DONNING PROTECTIVE CLOTHING

Don the protective suit in the following manner:

1. Select proper size. Please refer to Size Prediction Chart.

2. Open vapor-barrier bag and remove protective suit.
   a. If damaged, exchange item for a new one. Retain containers for packing.

3. Don overgarment trousers (1) over normal clothes (or underwear in hot climate).

4. Close the fly, fasten two fly opening snaps (2),
   a. Adjust waistband tabs (3) for snug fit.

5. Don overgarment jacket (4),
   a. Close front slide fastener (5), and
   b. Secure three hook and pile fasteners tapes on front flap (6)
6. Fasten three snaps in rear of jacket (1) to three snaps on overgarment trousers (2).

7. Adjust and tie jacket waist drawcord (3) for snug fit to minimize bellowing action.

8. Don and button GVOs.

9. Blouse overgarment trouser legs (2) over GVOs (1).

10. Close trouser leg slide fastener (3) and snug and tie drawcords (4).

11. Don apron (if needed).
   a. Adjust wrist straps to maintain comfortable but snug fit, ensuring gloves remain inside apron sleeves.
   b. Have buddy secure back straps.
12. Put hood on PAPR (hood should be stored on the PAPR).
   a. Insert the PAPR breathing tube into the hood tubular cover.
   b. Extend the breathing tube while working the hood cover over it.
   c. Secure the hood cover to the breathing tube.

13. Don PAPR and hood. Please refer to the PAPR Chart for exact donning procedures for PAPR. When completed, fasten down the hood with straps.

14. Don glove liners and gloves as follows:
   a. Don glove liners (1). Don gloves (2) over liners (1).
   b. Place cuffs of overgarment jacket (3) over gloves (2) and secure hook and pile fastener tapes (4) for snug fit.
REMOVING PROTECTIVE CLOTHING

Perform the following steps:

___ 1. Loosen the hood from the rest of the protective clothing, but do not remove.

___ 2. Unfasten the hook and pile fastener tapes (1) at wrist of apron (if worn) and overgarment jacket.

___ 3. Loosen back tapes and remove apron (if worn).
4. Turn off and remove the turbo unit.

5. Open trouser leg slide fasteners (1) and drawcords (2) on overgarment trousers.

6. Remove your GVOs.

7. Untie overgarment jacket drawcords (1), open front flap (2) and open slide fastener (3).

   a. Unfasten three snaps (4) in rear of overgarment jacket (5).

8. Remove jacket (5).

9. Unfasten snaps (6), open fly slide fastener (7), and remove trousers (8).

11. Remove gloves (2), and then glove liners (1).

12. Pack and seal PPE in appropriate containers.
DONNING THE PAPR

The PAPR should be put on in uncontaminated air as follows:

__ 1. Screw the Breathing Tub handwheel into threaded cavity in front of Facemask until a hand-tight seal is achieved.

__ 2. Put the hood on PAPR.
   __ a. Insert PAPR breathing tube into hood tubular cover.
   __ b. Extend PAPR breathing tube while working hood cover over it.
   __ c. Secure hood cover to PAPR breathing tube.

__ 3. Place Hose Clamp onto free end of Breathing Tube.
   __ a. Slide that end of Breathing Tube over Turbo Unit Outlet, and tighten Clamp.
   __ b. Ensure that Breathing Tube is secured to Turbo Unit Outlet and that the end of Breathing Tube is visible between Turbo Unit and hose Clamp.

__ 4. Pull whole belt to the right or left through Turbo Unit's bracket so buckle centers at your waist (in front) and Turbo Unit is behind you.

__ 5. To don System, place Turbo Unit Back Cover against your lower back (along your spinal column) with Breathing Tube extending upward.
   __ a. Fasten Belt around your waist at front so Turbo Unit rests comfortably and securely against your lower back.
   __ b. Plug Turbo Unit into fully charged Battery Pack, and attach Battery Pack to the Belt using Clothing Clip.
__ 6. Remove spectacles or other eye protection which could project under face seal.
   __ a. If protective or corrective eye wear is required, equip facepiece with pair of holders for short temple spectacles.

