



# Massachusetts Task Force 1 Urban Search & Rescue



## Recommendations for Canine Technical Decontamination

**Lori E. Gordon, DVM  
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### **Introduction**

The following guidelines are based on two team decontamination drills that the MA TF 1 has conducted over the past year. Canine decontamination was included in these drills. The purpose was to discover what difficulties exist and to modify the decontamination corridor and procedures to accommodate these valuable members of the team.

It is understood that it is not normal procedure to send out any handler-canine team into a WMD contaminated area, especially since level A, B, or C protection is neither available nor practical for the canines. These drills were practiced in part as a precaution should an unknown secondary WMD device be deployed and unforeseen contamination occur as a result. It is common, however, to send people and canines into natural disaster settings where hazardous materials may be encountered.

The following information is provided as a guideline, and modifications dependent on each particular WMD or HAZMAT situation, as well as a team's available decontamination equipment, are expected. This way we may be better prepared to handle any situation.

The 2004 drill was conducted as a non-WMD situation. There was no technical decon station set up. It was designed to test the effectiveness of a soap and water washing of the canines.

The 2005 drill was conducted as a full-scale WMD situation. The technical decon station was set up and a canine run through the system.

## 2004 Drill Summary

On October 16, 2004 canine decon was performed as part of an all discipline mock disaster. The canines were contaminated with a test product called Glo Germ®. It comes in both powder and mineral oil based liquid form, and can be detected as it glows bright orange and green, respectively, under ultraviolet light. After search, the contamination pattern distribution on the canines was powder particles around their face and muzzle, liquid on their footpads and toes. After a soap and water washing, the canines were checked to see how well they were decontaminated.



The powder residue around their face was cleansed away the first time through, but the Glo Germ® persisted on the footpads, especially at the pad-skin interface. This problem persisted despite 3-4 times through decon. It was theorized that the Glo Germ® got lodged in the pad edges because this area is not worn down like the central portion that contacts surfaces as the canines walk, and remains deep-crevassed.

### Glo Germ Powder®

The thick, tough pads of canines are excellent protection for them against some things, but absorption through the pads has been of great concern in military working dogs. Pads have sweat glands, no hair, and will absorb nerve agents. One suggestion from the drill was that a brush might be used for the footpads, especially near the skin, to better cleanse this area. The brush would need to be firm enough to get into the deep crevasses, but soft enough not to abrade the skin and further open a gateway for a contaminant to enter the canine's body systemically. Another option is to walk the canine through a 0.5% hypochlorite solution (1:10 diluted household bleach), wait 10 minutes, then walk through a clean water rinse. This will destroy or at least reduce the level of most chemical and biological agents.



### Glo Germ Liquid®



## 2005 Drill Summary

On August 15, 2005 a full set-up of the WMD decontamination unit was performed and included was a canine decontamination run. The handler wore a Lakeland Industries Level B Tychem<sup>®</sup> 9400 suit, and was sent through a Reeves gross decontamination shower, then through a TVI Corporation decontamination shelter. No test contamination material was used. Concerns with the process of sending a canine through these specific team equipment units were addressed.

In brief, the following are some of the points made during the drill.

- Have clean leashes and collars available along the decon corridor to replace contaminated ones that should be tossed away.
- We considered using a pH balanced baby shampoo to protect their eyes, as adding a petroleum-based protectant to protect the eye before decon can compromise or further damage corneas that have been contaminated. However, most chemical agents degrade faster in a pH above 8.0. There is a trade-off either way.
- Place rubber mats with smaller holes over grates to protect toes and nails from getting caught and prevent slipping
- Spray nozzles along the TVI decon shelter sides are lower than those in the middle corridor, so be careful the spray is not at a level to drive water too harshly into the canine's eyes and damage them.
- Because potentially contaminated water was dripping off the level B suit hood onto the canine, decon the handler first to lessen the contaminant.
- There is a need for at least 2 hose attachments, one for the human decon and one to be able to reach under the canine's belly and legs for rinsing.
- Have absorbent towels ready to catch the water spray shaken off after getting wet. Shaking water off between gross and thorough decon may need to be contained

### **Draft Outline for Canine Decontamination Standard Operating Procedure**

#### **Pre-Decontamination**

Set up of an ideal WMD or HAZMAT decontamination corridor consists of a gross decon shower (stage 1) followed by a more thorough shampoo and rinsing shower (stage 2).

