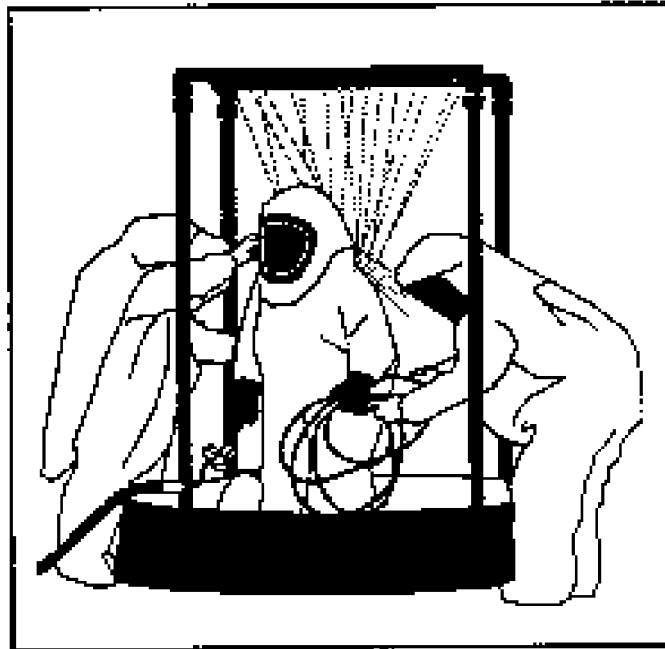


APPENDIX E

SAMPLE DECONTAMINATION LAYOUTS AND PROCEDURES FOR LEVELS OF PROTECTION A THROUGH C

The objective of these procedures is to minimize the risk of exposure to hazardous substances in the field. Protective equipment must be worn by personnel when response activities involve known or suspected hazardous substances. The procedures for decontaminating personnel upon leaving the contaminated area are discussed for personal protective equipment levels A through C. The procedures given are for the maximum and minimum amount of decontamination used for each level of protection.

The maximum decontamination procedures for all levels of protection consist of specific activities at 19 stations. Each station emphasizes an important aspect of decontamination. When establishing a decontamination line, each aspect should be incorporated separately or combined with other aspects into a procedure with fewer steps (such as the minimum decontamination procedures). Decontamination lines are site-specific and vary depending on the types of contamination and work activities conducted on-site. When the decontamination line is no longer required, contamination wash and rinse solutions and contaminated articles must be contained and disposed of as hazardous wastes in compliance with State and Federal regulations.



**EQUIPMENT NEEDED TO PERFORM MAXIMUM DECONTAMINATION
MEASURES FOR LEVELS A, B, AND C**

- | | | | |
|------------|---|-------------|---|
| Station 1: | <ul style="list-style-type: none"> a. Various Size Containers b. Plastic Liners c. Plastic Drop Cloths | Station 10: | <ul style="list-style-type: none"> a: Containers (20-30 Gallons) b. Plastic Liners c. Bench or Stools d. Boot Jack |
| Station 2: | <ul style="list-style-type: none"> a: Containers (20-30 Gallons) b. Decon Solution or Detergent Water c. 2-3 Long-Handled, Soft-Bristled Scrub Brushes | Station 11: | <ul style="list-style-type: none"> a. Rack b. Drop Cloths c. Bench or Stools |
| Station 3: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons)
OR b. Water c. 2-3 Long-Handled, Soft-Bristled Scrub Brushes | Station 12: | <ul style="list-style-type: none"> a. Table |
| Station 4: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Plastic Liners | Station 13: | <ul style="list-style-type: none"> a. Basin or Bucket b. Decon Solution c. Small Table |
| Station 5: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Plastic Liners c. Bench or Stools | Station 14: | <ul style="list-style-type: none"> a. Water b. Basin on Bucket c. Small Table |
| Station 6: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Plastic Liners | Station 15: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Plastic Liners |
| Station 7: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Decon Solution or Detergent Water c. 2-3 Long-Handled, Soft-Bristled Scrub Brushes | Station 16: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Plastic Liners |
| Station 8: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons)
OR b. Water c. 2-3 Long-Handled, Soft-Bristled Scrub Brushes | Station 17: | <ul style="list-style-type: none"> a. Containers (20-30 Gallons) b. Plastic Liners |
| Station 9: | <ul style="list-style-type: none"> a. Air Tanks or Face Masks and Cartridge Depending on Level b. Tape c. Boot Covers d. Gloves | Station 18: | <ul style="list-style-type: none"> a. Water b. Soap c. Small Table d. Basin or Bucket e. Field Showers f. Towels |
| | | Station 19: | <ul style="list-style-type: none"> a. Dressing Trailer is Needed in Inclement Weather b. Tables c. Chairs d. Lockers e. Cloths |

