary and sensitive security information. Many of the inspectors which are on standby for other on-site activities could be used in the meantime for NCVs thus limiting the extra costs.
>
> NCVs could also play an important role in enhancing the inspectors professionalism and give them necessary experience of various types of facilities. As the numbers of NCV will be limited the extra burden due to them on the inspectorate will be limited. Without NCVs a programme for trial inspections to keep the inspectors well trained would have to be extensive."

In respect of ambiguities, the case for a separate category of visits is argued. It is pointed out that the BTWC organisation will probably receive a large amount of declaration information and during their examination, it will in certain cases be necessary to clarify certain ambiguities within declarations. Such ambiguities cannot be addressed by NCVs as NCVs include a random selection and a quota element. The case is set out for a consultation and clarification procedure including on-site visits as necessary to resolve ambiguities.

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[47]Sweden/the Netherlands, *Further Elaboration of Concepts of On-Site Visits (other than those to investigate a non-compliance concern),* BWC/AD HOC GROUP/WP. 105, 18 September 1996.

44. The FOC paper on compliance measures annexed to the procedural report of the September 1996 AHG meeting included a separate section III [48] entitled "Other Visits/Measures" which contained a number of items in square brackets:

> "[A number of mandatory [non-challenge] visits to facilities in States parties could be conducted to help strengthen confidence in the accuracy of declarations and to deter non-compliance]
>
> [Such visits could convey information to States parties about other relevant matters and could therefore have a role to play in implementing Article V and Article X]
>
> [Such visits could be focussed on key declared facilities eg. those involved in bio-defence programmes]
>
> [Such visits could take place at random]
>
> [Such visits could take place at short notice]
>
> [Such visits could be subject to a quota system to govern their distribution]
>
> [In the event that a State Party [or future organisation] wished to seek clarification of an ambiguity or concern related to any other State Party's implementation of the arrangements under the future regime, but which would not warrant an investigation into a no-compliance concern, the State party of organization] could consult with the other State Party to seek to resolve the ambiguity or concern, and could if necessary, request [or initiate] a visit for confirmation.]
>
> [Consideration could be given to whether any compliance measures could help strengthen confidence in the implementation of Article III]]"

45. **The AHG meeting in March 1997**, which was the fifth substantive meeting, saw further working papers which addressed non-challenge visits. An Indian working paper[49] on compliance with Article III includes the following measure:

> "- Declarations may be subject to checks through inspections/visits by the future BTWC organization"

46. The European Union in a working paper[50] set out various points relating to non-challenge visits:

> "**A. Purpose**

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[48]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/32, 27 September 1996: Annex I, page 18.

[49]India, *Guidelines to ensure Compliance with Obligations under Article III of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (BTWC)*, BWC/AD HOC GROUP/WP. 126, 5 March 1997

[50]European Union, *Elements concerning Non Challenge Visits*, BWC/AD HOC GROUP/WP. 132, 10 March 1997.

> The aim of NCVs would be primarily to deter non-compliance and to act as a deterrent against proliferators using declared sites as a cover for non-compliant activities. Furthermore, a system of NCVs would help strengthen confidence in the accuracy of declarations...
>
> Inspectors during a non-challenge visit might be able to gather information that could indicate a possible non-compliance concern.....The information resulting from NCVs that could indicate a possible non-compliance concern could be followed up through other measures, including clarification procedures/visits."

The paper goes on to make other relevant and valid points including:

> "These visits should take place at declared sites only.
>
> In order to achieve the deterrent effect, it is important these visits are carried out on short notice.
>
> In contrast to 'routine visits', a concept known from other disarmament instruments, a deterrent effect could be reached by a relatively small number of non-challenge visits. In order to restrict as much as possible the burden on industry, NCVs should be subject to a quota system.....
>
> NCVs would be initiated by the future BTWC organization in an objective manner and in accordance with agreed guidelines, to ensure that the visits have a non-confrontational nature.
>
> Non-challenge visits could also serve other objects of the BTWC, such as development of technological cooperation under Article X, as well as health and safety."

It is important to note the point about the **difference** between **NCVs** and **'routine'** inspections in other disarmament regimes.

47. A working paper[51] by Austria and New Zealand addressing the implementation of Article III proposes the provision of annual reports by States Parties on the implementation of Article III and then goes on to propose that:

> "These reports could be a basis for work undertaken during any clarification or other appropriate visits carried out under the overall investigation mechanism."

