

SAB Homeland Security Advisory Committee (HSAC)
Minutes
of the
Briefing Conference Call on the
***Bacillus anthracis* Technical Assistance Document**

October 15, 2008

1:00 - 3:00 pm (eastern time)

Ms. Vivian Turner, the Designated Federal Officer (DFO) for the Homeland Security Advisory Committee (HSAC), began the conference call at 1:00 pm, stating that HSAC was convening to receive a briefing from the EPA and its Federal partners on their plan to develop a Technical Assistance Document (TAD) on *bacillus anthracis*. She also explained that HSAC operates according to the Federal Advisory Committee Act (FACA) and the conference call was open to the public. After requesting that all persons from the public who were listening to the discussion provide their names via email for inclusion to the record (see Attachment 1), she acknowledged that no one from the public requested time to speak on the conference call and no one from the public provided written comments for consideration.

Ms. Debbie Dietrich, the EPA's Director of the Office of Emergency Management/Office of Solid Waste Emergency Response, thanked the Committee for convening and presented a brief background regarding the TAD development on *bacillus anthracis*. She explained that following the 2001 and 2002 *bacillus anthracis* clean-up/decontamination efforts for the Capital Hill and postal offices, the first version of the TAD was developed under the direction of the National Response Team (NRT). She noted that because *bacillus anthracis* has become a high-priority issue for the EPA and its Federal partners, the TAD requires revision so as to incorporate more current knowledge.

Dr. Baruch Fischhoff, the HSAC Chair, acknowledged the presence of the standing HSAC Members and the new Members (Attachment 2) who are augmenting the Committee and have the expertise specific to *bacillus anthracis*.

Captain Colleen Petullo, the EPA's technical lead for this project, commenced her presentation (Attachment 3) that included a discussion on:

- NRT Membership;
- TAD Background;
- Composition of the TAD Project Team Membership;
- *bacillus anthracis* TAD Outline and;
- *bacillus anthracis* Quick Reference Guide.

The Chair offered each Committee Member the opportunity to provide a few comments of interest regarding the development of the revised TAD. Some of the concerns voiced by the Members included the need to:

- Focus on areas of delayed response wherein exposure had occurred without awareness;

- Include discussions on division of labor; who does what;
- Define a way to marry sampling plans to testing capabilities;
- Better define the intended users of the document;
- Describe how data will be maintained and updated;
- Address exposures via multiple routes and pathways;
- Include a discussion on drinking water contamination;
- Include procedures for delineating division of responsibility with law enforcement.

The Chair and some Members voiced that the overall plan seemed well-intended but stressed the apparent neglect for public communication and involvement in the process. The Chair felt the TAD development effort provided an opportunity and an obligation for the Agency and its Federal partners to acknowledge and demonstrate their capability for dealing with behavioral science issues such as scientifically sound risk communication.

The Agency thanked the Committee for their comments and stated a desire to meet face-to-face with the HSAC Members in the upcoming year as it moves forward in developing the *bacillus anthracis* TAD. The Chair requested feedback at the next meeting on how the TAD team had responded to Committee comments, or decided to set them aside, recognizing the non-binding character of this early briefing.

The DFO adjourned the conference call at 3:05 pm.

Certified as true:

_____/S/_____10/23/2008

Baruch Fischhoff, Chair

_____/S/_____10/23/2008

Vivian Turner, Designated Federal Officer

Attachment 1

Participants on the Conference Call

EPA/SAB

Vivian Turner – DFO

OSWER

Debbie Dietrich – Office of Emergency Management
Captain Colleen Petullo – Technical Lead

Other Public

Dr. Frank W. Schaefer, III
National Homeland Security Research Center
U.S. Environmental Protection Agency

Gene Rice
National Homeland Security Research Center
U.S. Environmental Protection Agency

Curtis P. Snook, MD, FACEP, FACMT
Medical Officer, National Decontamination Team
U.S. EPA

Jim Holler
CDC/ATSDR

Daniel R. Ruedy
EnDyna, Inc.