**EQUIPMENT NEEDED TO PERFORM MINIMUM DECONTAMINATION
MEASURES FOR LEVELS A, B, AND C**

- Station 1:
- a. Various Size Containers
 - b. Plastic Liners
 - c. Plastic Drop Cloths
- Station 2:
- a. Containers (20-30 Gallons)
 - b. Decon Solution
 - c. Rinse Water
 - d. 2-3 Long-Handled, Soft-Bristled Scrub Brushes
- Station 3:
- a. Containers (20-30 Gallons)
 - b. Plastic Liners
 - c. Bench or Stools
- Station 4:
- a. Air Tanks or Masks and Cartridges Depending Upon Level
 - b. Tape
 - c. Boot Covers
 - d. Gloves

- Station 5:
- a. Containers (20-30 Gallons)
 - b. Plastic Liners
 - c. Bench or Stools
- Station 6:
- a. Plastic Sheets
 - b. Basin or Bucket
 - c. Soap and Towels
 - d. Bench or Stools
- Station 7:
- a. Water
 - b. Soap
 - c. Tables
 - d. Wash Basin or Bucket

MAXIMUM MEASURES FOR LEVEL A DECONTAMINATION

Station 1:	Segregated Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. During hot weather operations, a cool-down station may be set up within this area.
Station 2:	Boot Cover and Glove Wash	Scrub outer boot covers and gloves with decon solution or detergent/water.
Station 3:	Boot Cover and Glove Rinse	Rinse off decon solution from station 2 using copious amounts of water.
Station 4:	Tape Removal	Remove tape around boots and gloves and deposit in container with plastic liner.
Station 5:	Boot Cover Removal	Remove boot covers and deposit in container with plastic liner.
Station 6:	Outer Glove Removal	Remove outer gloves and deposit in container with plastic liner.
Station 7:	Suit and Boot Wash	Wash encapsulating suit and boots using scrub brush and decon solution or detergent/water. Repeat as many times as necessary.
Station 8:	Suit and Boot	Rinse off decon solution using water. Repeat as many times as necessary.
Station 9:	Tank Change	If an air tank change is desired, this is the last step in the decontamination procedure. Air tank is exchanged, new outer gloves and boot covers are donned, and joints are taped. Worker returns to duty.
Station 10:	Safety Boot Removal	Remove safety boots and deposit in container with plastic liner.
Station 11:	Fully Encapsulating Suit and Hard Hat Removal	Fully encapsulated suit is removed with assistance of a helper and is laid out on a drop cloth or hung up. Hard hat is removed. Hot weather rest station may be set up within this area for personnel returning to site.
Station 12:	SCBA Backpack Removal	While still wearing facepiece, remove backpack and place on table. Disconnect hose from regulator valve and proceed to next station.
Station 13:	Inner Glove Wash	Wash with decon solution that will not harm the skin. Repeat as often as necessary.
Station 14:	Inner Glove Rinse	Rinse with water. Repeat as many times as necessary.
Station 15:	Face Piece Removal	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
Station 16:	Inner Glove Removal	Remove inner gloves and deposit in container with liner.
Station 17:	Inner Clothing Removal	Remove clothing and place in lined container. Do not wear inner clothing off-site since there is a possibility that small amounts of contaminants might have been transferred in removing the fully-encapsulating suit.
Station 18:	Field Wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
Station 19:	Redress	Put on clean clothes.

