

**Working Group on the Strengthening of the
Convention on the Prohibition of the Development,
Production and Stockpiling of Bacteriological
(Biological) and Toxin Weapons and on Their
Destruction**

6 December 2023

English only

Third Session

Geneva, 4-8 December 2023

Agenda item 6

**Identifying, examining and developing specific and effective measures, including possible
legally-binding measures, and making recommendations to strengthen and institutionalize
the Convention in all its aspects within the mandate of the Working Group**

**Contemporary problems of verification under the BTWC.
Historic work experience of the VEREX and the Ad Hoc
Group of States Parties to the BTWC**

Submitted by the Russian Federation



**Problems of BTWC verification at the present stage.
Historical Perspectives of VEREX and the Ad Hoc Group**

Dr. Dmitrii Poklonskii



**BIOLOGICAL WEAPONS
CONVENTION**

**WORKING GROUP ON THE
STRENGTHENING OF THE BTWC**

VEREX GROUP, GOAL-SETTING AND WORKING METHODOLOGY

2



1991

Third Review
Conference

VEREX 1 30 March-10 April 1992
(Identification of measures)

VEREX 3 24 May-4 June 1993
(Evaluation of measures)

Summary report
efforts

VEREX 2 23 November-4 December 1992
(Examination of measures)

VEREX 4 13-24 September 1993
(Preparation of the report)

1993

Evaluation criteria for verification measures



Strengths and weaknesses based on but not limited to the amount and quality of information they provide and fail to provide



Ability to differentiate between prohibited and permitted activities



Ability to resolve ambiguities about compliance



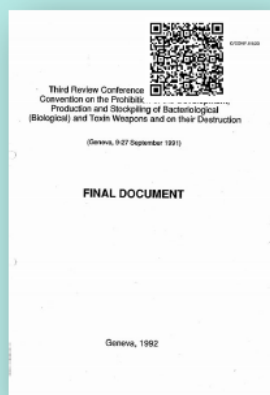
Their technological, material, manpower and equipment requirements



Their financial, legal, safety and organizational implications



Their impact on scientific research, scientific cooperation and other permitted activities



«...to establish an Ad Hoc Group of Governmental Experts, VEREX, open to all States Parties to identify and examine potential verification measures from a scientific and technical standpoint...»

METHODOLOGICAL APPROACHES TO ASSESSING THE EFFECTIVENESS OF VERIFICATION MEASURES

3



The quality of information on the use of a verification measure may be examined differently. On the one hand, it may simply be the volume of information, while on the other - it may be understood as a quantity measure of information



Prognosis models have to be developed to quantify criteria 5 and 6 on a number of parameters and subjects for prohibition and their scope have to be specified for criteria 2 and 3

Verification measures	Relative VM effectiveness			Relative VM costs		
	R&D evaluation	Prod. facility evaluation	Storage facility evaluation	R&D evaluation	Prod. facility evaluation	Storage facility evaluation
Surveillance of publications	8,2	10,7	8,9	12,6	14,0	14,5
Declarations	7,2	7,4	9,2	15,5	15,9	16,0
Notifications	8,6	8,5	11,1	15,5	15,8	15,8
Surveillance by satellite	13,4	12,2	11,7	7,2	7,4	7,4
Surveillance by aircraft	13,0	12,0	11,5	9,1	8,5	8,6
Ground-based surveillance	11,3	11,2	11,5	9,3	9,1	9,1
Sampling and identification (off-site)	12,9	11,9	13,1	6,5	6,0	6,7
Observation	12,2	12,2	12,4	10,3	9,7	9,6
Auditing (off-site)	11,2	11,4	12,6	11,3	11,0	11,0
International arrangements	8,8	12,5	12,7	9,4	10,3	9,3
Interviewing	6,1	7,4	7,4	9,5	9,8	9,1
Visual inspection	8,9	7,4	6,0	9,1	8,7	9,7
Identification of key equipment	6,5	5,1	4,4	8,8	8,6	8,5
Auditing (off-site)	4,5	5,1	3,5	7,3	6,7	7,2
Sampling and identification (on-site)	5,4	5,2	4,5	4,0	4,0	3,9
Medical examination	6,8	6,2	8,3	6,8	6,8	6,7
Continuous monitoring by instruments and personnel	5,3	6,1	3,4	1,8	1,4	1,5

12,8
7,3
15,0
15,0
14,8
11,8
14,6
12,3
10,7
5,3
4,7
3,5
5,3
2,8
8,5
8,0

VEREX GROUP, VERIFICATION MEASURES

4



Off-site

- Information Monitoring
- Data exchange
- Remote sensing
- Sampling and identification



On-site

- Exchange visits
- Inspection
- Auditing on-site

- Multilateral information sharing
- Surveillance of publications
- Surveillance of legislation

- Data on transfers, transfer requests and on production
- Exchange visits - international arrangements
- Declarations

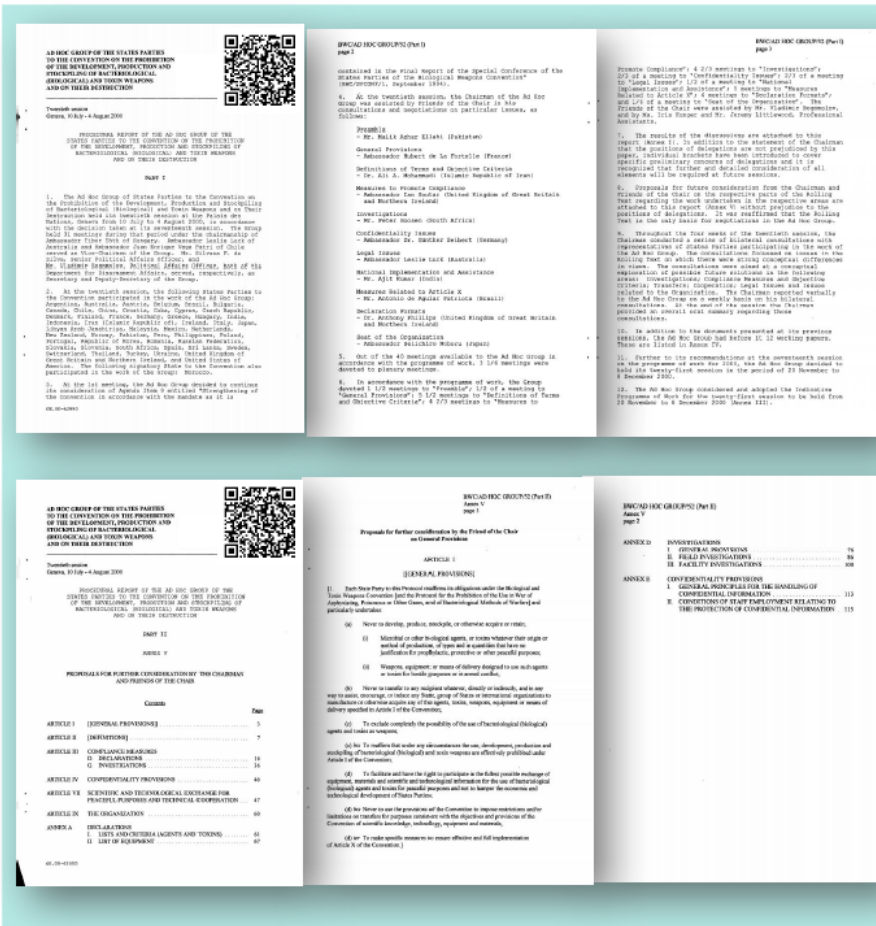
- Visual inspection (off-site)
- Surveillance by satellite
- Observation (off-site)