Blake T. Velde, Sr. Environmental Scientist
USDA, Departmental Administration/Office of Procurement & Property

John F. Koerner, MPH, CIH
Office of Emergency Management
Directorate of Technical Support & Emergency Management
Occupational Safety & Health Administration

Attachment 2

**SAB Homeland Security Advisory Committee (HSAC)
for
Bacillus anthracis Technical Assistance Document Development**

Chair

Dr. Baruch Fischhoff, Carnegie Mellon Institute, (PA)

HSAC Members

Dr. William Bellamy, CH2M Hill, (CO)*

Dr. Vickie Bier, University of Wisconsin, (WI)

Dr. Mary Durfee, Michigan Technological Institute, (MI)

Dr. David S. Ensor, Research Technical Institute, (NC)

Dr. Lynda Knobeloch, Wisconsin Department of Family Services, (WI)

Dr. Paul J. Liroy, Robert Wood Johnson Medical School-UMDNJ &
The Environmental and Occupational Health Sciences Institute (EOHSI)
(NJ)

Dr. Lee D. McMullen, Snyder & Associates, (IA)

Dr. Royal Nadeau, The Eco-Strategies Group, (NJ)

Dr. W. Kip Viscusi, Vanderbilt University, (TN)

Dr. Daniel Walsh, New York State Department of Environmental
Conservation, (NY)

Dr. Rae Zimmerman, New York University (NY)

Consultants:

Dr. John Bartlett, The Johns Hopkins University School of Medicine,
(MD)

Dr. Christina Egan, Wadsworth Center, New York State Department of
Occupational Health, (NY)

Dr. Philip Hanna, University of Michigan Medical School (MI)

Dr. Denise Pettit, Virginia Division of Consolidated Laboratory Services,
(VA)

Dr. James Rogers, Food Safety Inspection Service, USDA, (DC)

*not present

Attachment 3

Presentation by Captain Colleen Petullo

EPA Science Advisory Board –
Homeland Security Advisory Committee:
Environmental Response Technical
Assistance Document for
Bacillus anthracis Intentional Releases

CAPT Colleen Petullo, USPHS

Assigned to: USEPA/ERT

Chair, National Response Team

Weapons of Mass Destruction Subcommittee

National Response System (NRS)

- Federal/state/local responders to oil/hazardous substances
- The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR part 300) establishes the NRS as the federal government's response management system for emergency response to releases of hazardous substances into the environment or discharges of oil into navigable waters of the United States.

National Response System (Cont'd)

- This system functions through a network of interagency and intergovernmental relationships and provides for coordinating response actions by all levels of government to a real or potential oil or hazardous substances incident.

National Response System (Cont'd)

- The NRS primary mission is to provide support for state and local response activities. Oil and hazardous substances responses under the NRS are divided into three organizational levels: the
 - National Response Team (NRT)
 - Regional Response Teams (RRTs)
 - Federal On-Scene Coordinators (OSCs).

National Response System (Cont'd)

- During emergency and non-emergency response support needs, the NRS can be accessed 24-hours a day by calling the National Response Center (NRC). The NRC is located in the United States Coast Guard (USCG) Headquarters Command Center and immediately relays reports and information to the pre-designated OSC.

National Response Team (NRT)

- Comprised of 16 member agencies
- EPA Chair and Coast Guard Vice Chair
- Mission: Oil Spills and Hazardous Substance releases
 - Approximately 25,000+ per year

National Response Team (Cont'd)

