

Terrorism and Weapons of Mass Destruction/ Response: Special Agents - WMD Coordinators

**Integration for Hazardous Response
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WMD Definition

- **Any explosive or incendiary device:**
 - **Bomb, grenade, rocket, missile, mine, or other device with a charge of more than 4 ounces**
- **Any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals**

WMD Definition

- **Any weapon involving a disease organism**
- **Any weapon that is designed to release radiation at a level dangerous to human life**

Laws and Statutes

- **Unlawful to produce, develop, acquire, transfer, receive, stockpile, own, possess use, or threaten to use any chemical weapon**
- **Similar with radiological, biological agents**
- **Unlawful to teach or demonstrate the making or use of a WMD with intent to further a crime of violence**

Laws and Statutes

- **Unlawful to convey false information related to terrorist/WMD act**
 - **A hoax has and can be prosecuted**

5 Categories of WMD Materials

- **B-NICE**
 - Biological
 - Nuclear
 - Incendiary
 - Chemical
 - Explosive

Types of Harm

- **T - Thermal**
- **R - Radiological**
- **A - Asphyxiation**
- **C - Chemical**
- **E - Etiological**
- **M - Mechanical**

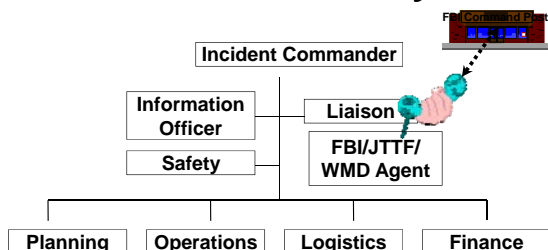
FBI Responsibilities

- **Protect public health and safety**
- **Intelligence gathering and dissemination**
- **Threat assessments**
- **Identify, detect, investigate, deter, and disrupt terrorist operations before they occur**

FBI Responsibilities

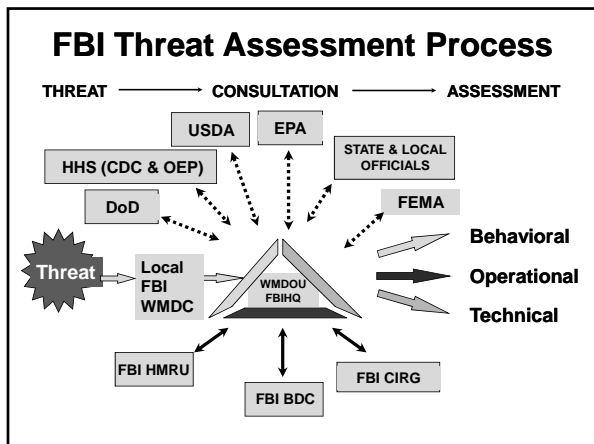
- **FBI is the lead for investigative, intelligence, and overall law enforcement activities related to a terrorist threat or incident**

Incident Command System



Initial FBI Response

- **Incident Command System (ICS)**
 - **Management system designed to integrate resources from numerous organizations into a single response structure using common terminology and common processes**



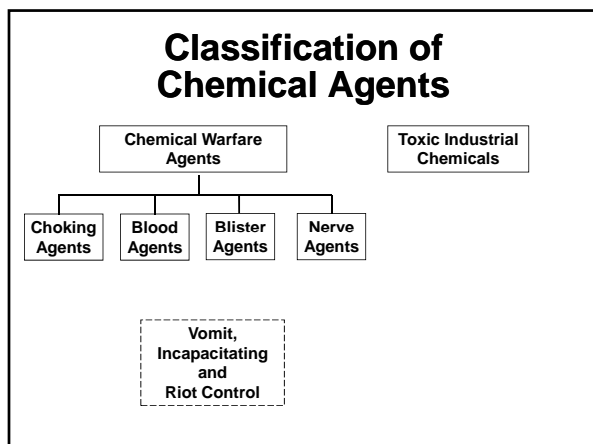
- ### Why Weapons of Mass Destruction?
- Reasons terrorists might use WMD
 - Cheap
 - Available
 - Effective
 - Difficult to detect
 - Maximum benefit/minimum resources

