



SAND2009-2793C

Controlling Chemical Weapons

Chemical Threats and Legitimate Laboratories Training Course

International Biological Threat Reduction
Sandia National Laboratories

SAND No. 2009-

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.



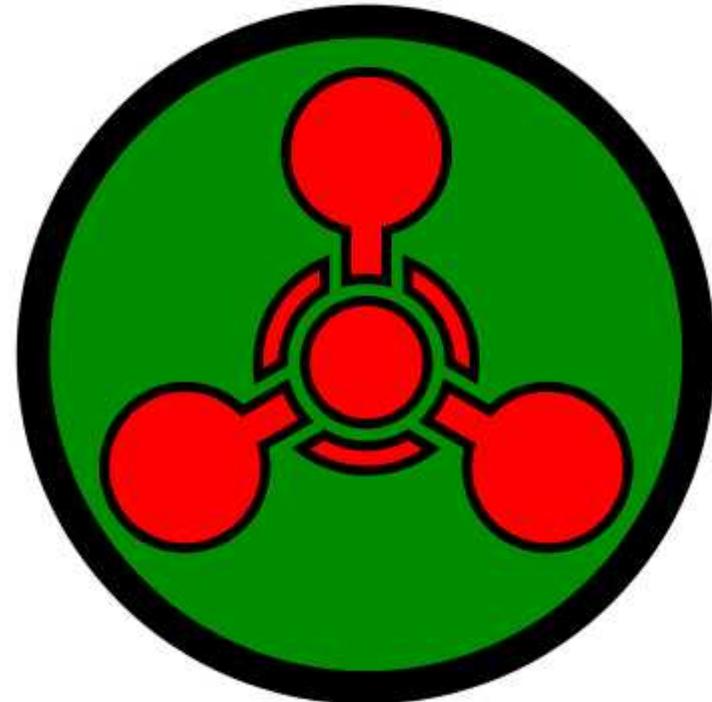
How would you obtain your hazardous chemicals?

- **What type of material are you looking for?**
- **What recipe are you going to use?**
- **Where will you obtain this material?**
- **Will you obtain it legally?**
- **How easy will it be?**
- **What materials would you need to stay safe?**



Overview

- A little history
- Chemical Weapons Convention
- U.S. implementing legislation
- UNSCR 1540





International Chemical Weapons Agreements

- 1925 Geneva Convention
- UN Security Council Resolution 1540
- Chemical Weapons Convention





1925 Geneva Protocol

- **Prohibits the *use* in war:**
 - asphyxiating, poisonous or other gases
 - bacteriological methods
- **Does not prevent research, development, production, or storage**
- **Does not have an effective verification regime**





CWC

- An international treaty that bans chemical weapons
 - CW use
 - CW production
 - CW storage
 - Requires destruction of existing CW stockpiles and facilities
 - Allows for small amounts for research



ORGANISATION FOR THE
PROHIBITION OF CHEMICAL WEAPONS



- The CWC entered into force April, 1997
- Administered by the Organisation for the Prohibition of Chemical Weapons
- Located in The Hague, Netherlands
 - Technical Secretariat
 - Currently verifying national declarations and CW destruction activities





What Chemicals Are Controlled?

- **CWC classifies suspect chemicals in 3 schedules and one grab-bag**
 - Schedule 1 — CW chemicals (100 gram threshold)
 - Schedule 2 — CW precursors (10 kg, 100 kg, 1 tonne thresholds)
 - Schedule 3 — Dual-use chemicals
 - Unscheduled discrete organic chemicals





Scheduled Chemicals

- **Schedule 1**
 - Prohibited except for closely monitored research
 - Mustard gas, sarin, tabun, VX, ricin
- **Schedule 2**
 - Closely monitored but not banned
 - PRIB, BZ, thiodiglycol
- **Schedule 3**
 - Reporting and inspection requirements
 - Epoxy hardeners, hydrogen cyanide, phosgene
- **Unscheduled discrete organic chemicals**
 - Require declaration and annual reporting
 - Phosphorus, sulfur, or fluorine containing organics



