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Section 8 – Decontamination

Overview

This section contains recommendations for decontamination equipment, and changes from the previous edition are minimal. It is organized into three main categories, as follows:

- **Individual Decontamination,** which contains personal decontamination items.
- **Active Decontamination,** defined as activities or equipment that may be used in removing contamination from individuals and equipment. Active decontamination includes Decontamination Corridor Support, Emergency Decontamination, Technical Decontamination, and Site/Equipment Decontamination.
- **Post-Decontamination,** defined as activities or equipment that may be used after active decontamination.

Successful CBRNE HAZMAT response requires a sound decontamination plan that has been practiced with proper techniques and equipment. In addition to personnel, techniques, and equipment, the plan should address factors such as run-off and hazardous materials disposal, since some CBRNE agents may be neutralized while others may become hydrolyzed or diluted while being physically washed off patients and equipment. Plans should include as many specific procedures as possible - if a hazardous material has been identified through testing, then the decontamination plan should include proper PPE and decontamination equipment appropriate to the hazard. The plan should include multiple stages of decontamination (e.g., field expedient gross decon for personnel and equipment), with appropriate equipment and training required for each stage. The decontamination plan must also interface smoothly with other operating plans, such as medical response (e.g., policies for triage at decontamination stages, transportation of contaminated patients, etc.).

The Detection and Decontamination (D&D) SubGroup is continually working to identify standards and best practices for decontamination, including the establishment of standards for newly available decontamination equipment and technologies. All first responders should also seek advice from their state and local experts on the applicability and practicality of their plans in the context of local laws and practices.

Changes for 2007

In addition to minor edits, the structure of this section has also been modified to establish categories of active decontamination and place decontamination corridor support within the Active Decontamination category. The new structure is as follows:

08D1 Individual Decontamination
- 01- Personal Decontamination Items

08D2 Active Decontamination
- 01- Decontamination Corridor Support
- 02- Emergency Decontamination
- 03- Technical Decontamination
- 04- Site/Equipment Decontamination

08D3 Post-Decontamination
- 01-Blankets and Clothing
- 02-Bags

Online Selection Factors and Efficacy Matrix

Like most sections in the 2007 SEL, the online[1] version of the Decontamination section uses a pair of selection factors to assist users in quickly identifying appropriate equipment items. For the Decontamination section, the SubGroup chose the same factors used in the Detection section (Section 7): Proficiency Level and Hazard Environment. See the introduction to Section 7 for a detailed description of these two factors. Every online item is "tagged" for each appropriate combination of factors. Thus, users of the online version can choose any combination of Proficiency Level and Hazard Environment, and the system will provide a list of all items tagged for that combination.

The Responder Knowledge Base also contains an additional feature that should prove helpful in decontamination planning. It is called the Decontamination Efficacy Matrix, and provides information about various decontamination methods and their effectiveness against specific threats. The information in this matrix was provided to the RKB by the U.S. Army Edgewood Chemical and Biological Center (ECBC) in Aberdeen, Maryland, and is linked online to applicable items in this section of the SEL.

[1] *The online version is available on the Responder Knowledge Base at www.rkb.mipt.org.*

Section 8 | Decontamination

Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D1 - Individual Decontamination 01 - Personal Decontamination Items			
08D1-01-KITD* Kits or Packets, Personal Decontamination	Kits or packets used for emergency personal decontamination.	Handheld. Ability to self-decontaminate from chemical warfare agents. Ability to self-decontaminate from TIMs. Ability to self-decontaminate from biological agents. ---------- One time use. Shelf life limitations. Additional decontamination measures are required.	
08D1-01-RSDL* Lotion, Decontamination	Alternate solution to neutralize chemical warfare agents.	Easy to use. ---------- For use on equipment. For use on humans under FDA approved conditions only in limited quantities. Good against chemical warfare agents and some TICs only.	93
D2 - Active Decontamination 01 - Decontamination Corridor Support			
08D2-01-HTRB* Heater, Portable Air Blower	Provides climate control for victims during necessary decontamination operations during inclement conditions.	Provides heating and/or drying. ---------- Size. Portability. Power supply (electric or fuel). Temperature regulation. Speed controls. Collapsible ductwork.	
08D2-01-HTRW* Heaters, Water,	Used to heat water for decontamination applications in the field.	Temperature regulation and gauge. May have ability to induct and mix decontamination solutions with water. ---------- →	139

[1] *Use numbers given to refer to Standards List at the end of this document.*
** Item has been moved or changed in the edition.*

Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D2 - Active Decontamination 01 - Decontamination Corridor Support - *Continued*			
Transportable		Inlet water pressure requirements and limitations. GPM output to meet application rate needed / fuel or power needed. Rapid heating of water.	
08D2-01-LDCD* Device, Liquid Decontamination Containment	Containment devices intended for use in the decontamination corridor for decontamination of equipment, people, and vehicles.	Portable. Capture run-off. Non-porous. May be disposable. Low enough for personnel to step into and out of. ---------- Various sizes. Decontamination system dependent. Material compatibility. Larger inflatable or collapsible devices for vehicles will require ability to get vehicle into and out of device. Size may limit patient numbers before requiring pump-off capability.	
08D2-01-LITE* Lighting, Decontamination Area	Portable area lighting system suitable for use in active decontamination area.	Moisture resistance. Brightness. Decontaminable. Portable. Intrinsically safe (optional). ---------- Power supply. Decontamination system compatible. GFI. Replacement bulbs. Power cords.	123, 142