__ 7. Hang Facemask’s Neckstrap around your neck.

__ 8. Loosen Head Harness Straps, and fit Facemask by placing your thumbs inside straps, placing your chin into chin cup, and pulling straps over your head.

__ 9. Tighten lower side straps first, then top side straps, and finally top strap. A correct seal may be obtained without overtightening straps.

__ 10. Confirm good facial fit of Facemask. (Positive or Negative Pressure Field Face Fit Test.)

**NOTE:** Return to Checklist for Donning Protective Clothing, Item 13.
REMOVING THE PAPR

For your protection, only remove the respirator in an uncontaminated environment.

___ 1. Remove hood and facepiece. Turn power switch off.

___ 2. On facepieces using the elastic headstrap, unfasten the top and bottom headstrap clips. Pull the facepiece out and away from your face to remove it.

___ 3. On facepieces using the cradle headstrap, just unfasten the bottom headstrap. Pull the facepiece away from your face and up over your head.

___ 4. Remove the support belt. Be careful that you do not drop the motor-blower.
USING CHEMICAL DETECTOR KIT – TESTING FOR TOXIC AGENT VAPORS

A set of 3 or 4 instruction cards are included in the kit. This checklist deals only with the agents of concern: blister and nerve agents. Gloves should be worn (and properly disposed of after use) at all times when using the Chemical Detection Kit.

**WARNING**

Do not expose the sampler-detector to direct flame or other high heat source. Some of the chemicals in the ampoules are flammable and/or explosive.

Do not use an outdated sampler-detector because it will give test results you cannot trust.

**Do not use kit if you do not see colors correctly.** Color combinations and comparison are used during tests. A wrong reading of results might cause you to remove protective equipment while toxic agents are actually present, and you could become a casualty.

**NOTE:** Kit operator will stimulate the waiting times—10 minutes, 5 minutes, etc. Operator cannot wear or use watch while wearing protective clothing.

Perform the following steps:

1. Open kit, take out instruction cards and read them.

2. Take out a sampler-detector. Read both sides of sampler-detector protective bag; then tear protective bag along line marked by arrows. Carefully pull out sampler-detector and save bag for reference to instructions.

3. Before breaking glass ampoules (except heater ampoules), place one heater pad on each side of the sampler-detector, covering the ampoule to be broken. These pads will prevent pieces of glass from cutting your gloves or hands.
4. Save pads under hinged heater. Swing out heater, remove and save two loose pads. Swing heater back in.

5. Remove pull tab marked 1. Pull upward to expose lewisite detecting tablet.

6. Mark lewisite rubbing tab. Bend tab over lewisite detecting tablet and rub upper half of tab until a mark is visible.

7. Hold sampler-detector with test spots or arrow pointing up.

8. Using heater pads, crush 4 ampoules in the 3 center pockets marked 3.

**NOTE:** Nerve spot may be difficult to wet with solutions as kit gets older. Work solutions into spot carefully while pressing protective strip over nerve agent test spot.

9. Turn sampler-detector upside down and insure wetting of test spots. Hold sampler-detector with test spots or arrow pointing down. Using heater pads, squeeze ampoules to force liquid through formed channels.

10. Hold sampler-detector. With test spots or arrow pointing down, put your thumb on the protective strip over middle test spot.

11. Swing heater away from test spot.

**WARNING:** Avoid hot vapors that may burn you when crushing heater ampoules. You will be facing into the wind. Hold sampler-detector down and to one side while vapors are venting.
12. Activate first heater ampoule marked 4. Being sure not to use heater pads, crush one green ampoule and swing heater immediately over test spot. Hold sampler-detector to one side while venting to avoid vapor.

13. After about 2 minutes swing heater away from test spot, and protective strip away from test spots.

**WARNING:** Do not hold sampler-detector in direct sunlight while exposing test spots. You may not be able to trust the test results.