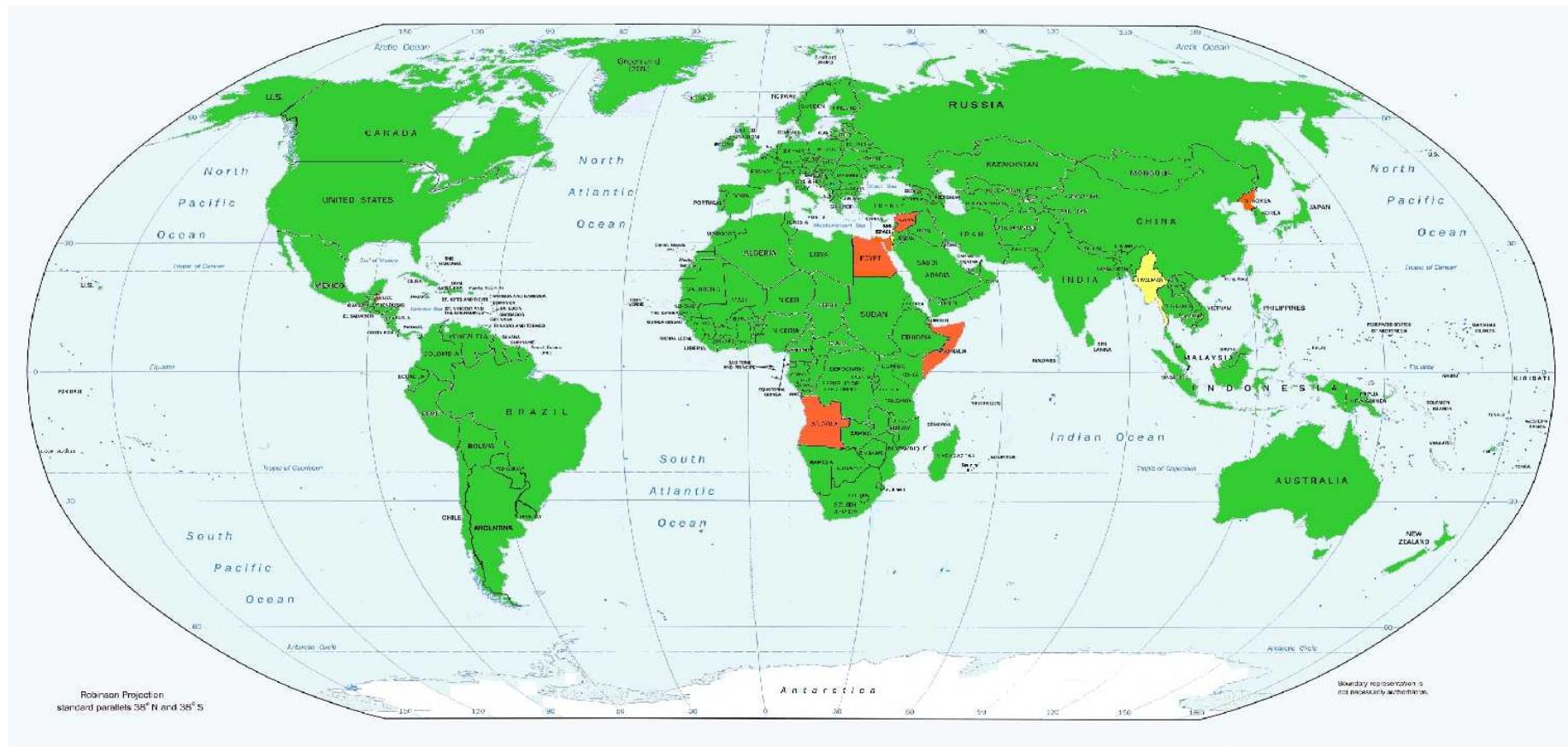
Permitted Activities

- **Schedule 1 chemicals for research, medical or pharmaceutical purposes**
- **Single small-scale facility**