48. The FOC paper on compliance measures annexed to the procedural report of the March 1997 AHG meeting included a separate section III [52] entitled "Other Visits and Procedures". This has two parts addressing first Non-Challenge Visits and then Clarification Procedures/Visits. The purpose of NCVs was described as follows:

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[51]Austria/New Zealand, *Working Paper by Austria and New Zealand*, BWC/AD HOC GROUP/WP. 142, 14 March 1997.

[52]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/34, 27 March 1997: Annex I, page 37.

"- Mandatory NCVs at facilities would aim to deter non-compliance, and to act as a deterrent against proliferators using declared sites as a cover for non-compliant activities. A system of NCVs would help strengthen confidence in the accuracy of declarations...

- Inspectors during a NCV might be able to gather information that could indicate a possible non-compliance concern.....The information resulting from NCVs that could indicate a possible non-compliance concern could be followed up by other measures."

The point is also noted that "NCVs could also serve other objectives of the BTWC. They could convey information to States Parties about other relevant matters (e.g. health and safety) and could have a role to play in implementing Article V and technological cooperation under Article X."

49. Clarification Procedures/Visits are described as having the following purposes:

"- Could help build confidence in the effectiveness of mandatory declarations as a means to build transparency, by providing a means of clarifying/confirming a declaration, through consultations and/or visits to declared sites.

- Could clarify any ambiguity, anomaly, gap or any other issue relating to a declaration which has been submitted under the legally-binding regime.

- Could clarify whether there has been any error or omission resulting in the non-declaration of a site that might be declarable under the Protocol/regime.

- Could clarify any other issue relating to a State party's implementation of the arrangements under the future regime, but which would not warrant an investigation into a non-compliance concern."

The FOC paper also included the point under the section on measures to strengthen the implementation of Article III that "Declarations may be subject to checks through inspections/visits by the future BTWC Organization."

50. **At the July 1997 AHG meeting**, consideration was focussed on a rolling text[53] issued on 9 June 1997 which incorporated the language from the FOC papers annexed to the March procedural report. The purpose and initiation on NCVs and clarification procedures/visits appeared in draft Article II. G on pages 19 and 20 with implementation in Annex B on page 78. A working paper[54] by Australia, Austria, Canada, Netherlands, New Zealand, Sweden and Switzerland proposed language for non-challenge visits which sought to consolidate appropriate aspects of "Random Non-Challenge Visits" and "Ambiguity-Related Non-Challenge Visits". The purpose of such visits was stated as being:

[53]United Nations, *Rolling Text of a Protocol to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, BWC/AD HOC GROUP/35, 9 June 1997.

[54]Australia, Austria, Canada, Netherlands, New Zealand, Sweden and Switzerland, *G. [Non-Challenge Visits]*, BWC/AD HOC GROUP/WP. 178, 22 July 1997.

> "The Organization shall conduct, in accordance with the detailed provisions contained in the Annex on Implementation, a limited number per year of Random Non-Challenge Visits to declared facilities in order to confirm that declarations are consistent with this Protocol.
>
> "The Organization may conduct, in accordance with the provisions in this Article and the detailed provisions contained in the Annex on Implementation, Ambiguity Related Non-Challenge Visits to declared facilities to resolve ambiguities in declarations."

Further sections of the working paper provide language on initiation, pre-visit activities, conduct of visits and reports. Although not stated in the "Purpose", the "Pre-Visit Activities" section makes it clear that both types of visits shall have a mandate for the visit which will include the words "and shall encourage cooperation with the State party" making it clear that the aim is broader than just confirming declarations or resolving ambiguities. The section on reports includes the following:

> "The report may make recommendations as appropriate and in cooperation with the facility representatives, in such areas as the fulfillment of declaration obligations, bio-safety standards, and good laboratory or manufacturing practice."

51. A Canadian working paper[55] addresses in more general terms why non-challenge visits are an important element of a verification regime. This notes that the Verification Principles endorsed by the UN General Assembly on 7 December 1988 stated that

> "Adequate and effective verification is an essential element of all arms limitation and disarmament agreements"

and went on to say

> "Adequate and effective verification arrangements must be capable of providing, in a timely fashion, **clear and convincing evidence of compliance** or non-compliance. **Continued confirmation of compliance is an essential ingredient** to building and maintaining confidence among the parties."[Emphasis added]

The Canadian paper notes that

> "...the constituent elements of a verification regime can contribute in different ways and to different degrees, to each of the overall purposes [of a BTWC verification regime] listed above.....Other measures, by establishing a "baseline" of State/International Organization relations and interactions, may have particular merit in contributing to the assurance of compliance with certain obligations. Non-Challenge Visits (NCVs) ... are often characterized as serving such a purpose. It is generally understood that it is in the totality of the measures that the overall purpose of the verification regime can be achieved through, on the one hand, certain insistent -- perhaps even confrontational -- provisions; and, on the other, through more cooperative procedures."