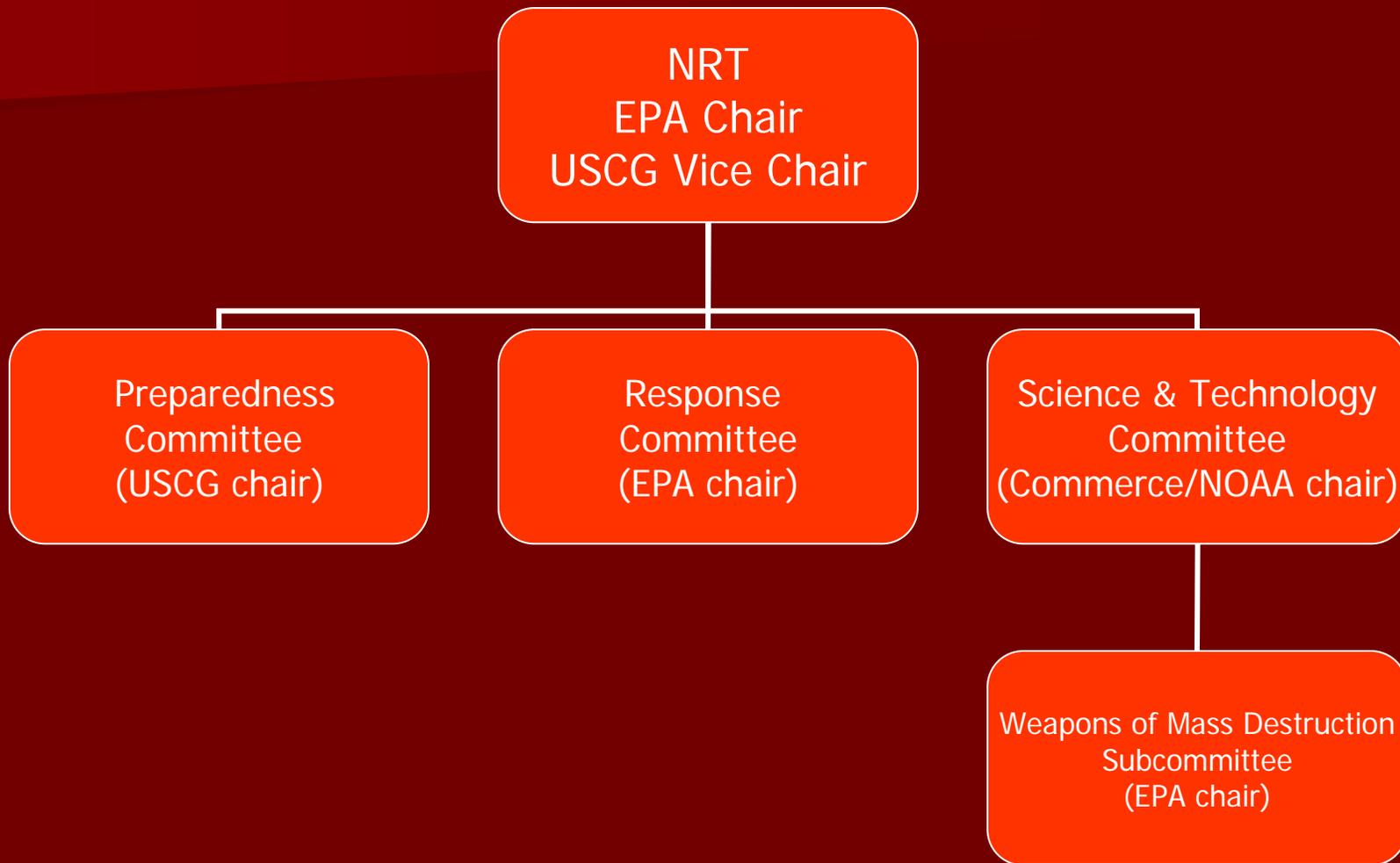
■ Authorities:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Superfund)
- Clean Water Act (CWA)/Oil Pollution Act (OPA)
- NCP (40 CFR 300)
- Emergency Support Function (ESF) 10 of the National Response Framework (NRF)

NRT Member Agencies

- EPA
- USCG
- DHS
- FEMA
- Interior
- Agriculture
- State
- General Services Administration
- Nuclear Regulatory Commission
- Defense
- Energy
- HHS/CDC-ATSDR
- Commerce/NOAA
- Labor/OSHA
- Transportation
- Justice

NRT Organization



NRT Science & Technology (S&T) Committee

- The S&T Committee serves as technical support to the NRT on issues relating to oil and hazardous substances releases; on-going, past, and proposed research; developments in technology; and recommendations for future national research and development.
- Chair: Stephen Lehmann (NOAA)
- Alternate Chair: Lisa DiPinto (NOAA)
- Active participants: NOAA, EPA, USCG, DOI, DOL, HHS, and DOE

WMD Subcommittee

- Established in 2004
- Subcommittee of the S&T Committee
- Chaired by EPA
- Active participants: EPA, OSHA, USDA, APHIS, HHS, and DoD