Map of CWC Status





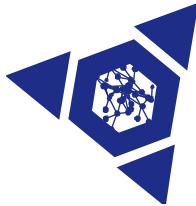
CWC Enforcement

- **National declarations**
 - Military
 - Industry
- **OPCW verification inspections**
- **Chemical trade embargo against non-member states**
- **Challenge inspections**
 - Brought to OPCW by a member state
 - OPCW executive council can dismiss challenge with 75% vote



Challenge Inspections

- **Anytime, anywhere, without right of refusal**
- **Little advance notice**
- **Conducted by a team of international inspectors**
- **Inspected state party may use *managed access***

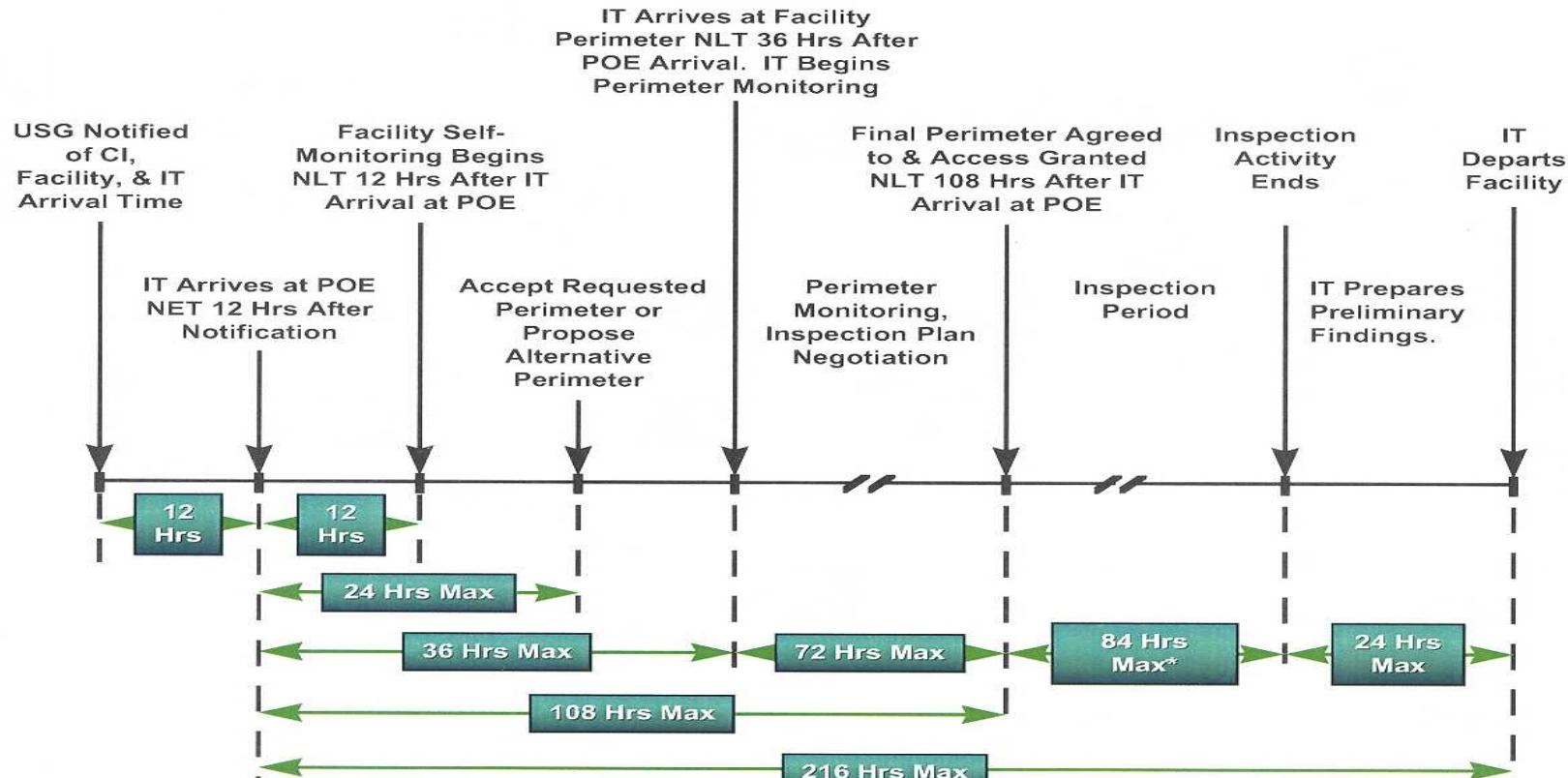


Managed Access

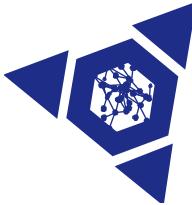
- **Restricting access of the inspectors from an area that has national security or proprietary concerns unrelated to the CWC**
- **Some options**
 - Deny access
 - Allow access for selected inspectors
 - Random access to areas
 - Viewing from outside an area
 - Shroud objects or areas
 - Provide *alternative information*



Challenge Inspection Timeline

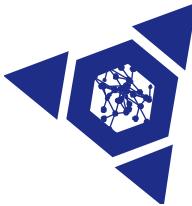


* Additional Inspection Activity if Mutually Agreed.



Challenge Inspections

- **Site receives 48 hours advance notice before on-site inspection activities begin**
- **Inspection itself lasts only 84 hours**
- **If a challenge inspection was announced at this moment**
 - Inspectors would be on-site Saturday afternoon
 - The inspection would be finished a week from Sunday
- **Local and national FBI assets would be involved**



What are the Inspectors Looking For?

- **Sufficient information to determine compliance**
 - Verification of declared activities
 - Evidence of normal operations
 - Reasonable explanations of dual-use chemicals
 - No anomalies



CWC Summary

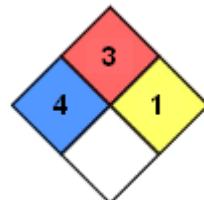