[55]Canada, *Canadian Views on Non-Challenge Visits,* BWC/AD HOC GROUP/WP. 193, 28 July 1997.

The importance of the measures and obligations of the Protocol being treated as a "living document" and not only as a "paper" commitment is emphasised. Finally the paper notes the key point that:

> "Given the different industrial practices and procedures that vary from one firm to another and one country to another, **it should not be taken for granted that an international inspectorate could simply arrive in an unfamiliar country and be able to get on with its work immediately.**.....the stage might be set for unnecessary misunderstanding and friction, especially if there is no record of previous successful interaction between the State party and the inspectorate....**Visits offer an opportunity for both sides to see the other in action, to understand how and why they do things certain ways, and to understand each other's sensitivities and concerns.** All of these are worthy considerations, but one should not lose sight of the principal reason for NCVs: assurance of the fulfillment of the obligation to submit accurate, complete declarations under the Protocol, as but a small part of fulfilling one's national obligations under the Convention itself."[Emphasis added]

52. The revised rolling text attached as Annex I to the procedural report addresses "[[Non-Challenge][Random] Visits]" in Article III. F [Visits and Investigations][56]. This draws upon the language offered in the working paper by Australia, Austria, Canada, Netherlands, New Zealand, Sweden and Switzerland in respect of both Random Non-Challenge Visits and Ambiguity-Related Non-Challenge Visits. Article III. F goes on to also address "[Declaration Clarification and Consultation Procedures" which includes a section on "[[Voluntary] Visits" which states that:

> "Should [the Organization] and the requested State party be unable to resolve the ambiguity, uncertainty, anomaly, omission or other issue satisfactorily through such consultations, [the Organization] [shall have the right to] [may, upon the request of the State party] visit the declared facility or facilities in respect of which the ambiguity, uncertainty, anomaly, omission or other issue has arisen."

The section goes on to describe "Clarification Visits". The current rolling text is unclear as to whether "Clarification Visits" shall be requested by the Organization or by the State Party. Furthermore, the difference between "Ambiguity-Related Non-Challenge Visits" which are "to resolve ambiguities in declarations" and "Clarification Visits" which are to "clarify the situation and promote accuracy and comprehensiveness in future declarations" appears to be minimal -- apart from the important and significant difference as to whether the visits are requested by the Organization or by the State Party. In order to strengthen the BTWC, these should be visits requested by the Organization.

53. In addition Article VII (Scientific and Technological Exchange for Peaceful Purposes and Technical Cooperation) of the rolling text, attached to the July 1996 AHG procedural report, includes a section[57] which addresses the provision of assistance to States Parties:

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[56]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/36, 4 August 1997: Annex I, Article III. F, page 28.

[57]United Nations, *Ad Hoc Group of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction*, Procedural Report, BWC/AD HOC GROUP/36, 4 August 1997: Annex I, Article VII, page 59.

"[The BTWC Organization shall develop a framework for activities aimed at providing assistance to the States Parties [to the Protocol], and in particular to the developing countries being States parties [to the Protocol]. Taking full account of existing agreements and competences of the relevant international organizations, and bearing in mind the need to avoid duplicating existing activities and mechanisms, [the following should, *inter alia*, be considered by the States Parties directly or through a future institutional mechanism] [the BTWCO should ensure, through its own institutional framework [or directly by States parties,] provision of the following]:

a. assistance to States Parties, if requested, for the preparation of declarations required [under this Protocol][as part of the compliance regime];

b. assistance to States Parties, if requested, in drawing up internal legislation necessary [under this Protocol][to the compliance regime];...

d. [inclusion of a cooperative dimension in (non-challenge/other on-site measures) visits to States Parties, with a view to:]

i. exchanging information and providing expert advice, assistance and appropriate recommendations on biological practices;

ii. sharing information concerning cooperative programmes in biosafety, identification of agents, diagnostics and the development of innovative vaccines, aimed at being low-cost products, safe and useable under difficult conditions;....

The approach envisaged in such cooperative measures is clearly one which would be requested by the State Party seeking such assistance and help.

Analysis

54. It is thus clear that there has been debate about the role of Non-Challenge Visits for some time. Most of the arguments why NCVs are a necessary, and, indeed, essential element which can make a substantial contribution to a strengthened BTWC have been made at various times by many delegations.