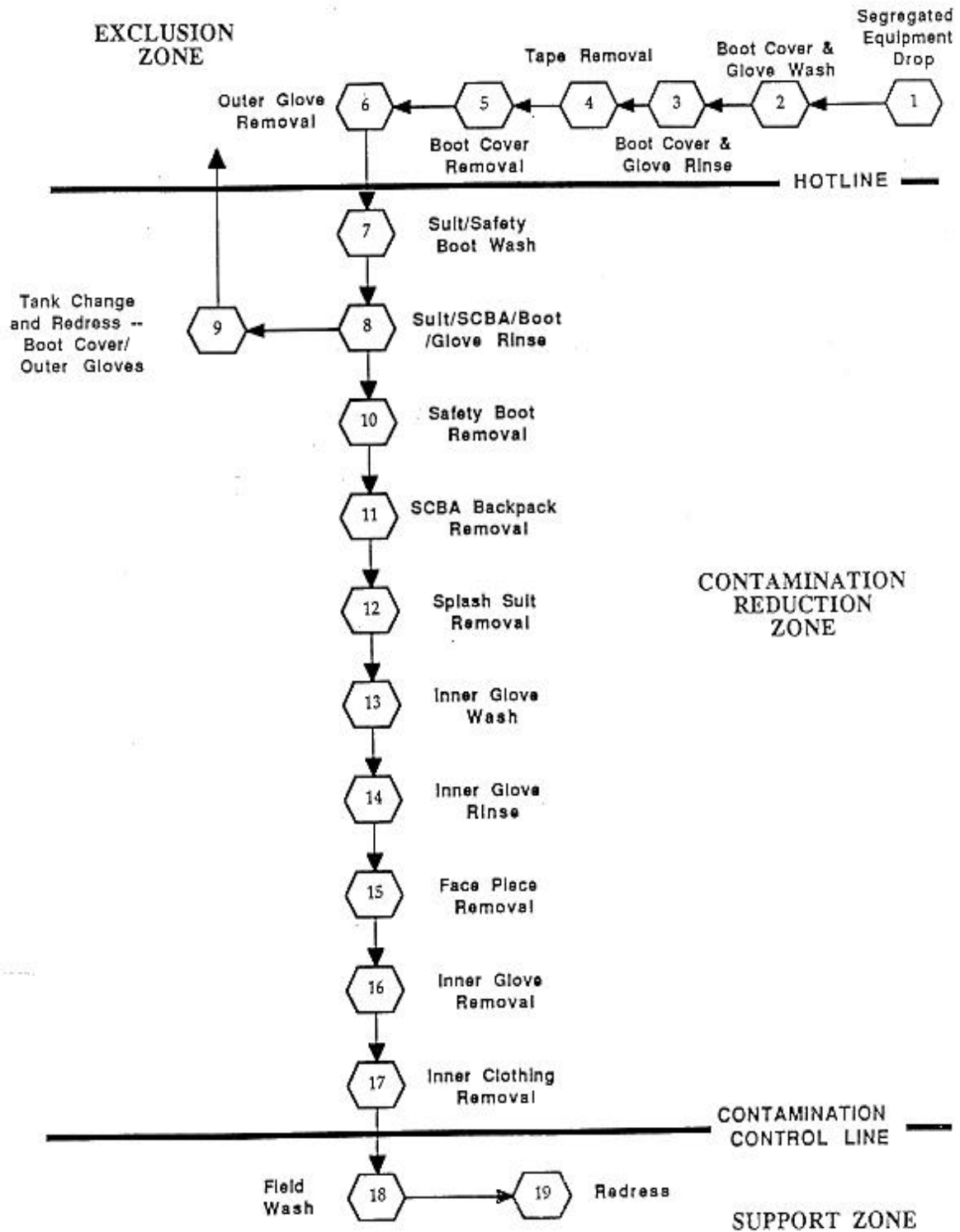
MINIMUM MEASURES FOR LEVEL A DECONTAMINATION

Station 1:	Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, cool-down stations may be set up within this area.
Station 2:	Outer Garment, Boots, and Gloves Wash and Rinse	Scrub outer boots, outer gloves and fully-encapsulating suit with decon solution or detergent and water. Rinse off using copious amounts of water.
Station 3:	Outer Boot and Glove Removal	Remove outer boots and gloves. Deposit in container with plastic liner.
Station 4:	Tank Change	If worker leaves Exclusion Zone to change air tank, this is the last step in the decontamination procedure. Worker's air tank is exchanged, new outer gloves and boot covers are donned, joints are taped, and worker returns to duty.
Station 5:	Boot, Gloves, and Outer Garment Removal	Boots, fully-encapsulating suit, and inner gloves are removed and deposited in separate containers lined with plastic.
Station 6:	SCBA Removal	SCBA backpack and facepieces are removed (avoid touching face with fingers). SCBA is deposited on plastic sheets.
Station 7:	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