- Sampling and identification (on-site)
- Surveillance by aircraft
- Ground-based surveillance (off-site)

- Interviewing (on-site)
- Identification of key equipment (on-site)
- Continuous monitoring by instruments (on-site)

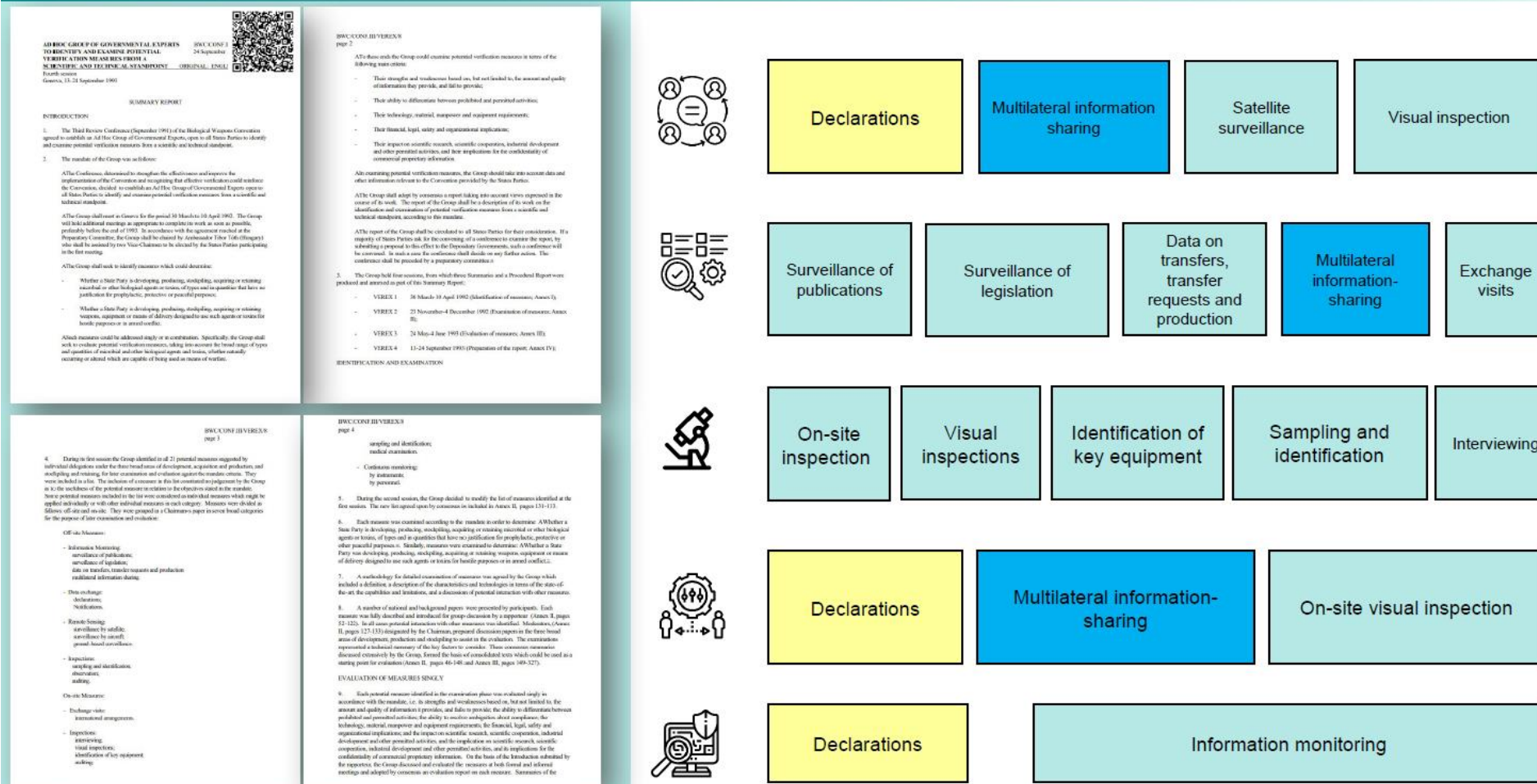
- Exchange visits (off-site)
- Auditing (off-site)
- Sampling and identification (off-site)

- Medical examination (on-site)
- Continuous monitoring
- Continuous monitoring by personnel



