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OLDHAM COUNTY FIRE CHIEF'S ASSOCIATION  
STANDARD OPERATING PROCEDURE

**AFTER FIRE DECONTAMINATION**

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**Effective Date:**  
5 SEPT 2019

**Supersedes Editions:**

**SOP #:**  
200.1

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**Purpose**

The purpose of this policy is to establish a procedure of best practices that all members of the **Oldham County Fire Chiefs Association** shall adhere to while at the station or operating at an incident to reduce exposure to carcinogens and or other contaminants.

**Scope**

The **Oldham County Fire Chiefs Association** is committed to continuously improving the health and wellness of all its members. This SOP will establish a procedure of preventive measures to minimize the impact of harmful carcinogens and other contaminants while operating at the scene of any incident where firefighters are directly involved in firefighting activities, live burn trainings, assisting in clean up in quarters, or any activity that may result in contamination.

**Definitions**

**Shall-** Indicates a mandatory requirement

**SOP-** A document with step by step instructions compiled by the organization to help workers carry out complex routine operations.

**Carcinogens-** A substance capable of causing cancer in living tissue

**Contaminate-** Make impure by exposure to or addition of a poisonous or polluting substance.

**Best Practice-** A method or technique that has been accepted as superior to any alternatives because it produces the best results.

**Immediate Danger to Life or Health (IDLH)-** A condition that poses an immediate or delayed threat to life or cause irreversible adverse health affects

**Gross Decontamination-** The physical or chemical process of reducing and preventing the spread of contamination from environment, persons or equipment.

**PPE-** Personal Protective Equipment



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**Background**

Firefighter cancer is a looming personal catastrophe for each and every firefighter. Cancer is the most dangerous and unrecognized threat to the health and safety of our nations firefighters. Multiple studies, including the NIOSH cancer study, have repeatedly demonstrated credible evidence and biologic credibility for statistically higher rates of multiple types of cancers in firefighters compared to the general population including:

- Testicular cancer (2.02 times greater risk)
- Multiple Myeloma (1.53 times greater risk)
- Non-Hodgkin's Lymphoma (1.51 times greater risk)
- Skin Cancer (1.39 times greater risk)
- Prostate Cancer (1.28 times greater risk)
- Malignant Melanoma (1.31 times greater risk)
- Brain Cancer (1.31 times greater risk)
- Colon Cancer (1.21 times greater risk)
- Leukemia (1.14 times greater risk)
- Breast Cancer in women (preliminary study results from San Francisco Fire Dept)

**Personnel Protective Equipment**

It will be the policy of the **Oldham County Fire Chiefs Association Departments** to have available a second personal protective firefighting hood for each member in the event that one becomes contaminated. The additional firefighting hood shall not be stored in any pockets of turnout gear.

It shall be the duty of the shift commander at the first of each month to have shift personnel account for their equipment and inspect their firefighting ensemble. It shall be the duty of the department's assigned PPE officer at the first of each month to have the volunteer firefighting staff account for their equipment and inspect their firefighting ensemble. All findings shall be documented and forwarded to the department's assigned PPE officer.



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PPE cleaning shall be done in accordance to NFPA 1851, Standard on Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting PPE.

**PPE Decontamination Kit**

The **OCFCA Departments** shall maintain a PPE decontamination kit in order to minimize the absorption by firefighters engaged in fire suppression activities and those operating on any incident that may become contaminated.

The PPE Decontamination Kit will include:

- One 5 Gallon Bucket with lid
- One scrub brush
- Liquid soap
- Hand sanitizer
- Wet wipes
- Large trash bags
- Sunscreen (SPF 30)
- 25' Garden hose
- Garden hose nozzle
- 2.5" with garden hose thread

Returning to the station, the apparatus shall stop to allow the officer or officers designee to exit the apparatus and apply the exhaust extraction hose to the apparatus upon entering the apparatus bay.

While performing daily apparatus truck checks in the bay, manually activate the system to ensure early capture of exhaust particulate.

In stations where diesel exhaust capture systems aren't installed, apparatus shall not be allowed to idle in the bays.

Apparatus bay doors shall be closed while vehicles are operated outside.