- ### Who Poses Threat?
- IT empathizers, homegrown terrorists
 - Those who are not Al Qaeda, but have bought into its ideology
 - Miami
 - Seven conspire to destroy Sears Tower/FBI

- ### Who Poses Threat?
- New Jersey
 - Five plan to attack Fort Dix
 - New York Subway – Zazi
 - Fort Hood
 - Nidal Hasan – Killed 13, wounded 30
 - Times Square
 - Faisal Shahzad failed car bomb

- ### Biological/Chemical Agent Delivery
- Aerosol dispersion
 - Oral dissemination
 - Dermal exposure
 - Injection

- ### Aerosol Dissemination
- Explosive munitions
 - Medical nebulizer
 - Fire extinguishers



Toxic Industrial Chemicals

- **Greatest chemical threat from terrorist groups most likely from release of a toxic industrial chemical (TIC) such as a cyanide or chlorine-based mixture**
- **TICs are readily available and less regulated than other potential WMD materials**

Improvised Chemical Device

1. Pierced container, e.g. paint can
2. Bottles of acid
3. Cyanide salts
4. Potassium permanganate crystals
5. Detonator (optional)

Target of Theft for Precursor

- **Chemicals such as Chlorine and Anhydrous Ammonia can be the target**
 - Whether fixed or moving, to effect a release on the public and cause mass casualties
 - **An explosive device would be the most likely method**

Target of Theft for Precursor

- **Chemicals can be the theft target as precursors for drugs, another attack at another time, and location**
 - Either for a toxic chemical attack OR for use as an explosive

Peroxide Availability (Zazi)

- **Drug stores**
 - 3-6% solutions
- **Beautician supply stores**
 - Up to 18%
- **Internet**
 - 30-35% solutions
 - **Food grade peroxide**

Peroxide Availability (Zazi)

- Pool chemicals
 - 28%
- Health trend

Energetic Material

- Material which can undergo a self-sustaining chemical reaction which gives off heat, rapidly releasing a large amount of energy
 - “Rapid”
 - Decomposition can occur in fractions of a second

Energetic Material

- Reactions turn solids and liquids into superheated gases almost instantaneously

Sooner Bomb

- 10/1/05 (~7:20 pm) outside OU Stadium
- Explosion 100 yards from 84,000 people
- An apparent suicide or accident?

Methods of Attack

- IED
- VBIEDs
- Standoff weapons - Arms
- SCADA or Cyber Attacks

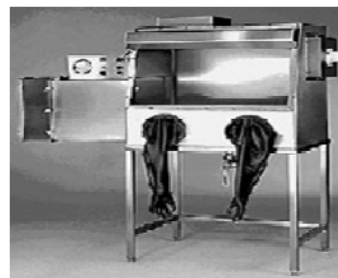
Indicators of CBRNE Production

- Personal protective equipment
 - Masks/respirators, chemical suits, gloves
- Specialized production equipment
 - Glove boxes, improvised air filtration

Indicators of CBRNE Production

- Specialized reagents or antidotes
 - Depending on product
- Weaponization equipment
- Literature

