Chapter 10

Logistics

Everyone who conducts decon has a supply responsibility and must know where resupply comes from. This chapter identifies what materials are needed for each of the seven decon techniques.

Skin Decon

Since skin decon procedures are done immediately after an NBC attack, each individual carries his or her own decon supplies.

The standard decon kit is the M258A1 individual decon kit until it is replaced by the M291 skin decontamination kit (SDK). Supplies of M258A1 will be used until exhausted or discarded.

Each soldier carries an M258A1 decon kit in his or her mask carrier. The M291 is stored in the right cargo pocket of the BDU trousers or BDO trousers. The basis of issue per soldier for M291 is two M291s (12 packages); each individual package contains six individual decon packets. The unit maintains at least one M258A1 kit or two M291 kits, per assigned person, for resupply of its soldiers.

Personal Wipedown

The personal wipedown technique must be done within 15 minutes after chemical attack to be effective. Soldiers must carry their decon materials with them. The M291 or M258A1 kits are used for this procedure.

If individual equipment decon kits are all used or not available, the company or unit should issue the soldier two M291 or one M258A1 decon kits. Follow the same logistic responsibilities and supply disposition guidance for this technique as for skin decon.

Operator's Spraydown

Major pieces of equipment are authorized an on-board decon apparatus. The operator's spraydown technique uses the M11 or M13 decon apparatus. The M11 is filled with 1-1/3 quarts of DS2 before use. DS2 comes in 1-1/3 quart cans (two authorized per M11 according to CTA 50-970) and in 5 gallon pails (two authorized per company-size element according to CTA 50-970).

Four nitrogen cylinders and two 1-1/3 quart cans of DS2 should be carried in the vehicle with each M11 (two nitrogen cylinders authorized per can of DS2). The M13 comes with a 14-liter (3.7-gallon) DS2 container. Use the nitrogen cylinders to pressurize the container during M11 use. Operating the M11 decon apparatus in below-freezing weather (below 32°F or 0°C) requires two nitrogen cylinders to expend the contents of the M11. Double your stock of nitrogen cylinders for operations in below-freezing weather.

The battalion resupplies M11s and accessories. Units maintain limited spare parts and accessories. Units are not required to maintain additional stocks of 1-1/3-quart cans of DS2. The five gallon pails authorized each unit can be used to refill empty M11s until a resupply of 1-1/3-quart cans is received from the battalion.

MOPP Gear Exchange

MOPP gear exchange normally is done by squads and platoons. Time and materials are at a premium for these units, and needed decon supplies must be readily available, For planning purposes, it takes approximately 45 minutes for MOPP gear exchange by squad-platoon sized elements. Filters for the protective masks and a mask hood are considered part of the MOPP gear, but are not required to be changed for this technique.

Each soldier wears or carries one complete set of MOPP gear. The unit stocks a second complete set, sized and identified for each soldier. When a squad or platoon undergoes a MOPP gear exchange, the unit sends a supply vehicle to rendezvous with the contaminated element at the operational decon site. The vehicle carries replacement MOPP gear and any decontaminants required. Dry mix STB will be used to decontaminate the soldiers' individual fighting equipment. Appendix F tells how to prepare dry mix. Plan to use about 40 pounds of dry mix per squad-sized element. In wartime, 5-pound quantities of STB can be put in l-gallon air tight containers and stored in the company

supply section. This saves time when supplying operational decon operations.

CAUTION

The STB W-Pound drums should not be opened because STB losses its effectiveness if left open to the air for extended periods. The unit is resupplied with MOPP gear and decontaminate from its battalion.

Units maintain a 5 percent overage of MOPP gear based on its personnel strength or authorization (whichever is greater) to ensure a complete range of sizes and replacement gear (for example, unserviceable equipment replacement per CTA 50-970). Manage all MOPP gear, serviceable and unserviceable, and replacement gear the same as other organizational clothing and equipment (Class II supplies).

