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S&T Stakeholders Conference

CHEMICAL RESPONSE AND RECOVERY PROGRAM

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PARTNERING FOR A SAFER NATION

OUTLINE

- **Introduction**
- **Chemical Response and Recovery**
 - **Restoration Guidance**
 - **Prototype High-throughput Mobile Laboratory**
 - **CWA Fixed Labs**
- **Summary**

Chemical Response & Restoration Program

GOAL: Generate capabilities for rapid return of a *chemical*-contaminated site to a normal condition.

Areas of *primary* focus include:

- Development of technologies and guidelines for decontamination and clearance
- Strategies, capabilities and tools for the analysis of contaminated areas *before and after* a restoration process



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Systems Approach: Follows structure developed by an interagency panel of experts

Response and Recovery Activities					
Crisis Management		Consequence Management			
Notification	First Response	Remediation/Cleanup			Restoration (Recovery)
		Characterization	Decontamination	Clearance	
Receive and assess information	HAZMAT and emergency actions	Detailed characterization of agent	Worker health and safety	Clearance sampling and analysis	Renovation
Identify suspect release sites	Forensic investigation	Characterization of affected site	Source reduction	Clearance decision	Reoccupation decision
Relay key information and potential risks to appropriate agencies	Public health actions	Site containment	Decontamination strategy		Long-term environmental and public health monitoring
	Screening sampling	Continue risk communication	Remediation Action Plan		
	Determination of agent type, concentration, and viability	Characterization environmental sampling and analysis	Site preparation		
	Risk communication	Initial risk assessment	Waste disposal		
		Clearance goals	Decontamination of sites, items, or both		
			Verification of decontamination parameters		



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Chem Restoration Guidance

– Restoration Guidance & Checklist for Major Airports after a Chemical Attack

- Builds upon earlier Biological Restoration project
- “Pre-reviewed” protocols & plans
- Defines process to set clean-up goals for clearance and re-occupation



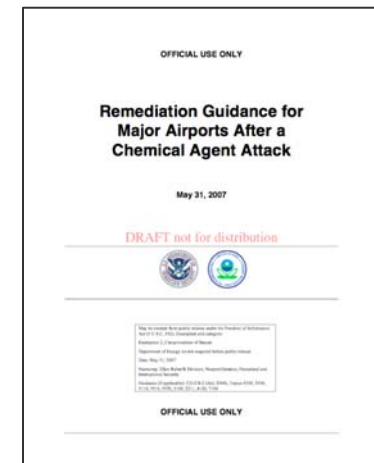
– Additional Key Stakeholder Deliverables

- Site-specific plan - Los Angeles International Airport
- Table-top exercise; final technology demonstration
- Integrated decision support and statistical sampling plan software tool



– Focused Technology Development Tasks

- Statistical sampling strategies and validated methods
- Large volumetric space decontamination
- Fate of agent on relevant indoor materials



Prototype High-throughput Integrated Laboratory Identification System

– Mobile Laboratory Platform for On-site Analysis of Environmental Samples

- Rapidly deployable; operational within hours
- Utilizes modified EPA analytical methods
- Ability to analyze for CWAs and TICs at specified Method Quantitation Limits
- Capacity: ≥ 300 samples/day

– Key Attributes

- Multiple GC-MS instruments; LC-MS capability
- Purge and trap, pressurized solvent extraction techniques for sample prep
- Laboratory Information Management System
- Capability to interface with CWA Fixed Labs
- Minimal need for local infrastructure tie-in



