

## ESCAMBIA COUNTY FIRE-RESCUE

*Rules, Policies, and Guidelines*

1225.035

### PPE Decontamination

Implemented: 06/03/2019

Revised:

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Paul Williams, Fire Chief

### **PURPOSE:**

The purpose of this SOG is to establish a safe and effective practice of removing toxic particulates from equipment and the fire protective ensemble after their exposure to products of combustion.

### **OBJECTIVE:**

To provide a procedure that will remove the harmful chemicals and carcinogens that are accumulated through fire extinguishment and overhaul through on scene gross decontamination.

### **SCOPE:**

This instruction applies to all Department personnel involved in on scene emergency operations resulting in exposures to the products of combustion that can be removed using the prescribed procedures. The decontamination instruction outlined in other Department policies may be required when determined by the incident commander.

### **DEFINITIONS**

- Decontamination- removal of all hazardous products that a firefighter may have been exposed to in the hot zone of any incident.
- Wet Decon: the use of water or wetting agents to assist in removal of hazardous contaminants from firefighters PPE, person, or equipment. With soap being added to the solution during the use of WET DECON, over 90% of carcinogenic materials can be removed.
- Dry Decon: the use of brushes, blotting, etc, to remove possible harmful substances from a firefighter's PPE or person
- Air Assisted Decon: the use of compressed air, PPV, or exhaust fans to remove harmful substances that a firefighter may have been exposed to at an incident
- "Shower within the Hour": the process of taking a shower within one hour of returning to quarters to limit cross contamination and absorption from harmful contaminants

### **PROCEDURE**

The Incident Commander at any incident may dictate the level of decontamination that is required by individual companies engaged on scene. This may include wet, dry, or air assisted decon. For example: companies engaged in interior attack with gross exposure to heat, smoke, and other products of combustion will benefit most from wet decon, with or without soap. Companies completing search or roof ventilation may only require dry decon to remove building contents and solids/liquids. Air assisted decon may be used for the overhaul and RIT companies that were exposed to limited products of combustion or smoke.



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Once the Incident Commander has determined the proper DECON needed, the following will occur:

**WET DECON:**

Materials needed- hard bristle brush, 2.5" to Garden Hose adapter, hand held nozzle, soap, tarp for doffing gear, non-alcoholic wipes and/or rags, plastic bag for gloves and hood

1. The driver of the First due apparatus will select the materials needed and place in a safe area for crews to be free of traffic or exhaust.
2. The crew sent to the decon area will begin the process with the hose and sprayer provided. With arms out and on air, the crew will lightly mist each other to rinse as much of the contaminants off as visibly possible. Starting at the shoulders and working their way down to the boots.
3. The SCBA straps will be loosed, allowing for water to run down the areas behind the SCBA for full coverage, as the crew lightly sprays the torso. Lower discharge pressures allow for less run off, over spray, and drenching of the PPE.
4. When completed, the firefighter being decontaminated will then make their way to the designated doffing area, such as a tarp spread on the ground or other hard surface.
5. Remove helmet and gloves, setting aside for further decontamination. Remaining on air until ready for SCBA removal.
6. Remove the mask of the SCBA with care not to allow it to sit or lay near the PPE that has been removed.
7. Use soap and water or provided wipes to wash face, neck, and arms/hands. Using a rag or towel can assist in full coverage and removal of 60%-80% of most contaminants. Throw used towels/rags in trash on returning to station.
8. While wearing medical gloves, use other means of decon to remove from the following items:
  - a. Helmet- use hard bristled brush, soapy water, and clean water to rinse
  - b. Gloves- rinse with soap and water to allow for removal of gross decontaminates
  - c. Boots- use hard bristled brush, soapy water, and clean water to rinse
  - d. SCBA Mask: use alcohol free wipes to clean outer and inner portions of mask, dry with cloth
  - e. SCBA: use hard bristled brush, soapy water, and clean water to rinse
9. IF POSSIBLE, switch to back up hood and Bunker Gloves on scene, allowing for contaminated items to be placed into a plastic bag for further cleaning at quarters.



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**DRY DECON:**

Materials needed- fox tail brush, hard bristled brush, tarp for doffing, non-alcoholic wipes and/or rags, soapy water in bucket

1. Using hard bristled brush or fox tail brush, start at shoulders with arms extended. Brush any visible contaminants off of each other in company prior to removing SCBA and remaining on air.
2. Loosen shoulder straps to eliminate any possible debris on back and waist, and continue to hips, legs, and tops only of boots.
3. Using hard bristled brush with soap and water, scrub bottoms and sides of boots to limit exposure both in cab and on returning to quarters.
4. Remove helmet and gloves, setting aside for further decontamination with previously used brushes. Remaining on air until ready for SCBA removal.
5. Doff mask and set in clean area to avoid cross contamination from off gassing gear and SCBA. Gear should remain in the open area as long as possible, out of direct sunlight (optimum), for continuous off gassing (up to 20 minutes).

**AIR ASSISTED DECON:**

Materials needed: Electric Exhaust Fan, non-alcoholic wipes and/or rags, air hose plugged into source or SCBA bottle, blower adapter for air hose

1. Using Electric Exhaust fan, set up a DECON corridor for firefighters to use the high-speed air to remove any contaminants.
2. With arms raised and SCBA shoulder straps loosened, rotated within the cone of air to remove any residual or off gassing contaminants. Understanding that with the longer time spent in the fresh, blown air more contaminants will be removed. Suggested time of 15 seconds for front and 15 seconds for back.
3. Prior to doffing, crews will use a compressed air hose with blower adapter, to remove any residual or visible areas of contamination, especially areas of folds, i.e. armpits, groin, rear of knees, elbows
4. Remove helmet and gloves, setting aside for further decontamination. Remaining on air until ready for SCBA removal. Using the compressed air as previously used.
5. Doff Mask and SCBA, setting aside for possible further decontamination. Gear should remain in the open area as long as possible, out of direct sunlight (optimum), for continuous off gassing (up to 20 minutes).

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With crews remaining on air as long as possible, inhalation, the fastest and most dangerous route of exposure, is minimal.

Gear should remain in the open area as long as possible, out of direct sunlight (optimum), for continuous off gassing (up to 20 minutes).

Wipe all SCBA masks with non-alcohol wipes or soapy water on rags to eliminate any other forms of contamination.

Showering within the hour of returning to the station shall be a priority. This reduces cross contamination in the living and sleeping areas of the station, as well as the rate of absorption through the skin over time.