Specialized Production Equipment



Glove box

Specialized Production Equipment



Improvised glove box

Specialized Production Equipment



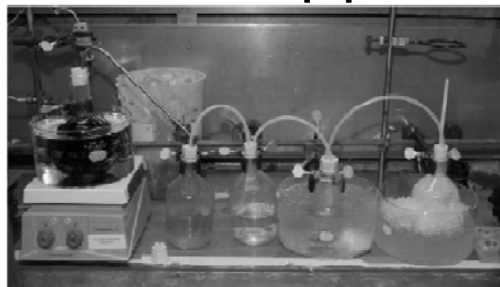
Improvised air filtration

Specialized Production Equipment



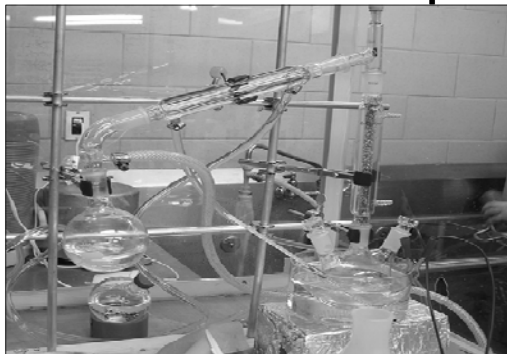
Meth Lab

Specialized Production Equipment



Sulfur Mustard

Simulated Sarin Setup

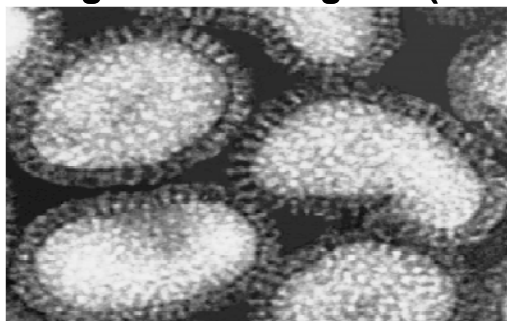


Biological Threat Agents (BTA)



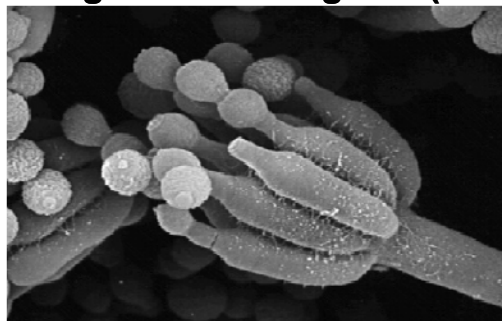
Bacterial (Anthrax) cells

Biological Threat Agents (BTA)



Influenza virus

Biological Threat Agents (BTA)



Fungi

Biological Threat Agents (BTA)



Ricin Toxin

Toxins



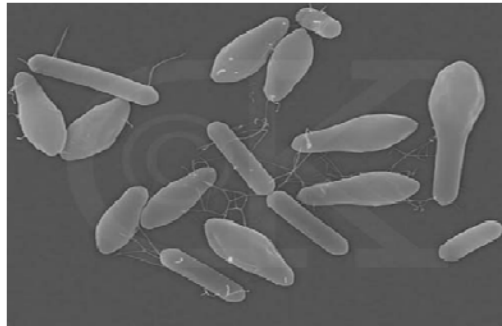
Castor bean plant: *Ricinus communis*

Toxins



Fungi

Toxins



Bacteria

Toxins



Marine

Available Resources / Literature

- Internet sites
- The Anarchist Cookbook
- The Anarchist Arsenal: Improved Incendiary and Explosives Techniques by David Harber
- Assorted Nasties by David Harber
- The Poor Man's James Bond, Vol. 1, Kurt Saxon
- Silent Death, Uncle Fester, Revised and Expanded Second Edition

DIYbio.org

- Organization that aims to help make biology a worthwhile pursuit for citizen scientists, amateur biologists, and DIY biological engineers who value openness and safety

DIYbio.org

- This will require mechanisms for amateurs to increase their knowledge and skills, access to a community of experts, the development of a code of ethics, responsible oversight, and leadership on issues that are unique to doing biology outside of traditional professional settings

Indicators of Biological Agent Production

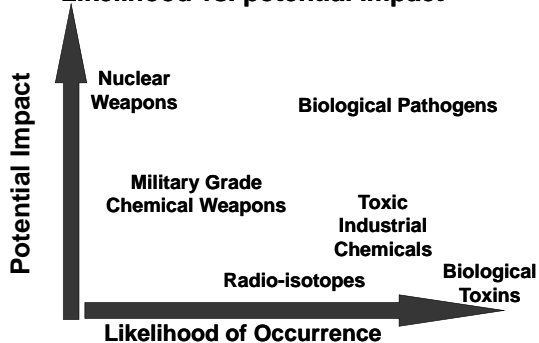
- Biological growth equipment
 - Incubators
 - Petri dishes
 - Fermenters
 - Flasks

Radiological / Nuclear Weapons

- Three types of radioactive weapons:
 1. Nuclear Weapons (fissionable)
 2. Radiation Dispersal Device (RDD – non-fissionable)
 3. Exposure Device (RED)

Scale of the Threat

Likelihood vs. potential impact



Suspicious Activity

- Look for precursors and equipment
- Look for surveillance – cameras
- Look for maps with marked locations
- Look for discrepancies in ID
- Unlikely explanations
- Look for discolorations or burns on clothing, skin, carpet, etc.
- Books on bombs or jihadist literature

Crime Scene Management – First Officer on Scene Responsibilities

- Location treated as potential crime scene until otherwise determined
- Officer arrives and assesses
 - Assessment includes need for PPE
 - Share with Fire/EMS
- Assist victims/notify EMS?