WMD Subcommittee Products & Activities

- 28 one-page Quick Reference Guides (QRGs) for chemical and biological intentional releases
- 15 QRGs under development
- Update of 2005 version of Environmental Response Technical Assistance Document for *B. anthracis* Terrorism Incidents* (TAD)
- Other tasks as assigned by the NRT

** 2009 Revision will be renamed: Environmental Response Technical Assistance Document for B. anthracis Intentional Releases*

Environmental Response Technical
Assistance Document for *B. anthracis*
Intentional Releases
(TAD)

2009 Update

TAD Background

- Protect public health & safety
- Snapshot of federal expertise and experience for “urban” releases (intentional, non-agricultural)
- Multi-agency responses to the 2001/2002 environmental contamination with *B. anthracis* and inhalation anthrax disease cases
- Designed to provide guidance and consistency for *B. anthracis* responses
- 2003 first draft
- 2005 update of first draft

2001/2002 Responses

- American Media Inc. (AMI), FL
- NBC News, NYC
- Senate office buildings, DC
- Brentwood USPS, DC
- Hamilton USPS, NJ
- Various federal government agency mail rooms, Metro DC

Health Impact of Incidents

- Inhalation anthrax: postal workers (3 fatalities)
- Inhalation anthrax: members of the public (3 fatalities)
- Exposed persons received prophylaxis - Ciprofloxacin and other antibiotics
- Vaccination of response and other workers

Economic Impacts

- Mail disruption
- Response costs - \$27 M Senate office buildings for decontamination
- Disruption of US Senate operations and loss of contaminated documents
- Disruption of many federal agencies' normal operations
- Responding to suspected, but false releases
- Irradiation of U.S. Government mail

Initial TAD Timeline

- 2001/2002 intentional releases
- EPA led cleanup
- Initial TAD, 2003: Compilation of lessons learned
 - procedures & protocols for field sampling and decontamination
- Interim Final Draft (update) 2005
- Reviewed by federal responders

Current TAD – 2005 Update

- Needs Revising:
 - Internal federal government review only
 - Does not reflect current science
 - Does not reflect current NRF and Homeland Security Presidential Directives (HSPDs)
 - Not consistent with current federal *B. anthracis* technical documents
 - Target audience too broad
- Outgrowth of 2001/2002 incidents
- Marginally used – 2006/2007 incidents

Purpose of 2009 Revision Effort

- NRT requested update to:
 - Revise and update technical information
 - Narrow target audience to OSCs and reformat to make more user friendly
 - Make consistent with other current federal efforts
 - Make consistent with NRF, HSPDs, White House Office of Science & Technology Policy (OSTP), and other changes to response protocols

Current Progress

- Outline – completed in Summer 2008
- Second draft – completed in Fall 2008
- SAB-HSAC Process started

TAD Project Team

■ Colleen Petullo, (EPA/ERT)

- Tom Gomez (USDA/APHIS)
- Jim Holler (CDC/ATSDR)
- John Koerner (DOL/OSHA)
- Dino Mattorano (EPA/NDT)
- Deborah McKean (EPA/NHSRC)

- Michael Ottlinger (EPA/NDT)
- Gene Rice (EPA/NHSRC)
- Frank Schaefer (EPA/NHSRC)
- Curtis Snook (EPA/NDT)
- Blake Velde (USDA)
- William So (USFBI)

Meet the Team

CAPT Colleen Petullo, USPHS*
Chair
NRT WMD Subcommittee

- BS Radiological Health Physics
- MS Adult Technical/Vocational Education
- Registered Environmental Health Specialist
- National Registry EMT

*CAPT. Petullo, USPHS, is permanently assigned to and represents USEPA on this subcommittee.