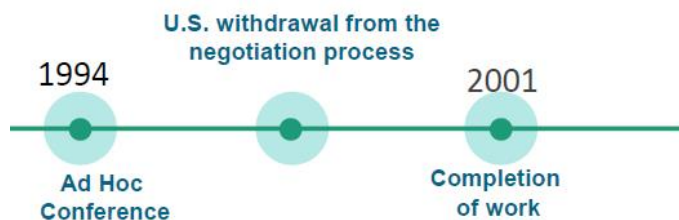
VEREX GROUP. METHODOLOGICAL ASPECTS OF THE USE OF VERIFICATION MEASURES

5



ACTIVITIES OF THE AD HOC GROUP (AHG). REPORT OF THE AD HOC GROUP

6



«Compromise» text version



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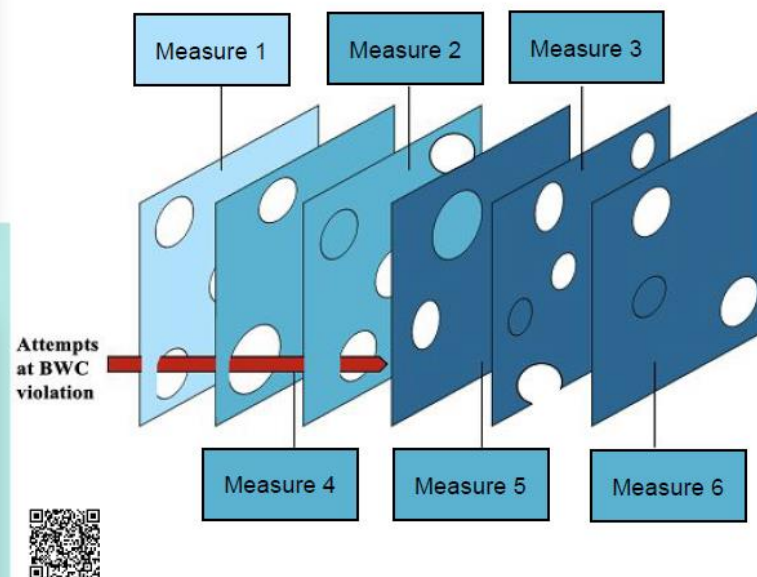





Figure 1: Schematic depicting the multi-layered approach recommended to assess BWC compliance and hinder development of bioweapons. Visualization adapted from Mackay, Ian M «The Swiss Cheese Respiratory Virus Defense.» Virology Down Under, 26 Dec. 2020

ACTIVITIES OF THE AD HOC GROUP (AHG). PROJECT OF PROTOCOL

7



Confidence Building Measures (CBM) reports submitted by 2022, total 183 States Parties

Measure	Definition	EVALUATION (Capabilities and Limitations)	
		Criteria 1 - 3	Criteria 4 - 6
Surveillance of publications 	Selective scanning and analysis of publicly available printed matter and of the media with special attention to scientific literature related to activities in the biological field. (VEREX/9, Annex II, p.54)	It could provide useful information on relevant activities in State Party, but consistency in quantity and quality may vary. It may help in the selection of sites for inspections and in focussing ongoing inspection activities. The information provides only a partial picture of activities. This focussing could be done by using key identifiers. Not all types of relevant information are necessarily published. (VEREX/9, Annex III, p. 154 etc.)	If focussed this measure need not be very costly. Some personnel with specific expertise and a computer database would be needed. Translation services might be costly. The low level of intrusiveness of this measure is an advantage.
Multilateral information sharing 	The use of any voluntary international provision or exchange of information on medical, veterinary, agricultural, environmental safety standards, defence and waste management issues, etc. relating to materials and activities of potential relevance to the BWC. Such information sharing on a voluntary basis may or may not have an agreed standard for the nature of the information to be provided. (VEREX/9, Annex II, p.58)	May well be an effective measure if combined with other measures. May help explain the nature of dual purpose activities and provide indications of non-declared activities. However, this measure depends on the willingness of a State Party to provide information. The information may be inaccurate and generate unwarranted concerns. (VEREX/9, Annex III, p.160 etc.)	If focussed this measure is not very costly. The precise requirements of this measure still need to be determined. A computer/ database is needed. Legal implications and confidentiality concerns need to be considered; access to CPI can be defined.
Surveillance of legislation 	Collecting and analyzing of information with regard to legislation that exists in relation to the BWC or other areas of interest. (VEREX/9, Annex II, p. 56)	Could provide information on relevant activities of States Parties. However, the absence of legislation is not an indication of non-compliance. It may help in the selection of sites for inspections and in focussing ongoing inspection activities. The amount of information could be very large and the quantity varies per State. May help explain the nature of dual purpose activities. (VEREX/9, Annex III, p. 156 etc.)	This measure need not be very costly. Although the precise requirements pertaining to this measure still need to be determined, an investment into a computer/ database is needed. Translation costs may be substantial. Limited impact, if any, on permitted activities.

Criteria 1-3:

Strengths and weaknesses based on but not limited to the amount and quality of information they provide and fail to provide

Ability to differentiate between prohibited and permitted activities.

Ability to resolve ambiguities about compliance.

Criteria 4-6

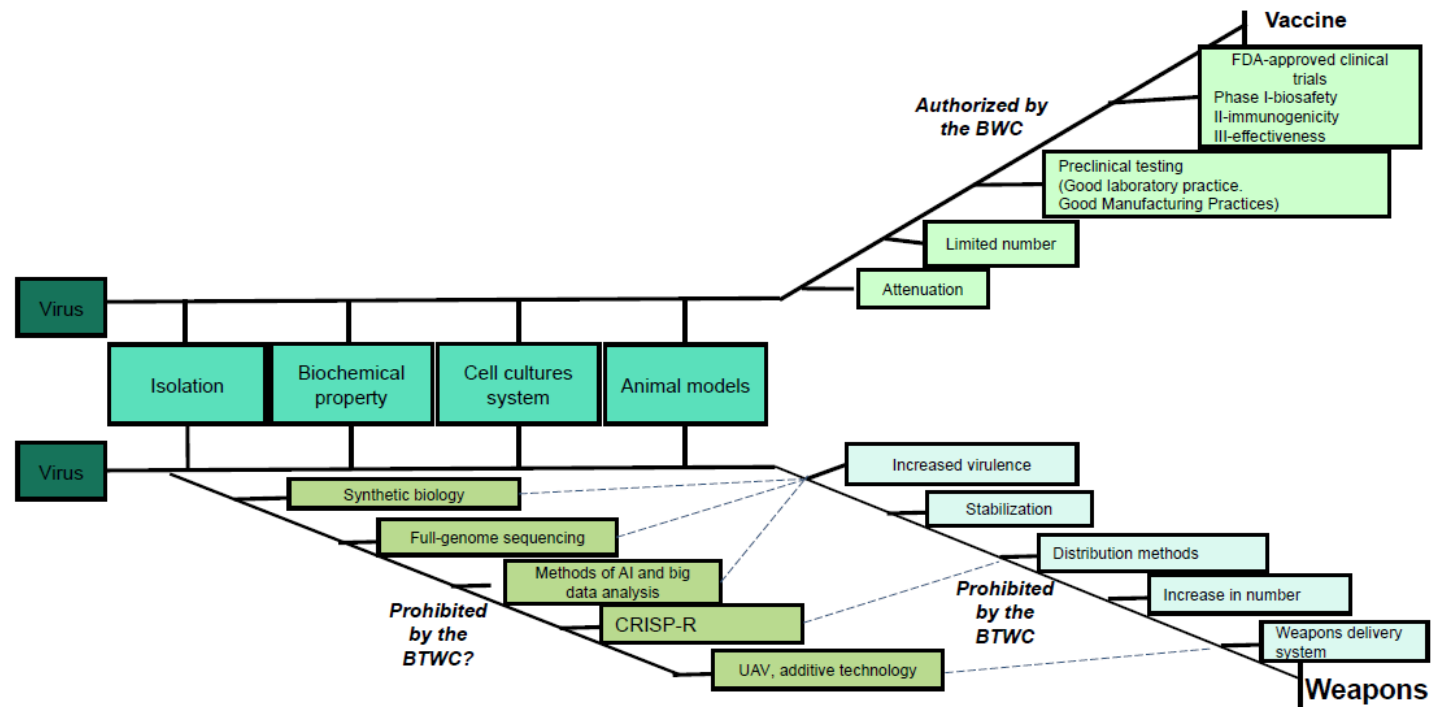
Their technological, material, manpower and equipment requirements.