MAXIMUM MEASURES FOR LEVEL B DECONTAMINATION

Station 1:	Segregated Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross-contamination. During hot weather operations, cool-down stations may be set up within this area.
Station 2:	Boot Cover and Glove Wash	Scrub outer boot covers and gloves with decon solution or detergent and water.
Station 3:	Boot Cover and Glove Rinse	Rinse off decon solution from Station 2 using copious amounts of water.
Station 4:	Tape Removal	Remove tape around boots and gloves and deposit in container with plastic liner.
Station 5:	Boot Cover Removal	Remove boot covers and deposit in container with plastic liner.
Station 6:	Outer Glove Removal	Remove outer gloves and deposit in container with plastic liner.
Station 7:	Suit and Safety Boot Wash	Wash chemical-resistant splash suit, SCBA, gloves, and safety boots. Scrub with long-handle scrub brush and decon solution. Wrap SCBA regulator (if belt mounted type) with plastic to keep out water. Wash backpack assembly with sponges or cloths.
Station 8:	Suit, SCBA, Boot, and Glove Rinse	Rinse off decon solution using copious amounts of water.
Station 9:	Tank Change	If worker leaves exclusion zone to change air tank, this is the last step in the decontamination procedure. Worker's air tank is exchanged, new outer gloves and boot covers are donned, joints are taped, and worker returns to duty.
Station 10:	Safety Boot Removal	Remove safety boots and deposit in container with plastic liner.
Station 11:	SCBA Backpack Removal	While still wearing facepiece, remove backpack and place on table. Disconnect hose from regulator valve.
Station 12:	Splash Suit Removal	With assistance of helper, remove splash suit. Deposit in container with plastic liner.
Station 13:	Inner Glove Wash	Wash inner gloves with decon solution.
Station 14:	Inner Glove Rinse	Rinse inner gloves with water.
Station 15:	Face Piece Removal	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
Station 16:	Inner Glove Removal	Remove inner gloves and deposit in container with liner.
Station 17:	Inner Clothing Removal	Remove inner clothing. Place in container with liner. Do not wear inner clothing off-site since there is a possibility that small amounts of contaminants may have been transferred in removing the fully-encapsulating suit.
Station 18:	Field Wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
Station 19:	Redress	Put on clean clothes.

