

# Model Procedures for Responding to a Package with Suspicion of a Biological Threat

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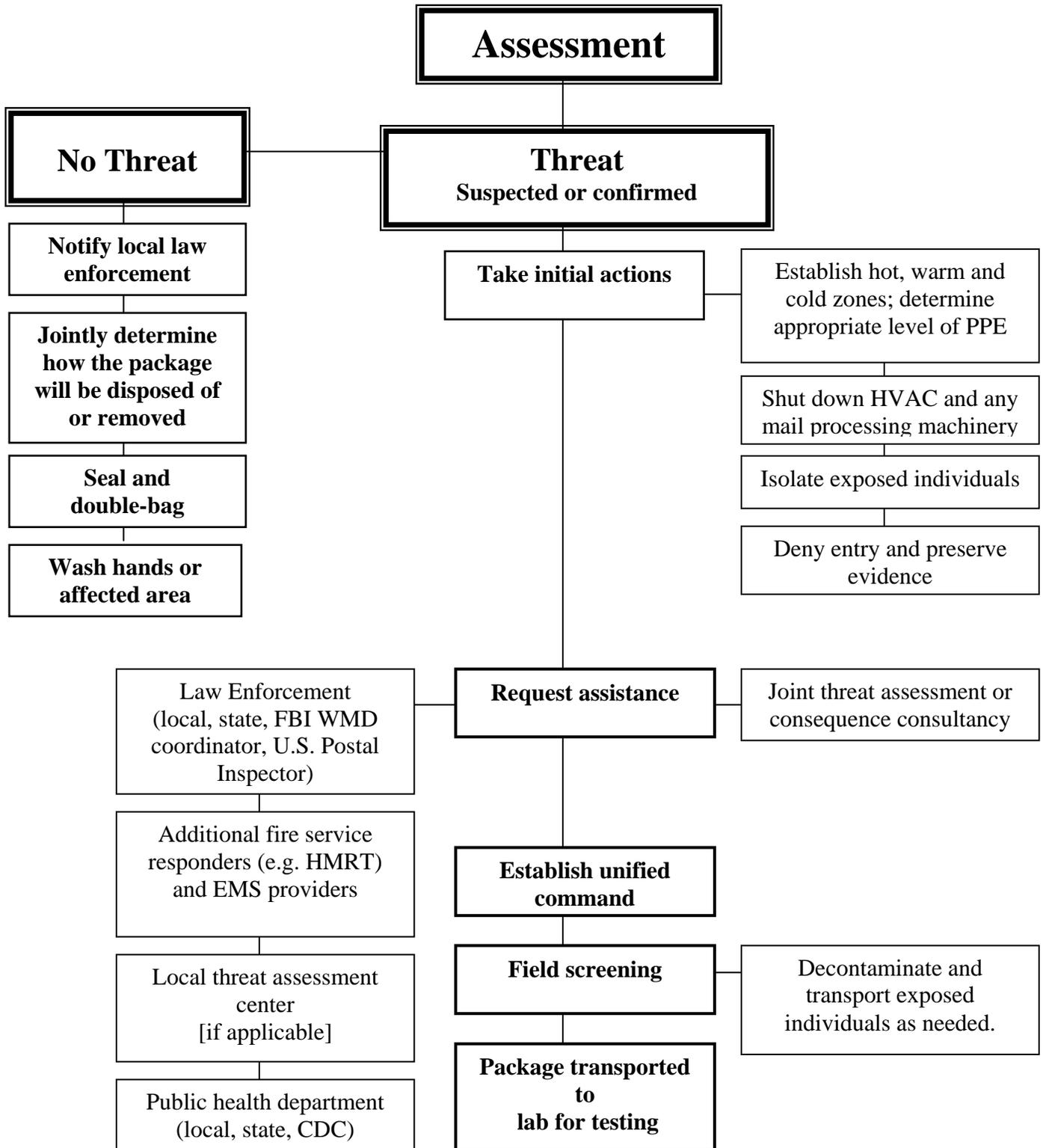
International Association of Fire Chiefs



In cooperation with  
FBI Hazardous Materials Response Unit  
FBI Laboratory Division

# FIRST RESPONDER DECISION MATRIX

## *Package with Suspicion of Biological Threat*



# ***Model Procedures for Responding to a Package with Suspicion of a Biological Threat***

## **I. Introduction**

Local and world events have placed the nation's emergency service at the forefront of homeland defense. The service must be aware that terrorists, both foreign and domestic, are continually testing the homeland defense system.