Crime Scene Management – First Officer on Scene Responsibilities

- Preserves scene with minimal contamination and disturbance of physical evidence
- Remains observant of persons, vehicles, and environmental condition

Crime Scene Management – First Officer on Scene Responsibilities

- Police/Fire may guide medical personal to victims to avoid contamination of scene
- If discovered, may point out physical evidence to law enforcement

Crime Scene Management – First Officer on Scene Responsibilities

- Document any statements or comments by victims, suspects or witnesses
 - Photos, videos, sketches, location of evidence
- Collect, preserve, inventory, package
- Transport and submit evidence
 - Law enforcement

Field Screening

Module 13

Why and When We Field Screen

- To characterize potentially hazardous materials
 - Not identification
 - Chemical properties
 - Radioactive properties

Why and When We Field Screen

- Must be performed prior to moving materials to the Laboratory Response Network (LRN) labs for chemical, biological or radiological testing unless other arrangements have been made with the receiving LRN

Why and When We Field Screen

- Must be done prior to introducing any sample into the LRN or Bureau Vehicle

What Do We Field Screen

- Any evidence that may potentially be chemical, biological, or radiological in nature
- Any evidence that may have been contaminated either directly or through cross-contamination with chemical, biological, or radiological material

Where Do We Field Screen

- Identify locations prior to conducting operation:
 - Ideally, field screen in place
 - Issued field screening “Pyramid” tents
 - Mail / chemical hoods
 - With science approval

Where Do We Field Screen

- If it has to be moved make sure the area is not publicly accessible
 - Political, gathering crowd, media
- Work with local hazmat, health departments

Where Do We Field Screen

- May be possible to field screen at LRN

Field Screen for Characteristics NOT Identification

- Following EOD Clearance
 - Radioactive
 - Corrosives (liquids)
 - Flammables
 - Volatile organic compounds (toxicity)

Field Screening Equipment

- Radiation detector – Alpha, Beta, Gamma
 - Radioactivity
- pH paper (liquids)
 - Corrosivity

Field Screening Equipment

- Photo-Ionization Detector (PID)
 - Volatility
- Combustible gas indicator (LEL)
 - Flammability

Field Screening Equipment

- Optional equipment
 - Water finding paper

Field Screening Considerations

- EOD cleared work area
- Clean work space
 - Lab mats
 - Absorbent pads
- Well ventilated
 - Outdoors if possible
- PPE at the direction of the HMO

WMD Field Screening - EOD

- Ensure materials are cleared of explosive devices by EOD before field screening
- Check for crystallized materials around caps, threads of containers
 - Possible shock sensitive explosive
- Do not open closed containers without HMO approval

WMD Field Screening Procedures

- Document all intelligence gathered on the Hazard/Risk Assessment Guide
- Identify receiving laboratory or agency to ascertain their needs
 - Coordinated by HMSRU Science, FBI Chem-Bio-Rad-Nuclear Science Unit

WMD Field Screening Procedures

- Special requirements
 - Rad worker card etc.
- Start documentation on a Field Screening Matrix Sheet
- Do not exhaust sample in screening process

Material Properties

- **If the material being field screened exhibits multiple phases (Liquid, gas, solid)**
 - **Each phase must be characterized and field screened independently**
 - **Documented on the Field Screening Matrix separately**

Transportation Containers

- **Also known as TC's**
- **Stainless steel vessel**
- **Leak proof**
- **O-rings or gaskets**
- **Torque-able closure**
- **Drop tested**

Transportation Containers

- **Available in 4, 6, 8, and 12 inch models**
 - **TC12's weigh 76 pounds**