Vehicle Washdown

Like MOPP gear exchange, vehicle washdown is done in the unit's area of operations. The battalion PDDE crew, stationed in the battalion trains, conducts the washdown. They move to the operational decon site, rendezvous with the contaminated element, and conduct the washdown. The decon crew uses its PDDE to spray approximately 100-150 gallons of hot, soapy water on each vehicle to wash off the gross contamination. For vehicles such as M60 or Ml-series armored fighting vehicles, approximately 200 gallons of water maybe required per vehicle. Soil characteristics and vehicle size determine how much water is needed. Sandy soils may require less water, clay soils more. One hundred gallons of water per vehicle provide a 2-3 minute wash when the PDDE is discharging 25 gallons per minute per hose. To speed the operation, the decon crew should heat the water prior to arriving at the operational decon site. See Chapters 2 and 3 and Table 10-3 for planning, coordination and requirements of vehicle washdown.

Mix two pints of liquid detergent with one 450-gallon tank of water for the M12A1 decon apparatus. The M17 LDS injects detergent into the water as it operates. It uses 2.5 quarts of detergent for every 1,200-gallon water bladder (about 1 quart of soap per 450 gallons of water). The battalion decon crew should maintain a basic load of liquid all-purpose detergent, sufficient to decon 30 percent of the battalion's organic vehicles.

Detailed Troop Decon

Generally, units conduct detailed troop decon in the brigade support area. Battalions conduct it in the division/corps support area. Materials for this technique usually are stocked in the battalion or brigade trains. Reconstitution operations should be closely associated with the decon operations. The battalion assessment and recovery team (ART) ensures the material and equipment are available for the decon operation as part of the reconstitution effort.

If mission and time permit, the contaminated unit may request the services of a clothing and bath point from the ART commander. Chemical units no longer have the mission of providing this service. Quartermaster elements from the division support area provide that support. Decon platoon must carry sufficient equipment and materials to setup a DTD. It is highly possible that contaminated units will arrive at the decon site without supplies to set up and operate the DTD.

Detailed Equipment Decon

The detailed equipment decon technique is done at the same site as the detailed troop technique. The site must have access to large water sources – rivers, ponds, and public water systems are best. The ART estimates the amounts of decontaminants needed. A chemical platoon sets up, supplies the decontaminants, and conducts this technique. A decon platoon should carry enough decontaminants to service one company/team/battery. A minimum amount for a decon platoon assigned to support a maneuver company (approximately 16 vehicles per tank company) is: 4 gallons liquid detergent, 48 5-gallon cans of DS2, and 10 50-pound drums of STB.

The chemical platoon is usually resupplied through its parent unit. However, command assignment relationships can change the resupply channels.

For instance, chemical platoons attached to divisional engineers might be resupplied through the divisional engineer battalion instead of their parent company. See Table 10-1, for decon resources which are available at each orgizational level. For equipment and supplies which are needed for decon, see Table 10-2.

Table 10-1. Decon resources available at each organizational level.

Organizational Level	Decon Resources	
Individual soldiers	• 2 IDK (M258A1/M291) • 1 canteen of water	
Operators and crews	• M258A1 skin decon kits • Decon kit, individual equipment	• 1 on-board decon apparatus (M11 or M13) • Soap and water
Companies	• 2 5-gallon pails of DS2 • 2 immersion heaters (from mess section) • 2 32-gallon galvanized trash cans (from mess section)	• 6 3-gallon buckets • 6 long-handled brushes • 6 large sponges • 300 plastic garbage bags
Battalion PDDE crews	• Power-driven decon equipment (M17 LDS)	• Basic load, liquid detergent
Chemical company decon squad	• Power-driven decon equipment (M12A1 PDDA/M17 LDS)	• Basic load, liquid detergent
Chemical company decon platoon	• Power-driven decon equipment (M12 A1 PDDA/ M17LDS) • Interior decon equipment	• Sufficient amounts of decontaminants • Sufficient material to set up a DTD

Table 10-2. Equipment and supplies needed for decon.