In October 2001, a person or persons contaminated the U.S. mail stream with anthrax, resulting in illness and death. The potential threat of similar attacks continues, and the authorities continue to be called in to assess hoaxes and suspect materials. No community is immune from the threat. To protect the health and safety of the public, and to help deal with hoaxes and suspicious materials, clear procedures for assessing and managing biological threats are imperative.<sup>1</sup>

Departments of all sizes should have procedures in place to determine the credibility of and manage a potential threat. To date, emergency service agencies across the nation have taken independent action to address these needs. However, the action ranges from cursory attention to fully developed, detailed response procedures. The following model procedure, based on sound principles, complements the concepts of unified command, promotes interoperability and generates standard operating guidelines that all departments will recognize.

The International Association of Fire Chiefs developed these guidelines in coordination with local emergency responders and federal authorities, as noted in Appendix F of this document.

## **II. Purpose**

The purpose of these guidelines is to provide a model procedure for first-arriving emergency service personnel for addressing potential bioterror events primarily involving suspicious letters, packages or containers.

This model provides a framework for building a local protocol tailored to a specific community. It was created to serve as a model for all types of fire departments in all types of communities. While some information may reach beyond the typical scope of the first responder, it is outlined so that a first responder will have knowledge of the broader process in which they may be requested or required to assist.

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<sup>1</sup> This document specifically addresses biological threats delivered through a point source, such as those that may arrive in the mail or similar delivery systems. However, it should be noted that many of the procedures noted in this document would be similar to any bio-terror response.

### **III. Audience**

First arriving emergency service personnel

### **IV. Definitions**

Definition of a biological threat: Any biological material capable of causing: death, disease, or other biological malfunction in a human, an animal, a plant, or another living organism; deterioration of food, water, equipment, supplies or material of any kind; or harmful alteration of the environment. Also, an expression of intention to use any such material for such purposes.

Definition of emergency service: The industry comprised of fire, law enforcement and emergency medical service providers who respond to an emergency; includes emergency management.

Definition of a first responder: An emergency worker who responds to an incident within a set amount of time. The term is usually specific to fire, law enforcement and EMS' immediately arriving assets. Those arriving on scene at later intervals may be called a responder, an emergency responder, a secondary responder, a subject matter expert or a special law enforcement assignment.

Definition of a hazmat responder: A trained and certified individual who is a member of a hazardous material response team and qualified to respond to incidents involving toxic industrial chemical, chemical warfare agents and other weapons of mass destruction. A hazmat response specialist will have additional training to respond to specific weapons of mass destruction.

Definition of a package: A letter, box, jar, suitcase or any other container that may hold a suspect material.

Definition of weapons of mass destruction (WMD): WMDs may be any nuclear, biological, incendiary, chemical, explosive or radiological weapon that may be used for death or destruction. For the purpose of this document, we will be referring to only biological agents.

