# PERSONNEL DECONTAMINATION

## OBJECTIVE & STRATEGY

D

The objective of this section is to protect worker safety and health and prevent the spread of contamination. This section provides guidance to be used in establishing minimum standards for decontamination by properly trained oil spill response workers. Safety is always the first objective of any response. Either of the following two documents supersedes this guidance:

- Incident-specific Decontamination Plan (usually part of the Site Safety Plan)
- Oil Spill Response Organization decontamination procedures and training for employees/responders

The following are recommended decontamination guidelines for crude oil/petroleum spill cleanup operations.



## TACTIC DESCRIPTION

Decontamination involves the removal of oil or other contaminants from personnel or equipment after they leave the Hot Zone. The purposes of decontamination are to:

- Minimize worker contact with contaminants,
- Prevent spread of contaminants to clean areas and exposure to personnel there, and
- Remove contaminants from equipment to allow its reuse.

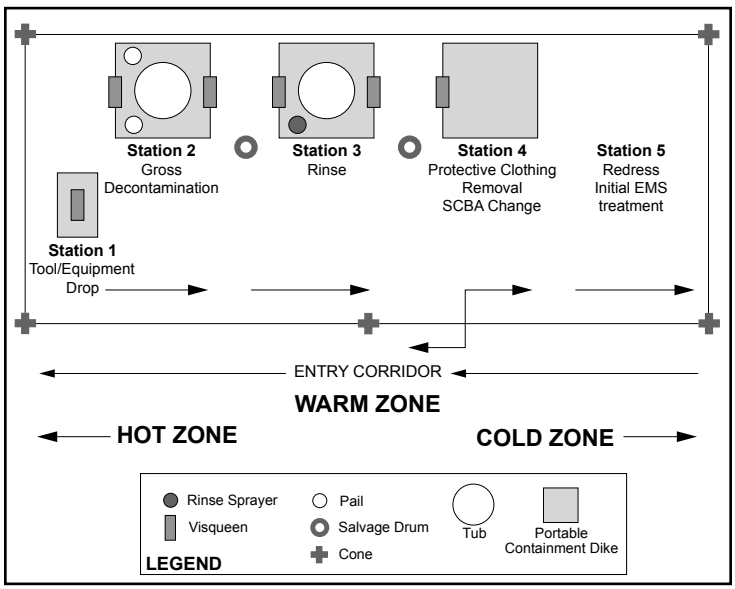

Figure D-1. Sample decontamination area.

Decontamination is conducted in the Warm Zone, which is the control point for personnel entering and leaving the Hot Zone. Decontamination is divided into four categories based on the level of personal protection equipment (PPE) being used for the spill zone. In general, personnel and equipment move through various

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steps of decontamination to ensure that gross contaminated is removed first, and that uncontaminated clothing/equipment do not become contaminated by the decontamination process. Flow charts are presented below for each of the four levels of protection, with the highest level being Level A.

## *Level A*

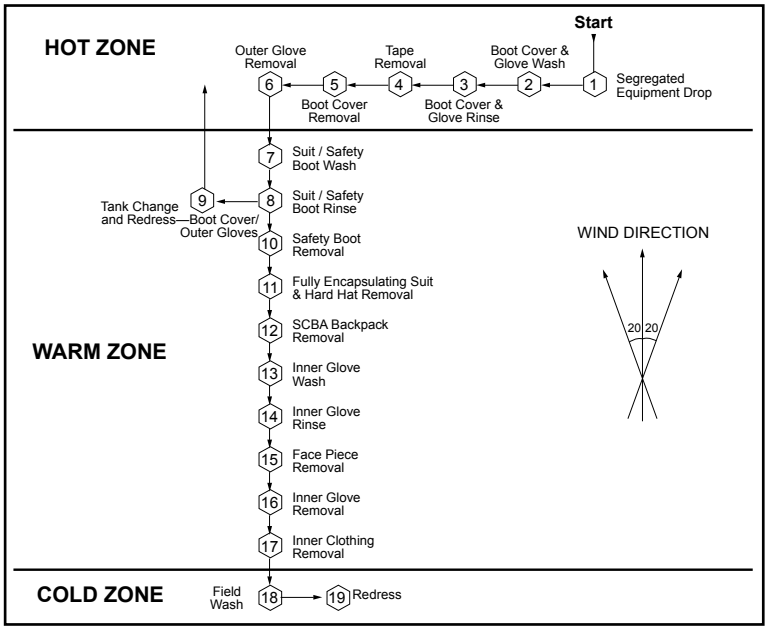


Figure D-2. Level A Decontamination Flow Chart.