- **The Chemical Weapons Convention**
 - Prohibits production, use, or storage of CW
 - Administered and enforced by the OPCW
 - Has broad on-site inspection provisions
- **On-Site Inspection**
 - Very short timeline
 - Obligation to demonstrate compliance
 - Right to protect unrelated information
 - Managed access techniques
 - FBI would be involved



U.S. Implementing Legislation

Executive Order 13128 of June 25, 1999

- **Section 1. The Department of State shall be the United States National Authority....**
- **Section 8. (e) The Secretary of Commerce shall impose and enforce such restrictions on the importation of chemicals into the United States as may be necessary to carry out the requirements of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction.**

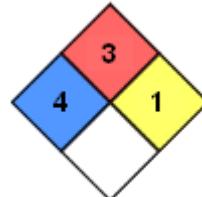


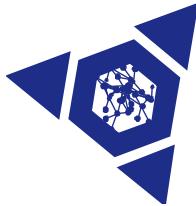


U.S. Implementing Legislation

Executive Order 13128 of June 25, 1999

- **Sec. 9. Any investigation emanating from a possible violation of this order ... involving ... a possible violation of 18 U.S.C. section 229 [next slide] shall be referred to the Federal Bureau of Investigation (FBI),**
- **which shall coordinate with the referring agency and other appropriate agencies.**
- **The FBI shall timely notify the referring agency and other appropriate agencies of any action it takes on such referrals.**





18 U.S.C. section 229

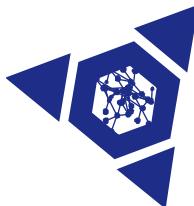
- **...it shall be unlawful for any person knowingly -**
 - (1) to develop, produce, otherwise acquire, transfer directly or indirectly, receive, stockpile, retain, own, possess, or use, or threaten to use, any chemical weapon; or**
 - (2) to assist or induce, in any way, any person to violate paragraph (1), or to attempt or conspire to violate paragraph (1).**