55. Other delegations have expressed concern about the effectiveness and costs of NCVs as well as about the potential burden on industry and the possible risk to confidential proprietary information (CPI). Although the concept of random NCVs envisages very infrequent visits, it will be evident that nevertheless the possibility of such random visits to declared facilities will provide an incentive, which will be very much greater than the efforts involved in mounting random NCVs, to provide accurate declarations and, in would-be proliferators, to take steps to ensure that no traces of prohibited programmes are evident in declared facilities. The costs of random NCVs -- both in mounting and receiving them -- should not be high. A future BTWC organization will need to have an international inspectorate capable of mounting non-compliance concern investigations at short notice; consideration of the numbers of inspectors needed to be able to mount such a compliance concern investigation at any time shows that the BTWC organization will need to have a somewhat larger group of inspectors available to compensate for those on annual leave, sickness or undergoing training to join the group. The effectiveness and professional standing of this group of inspectors will

be enhanced if they are used to carry out NCVs whenever they are not engaged in non-compliance concern investigations. The costs of NCVs carried out in this way would be modest. As to the burden on industry, it needs to be recognised that, increasingly around the world, public concern about the safe handling and storage of pathogens and toxins is demanding increased inspection by national health and safety authorities. Furthermore, as these are **non-challenge** visits of declared facilities whose goal is to confirm compliance and to validate the accuracy of declarations; in some cases, they will be to clarify uncertainties or ambiguities. The burden on industry should be slight and there should be no risk to CPI.

56. The situation has, however, been confused by the use of the term NCV to cover **three** types of visit -- all of which are non-challenge yet one is a **random** measure involving visits to declared facilities whilst the other two categories are **focussed** either to clarify a declaration or to address an ambiguity -- in both of these cases there is no random element. In addition, it is apparent that the cooperative measures outlined in Article VI in which visits on request would be made fall into the category of **focussed** visits as the assistance sought by a State Party will be specific; waiting until a random visit happens to be made to a particular State or to a particular facility is unlikely to meet the requirement. It is also very clear that NCVs are **not** "routine inspections" of the type in the verification regime for the CWC. **Random** NCVs will involve infrequent visits to declared facilities -- and it should be recalled that the aim in determining which facilities will be declared will be to declare those facilities of **most** relevance to the BTWC and **not all** facilities of **possible** relevance. In addition, the format of the FOC papers has not been such as to facilitate the consolidation of the arguments for the different categories of NCVs into a comprehensive statement; for understandable reasons, the emphasis has been on brevity wherever possible. There does not seem to have been a comprehensive statement in a working paper which draws together all the reasons why **both random** and **focussed** NCVs are so important.

57. The **random** non-challenge visits to declared facilities are a particularly important element of a future regime for a strengthened BTWC. Of the nine reasons why NCVs are important set out below, most if not all apply to the **random** NCVs to declared facilities whilst some (such as c and d) may be more applicable to **focussed** NCVs.

a. to contribute to **an integrated and effective regime** for a strengthened BTWC --

> "It is highly unlikely that agreement could ever be secured for a protocol based exclusively on challenge inspections.... A mechanism with only a challenge provision would set an unnecessary high threshold for the on-site measures that could be taken to pursue non-compliance concerns. There are also grounds for doubting whether such an arrangement could be as effective as a package of interrelated measures consisting of declarations, short notice validation/information inspections/visits, challenge inspections and procedures for investigating alleged use."[UK, para 28 above, ref 31]

b. to **strengthen confidence** in the accuracy of declarations --

> "assurance of the fulfillment of the obligation to submit accurate, complete declarations under the Protocol" [Canada, para 51 above, ref 55]

c. to **clarify and confirm** declarations --

"Alongside short notice inspections, it seems useful to establish a mechanism of validation visits, which would be part of cooperation programs between the organization and national authorities. Such visits would help in the process of preparing, checking, updating and improving national declarations and would lead to recommendations by the secretariat to national authorities and facility operators, including recommendations on biological safety practices." [Brazil, para 14 above, ref 13]

d. to **clarify other ambiguities** --

"The measures set forth in the protocol should help strengthen the Convention by establishing an official benchmark for identifying discrepancies or ambiguities pertaining to facilities or activities and for seeking clarification, providing a mechanism for pursuing specific activities of concern and allowing for direct diplomatic engagement to resolve compliance concerns." [USA, para 13 above, ref 11]

e. to **deter non-compliance** and act as a deterrent to cheating at a declared site --

"the deterrence value against non-compliance of short-notice non-challenge visits, even if such visits are relatively limited in number, would make a significant contribution to a future verification Protocol."[EU, para 38 above, ref 42]

f. to **encourage cooperation** with States Parties --

"information/Validation visits could be an important element of a future BWC verification system, providing both deterrence and transparency, and could harness several cooperation activities." [Brazil, para 34 above, ref 37]