## V. Policy: Identifying and Assessing Biological Threats

- 1) Personnel safety is the number-one priority in handling any suspected bioterror event.
- 2) **Emergency Service Personnel Must:**
  1. Perform a scene survey (size-up) that includes a risk assessment of the threat for an improvised explosive device (IED) prior to approaching any suspicious package. If an explosive threat exists, or an explosion has occurred, evaluate the scene for a secondary IED. If an explosive threat exists, it will take precedence over any biological threat until rendered safe.
  2. **Not touch, move or open any suspicious package until a risk assessment on the package can be performed in coordination with hazmat personnel and law enforcement!**
  3. Notify appropriate law enforcement (local, state and FBI WMD coordinator, postal inspectors) when a potential threat is identified.
  4. Don protective gloves (surgical, vinyl, etc.) as the minimum level of protective clothing for incidents involving suspicious packages.
  5. Use NIOSH-approved respiratory protection when the risk assessment indicates a respiratory threat. Many biological agents pose a significant health risk by inhalation.
  6. Meet minimum competencies at the Hazardous Materials – Technician level according to the following laws and standards when handling unknown or suspicious packages:
    - a. OSHA: 29 CFR 1910.120 (q),
    - b. EPA: 40 CFR 311, or
    - c. NFPA: 472, 473.
  7. Ensure that materials are safely packaged. Try to retain enough suspicious material for:
    - a. Laboratory analysis, if necessary;
    - b. Use as criminal evidence, regardless of whether the threat is ultimately determined to be infectious, toxic or a criminal hoax.
  8. Transfer custody of evidence to a law enforcement officer as soon as possible. Maintain chain of custody by obtaining a record of names and signatures every time custody of a suspicious material or sample for laboratory analysis changes hands.
  9. Complete an incident report with the initial responding law enforcement agency, which will be forwarded to the local FBI WMD coordinator.

## **VI. RESPONDER PROCEDURE: ASSESSMENT**

1. Assess the hazard by:
  - a) gathering information from the reporting party, bystanders, witnesses and any other first responders.
  - b) determining who has physically had contact with the package.
  - c) conducting an initial evaluation of the package; consider using binoculars while standing a safe distance away from the suspicious package.
2. Determine the answers to the following questions
  - a. Was the package accompanied by a verbal or written threat?  
(see Appendix A on threat considerations)
  - b. Is the package open, leaking, giving off an odor or have any suspicious markings?
  - c. If the package is open, was any substance released from the package?
  - d. Is anyone who touched the package feeling ill?
  - e. Is the package making noise?
  - f. Are there any wires protruding?
3. When possible, the final hazard determination should be a coordinated effort with a hazardous material response team (HMRT) and a bomb squad.

**VII. RESPONDER PROCEDURE:  
IF THE ANSWER TO ALL ASSESSMENT  
QUESTIONS IN SECTION VI. IS “NO”**

1. If they are not already on the scene, law enforcement should be contacted and appraised of the incident, and a collective determination on the removal or disposal of the package should be agreed upon.
2. The package should be placed in a sealable plastic bag and double-bagged.
3. Anyone who touched the package should thoroughly wash hands or affected area with soap and water. A package that is not hazardous may still be unsanitary.
4. Contact your public information officer (PIO) and be prepared to face media coverage. (see Appendix E)

## VIII. RESPONDER PROCEDURE: IF THE ANSWER TO ANY ASSESSMENT QUESTIONS IN SECTION VI. IS “YES”

1. If they are not already on the scene, notify local law enforcement.  
Establish a unified command with the lead emergency service agencies.  
Ensure all special called agencies (e.g., federal law enforcement, certified bomb squad, health department, etc.) are included in the unified command structure.
2. Request special assistance (e.g., certified bomb squad, decontamination units, state and federal authorities, etc.) as soon as a threat requiring their involvement is identified.
3. Control the scene.
  - a. **Establish hot, warm and cold zones.** The size of the hazard control zones should be based on the assessed threat. Depending on the scenario, the initial hot zone may range from the desk top in an office to an entire building depending on the situation. Use barrier tape to cordon off open areas.
  - b. **Shut down the building ventilation system if there has been a substance release.**
  - c. **Turn off any high-speed mail processing equipment** that may have handled the suspicious package.
  - d. **Isolate those who have been exposed or potentially exposed and consider shelter-in-place as an initial tactical consideration. Do not evacuate the building unless an immediate threat is evident.** Individuals, including emergency service personnel, who contacted the package must be assessed for the need for decontamination (See Section IX., level of decon may vary from washing with soap and water, to full gross decon.) and transport to the hospital. Only under extreme medical emergency conditions should a contaminated victim be transported prior to decontamination. Contaminated immediate need victims must be placed in a protective envelope (e.g., Tyvek<sup>®</sup> suit) to minimize secondary contamination of the general population and/or environment.
  - e. **Consider location and well-being of those unexposed or unlikely exposed.** Non-victims may need to be gathered together for law enforcement interviews, or to receive information from public health or other officials to inform and allay fears.