14. Expose test spots for about 10 minutes. Sampler-detector can be laid down or held by hinged protective strip.

**WARNING:** Avoid hot vapors that may burn you when crushing heater ampoules. You will be facing into the wind. Hold sampler-detector down and to one side while vapors are venting.

15. After about 10 minutes activate second heater marked 4. Being sure not to use heater pads, crush second green ampoule. Swing heater immediately over test spot.

16. After about 1 minute, swing heater away from test spot.

17. Hold sampler-detector with test spots or arrow pointing down.

18. Using heater pads, crush remaining ampoules marked 5. Be sure to wet test spots by squeezing ampoules to force liquid onto test spots.
19. Rerub lewisite detecting tablet. Bend tab over lewisite detecting tablet and rub bottom half of tab until a mark is visible.

20. Compare colors to determine safe or danger conditions. Turn sampler-detector upside down and compare colors of test spots with those shown on sampler-detector. Look for a change in color or rub marks on lewisite detecting tab. If your kit has a fourth instruction card, use it to compare colors to determine safe or danger condition.

**WARNING:** Each sampler-detector contains 2.6 mg of mercuric cyanide; it is considered hazardous waste. Mercuric cyanide can cause skin burns and is considered a poison by ingestion, subcutaneous, intravenous, and intraperitoneal routes of exposure. Mercuric cyanide is reported on the Environmental Protection Agency’s (EPA) Toxic Substances Control Act (TSCA) Inventory and is on the Community Right-To-Know List. Please see an industrial hygienist/environmental control officer for correct disposal procedures. Disposal is regulated by Federal and state law; if correct disposal procedures are not followed, you are liable and you are subject to fine.

**NOTE:** You can compare lewisite (rubbing tab) tests after about 10 minutes exposure time. Blister agent develops color immediately after all ampoules are broken. Nerve agent requires a waiting period of about 3 minutes. If no color develops for M256A1, a positive nerve test is indicated. If peach color develops for the M256, a positive nerve test is indicated.

Source: Operator’s Manual for Chemical Agent Detector Kit M256 (6665-01-016-8399) and M256A1 (6665-01-133-4964)
USING CHEMICAL DETECTOR KIT – TESTING FOR TOXIC AGENT ON SURFACES

A set of 3 or 4 instruction cards are included in the kit. This list deals only with the agents of concern: blister and nerve agents. Gloves should be worn (and properly disposed of after use) at all times when using the Chemical Detection Kit.

WARNING
Do not use kit if you do not see colors correctly. Color combinations and comparison are used during tests. A wrong reading of results might cause you to remove protective equipment while toxic agents are actually present, and you could become a casualty.

NOTE: Kit operator will stimulate the waiting times—10 minutes, 5 minutes, etc. Operator cannot wear or use watch while wearing protective clothing.

NOTE: Lewisite is present only at Tooele Army Depot; the other locations do not have to be concerned with Lewisite testing.

Perform the following steps.

1. Open kit and remove and open M8 paper. Tear off and discard plastic bag.

2. Test liquid. Tear out a sheet of M8 paper (use half a sheet if it is perforated). Blot, do not rub, M8 paper where liquid agent is thought to be.

3. Compare color change. Check typical colors shown on inside cover of M8 paper.

NOTE: Red indicates presence of blister agents (H, L, or CX).
Yellow indicates presence of G-agent.
Dark green indicates presence of V-agent.
Some G-agents give a red-brown color which is between H and G color.

Some decontaminants will give false positive tests on M8 paper. Where decontaminants have been used, positive results must be confirmed by tests with sampler-detector. Non-persistent agents (i.e., VX) can be present and produce a positive reading on M8, but not produce a positive reading on M256A1 kit because of low vapor pressure. A solution to this is to rub the suspected liquid directly onto the test spot of the M256A1 kit to confirm or deny a positive M8 paper test.

Source: Operator’s Manual for Chemical Agent Detector Kit M256 (6665-01-016-8399) and M256A1 (6665-01-133-4964)