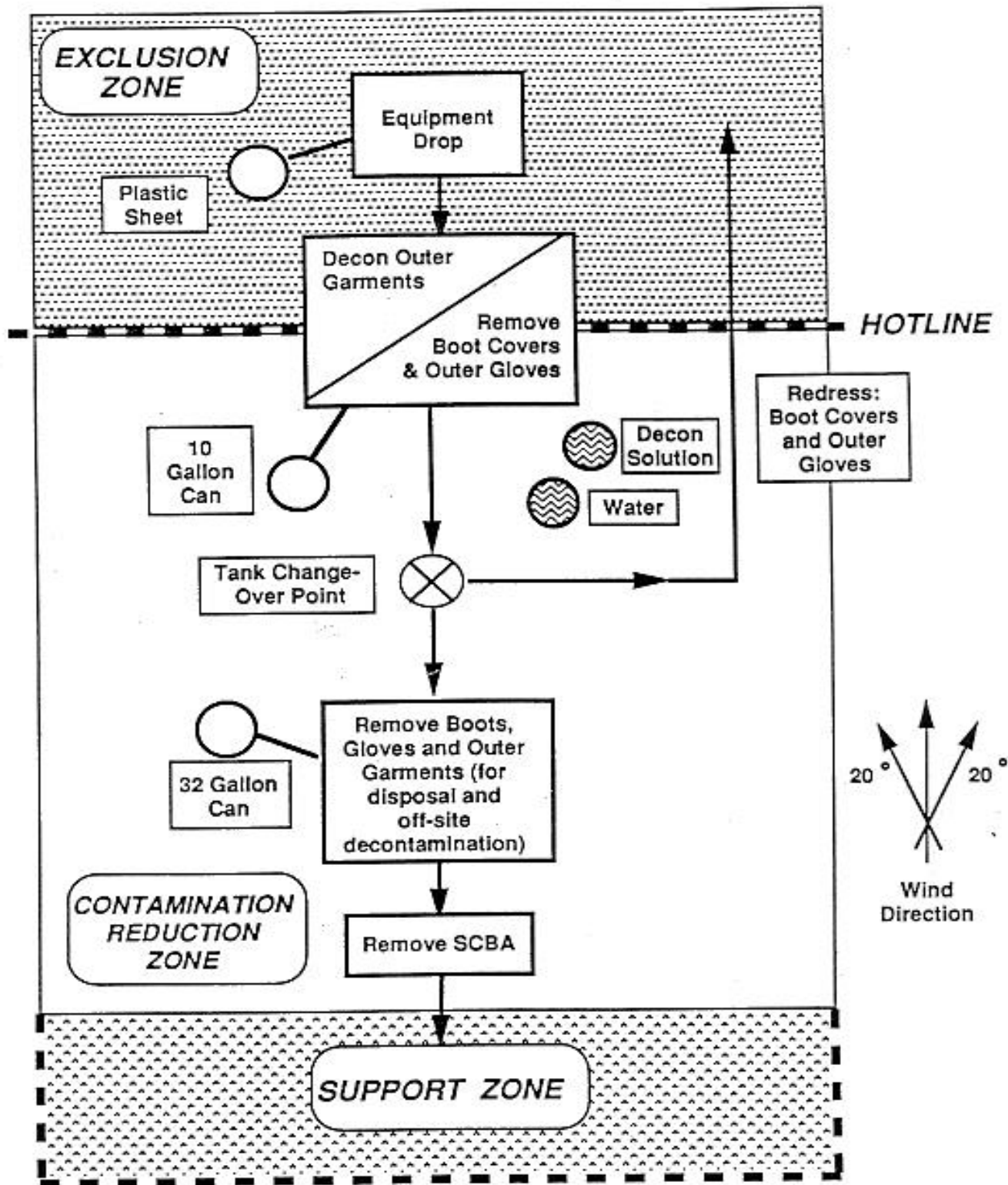
MAXIMUM DECONTAMINATION LAYOUT FOR LEVEL B PROTECTION



MINIMUM MEASURES FOR LEVEL B DECONTAMINATION

Station 1:	Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, cool-down station may be set up within this area.
Station 2:	Outer Garment, Boots, and Gloves Wash and Rinse	Scrub outer boots, outer gloves, and chemical-resistant splash suit with decon solution or detergent water. Rinse off using copious amounts of water.
Station 3:	Outer Boot and Glove Removal	Remove outer boots and gloves. Deposit in container with plastic liner.
Station 4:	Tank Change	If worker leaves exclusion zone to change air tank, this is the last step in the decontamination procedure. Worker's air tank is exchanged, new outer gloves and boot covers are donned, joints are taped, and worker returns to duty.
Station 5:	Boot, Gloves, and Outer Garment Removal	Boots, chemical-resistant splash suit, and inner gloves are removed and deposited in separate containers lined with plastic.
Station 6:	SCBA Removal	SCBA backpack and facepiece are removed. Avoid touching face with finger. SCBA is deposited on plastic sheets.
Station 7:	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