Exemptions

- (A) any person, including a member of the Armed Forces of the United States, who is authorized by law or by an appropriate officer of the United States to retain, own, possess, transfer, or receive the chemical weapon; or**

- (B) in an emergency situation, any otherwise non-culpable person if the person is attempting to destroy or seize the weapon.**



UNSCR 1540



[Obligates] ... all States to establish domestic controls to prevent the proliferation of nuclear, chemical and biological weapons, and their means of delivery...



What 1540 Does

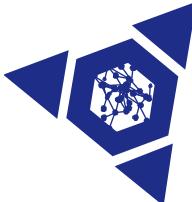
- 1. States ensure that they have the infrastructure to address the threat posed by non-state actor involvement in any aspect of WMD proliferation.**
- 2. States shall in no way support non-state actors involved in WMD activities.**
- 3. States shall enact and enforce the necessary laws to prevent these activities in their territories.**
- 4. States monitor and control sensitive technologies, materials, and equipment within their territories.**
- 5. States with the resources and expertise assist others.**



1540 Database



<http://www.nti.org/db/1540/regions.html>



International Partners and Resources

- **Australia Group**
- **EUROPOL**
- **Harvard Sussex Program**
- **International Council for Science**
- **INTERPOL**
- **NATO**
- **OPCW**
- **Red Cross**
- **Relief Web**
- **SECI**
- **UN 1540 Committee**
- **UNICRI**
- **OCHA**
- **Weapons of Mass Destruction Convention**
- **World Customs Organization**



The FBI's Role in 1540

- Executive Order 12333 assigns to the Director of the Federal Bureau of Investigation (FBI) ... responsibility for conducting and coordinating counter-intelligence (CI) activities in the United States against intelligence and terrorist activities....
- The primary goal of the FBI's national Strategy for CI is to prevent or neutralize the foreign acquisition of nuclear, chemical, biological or other means of delivery-related information, technology, or equipment, which, if acquired, would constitute an immediate danger to the United States.
- The FBI is reorganizing its CI programs into a centralized, nationally directed, prioritized effort. By centralizing, the FBI has improved its ability to become more proactive and predictive in protecting the nation's WMD-related information and critical national assets. In particular, the FBI has placed full-time Special Agents at certain national laboratories and nuclear weapons production facilities to pursue matters within the FBI's investigatory purview.



FBI-DHS

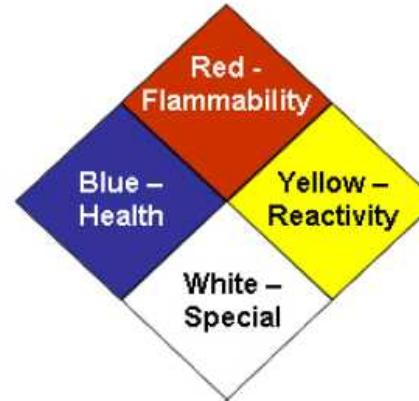
Advisory



If you receive a suspicious inquiry or purchase attempt for hazardous chemicals and/or explosive precursors.

What should you do?

1. Obtain customer information
2. Note interaction details and any other descriptive or unusual information
3. Contact Security/ Police Department/ Local FBI Joint Terrorism Task Force (JTTF)



Unusual Customer Behavior:

- Evasive
- Nervous
- Unfamiliar with normal procedures

Unusual Purchasing/ Shipping Requests:

- Unusual amounts
- Delivery to non-commercial property
- Large payments in cash

Company Security:

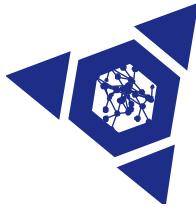
Local Police Department:

Local FBI JTTF:



Threats Deemed Serious

- Special agents would lead the investigation with the help of our intelligence analysts and other specialists.
- Disaster squad would help identify mass victims.
- National level Hazardous Material Response Unit and the local Hazardous Material Response Team collect evidence in and around the scene.
- An explosives team would get involved if a conventional bomb was used as the primary weapon or as a trigger to spread biological, radiological, or other toxic material.
- Photo operations personnel would take pictures using specialized aerial and infrared equipment.
- Chemical and Biological Sciences unit would help analyze highly hazardous material.