## *Level B*

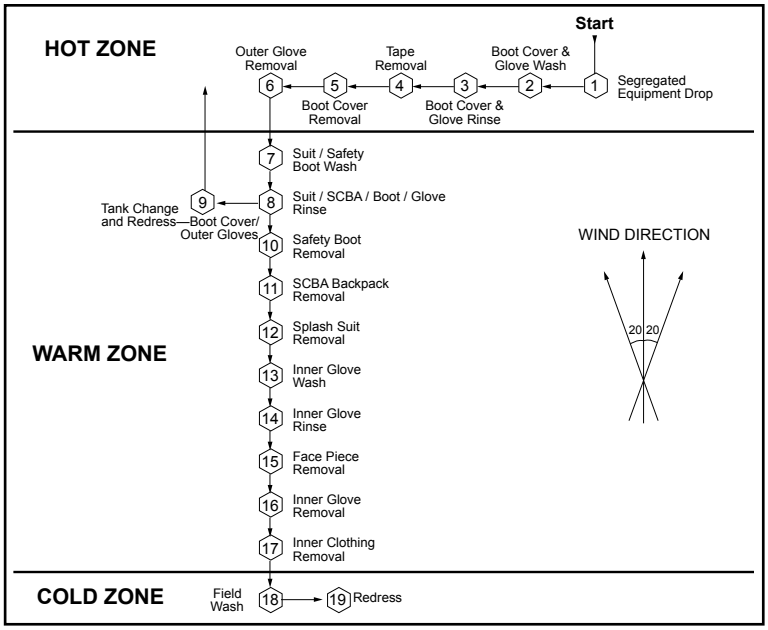


Figure D-3. Level B Decontamination Flow Chart.

## Level C

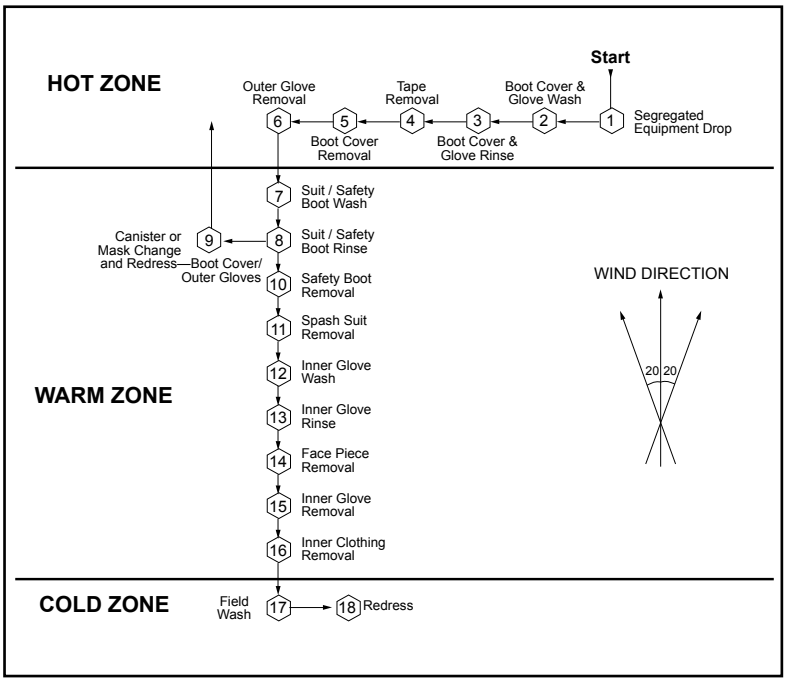


Figure D-4. Level C Decontamination Flow Chart.