CWA Fixed Lab Capability

– Enhancing Incident Readiness

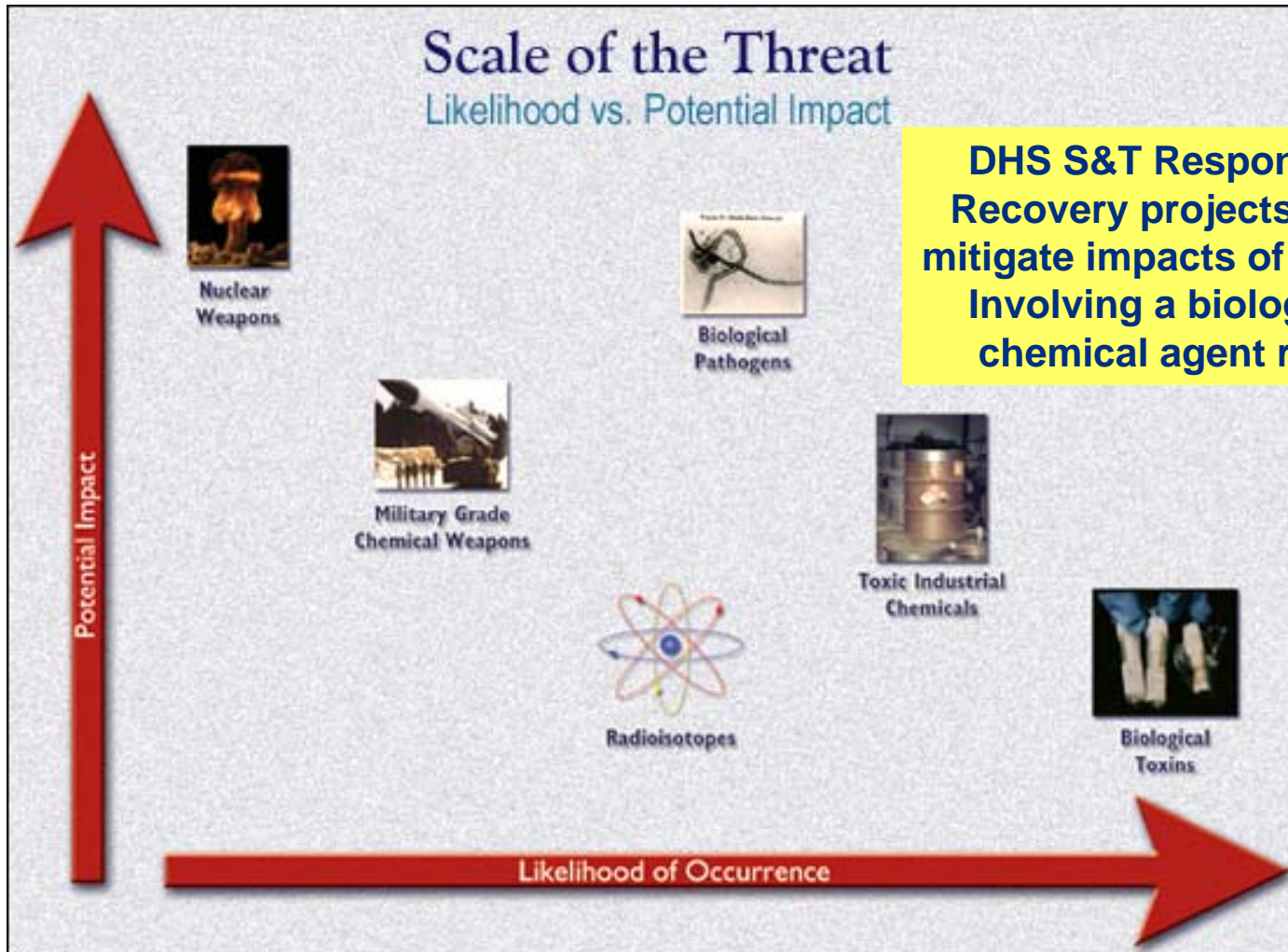
- Establishes network of prototype environmental labs; Adds surge capacity to assist with CWA incident response and recovery
- Labs will have full EPA certification, employ standard methods and protocols for agent analysis and reporting
- Target capacity: ≥ 500 samples/week/lab

– Prototype Network

- Labs established in US Northeast corridor, Mid-Atlantic, Southeast, Southern and West regions
- Combination of Federal and State labs that will form an *EPA-led* Environmental Response Laboratory Network (ERLM)
- Funded jointly by DHS S&T and US EPA



WEAPONS OF MASS DESTRUCTION



DHS S&T Response and Recovery projects seek to mitigate impacts of incidents involving a biological or chemical agent release

SOURCE: FBI WMD webpage

DNDO has DHS mission responsibility for nuclear / radiological threats





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