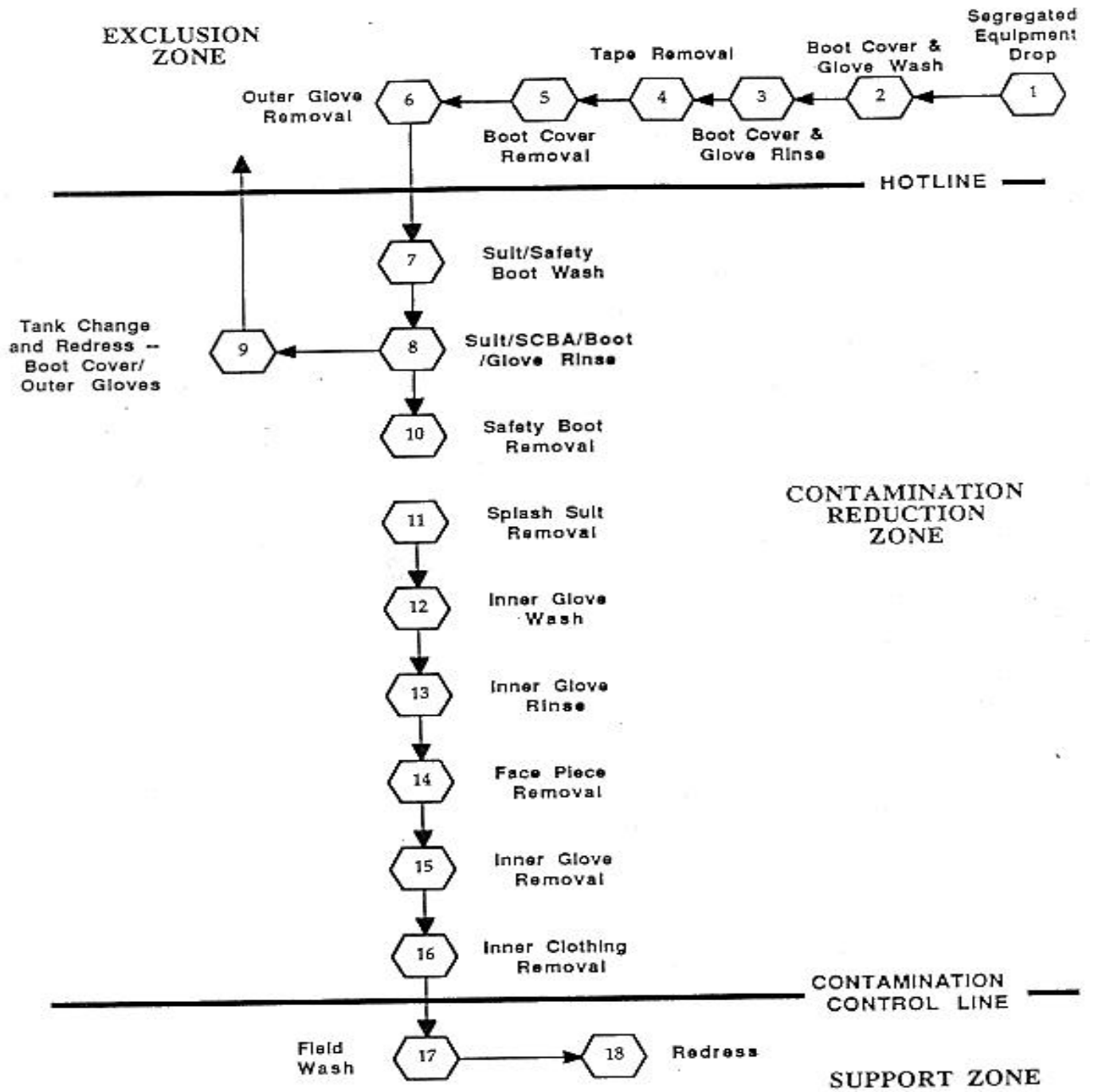
MINIMUM DECONTAMINATION LAYOUT FOR LEVELS A & B PROTECTION



MAXIMUM MEASURES FOR LEVEL C DECONTAMINATION

Station 1:	Segregated Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool-down station may be set up within this area.
Station 2:	Boot Cover and Glove Wash	Scrub outer boot covers and gloves with decon solution or detergent and water.
Station 3:	Boot Cover and Glove Rinse	Rinse off decon solution from Station 2 using copious amounts of water.
Station 4:	Tape Removal	Remove tape around boots and gloves and deposit in container with plastic liner.
Station 5:	Boot Cover Removal	Remove boot covers and deposit in containers with plastic liner.
Station 6:	Outer Glove Removal	Remove outer gloves and deposit in container with plastic liner.
Station 7:	Suit and Boot Wash	Wash splash suit, gloves, and safety boots. Scrub with long-handle scrub brush and decon solution.
Station 8:	Suit, Boot, and Glove Rinse	Rinse off decon solution using water. Repeat as many times as necessary.
Station 9:	Canister or Mask Change	If worker leaves exclusion zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers are donned, and joints are taped. Worker returns to duty.
Station 10:	Safety Boot Removal	Remove safety boots and deposit in container with plastic liner.
Station 11:	Splash Suit Removal	With assistance of helper, remove splash suit. Deposit in container with plastic liner.
Station 12:	Inner Glove Removal	Wash inner gloves with decon solution.
Station 13:	Inner Glove Wash	Rinse inner gloves with water.
Station 14:	Face Piece Removal	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
Station 15:	Inner Glove Removal	Remove inner gloves and deposit in lined container.
Station 16:	Inner Clothing Removal	Remove clothing soaked with perspiration and place in lined container. Do not wear inner clothing off-site since there is a probability that small amounts of contaminants might have been transferred in removing the fully-encapsulating suit.
Station 17:	Field Wash	Shower if highly toxic, skin-corrosive, or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
Station 18:	Redress	Put on clean clothes.