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 CPI.

VACCINE DEVELOPMENT AND WEAPONS DEVELOPMENT ARE NOT PARALLEL

8



CURRENT SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENTS AND THEIR POTENTIAL IMPACT ON INTERNATIONAL SECURITY AND DISARMAMENT

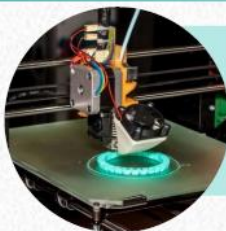
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Report of the Secretary-General



Current developments in science
and technology and their impact on
international security
and disarmament efforts



Additive manufacturing based on 3-D
printing technologies

Big data analysis and artificial
intelligence technologies






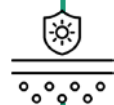

Nanotechnology and materials science

Biological research automation and
robotics



NEW TECHNOLOGY PLATFORMS IMPACT ON THE IMPLEMENTATION OF INDIVIDUAL BWC ARTICLES

10

Article I	It is necessary to keep track of scientific and technological advances that go far beyond the traditional understanding of biological weapons, but at the same time reduce technical barriers to the development and delivery of BW		Methodological approaches to the formation of equipment lists
Article III	The digitization of biological data and the growing possibilities for DNA sequencing and editing pose serious non-material challenges to existing export control regimes and practices		Terms and definitions
Article IV	A number of new technologies raise serious ethical, biosafety and biosecurity issues. It may be necessary to reassess whether states are actually taking «necessary measures to prohibit and prevent the development, production and stockpiling» of biological weapons		Lists of biological agents and toxins
Article VI	New technologies (big data and DNA sequencing) provide a much wider range of possibilities with which to confirm or refute the validity of alleged violations of the BTWC		Threshold quantities of biological materials
Article VII	New technologies increase the speed and efficiency of response to disease outbreaks and could also be important in helping states at risk from BWC violations		Conducting inspections and audits
Article X	Digitizing biological data fundamentally changes the way scientists can share information and collaborate for peaceful purposes		

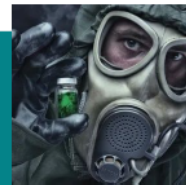
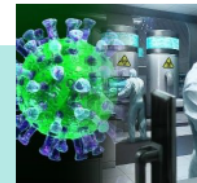
TERMS AND DEFINITIONS

11



Protection against biological weapons – measures for the prevention, abatement and elimination of the effects of bacteriological (biological) and toxin weapons on humans, animals and plants

Program of protection against biological weapons – a set of research and development activities directed towards the implementation of measures for the prevention, abatement and elimination of the effects of bacteriological (biological) and toxin weapons on humans, animals and plants



Presumed use of a biological weapon – a declaration by a State, based on observation of biological agents, means of delivery and their use, to the effect that biological and/or toxin weapons have been used against it

- Terms related to the entire set of verification measures under the Protocol
- Terms related to the criteria for evaluating declarations
- Operational terms and definitions applicable in the various sections of the Protocol

Unusual outbreak of a disease – the emergence and spread of an infectious disease whose origin and clinical characteristics fundamentally distinguish it from other diseases that are typical of a specific locality over a lengthy period of time



CRITERIA FOR INCLUSION OF MICROORGANISMS AND TOXINS IN THE LIST

13

The criteria proposed by the Ad Hoc Group

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



Thirteenth session
Geneva, 4-22 January 1999

Working paper submitted by the Russian Federation

EVALUATION OF THE SIN NOMBRE VIRUS, TETRODOXIN AND
THE DIPHTHERIA TOXIN

INTRODUCTION

Evaluations were carried out on the Sin Nombre virus, tetrodotoxin and the diphtheria toxin from the List of human pathogens.

The results of these evaluations are discussed.

SIN NOMBRE VIRUS

The area of distribution is South and North America. The vectors are rodents, primarily deer or certain hamsters and rats. The virus causes severe sicknesses, whose principal manifestation is haemorrhagic fever with pulmonary syndrome. Lethality is 47 per cent.

Evaluation according to criteria

- | | |
|--|---------|
| 1. [Vectors or] Agents known to have been developed, produced, stockpiled or used as weapons | No data |
| 2. Low infection dose or high toxicity | Yes |
| 3. [Short incubation and] High level of morbidity | No |
| 4. High level of contagiousness in population | No |
| 5. Infection or intoxication (by variety of route, especially) by respiratory route | Yes |
| 6. High level of incapacity or mortality | Yes |
| 7. No effective prophylaxis (i.e. immune sera, vaccines, antibiotics) and/or therapy available and widely in use | Yes |
| 8. Stability in the environment | No data |

GX.99.60083 (K)

9. Difficulty of detection or identification [at the

No data
No data
or human pathogens, it

eculature as a result
Eyes, and is most
cause death within a
ion through the skin or

Yes
Yes
Yes
No

Yes
Yes

and

Yes
Yes

Yes

No
or human pathogens, it

ion.

No data
Yes
Yes



High levels of morbidity and/or infectiousness



Infection or intoxication by respiratory route



Low infection dose or high toxicity



High level of incapacity or mortality



No effective prophylaxis and/or therapy available and widely in use



Stability in the environment



Difficulty of detection or identification



Ease of manufacture, ease of storage, and stability of stockpiles



Psychological consequences of the threat of use or any suspected use



Means known to have been used as a weapon or assessed as weapon

DEFINING THRESHOLD QUANTITIES OF BIOLOGICAL MATERIALS

14

Working paper

sipri

The quantity of a potential BW agent which could be used as a weapon



AHG experts

The quantity of biological in terms of effective doses (LD50, ID50, etc.)

$$M = K \cdot LD_{50} / C \cdot 500$$

M – amount of biological material, pathogen of a given virulence and contents that can be simultaneously stored at the facility (kg);
C – agent concentration (cells/ml).