## Level D

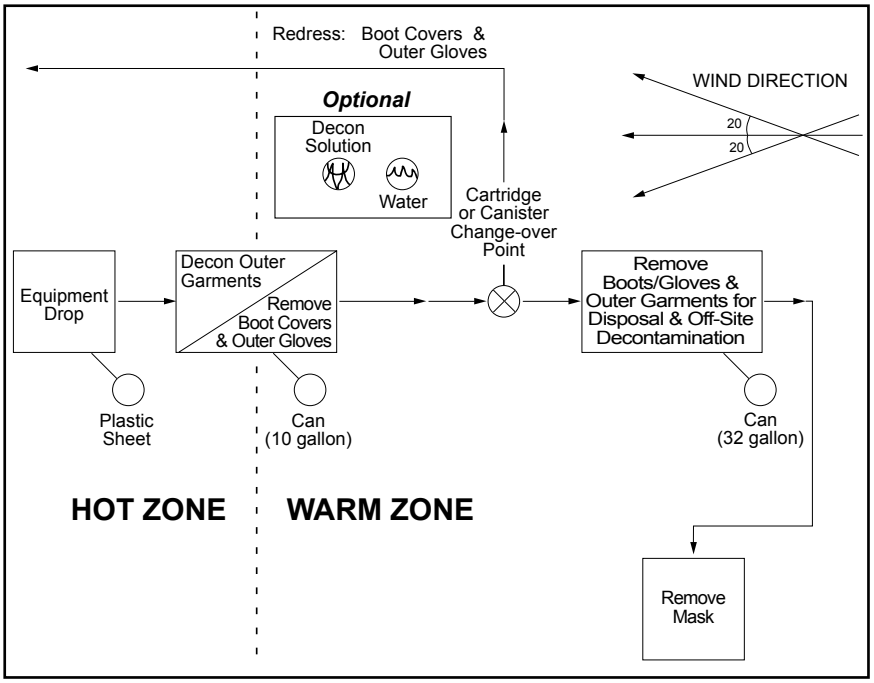


Figure D-5. Level D Decontamination Flow Chart.

# Personnel Decontamination

## DEPLOYMENT CONSIDERATIONS AND LIMITATIONS

- Plan for containment, collection, disposal of contaminated solutions and wastes generated from decontamination.
- Develop separate decontamination processes for heavy equipment and machinery to prevent cross-contamination of personnel.
- Separate decontamination stations to prevent personnel cross-contamination.
- Develop distinct entry and exit points, and physically separate entry paths from contaminated area to clean area and vice versa.
- Establish procedures for minimum decontamination for restroom use and medical emergencies.
- Locate medical/first aid stations to avoid exposure to contaminants.
- Stress the use of extra steps to avoid contact with or handling of contaminants.
- Wrap sampling/monitoring equipment in disposable see-through plastic bags.
- Use disposable protective clothing and equipment [personal protective equipment (PPE), chemical-protective clothing (CPC)] where possible.
- Use strippable coatings for equipment where possible.
- Use double containerization of contaminated wastes and recovered materials (e.g., plastic liners in overpack drums).
- Inspect all PPE/CPC for cuts, tears, punctures, abrasions, and other signs of deterioration.
- Assure proper fastening and sealing of CPC and PPE.
- First-stage decontamination personnel must wear the same, or one level lower, PPE as clean-up workers.
- Consider placing containment boom around vessels where on-water decontamination is performed.
- Consider placing containment boom along shoreline where decontamination is performed adjacent to a water body.

## REFERENCES TO OTHER TACTICS

- SITE ENTRY CRITERIA
- PERSONAL PROTECTIVE EQUIPMENT
- SITE LAYOUT AND CONTROL
- VESSEL DECONTAMINATION

## EQUIPMENT AND PERSONNEL RESOURCES

Resources required for decontamination and decontamination setup will depend on the following:

- Availability of potable water, electric power, and waste disposal.
- Mobilization time and duration of site activities.
- Level and type of cleanup and response activity expected at site, and site conditions.
- Available space for decontamination setup and location requirements for decontamination line.
- Health hazards presented by contaminants at cleanup/response site.
- Need for additional controls (e.g., vapor diffusion/dispersion, movement/transfer of gross waste).

### *Typical Decontamination Equipment and Personnel Needs for Level C and D*

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| Typical Equipment | Function | Quantity | Notes |
|---|---|---|---|
| Wash Tubs | Decontamination | >3 | |
| Portable Decon Berm | Decontamination | >4 | |
| Galvanized Bucket | Decontamination | >2 | |
| Sprayer | Decontamination | >2 | |
| Salvage Drum | Decontamination | >2 | |
| Traffic Cone | Designate decon area | >4 | |
| Caution Tape | Designate decon area | >2 rolls | |
| Visqueen | Decon area | > 1 roll | |
| Oily Waste Dumpster | Waste receptacle | 1 | |
| Light Plant | Illumination | >1 | |
| **Typical Personnel** | **Function** | **Quantity** | **Notes** |
| Field Team Leader | Supervise operations | 1 | |
| Skilled Technicians | Crews vessels and operates response equipment | 1 to 2 | |
| General Technicians | Work under the direction of skilled technicians | 2 to 10 | |