4. Request the assistance of the nearest qualified hazardous materials response team to assist with field screening for hazard assessment, sample collection, decontamination and other mitigation activities.
5. Appropriate local or state law enforcement agency will notify FBI WMD coordinator.
6. As needed, conduct a threat assessment conference call, via the FBI WMD coordinator, with the FBI Counter-Terrorism Division's Weapons of Mass Destruction Operations Unit (WMDOU), the FBI Laboratory Division, Hazardous Materials Response Unit (HMRU) and appropriate federal agencies. If available, also coordinate with the local threat assessment center.
7. Contact your local public health department (who should in turn notify state authorities and the Center for Disease Control) if casualties are involved or a threat of public health exposure or environmental contamination exists.
8. In coordination with law enforcement, notify the U.S. Postal Inspection Service, whenever it appears that the threat was delivered through the U.S. Postal Service. Assist with ensuring that origin and tracking information is obtained from the package (ideally, photographs of the front and back).
9. Treat the scene as a crime scene. Preserve evidence in coordination with law enforcement. If identified as a federal crime scene, assist the FBI HMRU in identifying and collecting biological evidence.
10. Coordinate transport of public health samples to the closest Laboratory Response Network (LRN) facility with the FBI WMD coordinator.
11. Be prepared to perform basic field screening of the biological sample to rule out radiation, flammability, corrosives, and volatile organic compounds to gain acceptance into the LRN, as coordinated with the FBI WMD Coordinator.
12. Identify and list the names of anyone who may have been exposed to the suspicious substance so they may be contacted when the LRN test results are available or if there is other additional information.
13. In coordination with the FBI, identify a single point-of-contact for follow-up.
14. Contact your PIO and be prepared to intelligently relate to the media. (see Appendix E)

## **IX. Decontamination Guidelines for Personnel Exposed to a Suspicious Package Containing Substance or Accompanied by a Threat**

### **1. Unopened, no leak or exposure**

- a. Thoroughly wash hands or affected area with soap and water.
- b. Public health department may be notified for further assistance.

### **2. Unopened, oily or granular leak, no exposure**

- a. Thoroughly wash hands or affected area with soap and water.
- b. Shower at home with soap and water.
- c. Launder clothes separately in hot water with soap.\*
- d. Public health department may be contacted for further assistance.

### **3. Opened, no exposure**

- a. Thoroughly wash hands or affected area with soap and water.
- b. Public health department must be notified.

### **4. Opened, oily or granular substance present, with exposure to:**

#### **a. Hands only (minimal contact)**

- i. Thoroughly wash hands or affected area with soap and water.
- ii. Change and place clothes in a sealed plastic bag.
- iii. Shower at home with soap and water, shampoo hair.
- iv. Launder clothes separately in hot water with soap.\*
- v. Public health department must be notified.

#### **b. Hands and clothes**

- i. Remove clothes and seal in plastic bag onsite.
- ii. Gross decontamination by emergency service that is based on and justified by the hazard assessment.
- iii. Transport to medical facility for evaluation after decon.
- iv. Leave contaminated clothes onsite for later pick-up by public health or other appropriate agency.

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\* As an extra layer of precaution, some departments recommend exposed workers refrain from washing their clothes, keeping them bagged at home, until any investigation or lab tests are completed.

