

# SOUTH PORTLAND FIRE DEPARTMENT

## STANDARD OPERATING GUIDELINES

<b>SOG #:</b>	6.253	<b>Effective Date:</b>	1/11/2021
<b>Title:</b>	Post Structure Fire Decontamination	<b># of pages:</b>	3
<b>Category:</b>	Safety	<b>Classification:</b>	Red

1. **PURPOSE:** To set clear expectations concerning cancer awareness and prevention. Cancer is one of the leading causes of occupational illness in the fire service This guideline will establish procedures for performing specific and immediate actions to limit carcinogen / toxicant exposures by:
  - Reducing firefighter exposure to hazardous substances during training, suppression, and overhaul activities, as well as ensuring that PPE, clothing, tools, and equipment are decontaminated prior to returning to quarters.
  - Preventing exposure to the inhalation, or ingestion, of hazardous substances when removing SCBA pieces or when exchanging bottles.
  - Ensuring that all personnel are properly decontaminated in a timely manner after exposure to smoke or other hazardous materials during a training fire, or at an emergency scene.
2. **POLICY:** It is the responsibility of all SPFD personnel to understand and follow the approved guidelines / procedures within this Standard Operating Guideline (SOG). It shall be the responsibility of each officer to implement this guideline, assure the SOG is adhered to, and train to the standard of this guideline.
3. **PROCEDURES:**

### Overview:

Structure fires have become known as hazardous materials events due to the materials involved and the contaminants which firefighters are exposed to. Cancer is the most dangerous and unrecognized threat to the health and safety of firefighters. Multiple studies have shown credible evidence of statistically higher rates of cancers in firefighters compared to the general American population. In all 10 types of cancer, firefighters have a 14% higher risk than the general population.

The two exposure routes of greatest concern for carcinogens entering the bodies of firefighters are:

- The lungs; when firefighters do not wear or prematurely remove their SCBA.
- Dermal absorption; where toxicants are absorbed thru the skin. Absorption rates increase 400% for every 5° increase in body temperature.

### Definitions:

- Exposure: the state of being exposed to contact with something.
- Contaminate: make (something) impure by exposure to or addition of a poisonous or polluting substance.
- Decontamination: the neutralization or removal of dangerous substances, radioactivity, or germs from an area, object, or person.

- Decontamination Kit: kit, or items, carried for the purpose of decontamination:
  - large heavy-duty trash bags (for heavily contaminated bunker gear)
  - garden hose and adapter for gross rinsing
  - towels
  - sanitary/rescue wipes
  - DECON SE7EN system
- Hood Exchange Kit: Duty Chief carried kit to be utilized at any incident involving interior operations, fire, smoke, or other conditions deemed hazardous.
  - Green bag (carries 20 clean hoods).
  - Red bag (for contaminated hoods and washing)

#### Actions at the Incident

- Firefighting Operations: All appropriate PPE shall be utilized for the task being conducted. Each member of the SPFD shall take all necessary steps to ensure firefighters remain protected from IDLH atmospheres, hazardous substances, and the products of combustion. SCBA should be worn from initial entry until completion of overhaul, or until air-monitoring has been completed per department SOG. In between operating periods, firefighters should remove their hoods completely rather than lowering them into the “scarf” position. Doing so will greatly reduce skin / contaminant contact times.
- Hood Exchange: After firefighters have been exposed to a carcinogenic/toxicant environment, they should remove their current hood, clean their neck with a sanitary wipe, and retrieve a clean hood from the Hood Exchange Kit carried by the Duty Chief. Contaminated hoods should be placed in the bag marked for such and washed by personnel at the station upon return.
- Decontamination at the Fire Scene: No firefighter shall leave the fire ground without having gone through gross (primary) field decontamination, when appropriate. Depending on level of contamination, personnel should undergo gross decontamination while wearing bunker gear and SCBA (while pressurized), using the DECON SE7EN air system running off on of the department apparatus. Water from a garden hose with a low flow volume can be used prior to DECON SE7EN to remove large contaminants (such as insulation/plaster/etc). Upon completion of gross decontamination or if gross contamination is not warranted, firefighters are to doff their PPE’s with firefighting hoods, gloves and any other equipment that normally comes into direct contact with the firefighter’s skin. The following steps should be followed to complete decontamination.
  - Remove a decontamination wipe from packet and fully open to take advantage of the whole wipe. If both sides of the wipe become soiled during the process, use additional wipes as needed.
  - Start with your eyelids and external corners around your eyes.
  - Clean your hands, lips and surrounding skin BEFORE hydrating. Use a sudsing action to pull the contaminants off your face.
  - If you are thirsty and cannot wait to hydrate, be sure to clean your hands off before grabbing a beverage.
  - Your nose has a lot of blood vessels close to the skin that easily absorb contaminants. Clean inside and around the folds of your nose. Blow your nose on the wipe after you have completed all of the following steps.

- Be sure to get inside and around the back of your ears. But don't use any small or pointed objects or you can damage your eardrums!
- Get all around your neck and make sure you get all sides as well as under your shirt collar.
- Wipe down your hair. Use your fingers to help "comb" out any debris.
- Use a clean side of the wipe to thoroughly clean your arms. Be sure to mop up the soot and debris and not just spread it around.
- Clean your hands and be sure to get in-between your fingers and underneath any rings or bracelets.

Remaining tools and equipment should follow before departure from scene.

- Decontamination at the Fire Station: When returning to the station, apparatus and personnel who have been exposed to hazardous environments and/or conditions should remain out-of-service until complete decontamination of personnel, PPE, and equipment is completed.
  - Wash contaminated bunker gear as described by SOG.
  - Perform thorough decontamination on helmet, tools, and equipment.
  - Shower (hot water to open pores, followed by cold water to close pores).
  - Wash station wear as soon as possible (do not store in locker room).
  - Clean and Decon apparatus interior per SOG.

These practices are not only necessary after a structure fire, but any incident involving products of combustion.

#### 4. REFERENCES:

- Little Rock FD SOG
- Olney FD SOG 317
- Center for Disease Control, (CDC)
- National Institute for Occupational Safety and Health, (NIOSH)
- National Fire Protection Association, (NFPA)
- International Association of Firefighters, (IAFF)
- International Association of Fire Chiefs, (IAFC)

By Order Of:



James P. Wilson  
Fire Chief