KEY EQUIPMENT INFORMATION

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AD HOC GROUP OF THE STATES PARTIES
TO THE CONVENTION ON THE PROHIBITION
OF THE DEVELOPMENT, PRODUCTION AND
STOCKPILING OF BACTERIOLOGICAL
CHEMICAL AND TOXIN WEAPONS AND
ON THEIR DESTRUCTION



Eighth session
Geneva, 15 September - 3 October 1997

RESULTS FOR HAZARDOUS DECLARATIONS

Working paper submitted by the Russian Federation
The States parties shall submit declarations in accordance
with the following format:

1. Form A
Does a biological weapons protection programme exist?
Yes/No
2. Form B
To be completed for facilities participating in a BW
protection programme which are carrying out work with any
micro-organisms and toxins, as well as with materials that
contain these preparations:
1. Name of facility
2. Location (address and geographical location)
3. Ownership (government department or company)
4. List the biological agents and toxins on which work is
being carried out
5. Indicate the main areas of activity in the facility
(development of protective agents and methods, observation,
identification, genetic manipulation, serology, toxicology,
distribution and other activities related to the purposes of
the Convention)
(How these areas with a BS-4 containment level)
Yes/No
7. Indicate all equipment present.

Fermentation equipment

Includes all fermenters, bioreactors, chemostats and
continuous-flow fermentation systems suitable for the
production of micro-organisms or subviral cells or for the
production of toxins.
Equipment for batch fermentation with a capacity of over
100 litres.

YES ...
NO ...
Equipment for continuous fermentation with a capacity of
over 100 litres.

YES ...
NO ...

Separators

Centrifugal separators or tanks for continuous or semi-
continuous operation with a capacity of over 100 litres per
hour.

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
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YES ...
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YES ...
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YES ...
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YES ...
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YES ...
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YES ...
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YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

Drying equipment

Spray-drying, freeze-drying and other drying equipment with
a maximum capacity greater than 5 kg per day.

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

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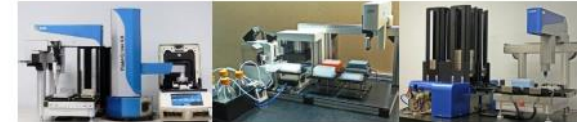
YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

YES ...
NO ...

Synthetic biology methods



Directed synthesis methods



Separators



Fermentation Equipment



Filtration equipment



CONDUCTING INVESTIGATIONS

16



Investigation into an alleged breach of obligations under the provisions of the Convention



Investigation into the alleged use of biological weapons



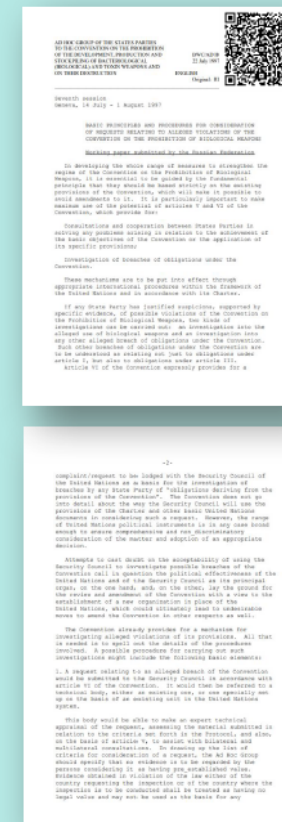
The procedure for filing and considering a complaint (request) has been determined; its contents, as well as the structural elements of the investigation, including specific on-site verification measures, sampling and analysis procedures.



The basic principles and procedures for considering requests related to alleged violations of the BTWC have been defined.



At the same time, emphasis is placed on maximum use of the potential of Articles V and VI of the Convention and specific procedures for their implementation are proposed.



PROTECTING PROPRIETARY INFORMATION DURING INVESTIGATIONS

17



- (e) In meeting the requirements to provide access, the receiving State Party shall be under the obligation to provide the greatest degree of access possible, taking into account any constitutional obligations it may have with regard to proprietary rights or searches and seizures;
- (f) The receiving State Party shall make every reasonable effort to demonstrate its compliance with the Convention and, to this end, to enable the investigation team to fulfil its mandate.
29. The receiving State Party shall have the right to take measures, as it deems necessary, to protect national security and/or to protect confidential information and data (including commercial proprietary information) in accordance with the provisions of this section and taking into account its obligations under this Protocol. Such measures may include but shall not be limited to the following:
- (a) Removal of sensitive papers from office spaces and direct view;
 - (b) Shrouding of sensitive displays, stores, and equipment;
 - (c) Shrouding sensitive pieces of equipment, such as computer or electronic systems;
 - (d) Logging off of computer systems and turning off data indicating devices;
 - (e) Using random selective access techniques whereby the team is requested to select a given percentage or number of buildings of their choice to investigate; the same principle can apply to the interior and content(s) of sensitive buildings or documents;
 - (f) Limiting the number of team members who have access to certain buildings, structures or places within the area specified in paragraphs 36 and 39;
 - (g) Limiting the viewing angle;
 - (h) Limiting the time investigation team members may spend in any area or building;
 - (i) At any time during the investigation, notifying the investigation team of the products and processes that involve national security and/or the protection of confidential information and data (including commercial proprietary information) and its rights to safeguard them. It may request that if a specific piece of information is released to the team, it should be accorded the most stringent protection measures in conformity with the confidentiality provisions of this Protocol.
30. If the receiving State Party provides less than full access to places, activities or information, it shall make every reasonable and feasible effort to provide alternative means to demonstrate compliance and to clarify the possible non-compliance concern that generated the investigation. The nature and extent of access, including any alternative means to demonstrate compliance, provided by the receiving State Party, and the extent to which this

- 61 -

enabled the investigation team to fulfil its mandate, shall be recorded factually in the investigation report.

31. These provisions may not be invoked by the receiving State Party to conceal any evasion of its obligations not to engage in activities prohibited under the Convention.

32. The investigation plan shall be handled in accordance with Annex B (80) and (149) to (153).

33. The investigation team shall take into consideration suggested modifications of the investigation plan and proposals which may be made by the receiving State Party, at any stage of the investigation, including the pre-investigation briefing, to ensure, *inter alia*, that sensitive equipment, information or places are protected.

34. The investigation team shall conduct the investigation in the least intrusive manner possible consistent with the effective and timely implementation of its mandate. As a rule, it shall begin with the procedures it deems least intrusive and proceed to more intrusive procedures only as required to fulfil its mandate.