## **Appendices**

- A. Identifying Suspicious Packages
- B. Sample Equipment List for First Responders
- C. Biological Detection / Mitigation Methods
- D. Additional Information on Biological Weapons
- E. Media Coverage
- F. Document Contributors
- G. Additional Resources

## Appendix A Identifying Suspicious Packages<sup>2</sup>

**Suspicious packages should be risk assessed for articulated threats. Examples would include:**

- Actual threat message in or on the package
- Addressee in position of authority, e.g., government employee, political figure, private sector executive
- Addressee in controversial business, e.g., Planned Parenthood, chemical industry, forestry

### **What kind of packages should be considered suspicious?**

*Some characteristics of suspicious packages and envelopes include the following:*

- Inappropriate or unusual labeling
  - Excessive postage
  - Handwritten or poorly typed addresses
  - Misspellings of common words
  - Strange return address or no return address
  - Incorrect titles or title without a name
  - Not addressed to a specific person
  - Marked with restrictions, e.g. "Personal," "Confidential" or "Do not x-ray"
  - Marked with any threatening language
  - Postmarked from a city or state that does not match the return address
- Appearance
  - Powdery substance felt through or appearing on the package
  - Oily stains, discolorations or odor
  - Lopsided or uneven envelope
  - Excessive packaging material such as masking tape, string, etc.
- Other suspicious signs
  - Excessive weight
  - Ticking sound
  - Protruding wires or aluminum foil

If a package or envelope appears suspicious, **NON-EMERGENCY PERSONNEL SHOULD NOT OPEN OR TOUCH IT.** Emergency personnel should limit direct contact with the package. Ideally, only those with hazardous material training should proceed to handle the package when necessary.

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<sup>2</sup> Based on the Centers for Disease Control and Prevention's FAQs regarding anthrax. [www.bt.cdc.gov](http://www.bt.cdc.gov)

## **Appendix B**

### **Sample Equipment List for First Responders**

The primary route of entry for the biological agents is inhalation. **Protecting the respiratory system from exposure is the first priority in any incident.** The use of the appropriate level of respiratory protection cannot be overstated. A properly selected, properly fitted full face respirator offers emergency service personnel the highest level of protection.

#### **Minimum Equipment**

- Protective gloves (surgical, vinyl, etc.)
- NIOSH approved respirator
  - Self-contained breathing apparatus (SCBA)
- Structural fire fighting ensemble
- Multi-gas detector
  - detects lower explosive limits of explosive gases (LEL)
  - Photoionization detector
  - measures percent of Oxygen by volume
- Small, glass or plastic, sterile vials with leak-proof caps
- Small sterile, individually-wrapped, disposable spatula or scoop
- Sealable plastic bags
- pH paper
- M8 paper
- Radiological survey meters
- Sterile distilled water

#### **Recommended Equipment**

- NIOSH approved
  - Air purifying respirator (APR)
  - Powered air purifying respirator (PAPR)
  - N-95 or P-100 Mask
- Dosimeters to measure individual exposure
- M9 tape
- M256A1 chemical agent detection kit
- Response organizations should assess their capability to monitor or detect the following hazards. Determine if your local/regional Hazardous Materials Response Team has these detection capabilities:
  - Flammability
  - Toxic industrial chemicals
  - Chemical agents
  - Oxygen deficiency or enrichment
  - Measures parts per million (ppm) of Volatile Organic Compounds (VOC)
  - Radioactive materials

Equipment to measure most threats is available, but may be cost prohibitive to smaller agencies. Smaller agencies should consider:

- pooling resources to purchase the equipment
- establishing regional teams that are proficient in using and operating the equipment
- establishing partnerships with other agencies (e.g., nearby military units, laboratories) that specialize in detecting or working with WMD agents.

## **Appendix C**

### **Biological Detection / Mitigation Methods**

Hazmat responders use a variety of tools in the field to assist in the assessment of potential biological threats. Examples of these tools are:

- Hand-held immunoassay devices
- Polymerase Chain Reaction (PCR) rapid tests
- Routine sampling
- Routine culturing of samples

Although a confirmed identification cannot be made in the field, certain possibilities can be evaluated through the use of various tests. Some departments use this type of field screening for tactical, decision-making purposes. However, samples of a suspicious substance(s) screened in the field should be expeditiously transported to the LRN for a comprehensive, definitive analysis.

