SOUTH PORTLAND FIRE DEPARTMENT
STANDARD OPERATING GUIDELINES

SOG #:	6.645	**Effective Date:**	2/20/2022
Title:	Radiological Decontamination for Civilians	**# of pages:**	8
Category:	Hazardous Materials Response	**Classification:**	Red

1. PURPOSE: This Standard Operating Guideline (SOG) defines and describes the procedures to decontaminate civilians in the event of a radiological event. This SOG is for ambulatory victim.

2. PROCEDURES:

   To frisk a person:
   Use one of the Ludlum 3 meters with the pancake probe covered by a plastic baggie to frisk people/places/things that were in the hot zone or items you believe to have contaminate; including civilians and first responders.

   Have the person assume a spread eagle position, and then use the Ludlum meter to locate any contamination.

   Ask the person to remove any hats, coats and other outerwear. Frisk the hats and outerwear separately. **(REMOVAL OF CLOTHING removes 90% of contamination)**

   Contamination is defined as 2 times background readings and/or 300 CPM.

   To frisk a person, start at one location (e.g. the top of the person's head), and move slowly around the outline of the person. Hold the probe, which should be covered in a baggie or other plastic wrap device, about 1-2 inches away from the person, and move the probe about an inch a second over the person's body.

   Once you have done the outline of the person, and then frisk the front of the person, from the top of the head to the shoe area. Once done, frisk the back of the person, again from the top of the head to the shoe area.

   Finally, frisk the persons shoe bottoms. The whole frisking process should take 2-3 minutes per person.

   A SPFD Personnel Contamination Survey Form (RAD) will need to be filled out on all victims that are sent through decon.

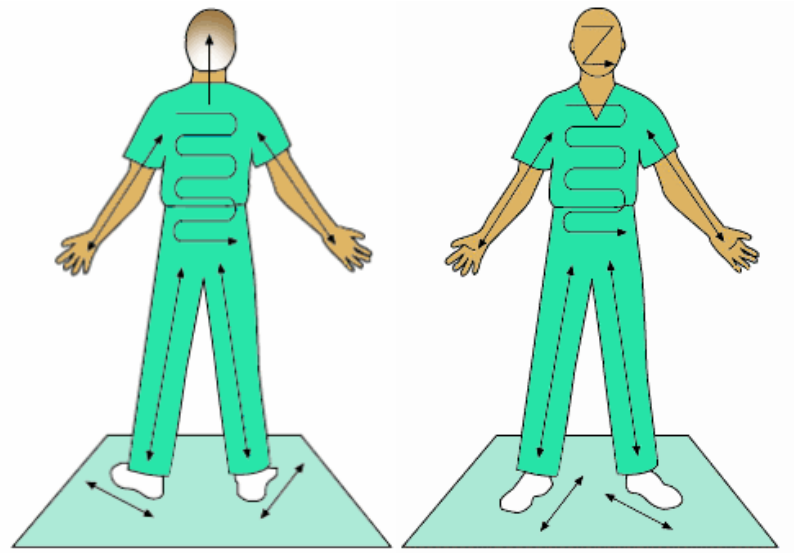
   If any clothes are found to be contaminated, then remove them, and place in a plastic bag with a tag on it, indicating the person's name and radiation readings.

NOTE: the patient assessment part of a SMART Triage tag can be used to identify each person, and instead of using the body outlines on the TAG to indicate locations of injury, use the outlines to indicate radiation readings.

If contamination is found on the person's skin, then wash with soap and water, in the decon tent, or other location. DO NOT SCRUB THE PERSON WITH BRUSHES, as this may abrade the skin, allowing external contamination to become internal contamination.

Keep washing the person, and follow each washing with another head to toe frisking. If the person is less than 2 times background readings and/or below 300 CPM, he/she is considered clean and can be released. For persons who have readings that stay above thresholds, even after repeated washings, request guidance from the State Radiation Control Program team.

PERSONNEL CONTAMINATION SURVEY PROCEDURE



It is not necessary to perform the survey in exactly the order listed below, but a consistent procedure should be followed to help prevent accidentally skipping an area of the body. Tell the person to stand straight, with feet spread slightly, and arms extended with palms up and fingers straight out. Pause the probe for about five seconds at locations most likely to be contaminated.

Perform the personnel contamination survey in the following recommended order:

1. Hands (pause at palms for approximately five seconds)
2. Arms
3. Have the person turn their hand and arms over
4. Backside of hands and arms (pause at each elbow)
5. Top and sides of head, face (pause at mouth and nose for approximately five seconds. This may indicate internal contamination)
6. Front of the neck and shoulders
7. Arms (pause at each elbow)
8. Chest and front abdomen
9. Front of the legs (pause at each knee)
10. Shoe tops
11. Shoe bottoms (pause at sole and heel)
12. Have the person being surveyed turn around
13. Back of the head and neck
14. Back and rear of abdomen (pause at the seat of pants)
15. Back of the legs

16. Any dosimeters worn by the person being surveyed. If the dosimeter is not contaminated, give it back to the person.

Return the probe to its holder on the meter when finished. Do not set the probe down on the ground. The probe should be placed in the holder with the sensitive side of the probe facing to the side or facing up so that the next person to use the meter can monitor his/her hands before handling the probe.

The most common mistakes made during personnel contamination surveying are:

- Holding the probe too far away from the surface (should be about ½ inch or less)
- Moving the probe too fast (should be about one probe-diameter per second or one to two inches per second)

Now that the person or persons have been surveyed correctly, it is important to make a record in the event the appropriate medical or law enforcement authorities need the information. The following form is a sample personnel contamination survey sheet which could be used to keep the necessary records.

Once decontamination is completed (under 300 CPM) advise the victims to shower completely once home and to follow up with their personal medical professional about any additional treatments/tests.

PERSONNEL DECONTAMINATION

Begin with the first listed method *for that body part* and then proceed step by step to the more severe methods, as necessary.

Method	Body Part	Action	Technique	Advantages	Disadvantages
1 Masking Tape	Skin and hands unless the area is sensitive or has a lot of hair	Removes contaminated dust and dirt.	Use the "sticky" side of a reverse rolled piece of masking tape to remove dirt and any loose contamination. If a meter shows the contamination was not removed, then cleanse the area with moistened paper towels. Lukewarm water should be used, if possible. Do not use hot water (it opens pores in the skin).	Quick and effective for most radioactive contamination. Only generates very small amounts of contaminated liquid waste compared to washing.	Some areas of skin are sensitive and can become irritated by the tape being pulled off. Will not work on liquid contamination.
2 Soap and water	Skin and hands	Emulsifies and dissolves contaminates.	Wash 2 to 3 minutes and monitor. Do not wash more than 3 to 4 times. Do not use hot water (it opens pores in the skin). Use lukewarm water.	Readily available and effective for most radioactive contamination.	Continued washing will defat the skin. Indiscriminant washing of other than affected parts may spread contamination.
3 Soap and water	Hair	Same as above.	Wash several times. If contamination is not lower to acceptable levels shave the head and apply skin decontamination methods.	Same as above.	Same as above.

PERSONNEL DECONTAMINATION (continued)

Begin with the first listed method *for that body part* and then proceed step by step to the more severe methods, as necessary

Method	Body Part	Action	Technique	Advantages	Disadvantages
4 Lava soap, **soft** brush, water	Skin and hands	Emulsifies, dissolves, and erodes contaminates.	Use light pressure with heavy lather. Wash for 2 minutes, 3 times. Rinse and monitor. Use care not to scratch or erode the skin. Apply lanolin or hand cream to prevent chapping.	Readily available and effective for most radioactive contamination.	Continued washing will abrade the skin.
5 Tide™ or other detergent (plain)	Skin and hands	Same as above.	Make into a paste. Use with additional water with a mild scrubbing action. Use care not to erode the skin.	Same as above.	Continued washing will abrade the skin.
6 Mixture of 50% Tide™ and 50% Cornmeal	Skin and hands	Same as above.	Make into a paste. Use with additional water with mild scrubbing action. Use care not to erode the skin.	Slightly more effective than washing with soap.	Will defat and abrade the skin and **must be used with care**.
7 Sweating	Skin of hands and feet	Physical removal by sweating.	Place hand or foot in plastic glove or booty. Tape shut. Place near source of heat for 10 to 15 minutes or until hand is sweating profusely. Remove glove and then wash using standard techniques. Or gloves can be worn for several hours using only body heat.	Cleansing action is from the inside out. Hand does not dry out.	If glove or booty is not removed shortly after profuse sweating starts and parts washed with soap and water immediately, contamination may seep into the pores.

PERSONNEL DECONTAMINATION (continued)

Begin with the first listed method *for that body part* and then proceed step by step to the more severe methods, as necessary

Method	Body Part	Action	Technique	Advantages	Disadvantages
8 Flushing	Eyes, ears, nose, and mouth (NOTE: This is the **first** method to use for the eyes, ears, nose, and mouth)	Physical removal by flushing.	Roll back the eyelids as far as possible, flush with large amounts of water. If isotonic irritants' are available, obtain them without delay. Apply to eye continually and then flush with large amounts of water. (Isotonic irrigant [0.9% NaCl solution]: 9 grams NaCl in beaker, fill to 1,000 cc with water.) Can be purchased from drug suppliers, etc.	If used immediately will remove contamination. May also be used for ears, nose, and throat.	When using for nose and mouth, contaminated individual should be warned not to swallow the rinses.
9 Flushing	Wounds	Physical removal by flushing.	Wash wounds with large amounts of water and spread edges to stimulate bleeding, if not profuse. If profuse, stop bleeding first, clean edges of wound, bandage, and if any contamination remains, it may be removed by normal cleaning methods, as above.	Quick and efficient if wound is not severe.	May spread contamination to other areas of body if not done carefully.

3. REFERENCES:
   - None

By Order Of:

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Fire Chief