35. If the investigation team considers it necessary in order to fulfil its mandate, the investigation team shall have the right to request clarification in connection with ambiguities that may arise during an investigation. Such requests shall be made promptly to, or through the representative of the receiving State Party. The representative shall make every reasonable effort to provide the investigation team with such clarification as may be necessary to remove the ambiguity.

Field investigations

36. The receiving State Party shall provide access within the investigation area within 48 hours after arrival of the investigation team at the point of entry in order to conduct activities in accordance with this Article and Annex B, Parts A and B for the duration of the investigation as specified in Annex B (73).

37. The receiving State Party shall provide access in accordance with paragraph 28 within the investigation area for the sole purpose of enabling the investigation team to conduct specific on-site activities identified in, and in accordance with, Annex B (84) to (111). The extent and nature of access within the investigation area shall be negotiated between the investigation team and the receiving State Party in accordance with paragraphs 28 to 35. Such negotiated access, in accordance with paragraphs 28 to 35, shall allow access to all humans, animals and/or plants that may have been affected by microbial or other biological agents or toxins directly related to the non-compliance concern being investigated.

38. The access provided for in these paragraphs shall not interfere or impede with any national measures taken to deal with the outbreak of disease.

Facility investigations

39. The receiving State Party shall provide access within the requested and, if different, final perimeter as soon as possible but not later than 108 hours after the notification of the receiving State Party of the request for an investigation in accordance with paragraph 20.

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Shrouding sensitive pieces of equipment such as computers or electronic systems

Logging off computer systems and turning off data indicating devices

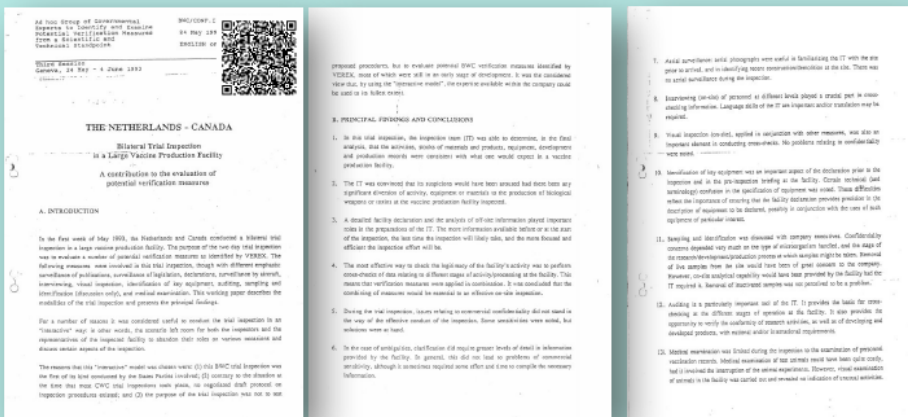
Using random selective access techniques whereby the team is requested to select a given percentage or number of building of their choice to investigate; the same principle can apply to the interior and content(s) of sensitive building or documents

Removal of sensitive papers from direct view

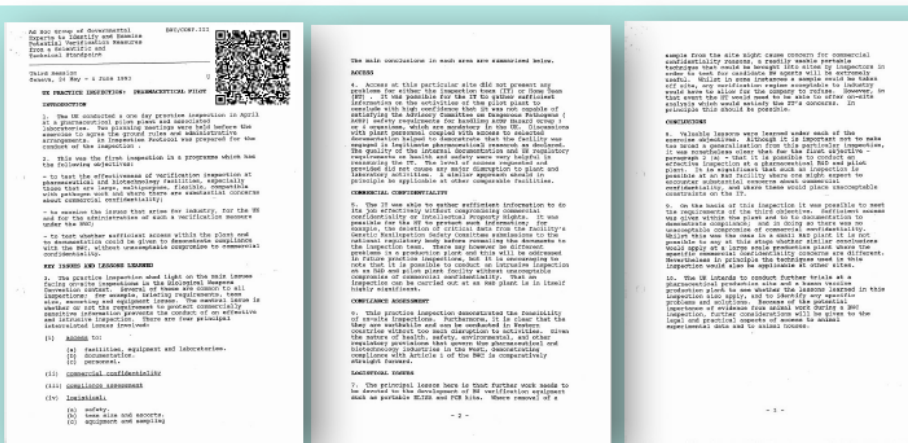
Limiting the time investigation team members may spend in any area or building, while allowing the team to fulfill its mandate

RESULTS OF TWO TRIAL INSPECTIONS IN ACCORDANCE WITH VEREX CRITERIA, RESULTS OF THE WORK OF THE EXPERT GROUP

18



he purpose of the two day trial inspection was to evaluate a number of potential verification measures as identified by VEREX



Given the nature of health, safety, environmental protection and other regulations governing the pharmaceutical and biotechnology industries, demonstrating compliance with Article I of the BWC is relatively straightforward

VISUAL ON-SITE INSPECTION, DATA ON MATERIEL TRANSFERS, TRANSFER REQUESTS, AND PRODUCTIONS

19

Definition	EVALUATION (Capabilities and Limitations)	
	Criteria 1–3	Criteria 4-6
Aimed at acquiring a general view of the site, facilities, equipment, materials and the degree of protection, safety measures and the peaceful activities which are being carried out. It includes taking note of the specificities and the characteristics of the equipment and the instruments. (VEREX/9, Annex III, p.217)	A large amount of information can be obtained, limited by the degree of access. May provide information on prohibited activities. But the dual-purpose nature of equipment may complicate interpretation of information and ability to resolve ambiguities about compliance. May provide information on production capacity and general capabilities. May provide information on possible undeclared activities, but it is unlikely to provide information on removed equipment. (VEREX/9, Annex III, p.217 etc.)	It has a low capital investment requirement. The quality of the manpower available is of particular importance. CPI may be disclosed; contamination risk might be a limiting factor. It may cause an interruption of the routine work at the site and commercial confidentiality may be at risk. Inspector training is required and, in some facilities, in some States, may require national legislation.