Mitigation methods have been utilized in an attempt to neutralize the potential biological threat. Examples of these tools are:

- Ultra-violet treatment
- Ethylene oxide treatment
- Chemical neutralization

Once activities are complete in addressing immediate public safety concerns, every effort must be made to preserve evidence necessary for public health and law enforcement investigations.

The FBI Laboratory, Hazardous Materials Response Unit recommends in situations where Biological Threat Agents are suspected, the item be field screened and immediately transported in law enforcement custody to a Laboratory Response Network Laboratory. This should be done in coordination with the local FBI Office WMD Coordinator. Field screening should be limited to ruling out explosive devices, radiological materials, corrosive materials and volatile organic compounds. Additional field-testing may indicate some of the contents of the material but will not completely rule out biological threat agents. This additional testing may mislead response efforts by providing invalidated results, and destroy materials required for laboratory testing.

## Appendix D

### Additional Information on Biological Weapons

#### Bio: Just One of Many Threats

Many different threats can be sent through the mail. The initial triage, or sorting and allocation of treatment to individuals according to a system of priorities for any threat situation, must consider *all* hazards. A critical element to be performed by the first responder is assessing for the presence of:

- Explosive devices
- Radiological hazards
- Chemical hazards
- Biological hazards.

Effective, well-tested procedures exist for detection and response to explosive devices, chemicals and radiological materials. **This document is specifically designed to deal with suspected biological threats.**

Unlike chemical and radiological agents that are rapidly known and require immediate consequence management, biological agents are not as immediately recognizable and consequence management may be delayed, for example by therapy or vaccinations, and may be managed by health care workers. However, effective countermeasures are available against many of the bacteria, viruses and toxins that might be used. If we develop a solid understanding of the biological threats we face and how to respond to them, many effects may be prevented or minimized.

#### About Bio

Biological agents usually do not make people sick instantaneously. Most biological agents have an incubation period, which ranges from three to seven days. Final confirmatory test results will usually be available from the LRN laboratory in about two days, so there will be enough time to form and coordinate an appropriate response, including treatment when appropriate, before symptoms appear. Dramatic steps such as closing large buildings (but closing areas to the building where there is an incident and controlling access to that area are logical steps if the threat is viable) are not usually appropriate until the LRN results have been received. However, where other indicators raise suspicions, small areas may be isolated until the final report is received.

In the event that microbiological tests in an LRN laboratory produces a positive result, decisions regarding containment, isolation or quarantine and treatment of potentially exposed individuals must be made as an integrated process involving

local public health, law enforcement and hazmat responders. Preplanning, training and rehearsal are essential to making this work. The process for

responding in these circumstances is laid out in detail in the “Technical Assistance for Anthrax Response” issued by the National Response Team ([www.nrt.org](http://www.nrt.org)).

It is also important to note that some biological threats may not be aimed directly toward infecting people. They may be aimed at contaminating or otherwise decimating food supplies. Agricultural bioterrorism can be carried out via the mail and can spread rapidly throughout commercial and private ranches and farms. For more information on agroterrorism contact the U.S. Department of Agriculture or visit [www.aphis.usda.gov](http://www.aphis.usda.gov).

**Diseases caused by:**

- **Bacteria**
  - Anthrax
  - Tularemia
  - Plague
  - Brucellosis
  - Cholera
  - Q Fever
  - Glanders
  
- **Viruses**
  - Smallpox
  - Viral hemorrhagic fevers (Ebola, Marburg, Lassa, etc.)
  - Venezuelan Equine Encephalitis (VEE)
  
- **Toxins**
  - Ricin
  - Botulinum (Botulism)
  - Staphylococcal Enterotoxin B (SEB) (Food Poisoning)
  - Aflatoxin

## **Appendix E Media Coverage**

Bioterror incidents will generate media interest regardless of the credibility of the threat. Be prepared to face intense media coverage of the incident.