Minimum Amounts Needed for the Seven Decon Techniques*							Nomenclature	NSN	Class of Supply	Unit of Issue	Basis of Issue (See GTA and TOE for actual authorizations)**
SD	PW	OS	MGX	VW	DTD	DED					
		1					Decon apparatus, DS2, ABC-M11	4230-00-720-1618	II	ea	1 per every major equipment
		2					Cylinder, nitrogen filled	4230-00-775-7541	II	box	2 per can DS2, 5 per box
1	1		1		2		Decon kit, skin:M258A1 Decon kit, skin: M291	4230-01-101-3984 4230-01-276-1905	II	ea	2 per soldier, 1 per mask
		1					Decon apparatus, port, 14 liter, M13	4230-01-133-4124	II	ea	1 per every major equipment
		1					Fluid-filled container, DS2	4230-01-136-8888	II	ea	1 per M13 DAP
					1		Hood, CB mask, M17	4240-00-021-8692	II	ea	1 per M24 mask
					1		Filter, canister, M10A1	4240-00-127-7186	II	ea	1 per M24/M25/M25A1 mask
					1		Filter, M13A2	4240-00-165-5026	II	ea	1 pair per M17-series mask
					1		Hood, CB mask, M5	4240-00-860-8987	II	ea	1 per M25/M25A1 mask
					1		Hood, CB mask, BC-M6A2	4240-00-999-0420	II	ea	1 per mask
*Techniques executed by individual soldiers							SD—skin decon PW—personal wipedown OS—operator's spraydown		Amount is consumption rate for 1 soldier.		
*Techniques executed by units							MGX—MOPP gear exchange VW—vehicle washdown		Amount is consumption rate for 1 platoon (4 vehicles, 40 personnel).		
							DTD—detailed troop decon DED—detailed equipment decon		Amount is consumption rate for 1 company (20 vehicles, 150 personnel).		
** Amounts vary, depending on situations.											

Table 10-2 continued. Equipment and supplies needed for decon.

Minimum Amounts Needed for the Seven Decon Techniques*							Nomenclature	NSN	Class of Supply	Unit of Issue	Basis of Issue (See GTA and TOE for actual authorizations)**
SD	PW	OS	MGX	VW	DTD	DED					
			1		2		Shears	5110-00-223-6371	II	ea	As needed
							Knife	5110-00-240-5943	II	ea	As needed
			**			**	Axe, single bit	5110-00-293-2336	II	ea	1 each for most vehicles
			**		**	**	Shovel, hand, RD, PT, D handle	5120-00-293-3336	VII	ea	1 each for most vehicles
							NAAK, MKI	6505-01-140-6455	VII	ea	
						**	Clock, alarm	6645-00-151-5274	II	ea	3 per platoon
					**	3	Paper chem agent, detector, M9	6665-10-049-8982	II	roll	1 roll/squad, 3/platoon
						**	Paper, chem agent, detector, M8	6665-00-050-8529	II	book	6 books per company
					**	**	Radiacmeter, AN/PDR27	6665-00-543-1435	VII	ea	
					2	**	Radiacmeter, IM93A/UD	6665-00-752-7759	VII	ea	
					2	1	Alarm, chemical agent, M8	6665-00-935-6955	VII	ea	1 per squad, 1 per decon team
							Detector kit, chem agent, M256	6665-01-016-8399	II	kit	
					1		Mask sanitizing solution	6810-00-266-6979	III	tube	4 per 10 masks
					**	1	Decontaminating agent, STB	6850-00-297-6653	III	drum	2 50-lb drums per company
							Decontaminating agent, DS2	6850-00-753-4870	II	can	5 gallons, 25 cans per decon plt
		1					Decontaminating agent, DS2 can	6850-00-753-4827	II	can	2 cans per M11
					2		Garbage, galvanized 32-gallon pail	7240-00-160-0440	II	ea	2 per company
					7		Pail, metal, 14-quart	7240-00-160-0455	II	ea	
		1				2	Brush, scrub, long handle	7920-00-141-5452	II	ea	

*Techniques executed by individual soldiers	SD—skin decon PW—personal wipedown OS—operator's spraydown	Amount is consumption rate for 1 soldier
*Techniques executed by units	MGX—MOPP gear exchange VW—vehicle washdown	Amount is consumption rate for 1 platoon (4 vehicles, 40 personnel).
	DTD—detailed equipment decon DED—detailed equipment decon	Amount is consumption rate for 1 company (20 vehicles, 150 personnel).

**Amounts vary, depending on situations.

Table 10-2 continued. Equipment and supplies needed for decon.