Special considerations include:

- Place small-holed rubber mats placed over any grates with holes that may catch a canine toe or nail
- Have extra collars and leashes hung up between a gross decontamination shower and a shampoo and rinse decon shower, and again at the end of the whole procedure so contaminated items may be thrown away
- Have bottles of shampoo, choosing the more commonly recommended Dawn<sup>®</sup> or a pH balanced baby shampoo, within the shampooing area
- Place soft yet firm brushes with easily held handles within the shampooing area for decontamination of the canine footpads (consider surgical scrub brushes)
- Have plenty of absorbent towels at the end of the decontamination corridor to dry the canines and decrease water spray when they shake

## Stage 1: Gross Decontamination

This is a shower designed to remove any visible or non-visible contaminant from the person or canine. By decreasing the gross amount of WMD or HAZMAT contaminant, the thorough shampooing stage can be much more effective. Ideally one steps up on a grate and the water run-off is contained and pumped into a controlled waste area for controlled disposal.



- The handler will be the main person to decontaminate their canine in most situations unless they are incapacitated.
- Should the canine become difficult to handle, two options were discussed:
  - Giving an intramuscular injection of diazepam (Valium® 5 mg/ml, 1.0 ml dose, maximum 3 doses). Extra Valium® auto-injectors issued to handlers for their canines unlikely at this point, so need medic or veterinarian (properly suited up) to inject, due to controlled nature of drug
  - Valium is not ideal, as it is poorly absorbed IM and stings. Medazolam is a better option.
  - Safety cage muzzle (like the track dogs) that will not interfere with panting or impinge on the muzzle area, and protects others from being bitten
  - Nylon muzzle that will prevent the canine from drinking contaminated water or licking contaminated fur
- Enter the gross decon water shower after initial blotting (don't rub) of any visible liquid or powder with a wet paper towel. Stay for as long as it takes to remove as much visible contaminant as possible, or as long as is deemed appropriate by HAZMAT and medical personnel based on the suspected contaminant, especially if it is not visible.
- Replace collar and leash with clean ones provided between here and the next stage.

## Stage 2: Thorough (Technical) Decontamination

This is a shower area designed to further decontaminate personnel to a point at which they can remove all contaminated clothing, proceeding further to a personal enclosed shower if necessary. For the canines, it is decontamination to a point at which they are safe from further skin contaminant effects and safe for others to be around or handle.



- Enter the area and decontaminate the handler first, who should try to avoid dripping potentially hazardous run-off from their body onto the canine, then they can decontaminate their canine
- If there is more than one helper in this area, one can do the handler and another begin shampooing the canine.
  - This decreases time spent in decon, important if medical attention needed or if the cold water may cause or add to a hypothermia situation
  - Have 2 hoses with spray nozzles for each helper to use on the handler and canine, or one for a helper to use on the handler and one for the handler to use on their canine
- In a TVI decon tent, you may need to take down one hanging wall to widen the area to accommodate both handler, canine, and a helper(s)



In decontamination of the canine, consider the following points:

- Choosing the use of a pH balanced baby shampoo to avoid corneal irritation versus using a higher pH shampoo that may degrade an agent faster
- Use firm but gentle hand scrubbing of shampoo and cover the entire body. Even gloved, you do not want to use any harsh scrub brushes which may compromise the skin integrity and allow contamination to enter the blood stream
- Be especially gentle in less haired spots: axillae (armpits), groin, lower abdomen, inner ears, perianal/perivulvar, and prepuccial areas.
- Use of a soft-bristled brush on the paw pads, especially near the pad-skin interface, to dislodge material that may be embedded in the deeply crevassed outer pad edges (surgical scrub brushes may fit the need)
- Use long hoses to reach hard to rinse areas that the side spray nozzles cannot reach
- May send the canines near the outer TVI tent walls where the spray nozzles are lower to reach them, but protect the canines' eyes from head-level spraying nozzles that may abrade the corneas
- Have clean leash and collar ready, and absorbent towels ready to dry the canines and decrease water spray when they shake. Those helping along the way may need some low level protective gear, especially goggles, in case some contaminated water gets sprayed about or in their eyes
- Consider a dilute bleach paw rinse through, waiting 10 minutes, then a water rinse to further reduce or destroy the level of any remaining contaminant.

### **Post-Decontamination**

Complete medical check-up for the canine, treatment as needed.

