

	<b>TUCSON FIRE DEPARTMENT</b> <b>Administrative Manual</b> <b>“EMERGENCY SCENE WASH DOWN”</b>		<b>POLICY</b> <b>???</b>	<b>PAGE</b> <b>1 of 3</b>
			<b>EFFECTIVE DATE</b> <b>April 1, 2019</b>	
			<b>REVISED DATE</b>	

## I. PURPOSE

To establish guidelines for the decontamination process of firefighting gear at emergency scenes that are exposed to potentially cancer-causing toxins encountered in firefighting activities. The basis for this procedure is a result of Tucson Fire Department (TFD) involvement in ongoing cancer research, national best practices, and research conducted by the NIOSH/CDC.

## II. SCOPE

Applies to all commissioned members of TFD who conduct fire ground operations and may come in contact with smoke, soot, and other known cancer-causing toxins.

## III. DEFINITIONS

- a. Best Practices: A technique that identifies a standard way of doing something that multiple organizations can use and adopt.
- b. CDC: Centers for Disease Control and Prevention
- c. Company Officer: The captain or supervisor of an operational fire crew.
- d. Encapsulate: Enclose (in this case PAH's) in or as if in a capsule. The use of Dawn dish soap will encapsulate the PAH's during agitation and then rinsed off the garments.
- e. IDLH: Immediately Dangerous to Life and Health otherwise known as the hot zone.
- f. Incident Commander (IC): The officer in charge of emergency scene operations.
- g. Incident Safety Officer (ISO): The officer assigned to oversee emergency scene safety operations, paying particular attention to scene conditions and personnel safety.
- h. NIOSH: National Institute for Occupational Safety and Health.
- i. Polycyclic Aromatic Hydrocarbons or PAH's: A class of chemicals that occur naturally in coal, crude oil, and gasoline. PAH's are generated at high temperatures and bind to form small particles in the air. Naphthalene is a PAH and can be measured in post-fire biological samples.
- j. UL: Underwriters Laboratories
- k. Wash down or Gross Decon: The procedure for limiting exposure to cancer-causing toxins by washing off the toxins with water, dish soap, and a brush before removing firefighting gear.

<b>POLICY ???</b>	<b>“EMERGENCY SCENE WASH DOWN”</b>	<b>PAGE 2 of 3</b>
-----------------------	------------------------------------	------------------------

#### **IV. POLICY**

TFD personnel operating in the IDLH and/or are exposed to smoke, soot, and other known cancer-causing toxins while performing fire ground operations in turnout gear shall perform the post-fire emergency wash down procedure.

#### **V. PROCEDURES**

- a. Background
  - i. The emergency scene “wash down” or “gross decon” protocol is intended to encapsulate and wash off cancer causing toxins encountered at a fire scene. Personnel exposed to these carcinogens shall participate in this process of wash down including water, Dawn dish soap, agitation with a brush, and finally rinsing off the contaminants with water. This type of emergency scene wash down has been recommended by the CDC/NIOSH as the most reliable process to date. When performed thoroughly, this process can remove up to 80% of the contaminants before firefighters begin to remove and handle their gear. This can result in limiting the cross-contamination that occurs when removing and handling the turnout garments.
- b. “Wash Down” Kit contents (items in this list may be substituted except for the use of Dawn dish soap)
  - i. (1) 5 gallon reflective green LeakTite bucket with threaded, locking lid.
  - ii. (1) Dawn dish soap (small)
  - iii. (1) Hose: Goodyear Flex Flat Hose ½” x 50’ (pressure rated up to 400 psi)
  - iv. (1) Nozzle: Pro Series Water Cannon
  - v. (1) Adaptor 2.5” female to .75” male Garden Hose Thread (GHT)
  - vi. (1) HDX Bench Brush
  - vii. (1) Duct tape roll
  - viii. (4) 55 gallon 6 mil bags (clear)
- c. “Wash Down” Setup
  - i. The IC, ISO, or company officer may at any time establish the “wash down” for exposed personnel.
  - ii. Identify a safe area that is easily accessed.
  - iii. Remove the content of the bucket.
  - iv. Connect the 2.5” adaptor, hose and nozzle to a 2.5” discharge.
  - v. Add a small amount (1 oz.) of Dawn dish soap to the bucket and add water.
- d. “Wash Down” Process

<b>POLICY ???</b>	<b>“EMERGENCY SCENE WASH DOWN”</b>	<b>PAGE 3 of 3</b>
-----------------------	------------------------------------	------------------------

- i. When directed by the IC, ISO or company officer, the firefighter(s) will remain on air and report to the designated “wash down” area.
- ii. Contaminated personnel will wash each other off. This prevents respiratory and dermal exposure to personnel not protected by turnout gear and SCBA protection.
- iii. Spray water on the contaminated firefighter, top to bottom without over saturating or introducing water through the neck area.
- iv. With the soapy water from the bucket, scrub the areas of the helmet, jacket, and pants.
- v. Rinse the soap and contaminants from the firefighter.
- vi. Repeat the process for remaining personnel.
- vii. Once personnel have completed the “wash down”, they are cleared for removing their gear.
- viii. To prevent inhalation or dermal contamination from removing the hood, keep your SCBA on and pull your hood over your head and down around the SCBA regulator hose. This will limit the chances of breathing in contaminants and transferring contaminants to the face, neck, and ears.
- ix. If there is a need to put the wet gear back on for ongoing fire ground tasks, it may be done with less chances of contamination since it has been washed down.
- x. To adhere with the “clean cab” philosophy, each individual shall place their washed down gear in the 55-gallon 6 mil clear bags prior to driving back to the station.
- xi. Once back at the station or at any time necessary, use gloves and other appropriate protection when handling the gear.

## VI. REFERENCES

- a. *TFD Best Practices for Reducing Firefighter Exposures to Carcinogens*, TFD PowerDMS Safety Documents, Retrieved from: <https://powerdms.com/docs/500897>
- b. NIOSH/CDC Journal of Occupational and Environmental Hygiene, Dr. Kenneth W. Fent Et Al, *Contamination of firefighter personal protective equipment and skin and the effectiveness of decontamination procedures*, Retrieved from: [https://ulfirefightersafety.org/docs/FentEtAl\\_JOEH2017.pdf](https://ulfirefightersafety.org/docs/FentEtAl_JOEH2017.pdf)
- c. *IAFC Lavender Ribbon Report*, Retrieved from: <https://www.iafc.org/about-iafc/sections/vcos/vcos-resource-detail/vcos-lavender-ribbon-report-best-practices-for-preventing-firefighter-cancer>
- d. *Healthy In, Healthy Out*, Retrieved from: <http://www.fcsnwa.org/docs/Healthy%20in%20-%20Healthy%20out.pdf>