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Section 8 | Decontamination

Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D2 - Active Decontamination 01 - Decontamination Corridor Support - *Continued*			
08D2-01-LITR* Device, Victim Extrication	Devices such as litters, stretchers, stokes baskets, etc. for moving non-ambulatory victims.	Man-portable. Reusable. Wheeled. NOTE: These items are similar to those described in Item 09ME-05-LITR, but MUST be designed to be decontaminable. ---------- Uneven terrain. Labor intensive. Patient maximum weight considerations. Storage/transport considerations. Minimal training.	
08D2-01-PPTS* System, Personal Property Tracking	Personal property tracking system to identify personal effects of decontaminated victims.	Waterproof. Attachable. Writable. ---------- Size.	
08D2-01-TDCS* Items, Support, Decontamination Corridor	Signs, signals, traffic cones, lights, hazmat tape, directional signage, strobes, glow sticks, loud-speakers, etc.	Multiple pictures and languages. Industrial grade. GFI equipment. ---------- Size. Weight. Deployment time. Collapsible. Water resistant.	123

[1] *Use numbers given to refer to Standards List at the end of this document.*
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Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D2 - Active Decontamination 01 - Decontamination Corridor Support - *Continued*			
08D2-01-WWCD* Drum, Waste Water Containment	Drums or bladders for waste water containment and decontamination shower waste collection. To be used in conjunction with Item 08D2-01-LDCD.	Various sizes. Ability to hold large volumes of liquid hazardous waste product. Disposable or decontaminable. ---------- Size. Weight. Transportation. Storage. Empty or full may require vehicles. Pump capability.	65, 123
D2 - Active Decontamination 02 - Emergency Decontamination			
08D2-02-EDCS* Equipment, Gross Decontamination Application	Equipment or system with the capability to immediately reduce contamination of individuals with potentially life-threatening exposure, with or without the formal establishment of a decontamination corridor.	Man-portable. Freedom to select desirable solutions. Low pressure. Rapidly deployable. Durable. ---------- All weather. Hazards of material. Low cost. Minimal training.	
08D2-02-MCDS* Systems, Mass Casualty Decontamination	Mobile or fixed systems capable of delivering water or solutions in varying temperatures and at sufficient flow rates for	Lighting. HEPA filters. Roller systems for dealing with non-ambulatory victims. Flash heater. Pre-plumbed. →	

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Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D2 - Active Decontamination 02 - Emergency Decontamination - *Continued*			
	the purpose of washing numerous contaminated victims. Suitable systems may be tents, trailers, vehicle mounted, or integrated into building systems.	---------- Set up time. Water supply (requires source), temperature, pressure, volume Power supply. Drainage or collection of runoff. Modesty protection.	
D2 - Active Decontamination 03 - Technical Decontamination			
08D2-03-SHWR* Shower, Portable Decontamination	Framework designed to deliver water/decontamination solution at low pressure, low volume.	Stand alone. Collapsible. Rigged. Quick setup. ---------- Size. Weight. Runoff control / waste water management. Water supply (source required). Deployment time.	
08D2-03-TDED* Equipment, Technical Decontamination - Dry	Equipment used to decontaminate or remove dry materials.	Portable. ---------- Requires power supply. Collected material must be disposed of properly.	
08D2-03-TDEW*	Equipment used in the physical or chemical	Pressure control for people/equipment. Water/solutions. →	

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Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D2 - Active Decontamination 03 - Technical Decontamination - *Continued*			
Equipment, Technical Decontamination - Wet	process of deliberate decontamination for responders and their equipment using liquids/solutions.	Portable. ---------- Climate. Material identification. Runoff control/waste water management.	
D2 - Active Decontamination 04 - Site/Equipment Decontamination			
08D2-04-SOLN* Solution, Decontamination, Site (Not For Personnel)	Equipment and site decontamination solutions (not approved for humans).	Premixed concentrate. May be stored as a dry powder or liquid. ---------- Some require dilution before application. Some may require special applicators. Use may require EPA approval.	
D3 - Post-Decontamination 01 - Blankets and Clothing			
08D3-01-BLKT* Blankets, Disposable	Disposable blankets.	Low cost. Compact storage. Durable. ---------- One time use.	
08D3-01-CLOM* Clothing, Disposable Modesty	Disposable modesty clothing, with footwear; adult and child sizes.	Compact storage. Durable. Various sizes. Instructions for use should be in multiple languages and/or pictures. ---------- Modesty shelter. →	

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Item Number/Title	Description	Features/Operating Considerations	Standards[1]
D3 - Post-Decontamination 01 - Blankets and Clothing - *Continued*			
		No shelf life limitations. Low cost.	
D3 - Post-Decontamination 02 - Bags			
08D3-02-BCNT* Bags, Cadaver, Non-transparent	Non-transparent cadaver bags. See also 09MS-01-BAGB	Disposable. Ability to be carried. Virtually unlimited shelf-life. ---------- Universal precautions may be required. Low cost.	

[1] Use numbers given to refer to Standards List at the end of this document.
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