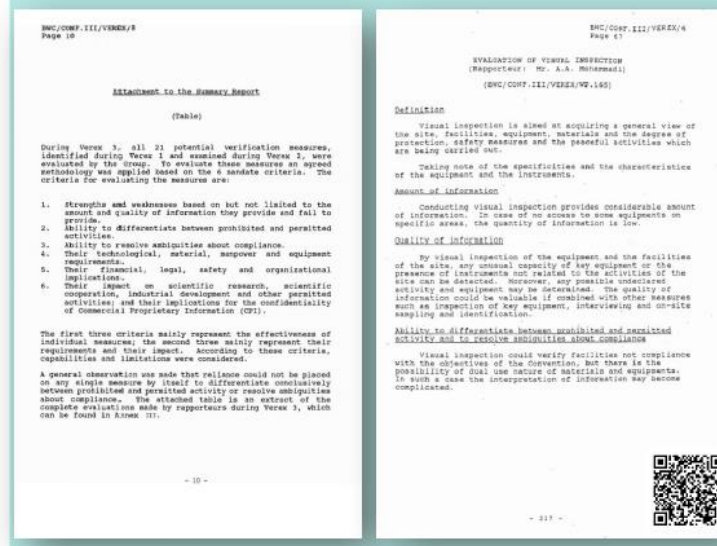
Criteria 1–3 **Strengths and weaknesses based on but not limited to the amount and quality of information they provide and fail to provide**

Ability to differentiate between prohibited and permitted activities.

Ability to resolve ambiguities about compliance.

Criteria 4-6 **Their technological, 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 CPI.



SAMPLING AND IDENTIFICATION (ON-SITE)

20

Definition	EVALUATION (Capabilities and Limitations)	
	Criteria 1–3	Criteria 4-6
The act of taking samples on the inspected site, analyzing these samples either on the site using appropriate methods or to transfer these samples from the site for identification or further investigations in appropriate laboratories. (VEREX/9, Annex III, p.228)	It could provide key information to resolve certain ambiguities about compliance because of the possibility of identifying the nature of an agent. Can provide information of significant quality and quantity, in particular because of the possibility of obtaining an independent confirmation of analytical results in the event that findings are disputed. A negative result does not necessarily rule out prohibited activities and may not resolve all cases of non-compliance ambiguities. The efficiency of this measure would be enhanced from a prior indication of the agents one is looking for. Ambiguous results would be reduced if more than one analytical technique and several samples from the same site were used. There is a need for an environmental profile of the site. Key issues are the chain of custody and the use of good sampling and identification practices (GSIP). (VEREX/9, Annex III, p.228 etc.)	Currently available materials would allow many of the on-site presumptive tests to be performed. There is a need to establish infrastructure for training and deployment of inspectors. Creation and maintenance of a sophisticated field laboratory or an independent laboratory could be very costly. There is a risk of loss of CPI, but the use of equipment and methodology from the site could reduce the costs and protect confidentiality. The need to preserve intellectual, individual and commercial proprietary rights in the case of legitimate activities, means the obligation to use special technical and legal procedures for processing samples, particularly if there are grounds for removing samples from the site for subsequent analysis.

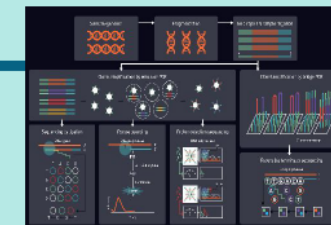
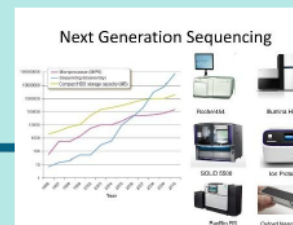
Criteria 1–3 **Strengths and weaknesses based on but not limited to the amount and quality of information they provide and fail to provide**

Ability to differentiate between prohibited and permitted activities.

Ability to resolve ambiguities about compliance.

Criteria 4-6 **Their technological, 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 CPI.



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Page 10

Attachment to the Summary Report
(Table)

During VEREX 3, all 21 potential verification measures, identified during Verex 1 and examined during Verex 3, were evaluated by the group. To evaluate these measures an agreed methodology was applied based on the 6 mandate criteria. The criteria for evaluating the measures are:

1. Strengths and weaknesses based on but not limited to the amount and quality of information they provide and fail to provide.
2. Ability to differentiate between prohibited and permitted activities.
3. Ability to resolve ambiguities about compliance.
4. Their technological, material, manpower and equipment requirements.
5. Their financial, legal, safety and organizational implications.
6. Their impact on scientific research, scientific cooperation, industrial development and other permitted activities; and their implications for the confidentiality of Commercial Proprietary Information (CPI).

The first three criteria mainly represent the effectiveness of individual measures; the second three mainly represent their requirements and their impact. According to these criteria, capabilities and limitations were considered.

A general observation was made that reliance could not be placed on any single measure by itself to differentiate conclusively between prohibited and permitted activity or resolve ambiguities about compliance. The attached table is an extract of the complete evaluations made by rapporteurs during Verex 3, which can be found in Annex III.

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Page 11

DEFINITION
SAMPLING AND IDENTIFICATION (on-site)
(Rapporteur: Mr. P. Binder)
(BWC/CONF.III/VEREX/9P.148)

Introduction

During VEREX I and II potential measures for the Biological and Toxic Weapons Convention (BWC) were identified and evaluated. On-site sampling and identification is a part of on-site inspection. Papers about this measure were listed in BWC/CONF.III/VEREX/9P.45 Rev.3. Some additional papers were presented at VEREX III (BWC/CONF.III/VEREX/9P.109, 113, 114, 117, 118, 119, 124, 139, 140, 141). This measure may improve and be improved by other off-site and on-site measures.

Definition

Sampling and identification were defined in BWC/CONF.III/VEREX/9P.45/Rev.1. Briefly, it refers to the act of taking samples on the inspected site, analyzing these samples either on the site using appropriate methods or to transfer these samples from the site for identification or further investigations in appropriate laboratories.

Characteristics

This measure is one of the set of on-site inspection measures. It may be an essential component of an inspection process which in some cases would require the results of analyses to support its findings.

The evaluation of this measure should take into account the following considerations:

- the protection of intellectual or commercial proprietary rights must be ensured in carrying out on-site sampling and identification; the inspecting authority is expected to take all appropriate measures to guarantee the confidentiality of the investigation. However, this legislative concern should not be used as a pretext for concealing prohibited activities;
- the efficiency of this measure would be enhanced if the inspecting authority had a preliminary idea of the agents to search for prior to sampling and analysis, and if the equipment is available;
- the probability of ambiguous results (e.g. false or false negative) would be reduced if not only a single technique and several samples from the site were used;

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Definition	EVALUATION (Capabilities and Limitations)	
	Criteria 1–3	Criteria 4–6
To take samples of the area in the vicinity of a declared or undeclared facility without penetrating its boundary. (VEREX/9, Annex II, P-83)	The measure will usually provide information of rather poor quality, as the probability of obtaining a relevant sample is low. Using this measure alone can result in ambiguities, as e.g. the origin of any agent isolated may not be possible to clarify, and the risk of false positive as well as false negative tests may be very high. Different interpretations of the information are possible. Ability to differentiate between permitted and prohibited activities as well as resolving ambiguities is low. Could be of value in connection with open air sites. (VEREX/9, Annex III, p.197 etc.)	The costs will depend on the total number of inspections and subsequent number of samples. Small inspection teams will be required, but the chain of custody and laboratory analysis would be labor intensive. Safety problems for inspectors are generally low, except for open air test sites. Assays for identification are not developed for some agents. Minimal impact on permitted activities and CPI.

Criteria 1–3

Strengths and weaknesses based on but not limited to the amount and quality of information they provide and fail to provide

Ability to differentiate between prohibited and permitted activities.

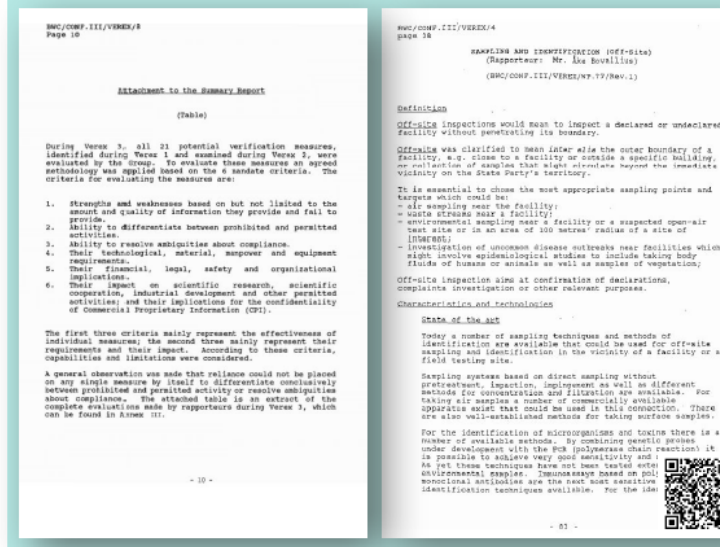
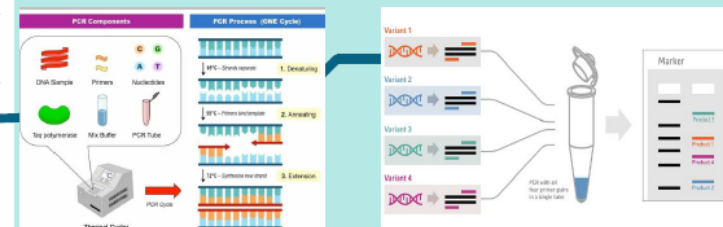
Ability to resolve ambiguities about compliance.

Criteria 4-6

Their technological, 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 CPI.



DECLARATIONS FORMAT OF ACTIVITIES OF FOREIGN FACILITIES

22

FOR THE GROUP OF THE STATES PARTIES TO
THE CONVENTION ON THE PROHIBITION OF THE
DEVELOPMENT, PRODUCTION AND STOCKPILING
OF BACTERIOLOGICAL (BIOWARFARE) AND
TOXIN WEAPONS AND ON THEIR DESTRUCTION



Formal title: _____
Geneva, 17 July-8 August 2008

Working paper submitted by the Russian Federation

DECLARATION JOURNAL

Facilities existing on the territory of a State Party but falling under the jurisdiction or control of another State Party:

States Parties shall submit to the Organization the information at their disposal regarding a facility or facilities existing on their territory but falling under the jurisdiction or control of another State Party to the Protocol State which meet one or more of the criteria triggering declaration under the Protocol. The information shall be submitted to the secretariat of the Convention.

This form may be set out as follows:

1. Name of the State Party on whose territory the facility is situated.

Postal address of the legal authority of the State Party through which communications may be sent:

2. This declaration relates to the calendar year: _____
3. Name of the facility situated on the territory of the State: _____
4. Postal address of the declared facility: _____

GE.08.6280 (R)

DECLARATION JOURNAL

5. Name of the State(s) under whose jurisdiction or control the facility falls:

Name of the department or town to which the facility belongs:

6. Area occupied by the facility: _____ sq. m.

including:

- Buildings: _____ sq. m.
- Laboratories: _____ sq. m.
- Production area: _____ sq. m.
- Area for biological work: _____ sq. m.

7. Criteria triggering the declaration which apply to the facility:

- Biological production (production against BPA) YES/NO
- Vaccine production YES/NO
- Work with listed agents/toxins YES/NO
- Microbial biological containment (BLC) YES/NO
- High biological containment (HLC) YES/NO
- Public production facilities YES/NO
- Animal tests in the open air YES/NO
- Other factors YES/NO

8. Personnel present at the facility:

- Military YES/NO
- Civilian YES/NO
- Recruited from the State where the facility is situated YES/NO

9. List the biological agents/toxins on which work is conducted at the facility: _____

10. Does the facility use biological agents and toxins which are to be found in the country of location YES/NO
If yes, specify which they are: _____

Does the facility use biological agents and toxins which are to be found in the country of location?

Does the facility enlist the services of volunteers drawn from the population of the State Party for the testing of biological agents?

Does the facility provide vaccinations for the local population?

Is the facility accessible to health and epidemiological monitoring authorities of the State Party where the facility is situated?

Are yearly reports on the work of the facility submitted to the State Party on whose territory the facility is situated?

Are biological agents and toxins exported to the State under whose jurisdiction or control the facility falls?

Are the procedures and the quantities of such exports approved by the State Party?

DECLARATION JOURNAL

11. Does the facility submit the results of voluntary declarations from the population of the State Party for the testing of biological agents YES/NO
Indicate the number of volunteers included per year: _____

12. Does the facility provide vaccinations for the local population:

- Living in the vicinity of the facility YES/NO
- Resident to work in the facility YES/NO
- Others YES/NO

13. Does the facility process the waste from its biological activities:

- In the territory of the facility YES/NO
- Outside the territory of the facility YES/NO

14. Is the facility accessible to:

- Health and epidemiological monitoring authorities of the State Party where the facility is situated YES/NO
- Others of the State Party YES/NO

15. Are yearly reports on the work of the facility submitted to the State Party on whose territory the facility is situated YES/NO

16. Are biological agents and toxins exported to the State under whose jurisdiction or control the facility falls YES/NO
Are the procedures and the quantities of such exports approved by the State Party YES/NO

THANK YOU FOR YOUR ATTENTION



**BIOLOGICAL WEAPONS
CONVENTION**

**WORKING GROUP ON THE
STRENGTHENING OF THE BTWC**