Minimum Amounts Needed for the Seven Decon Techniques*							Nomenclature	NSN	Class of Supply	Unit of Issue	Basis of Issue (See GTA and TOE for actual authorizations)**
SD	PW	OS	MGX	VW	DTD	DED					
						6	Mop	7920-00-224-8726			
					5		Sponge, cellulose	7920-00-240-2559	II	ea	
			2		4	6	Brush, scrub	7920-00-240-7171	II	ea	
			2		2		Towels, paper	7920-00-823-6931	II	box	
			1	1	1	1	Detergent, GP, liquid	7930-00-282-9699	II	gal	
			1		1		Bag, plastic	8105-00-655-8286	II	box	125 count
			1		1		Suit, chemical, protective. See CTA 50-909 for clothing tariff	8415-01-137-1700 through 1707	II	ea	2 per soldier
			1		1		Glove set, CP, See SB 10-523 for clothing tariff	8415-01-033-3517 through 3520	II	pair	1 per soldier
							Cover, helmet, chemical protective	8415-01-111-9028	II		
			1		1		Booties, CP	8430-01-021-5978	II	pair	1 per soldier
							NBC marking kit	9905-12-124-5955	II		

*Techniques executed by individual soldiers	SD—skin decon PW—personal wipedown OS—operator's spraydown	Amount is consumption rate for 1 soldier.
*Techniques executed by units	MGX—MOPP gear exchange VW—vehicle washdown	Amount is consumption rate for 1 platoon (4 vehicles 40 personnel).
	DTD—detailed troop decon DED—detailed equipment decon	Amount is consumption rate for 1 company (20 vehicles, 150 personnel).

** Amounts vary, depending on situations.

Table 10-3. Estimated water consumption for decontamination.

Required equipment	Time	Water consumption
Operational Decontamination[1]		
• M12 PDDA or • M17 LDS	• 1–3 minutes.	• 100–150 gallons per regular vehicle. • 150–200 gallons per armored vehicle or larger Example: 15 contaminated vehicles times 150 gallons of water equals 2,250 total gallons.[2]
Detailed Equipment Decontamination[3]		
• M12 PDDA[4] or • M17 LDS[4]	See Chapter 4 for time allowed during primary wash and rinse. Use proper decon method.	**Vehicles:** • Station 1, Primary Wash, 250 gallons • Station 4, Rinse, 200 gallons **Armored or larger vehicles:** • Station 1, Primary Wash, 300 gallons • Station 4, Rinse, 200 gallons Example: 4 tanks times 500 gallons of water per vehicle equals 2,000 gallons. 6 vehicles times 450 gallons of water per vehicle equals 2,700 gallons. Total 4,700 gallons[2]
Detailed Troop Decontamination		
• 30 gallon container		Initial set up requires 258 gallons of water. Water must be exchanged every 10 troops to avoid transfer of contamination. • Station 1, 90 gallons, (3 30-gallon containers)
• 3 gallon container		• Station 2, 6 gallons, (2 3-gallon containers)
• 30 gallon container		• Station 4, 180 gallons, (6 30-gallon containers)
• 4 gallon container		• Station 7, 12 gallons, (3 4-gallon containers) Example: Approximately 150 troops are to be decontaminated through DTD. You will require 258 gallons per every 10 troops. The number of troops (150) divided by required water exchange (10) equals 15 times water needed to be exchanged. 15 times 258 gallons per every 10 troops equals 3,870 gallons of water required for 150 troops.[2]

1. To reduce contamination, conduct operator's spraydown **prior** to operational decon. This process may require **less** water consumption during operational and/or thorough decon.

2. **Always** include a 10% planning factor to the total estimate of water consumption for DED and DTD.

   Example: 3,870 gallons of water required for DTD times 10% equals 387 additional gallons of water.
   A total of 3,870 plus 387 equals 4,257 gallons of water required for DTD.

3. Planner must consider vehicle segregation conducted during predecon action in order to estimate water consumption. Consider vehicles that were processed through operational decon. These vehicles will normally increase the weatherization process and may reduce water usage.

4. The M17 with two wands uses 14 gallons per minute.
   The M17 with one wand fitted with injector uses 25 gallons per minute.
   The M12 PDDA pumps 25 gallons of water per minute.