FBI Processes*

- 1. First, our local WMD coordinator (there's one in each of our 56 field offices) works with authorities to quickly find out what's going on.**
- 2. The coordinator alerts the new WMD Directorate at FBI Headquarters about the possibility of a WMD event.**
- 3. Then, a conference call is set up between the local coordinator and our WMD experts at Headquarters to evaluate the event. The call lets our experts get telling details from the local WMD coordinator about the scene. What does the coordinator see? Hear? Smell?**
- 4. Other federal and local agencies also take part in the conference call as necessary to coordinate the response and offer insight.**
- 5. The team of experts then determines what additional FBI resources—if any—should be deployed.**

* From <http://www.fbi.gov/page2/march07/wmd030507.htm>



Resources on the Web

A particularly good listing is:

<http://www.au.af.mil/au/aul/bibs/cbrn08.htm#che>

Weapons of Mass Destruction - Chemical, Biological, Radiological, and Nuclear (CBRN) - Mozilla Firefox

File Edit View History Delicious Bookmarks Tools Help

http://www.au.af.mil/au/aul/bibs/cbrn08.htm#che

Backyard scientists use Web to catalog... Weapons of Mass Destruction - C...

General Information

[Internet Resources](#) | [Books](#) | [Documents](#) | [Periodicals](#)

Internet Resources

Air War College: Center for Homeland Defense and Homeland Security Studies.
Available online at: <http://homeland.au.af.mil/>
Provides links to vast amounts of information on homeland defense and homeland security studies including, federal, state and local resources, along DoD directives and instructions.

Arms Control Association.
Available online at: <http://www.armscontrol.org/>
An authoritative source on arms control which provides country resources, fact sheets, treaties and current news articles on various programs and policies concerning nuclear, chemical, and biological weapons.

Armstrong, Glenda. Terrorism 2008. Maxwell AFB, AL, Muir S. Fairchild Research Information Center, 2008. 104 p.
Available online at: <http://www.au.af.mil/au/aul/bibs/terrorism08.htm>
Bibliography on various terrorist groups, geographic areas, methods and trends after 9/11.

British American Security Information Council (BASIC).
Available online at: <http://www.basicint.org/>
BASIC is an independent research organization that analyzes government policies and promotes public awareness of defense, disarmament, military strategy and nuclear policies in order to foster informed debate.

Center for Nonproliferation Studies. Monterey, CA, Monterey Institute of International Studies,
Available online at: <http://cns.miis.edu/>
Publications and links to Terrorism, WMD, and Emergency Preparedness.

Center for Nonproliferation Studies: Weapons of Mass Destruction in the Middle East.
Available online at: <http://cns.miis.edu/research/wmdme/>
Provides links and resources to overview of NBC weapons, WMD use and conflict, country profiles of WMD capabilities, delivery systems and range/payload of deployed missiles.

Central Intelligence Agency: Terrorist CBRN: Materials and Effects.
Available online at: https://www.cia.gov/library/reports/general-reports-1/terrorist_cbrn/terrorist_CBRN.htm
This website contains a summary of typical agents and CBRN devices available to al-Qaida and other terrorist groups.

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Conclusions

- Chemical weapons are one part of the WMD constellation of illicit CBRN material, equipment, technology, and knowledge
- The CWC prohibits use, production, or storage of CW as defined in their schedules
- UNSCR 1540 essentially criminalizes CBRN proliferation worldwide