TAD Project Team (Cont'd)

- Dr. Tom Gomez, USDA/APHIS
 - MS, DVM
 - Completed CDC Epidemic Intelligence Officer (EIS) 2-year postgraduate program
- Dr. Jim Holler, CDC/ATSDR
 - BA Chemistry
 - Ph.D. Organic Chemistry

TAD Project Team (Cont'd)

- John Koerner, DOL/OSHA
 - BS Biology; MPH
 - ABIH Certified Industrial Hygienist
- CDR Dino Mattorano, USPHS (assigned to USEPA)
 - MS Environmental Science and Engineering
 - ABIH Certified Industrial Hygienist
- Dr. Deborah McKean, USEPA
 - MS Pharmacology and Toxicology
 - Ph.D. Pathology and Laboratory Medicine

TAD Project Team (Cont'd)

- Dr. Michael E. Ottlinger, USEPA
 - BS, MS Physics
 - Ph.D. Biophysics
 - Board certified, General Toxicology (ABT) and Toxicological Chemistry, & Clinical Chemistry (NRCC)
- Dr. Gene Rice, USEPA
 - BS Biology; MS Microbiology
 - Ph.D. Microbiology
 - Specializes in inactivation & detection of bioterrorism organisms including agents of foreign animal diseases

TAD Project Team (Cont'd)

- Dr. Frank Schaefer, USEPA
 - BA Chemistry and Biology; MS Biological Sciences
 - Ph.D. Biological Sciences with Focus on Parasitology; Specializes in detection of microorganisms in the environment.
- Dr. Curtis Snook, MD, USEPA
 - BS Music and Psychology
 - MD Columbia University College of Physicians & Surgeons
 - ABEM Certified, Emergency Medicine
 - ABMT Certified, Medical Toxicology

TAD Project Team (Cont'd)

- Blake Velde, USDA
 - BS Biology and Environmental Studies
 - MEM concentrating in Environmental Law, Policy and Economics
- Dr. William So, USFBI
 - BS Biology
 - MS & Ph.D. Environmental Toxicology

2009 *Draft* TAD Contents

Table of Contents

1. Purpose & Scope
2. Federal Plans
3. Federal Agency Roles & Authorities
4. Overview of a Response
5. Initial Response

Table of Contents (Cont'd)

6. Health and Safety Considerations
7. Sampling for *B. anthracis* Spores
8. Cleanup Decision-Making Framework
9. Decontamination
10. Collection, Treatment, and Disposal of Wastes
11. Guidelines for Discharging *B. anthracis* Decontamination Wastewater to Publicly Owned Treatment Works (POTWs)

Appendices

- A. Quick Reference Guide (QRG)
- B. Example of Personal Protective Equipment (PPE) Ensembles for Indoor or Highly-Localized Outdoor Contamination
- C. Decontamination Fact Sheets
- D. Hierarchy of Response Plans
- E. Research on Inactivation of *B. anthracis* Spores with Aqueous Chlorine

Chapter 1

Purpose and Scope

■ Purpose

- Help protect public health & safety
- Provide most current information available
- Sharing national experience

■ Scope

- Will be designed specifically for federal OSCs but may also be helpful to first responders, facility managers/owners, and local, state, tribal and territorial government agencies

Chapter 2

Federal Plans

- Overview of the federal plans that authorize and guide federal responses
 - National Response Framework (NRF)
 - National Oil and Hazardous Substance Pollution Contingency Plan (NCP)

Chapter 3

Federal Agency Roles & Authorities

Will describe the general responsibilities of federal agencies and the resources that may be used in a response.

- DOJ (FBI)
- DHS (FEMA & USCG)
- EPA
- HHS
- USDA
- DoD
- GSA
- DOL/OSHA
- DOT/PHMSA

Chapter 4

Overview of a Response

- Crisis Management
 - Response Activities
 - Notification
 - First Response
- Consequence Management
 - Restoration Activities
 - Characterization
 - Remediation/Cleanup
 - Clearance
 - Recovery Activities
 - Reoccupancy

Chapter 5

Initial Response

- Will describe response activities during the initial or emergency phase (i.e., generally, the first 24 to 48 hours) of a response to a suspected incident involving anthrax.
- Will be intended for personnel who discover the potential contamination and for first responders on the scene.