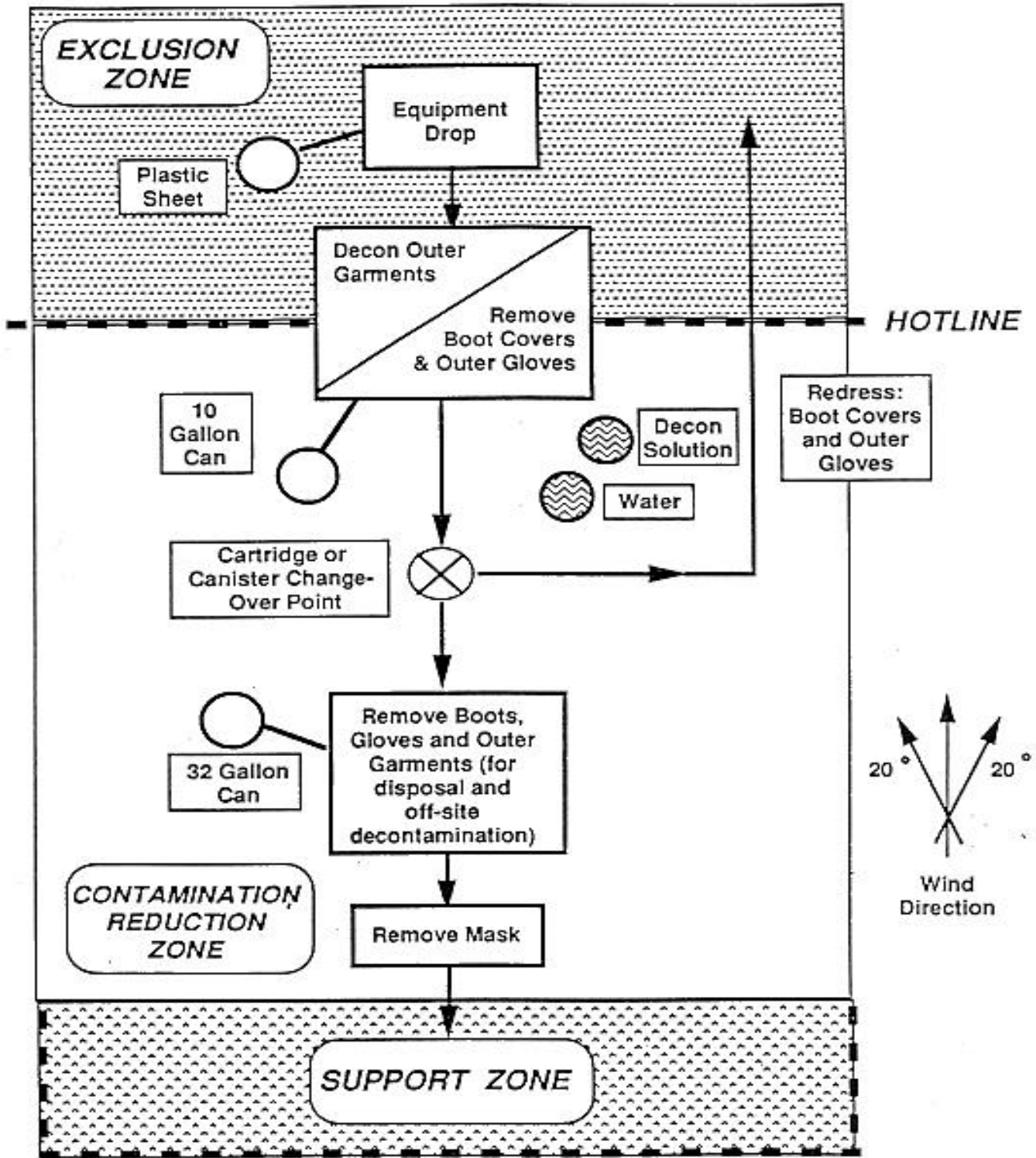
MAXIMUM DECONTAMINATION LAYOUT FOR LEVEL C PROTECTION



MINIMUM MEASURES FOR LEVEL C DECONTAMINATION

Station 1:	Equipment Drop	Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool-down station may be set up within this area.
Station 2:	Outer Garment, Boots, and Gloves Wash and Rinse	Scrub outer boots, outer gloves, and splash suit with decon solution or detergent water. Rinse off using copious amounts of water.
Station 3:	Outer Boot and Glove Removal	Remove outer boots and gloves. Deposit in container with plastic liner.
Station 4:	Canister or Mask Change	If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, and worker returns to duty.
Station 5:	Boot, Gloves and Outer Garment Removal	Boots, chemical-resistant splash suit, and inner gloves are removed and deposited in separate containers lined with plastic.
Station 6:	Face Piece Removal	Facepiece is removed. Avoid touching face with fingers. Facepiece is deposited on plastic sheet.
Station 7:	Field Wash	Hands and face are thoroughly washed. Shower as soon as possible.

MINIMUM DECONTAMINATION LAYOUT FOR LEVEL C PROTECTION



APPENDIX F

REGIONAL CONTACTS

This Appendix provides the addresses and telephone numbers of Headquarters and Regional contacts at both EPA and OSHA.



U.S. ENVIRONMENTAL PROTECTION AGENCY

U.S. EPA/Environmental Response Team

2890 Woodbridge Avenue
Building 18, MS 101
Edison, NJ 08837-3679
(908) 321-6740
24 Hour Hotline: (908) 321-6660

EPA REGIONAL OFFICES

- **EPA Region 1**
John F. Kennedy Federal Building
Room 2203
Boston, MA 02203
(617) 565-3715
- **EPA Region 2**
Jacob K. Javitz Federal Building
26 Federal Plaza
New York, NY 10278
(212) 264-2657
- **EPA Region 3**
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-9800
- **EPA Region 4**
345 Courtland Street, NE
Atlanta, GA 30365
(404) 347-4727
- **EPA Region 5**