"Such cooperation would, inter alia, help the organization obtain full knowledge of biological activity in each State Party and throughout the world, thereby providing a strong deterrent to potential violators, while at the same time offer the opportunity to increase the exchanges between States parties in the biological field, with all-round benefits in terms of increased confidence, enhanced biosafety practices and more reliable containment of infectious diseases."[Brazil, para 42 above, ref 46]

g. to assist in building a picture over time of **national norm in microbiological activities** --

"could be used by an inspectorate to build up a picture of the normal activity and to assess overall consistency and coherence." [VEREX, para 11 above]

h. to enhance the **efficiency, preparedness and professional standing** of the inspectorate --

"on-site inspections of a routine type for validation of declarations and information gathering for the BTWC should be strongly restricted in frequency and intensity to a small number of inspections/visits per year to keep

inspectors and an inspectorate well trained and give them adequate experience but at the same time limiting the costs." [Sweden, para 30 above, ref 33]

"NCVs could also play an important role in enhancing the inspectors professionalism and give them necessary experience of various types of facilities. As the numbers of NCV will be limited the extra burden due to them on the inspectorate will be limited. Without NCVs a programme for trial inspections to keep the inspectors well trained would have to be extensive." [Sweden/Netherlands, para 43 above, ref 47]

i. to avoid misunderstandings and **incorrect judgements** --

"Non-challenge visits would help to build transparency and could clarify concerns which might otherwise lead to false judgements being made."[EU, para 38 above, ref 42]

"Given the different industrial practices and procedures that vary from one firm to another and one country to another, it should not be taken for granted that an international inspectorate could simply arrive in an unfamiliar country and be able to get on with its work immediately.....the stage might be set for unnecessary misunderstanding and friction, especially if there is no record of previous successful interaction between the State party and the inspectorate....Visits offer an opportunity for both sides to see the other in action, to understand how and why they do things certain ways, and to understand each other's sensitivities and concerns." [Canada, para 51 above, ref 55]

58. Although in the earlier debate in the AHG about NCVs, there was emphasis then on such visits being at short notice, this emphasis has become less evident recently. It is clear that short notice is particularly important for non-compliance concern investigations when timely investigation is needed. When NCVs are considered, it is evident that clarification and ambiguity related visits will be more effective if the State Party being inspected has been able to prepare for the visit and has its relevant experts available. A similar argument applies to cooperation visits made at the request of a State Party. Insofar as random visits are concerned, short notice visits are not a prerequisite for the achievement of most of the objectives of such NCVs.

59. It is evident that there are a number of important reasons why **random** as well as **focussed** NCVs are important elements of a future regime additional to those cited in the current rolling text in Article III. F. Of particular importance are those relating to the avoidance of incorrect judgements and the building up of a benchmark appreciation of both national and world-wide activities in biology and microbiology against which consistency and coherence can be assessed. It has to be stressed that in the absence of **random** NCVs, the risk will be increased that the assessment made by a non-compliance investigation may be incorrect -- resulting in a false negative (ie failing to detect non-compliant activity when it is present) or a false positive (ie judging an activity to be non-compliant when it is actually compliant). Such a situation would bring the strengthened BTWC into disrepute and will not strengthen national and international security.

60. As has been recognised by several delegations, **a package of integrated measures** need to be crafted to create an effective Protocol to strengthen the BTWC. It is improbable that agreement could ever be secured for a protocol based exclusively on challenge inspections -- or that such a protocol would be effective in building confidence in compliance. A mechanism with only a challenge provision would set an unnecessary high threshold for the on-site measures that could be taken to pursue non-compliance concerns. A package of interrelated measures consisting of mandatory declarations, **random** as well as **focussed NCVs**, and non-compliance concern investigations of both facility and field will be needed.

61. There would be benefits to the AHG if a State Party were to set out clearly the arguments for both **random** and **focussed** NCVs as this would serve to provide a useful aide memoire to the negotiators who are endeavouring to incorporate into the rolling text the provisions for both random and focussed NCVs. There could also be benefit if the rolling text were to adopt language such as random and focussed to distinguish between the two fundamental types of NCVs as both are important elements that would contribute significantly to the effectiveness of a future legally binding instrument to strengthen the BTWC.

Conclusions

62. Consideration of the VEREX discussion together with the provisions of the CWC and the experience gained by UNSCOM and the subsequent AHG discussion shows that the advantages of non-challenge visits far outweigh the possible disadvantages and that **random** as well as **focussed** NCVs are a necessary and important element of the package of measures needed for an effective verification regime to strengthen the BTWC. The rolling text needs to be developed so that both categories of NCVs are incorporated in the legally binding instrument.