Chapter 5

Initial Response (Cont'd)

- Initial Response Components:
 - Discovery
 - Responder notification and initial actions
 - Agencies in the Unified Command
 - Preliminary assessment to determine credible threat
 - Site assessment to verify decontamination
 - Identification of potentially exposed persons
 - Public information, involvement, and outreach

Chapter 6

Health and Safety Considerations

- Will provide an overview of health and safety considerations for workers and other individuals potentially exposed to *B. anthracis*
 - Short-term response workers
(e.g., OSCs and other federal emergency personnel)
 - Long-term response workers
(e.g., USEPA Environmental Response Team (ERT))
 - Non-responders such as occupants, employees, or visitors

Chapter 6

Health and Safety Considerations (Cont'd)

- Will describe elements of a Health and Safety Plan (HASP)
- Will provide information regarding training under OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) standard (29 CFR 1910.120)

Chapter 6

Health and Safety Considerations (Cont'd)

- Will provide an overview of Personal Protective Equipment (PPE), including personnel decontamination
- Will discuss a medical program for responders and others who may be exposed

Chapter 7

Sampling for *B. anthracis* Spores

- Will be consistent with:
 - DHS-led multi-agency Sampling WG Product
 - GAO convened Validated Sampling Plan WG that is addressing concerns with Sampling & Analysis for Intentional Releases of *B. anthracis*
- Will describe sampling strategy for *B. anthracis*
- Will focus on consequence management
 - Characterization and extent of contamination
 - Decontamination/clearance

Chapter 7

Sampling for *B. anthracis* Spores (Cont'd)

- Will provide framework for sampling strategy development
 - Sampling plan (what, where, why, how, how many)
 - Statistical consideration (judgment, probabilistic, and combination of both)
 - Detailed sample collection procedures
- Sample analysis overview
 - Culture
 - PCR
 - Data interpretation

Chapter 8

Cleanup Decision-Making Framework

Optimizing Cleanup and Clearance Decisions

- Conduct risk assessment and estimate cleanup goals
 - Site-specific information
 - Consideration of stakeholder concerns and feasibility issues
- Verify clearance decision
- Clear for reuse/re-occupancy

Chapter 9

Decontamination

Remediation:

1. Define goals
2. Plan
3. Organize
4. Stage
5. Remediate
6. Clear

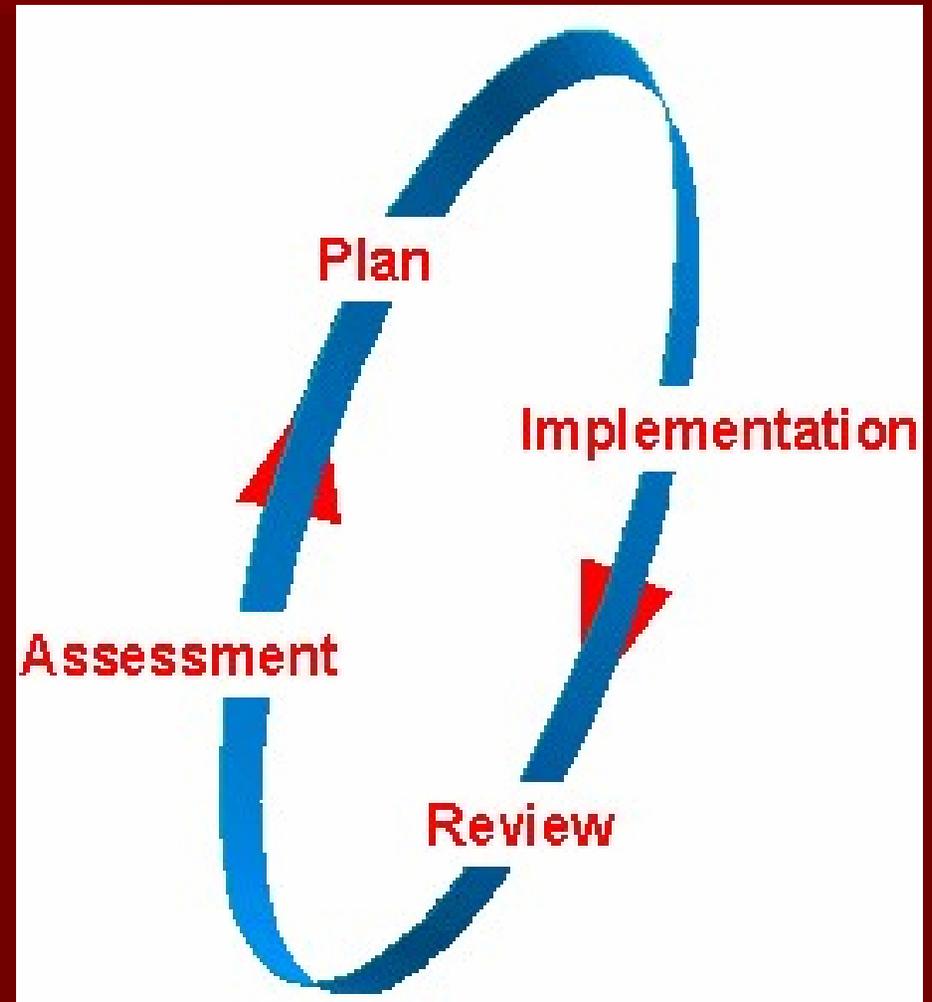
Considerations:

- Selection of decontamination methodologies
- Development of strategies & priorities
- Progress tracking (metrics)
- Ensure effective validation & QA
- Clearance

Chapter 9

Decontamination (Cont'd)

- The decontamination process is iterative - Chances are you won't get it all on the first go around



Chapter 10

Collection, Treatment, and Disposal of Wastes

- Will emphasize importance of consulting with state and local waste management authorities
- Will outline how to ID types of contaminated wastes, including wastewater
- Will describe electronic waste disposal tools for:
 - Residues from building clean-up
 - Water systems
 - Agricultural waste

Chapter 10

Collection, Treatment, and Disposal of Wastes (Cont'd)

- Will explain and emphasize the need to notify waste and recycling service providers of potential contamination
- Will describe how to manage wastes that are or may be contaminated

Chapter 11

Guidelines for Discharging *B. anthracis* Decontamination Wastewater to Publicly Owned Treatment Works (POTWs)

- Will provide information and guidelines for safe handling, treatment, and disposal of wastewater generated during decontamination
- Will describe procedures and provide examples for treatment of decontamination wastewater (i.e., wastewater volume, bleach, acetic acid required, etc.)

Appendix A

Quick Reference Guide: Anthrax

- Agent Characteristics
- Release Scenarios
- Health Effects
- Effect Levels
- Health and Safety
- Field Detection
- Sampling
- Laboratory Analysis
- Decontamination
- Waste/Disposal

Appendix B

Example PPE Ensembles

- PPE selection based on risk assessment
 - Red Zone – Contamination confirmed/strongly suspected
 - Yellow Zone – Contamination possible
 - Green Zone – Contamination not likely
- For Each Zone:
 - PPE: Skin, Respiratory, Other
 - Contamination containment
 - Cleanup (liquid, fumigation)

Appendix C

Decontamination Fact Sheets

- Autoclaving
- Chlorine Dioxide (aqueous)
- Chlorine Dioxide (gas)
- Ethylene Oxide (gas)
- High Efficiency Particulate Air (HEPA) Filter Vacuuming
- Hydrogen Peroxide and Peroxyacetic Acid
- Irradiation
- Methyl Bromide (gas)
- Paraformaldehyde
- Sodium Hypochlorite (liquid)

Appendix D

Hierarchy of Response Plans

- Hierarchy of domestic terrorism plans (organizational chart)
- National level documents
 - NRF and Relevant Terrorism Incident, Law Enforcement, and Investigation Annexes
 - United States Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN)

Appendix D

Hierarchy of Response Plans (Cont'd)

- Consequence management documents
 - FRP
 - Terrorism Incident Annex to NRF
 - NCP
 - DoD Directive 3025.1
- Crisis management documents
 - FBI WMD Incident Contingency Plan
 - Chairman of the Joint Chiefs of Staff CONPLAN 0300/0400

Appendix E

Research on Inactivation of *B. anthracis* Spores with Aqueous Chlorine

- Provides research data that validates the processes and procedures outlined in Chapter 11

TAD Project Schedule

- Project Introduction Teleconference
 - October 15, 2008
- Consult with SAB-HSAC
 - ~Jan-Mar 2009
- NRT member agency internal review & comment
 - ~April-June 2009
- Public/SAB-HSAC Review & Comment
 - ~October 2009-March 2010
- Final document
 - ~September 2010

Questions?