Metcalf Federal Building
77 W. Jackson Boulevard
Chicago, IL 60604
(312) 353-2000
- **EPA Region 6**
1445 Ross Avenue,
9th Floor
Dallas, TX 75202
(214) 655-6444
- **EPA Region 7**
726 Minnesota Avenue
Kansas City, KS 66115
(913) 551-7000
- **EPA Region 8**
999 18th Street
Suite 500
Denver, CO 80202-2405
(303) 293-1603
- **EPA Region 9**
75 Hawthorne Street
San Francisco, CA 94105
(415) 744-1305
- **EPA Region 10**
1200 6th Avenue
Seattle, WA 98101
(206) 442-1200

Note: Commercial and FTS telephone numbers are now identical with the institution of the new FTS system.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Occupational Safety and Health Administration

Department of Labor
200 Constitution Avenue NW
Room N-3647
Washington, DC 20210
(202) 523-8151

OSHA Notification Service (Complaint Hotline) for Emergency Situations
1-800-321-6742

OSHA REGIONAL OFFICES

- **OSHA Region 1**
133 Portland Street, 1st Floor
Boston, MA 02114
(617) 565-7164
- **OSHA Region 2**
201 Varick Street, Room 670
New York, NY 10014
(212) 337-2325
- **OSHA Region 3**
Gateway Building, Suite 2100
3535 Market Street
Philadelphia, PA 19104
(215) 596-1201
- **OSHA Region 4**
1375 Peachtree Street NE, Suite 587
Atlanta, GA 30367
(404) 347-3573
- **OSHA Region 5**
230 South Dearborn Street
32nd Floor, Room 3244
Chicago, IL 60604
(312) 353-2220
- **OSHA Region 6**
525 Griffin Street, Room 602
Dallas, TX 75202
(214) 767-4731
- **OSHA Region 7**
911 Walnut Street
Kansas City, MO 64106
(816) 426-5861
- **OSHA Region 8**
1951 Stout Street
Denver, CO 80204
(303) 844-3061
- **OSHA Region 9**
71 Stevenson Street
Suite 415
San Francisco, CA 94105
(415) 744-6670
- **OSHA Region 10**
1111 Third Avenue
Suite 715
Seattle, WA 98101-3212
(206) 442-5930

Note: Commercial and FTS telephone numbers are now identical with the institution of the new FTS system.

U.S. EPA REGIONAL MAP