Apparatus bay doors shall be left open for 10 minutes following any operation of the apparatus when weather permits and where vehicle exhaust systems aren't installed.

**General**



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**Responsibilities**

It shall be the responsibility of the Officer in Charge/or the Safety Officer to ensure that any necessary decontamination of firefighters and equipment be completed before returning to quarters.

It shall be the responsibility of the driver/operator of the attack engine to establish the decontamination line ASAP.

It shall be the responsibility of the individual firefighters to ensure that they are decontaminated prior to removing face pieces, exchanging air bottles prior to returning to quarters.

**Scene / Live -Fire Training Decontamination Procedures**

**Procedures**

Overhaul should be performed utilizing SCBA, (the use of a particulate mask will solely be at the discretion of the Incident Commander / Safety Officer based off conditions that are present and following air monitoring with readings within normal limits on CO, O2, H2S, LEL, HCN.)

Individuals performing the decontamination should wear at the minimum eye protection, a particulate mask respirator, and latex gloves.

The decontamination hose line will be charged to idle pump pressure only. Firefighters should take advantage of this decontamination line prior to exchanging their air cylinders. The hose line will also be used for post incident decontamination.

If possible, crews should perform these gross decontamination procedures on each other while they are still on air. Staying on air will prevent firefighters from getting contaminants splashed into their faces and also protect them from inhaling airborne contaminants that are off gassing from their PPE.

**Wet Decontamination**

- Add dish soap to the brush.
- Brush and wash off your gloves.
- Close all pockets and flaps.
- Slowly, without tipping it, remove and wash your helmet.
- Clutch collar to minimize water entering through the neck opening.
- With your gloves on remove your face piece and regulator to wash them off. Do not remove your hood to wash until the other items have been removed.



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- While removing your face piece be careful to keep it from any contaminated areas on your gear.
- Wash your SCBA tank and connections.
- Wipe your face and hands off with baby wipes.

**Dry Decontamination**

During cold, inclement weather the process of soaking firefighters while performing a wet decontamination may create additional safety hazards such as hypothermia, and equipment failure.

- Brush off all large particles from the PPE, working from the head down.
- Use damp towels to wipe the area around the firefighter's face piece to suspend any particulate matter.
- Attempt to remove all of the visible contaminants.

**Post Incident Decontamination On Scene**

- Individuals should wear eye protection, minimal particulate mask, and latex gloves.
- All equipment and hose will be hosed down thoroughly prior to being placed on the apparatus.
- PPE shall be doffed, sprayed, brushed with liquid dish soap, and rinsed off if member has proper foot wear.
- All PPE should be placed in a clear heavy-duty trash bag in order to reduce contamination of the interior of the apparatus.
- If PPE cannot be removed, pull bunker pants down to ankles, to prevent sitting on apparatus seats in contaminated gear. If turnout gear cannot be removed the apparatus seats should be covered with a large trash bag or tarp.
- If in a POV, place gear in a large garbage bag or tarp at the scene and place in trunk to be transported immediately to the station. Wipe your face and hands off with baby wipes, hero wipes, etc...

Once on Scene Decontamination is completed, then all contaminated equipment should be placed in the back of a service vehicle and returned to the station for additional cleaning and service as needed.



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## OLDHAM COUNTY FIRE CHIEF'S ASSOCIATION STANDARD OPERATING PROCEDURE

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#### **In Quarters Decontamination Procedures**

The initial entry crew should be the first crew to begin the in quarters decontamination process followed by each remaining member needing decontamination. This is in an effort to work within a reasonable time window in removing the potential harmful carcinogens and toxic materials from your bodies. When returning to the station, those involved in any type of firefighting activities or on fire ground activities that have exposed themselves to potential IDLH atmospheres should participate in the decontamination process. While initial crews are decontaminating, the remaining members should assist in getting apparatus and equipment decontaminated and returned to service. Proper PPE for cleaning crew will be determined upon your set cleaning task, but at a minimum, you should have on medical gloves, eye protection and a particulate mask.

- Members shall wash hands prior to eating/drinking/utilizing tobacco products.
- