
	TRAVIS COUNTY ESD #5 MANCHACA FIRE RESCUE Department Best Practices	B108
	Authorized by:  Fire Chief Chris Barron	Effective: 1/1/2020 Rescinds:
Firefighter Cancer Prevention		Reference: IFCA-VCOS/ NVFC Lavender Ribbon Report Application: All Shift Personnel

I. Purpose

These best practices are intended to provide awareness and procedures that enhance protection of firefighters from cancer hazards inherent in the fire service.

II. Background

The risk of firefighters contracting cancer is not a new threat, but scientific studies have brought the threat into focus and helped steer mitigation efforts to reduce risk. A multi-year study by NIOSH found that firefighters have a 9% higher risk of being diagnosed with cancer and a 14% higher risk of dying from cancer than the general population. In 2018, The International Association of Fire Chiefs and the National Volunteer Fire Council released a report outlining recommendations for 11 best practices for the prevention of firefighter cancer.

III. Best Practices

A. Best practices for preventing firefighter cancer.

1. **PPE use.** Full protective equipment (PPE) must be worn throughout the entire incident, including SCBA during salvage and overhaul.
 - a. **Nature of hazards.** During overhaul, gases and particulates may still be in the environment and present both an inhalation and skin absorption hazard. In fact, for every 5-degree rise in skin temperature, skin absorption ability increases by 400%.
 - b. **PPE use in overhaul.** Full PPE with SCBA should be used through the completion of overhaul to protect firefighters from inhalation and skin absorption hazards.
 - 1) **Heat stress consideration.** Should heat stress become a concern, Command may authorize a reduction in PPE used during overhaul. SCBA use will continue if atmospheric monitoring indicates CO levels above 25 ppm, HCN or VOC levels above 0, or an oxygen deficient atmosphere. If SCBA use is discontinued, personnel within the hot zone will wear a N95 mask as the minimum level of protection.

2. **Hoods.** A second hood should be provided to all entry-certified personnel in the department.
 - a. **Exposure risk.** The face as well as the thin skin layers of the neck and jawline have been identified as significant areas of dermal exposure from combustion products. Practices such as reusing a contaminated hood at subsequent incidents and wearing a contaminated hood pushed down around the neck should be discontinued.
 - b. **Use of a second hood.** All members will be issued two hoods. If the member is issued a particulate hood and a traditional sock hood, the particulate hood shall be considered the primary hood and worn first when clean and available. The second hood is provided to give the member a clean hood that can be worn while the primary hood is being cleaned.
 - c. **Hood cleaning.** The contaminated hood should be inspected for damage and cleaned upon returning to the station after every fire or other incident causing contamination. Hoods should be cleaned at the station in the gear extractor/washer and not the domestic washing machine.
3. **PPE gross decon.** Following exit from the IDLH, and while still on air, you should begin immediate gross decon of PPE using soap water and a brush, if weather conditions allow. A wet decon with soap has shown to reduce contamination by 85%. PPE should then be placed into a sealed plastic bag and placed in an exterior compartment of the rig, thus keeping the off-gassing PPE away from passengers and self.
 - a. **Hazard Zones.** The immediate action area on the scene where PPE is required is considered the hot zone while areas such as the command post and rehab are in the cold zone. Gross decon of PPE should happen in the warm zone space between the hot zone and cold zone areas. Excluding bunker pants and boots that have been through gross decon, no other contaminated items should be taken into the cold zone.
 - b. **Gross decon procedure.** Upon exit from the hot zone, crews should remain on air and report to the decon location. This is typically at the backup engine. A garden hose or low-pressure booster line will be provided along with a brush to rinse the exterior of the PPE and scrub gross contaminants off of the gear. If a crew is exiting the hot zone briefly only to reenter, they will not undergo gross decon at that time (i.e. cylinder change, retrieving tools, etc.).
 - 1) **Crew integrity.** The crew should stay together and assist each other with decon. The driver of the apparatus providing decon may assist if needed, but the goal is for the crews to handle decon on their own with members that are lowest on air going first.
 - 2) **Water use.** The water stream should be at low pressure and be applied from the collar line down. The goal is to rinse the exterior of the PPE to be as clean as possible while keeping the gear operationally dry on the interior.
 - 3) **Drop zone.** Once rinsing is completed, crew members should move to the designated drop zone to come off air and remove their PPE. PPE with the exception of bunker pants and boots should be left in the warm zone at the drop zone.

- 4) **Return to station.** When released from the scene, PPE should be bagged to reduce spreading of contaminants to the apparatus. Necks of the bags should be twisted shut, doubled over, and taped closed. Upon return to the station, the gear can be unbagged and hung on or near the exterior of the apparatus to allow for drying and continued off-gassing.
 - 5) **Final wash of PPE.** Once relieved at the conclusion of the shift, the crew shall break down their PPE for washing in the department extractor washing machine. The oncoming crew will be responsible for completing the washing and drying of the PPE. Drying should be performed by hanging the gear away from direct sunlight and using fans to circulate air. The member will need to reassemble their PPE before coming on duty for the next shift.
4. **Personal gross decon.** After completion of gross decon procedures as discussed above, and while still on scene, wipes should be used to remove as much soot as possible from head, neck, jaw, throat, underarms and hands immediately.
- a. **Personal wipes.** All MFR vehicles carry personal wipes for use in onscene personal decon. Crew members should wipe down their neck, face, arms, underarms and hands immediately. Food should not be handled until this step is completed. Used wipes should be properly disposed of or collected for later disposal.
 - b. **Rehab.** Once PPE gross decon and personal gross decon is completed, crew members may report to rehab. It is recommended that bunker pants be pulled down to increase body temperature cooling and create additional distance from any off-gassing. It is preferred that bunker pants be removed if practical.
- 1) **Reassignment.** If reassigned to the hot zone from rehab, the crew will report at the appropriate level of PPE to resume duties. If the crew is exposed to products of combustion, they shall go through the gross decon procedures when exiting the hot zone.
5. **Clothing decon.** Change your clothes and wash them after exposure to products of combustion or other contaminants. Do this as soon as possible and/or isolate in a trash bag until washing is available.
- a. **Uniform.** Upon return to the station, the primary focus will be to continue decontamination efforts of the individual, PPE, and the apparatus and tools used at the incident. Crew members should change into a clean uniform as soon as practical. The contaminated uniform should be washed at the station facilities immediately or bagged and isolated until they can be washed.
 - b. **Out of Service.** Once released from the incident, crews needing further decon at the station should be directed to do so in an out of service status until crew members are showered and in clean uniforms.
6. **Personal decon.** Shower as soon as possible after being exposed to products of combustion or other contaminants. "Shower within the Hour".

- a. **Shower within the hour.** The first decon priority upon return to the station is for crew members to shower and change into clean uniforms. Members with the highest levels of exposure should shower first if facilities are limited. Crew members can focus on cleaning of tools and the apparatus after personal decon is completed.
7. **PPE restrictions.** PPE, especially turnout pants, must be prohibited in areas outside the apparatus floor (i.e. kitchen, sleeping areas, etc.) and never in the household.
 - a. **No PPE in living quarters.** Structural firefighting PPE is not allowed inside the living quarters or public spaces of the station. Essentially, PPE is restricted to the apparatus bay, the apparatus, and the gear storage room.
 - b. **Traveling with PPE.** When traveling with PPE for training classes and similar events, cleaned gear will be transported in department supplied gear bags. It is recommended that gear never be transported in the passenger compartment of a vehicle. If staying in a hotel, PPE should also be enclosed in plastic bags while in the room.
8. **Apparatus decon.** Wipes, or soap and water, should also be used to decontaminate and clean apparatus seats, SCBA and interior crew area regularly, especially after incidents where personnel were exposed to products of combustion.
 - a. **Cab cleaning.** Seat surfaces and areas that are commonly contacted within the cab should be wiped down after a fire incident and on other occasions as needed.
 - b. **Equipment cleaning.** Tools such as SCBA, TICs, and radios should be wiped down. Care should be taken to not get water into SCBA components or electronic equipment.
9. **Annual physical.** Get an annual physical, as early detection is the key to survival. “A Healthcare Provider’s Guide to Firefighter Physicals” can be downloaded from www.iafc.org/healthRoadmap.
 - a. **Mandatory physical.** ESD5 provides access to an annual physical and participation is required from all full time firefighting personnel. If a member does not wish to utilize the department provided vendor, they may elect to get their physical through their personal physician.
 - b. **Scope of physical.** The minimum scope of an annual physical should be those outlined in the document “A Healthcare Provider’s Guide to Firefighter Physicals” available at <http://www.fstaresearch.org/resource/?FstarId=11591>.
10. **Tobacco use.** Tobacco products of any variety, including dip and e-cigarettes should never be used at anytime on or off duty.
 - a. **Tobacco-free workplace.** The use of any smoking or smokeless tobacco product, e-cigarette, or similar device or practice is prohibited on ESD5 properties, in ESD5 buildings, and in ESD5 vehicles.

11. **Documentation.** Fully document all fire or chemical exposures on incident reports and personal exposure reports.

- a. **Accuracy of crew log.** The MDC log of personnel on duty should be kept accurate at all times. This helps with fireground accountability and in tracking potential exposures throughout a member's career.
- b. **Incident reports.** When writing incident reports, the Officer shall ensure that the crew list on the report is accurate. Additionally, the narrative should include information such as entry into an IDLH atmosphere, individual assignments and level of PPE, and nature of materials burned. Documentation should be made of members operating outside the IDLH that had the potential for exposure as well (backup lines, driver's position, command and support roles where smoke may have traveled).