It is imperative that the PIO's from first responding agencies coordinate their efforts from the outset of any potential bioterror event.

Media releases not carefully crafted jointly by public safety, public health and law enforcement can cause public panic, high demand on public health resources and a negative impact on the criminal investigation.

1. A public information officer (PIO) should be established to handle media inquiries.
2. First responding agencies that do not have PIOs should defer to an agency within the unified command system that does employ one.
3. Bioterror incidents usually involve several agencies. There may be several PIOs present, each representing the interests of his/her own agency. It is essential that PIOs use a joint information system with information coordinated among agencies before release.

## **Appendix F Document Contributors**

International Association of Fire Chiefs (IAFC)

Federal Bureau of Investigation Laboratory Division, Hazardous Materials Response Unit (HMRU)

IAFC Hazardous Materials Committee

IAFC Terrorism Committee

IAFC Homeland Security Council

Interagency Board for Equipment Standardization and Interoperability (IAB)

Special thanks to the following fire departments:

Baltimore County, Md.

Chicago, Ill.

Edmonton, Alberta, Canada

Fairfax County, Va.

Halifax, Nova Scotia, Canada

Houston, Texas

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New York, N.Y.

Pasadena, Calif.

Seattle, Wash.

Toronto, Canada

Washington, D.C.

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Homeland Security Council

General Services Administration  
Office of Governmentwide Policy

Office of Science and Technology Policy

Technical Support Working Group (TSWG)

U.S. Department of Agriculture  
Animal and Plant Health Inspection Service

U.S. Department of Defense  
Defense Intelligence Agency  
Pentagon Force Protection Agency  
Program Executive Office for Chemical/Biological Defense  
Command

U.S. Department of Health and Human Services  
Office of the Secretary for Public Health Preparedness

U.S. Department of the Interior  
Health and Safety

U.S. Department of Homeland Security  
Federal Protective Service

U.S. Department of Justice  
Federal Bureau of Investigation

U.S. Postal Service  
Postal Inspection Service

## **Appendix G**

### **Additional Resources**

Bureau of Alcohol, Tobacco, Firearms and Explosives  
[www.atf.treas.gov](http://www.atf.treas.gov)

Centers for Disease Control and Prevention  
[www.bt.cdc.gov](http://www.bt.cdc.gov)

Council on Foreign Relations - Homeland Security Q&A on Biological Attacks  
[www.terrorismanswers.com/security](http://www.terrorismanswers.com/security)

Department of Homeland Security  
[www.dhs.gov](http://www.dhs.gov)

Federal Bureau of Investigation (FBI)  
[www.fbi.gov](http://www.fbi.gov)

Federal Emergency Management Agency (FEMA)  
[www.fema.gov](http://www.fema.gov)

GSA Mail Communications Policy Office  
[www.gsa.gov/mailpolicy](http://www.gsa.gov/mailpolicy)

International Association of Chiefs of Police  
[www.iacp.org](http://www.iacp.org)

International Association of Fire Chiefs  
[www.iafc.org](http://www.iafc.org)

International Association of Fire Fighters  
[www.iaff.org](http://www.iaff.org)

U.S. Department of Agriculture  
[www.usda.gov](http://www.usda.gov)

U.S. Department of Labor (DOL), Occupational Safety and Health Administration (OSHA) - [www.osha.gov](http://www.osha.gov)

U.S. Government Printing Office  
<http://www.gpoaccess.gov/index.html>

USPS Postal Inspection Service  
[www.usps.com/postalinspectors](http://www.usps.com/postalinspectors)

Workplace Risk Pyramid, OSHA  
[www.osha.gov/bioterrorism/anthrax/matrix](http://www.osha.gov/bioterrorism/anthrax/matrix)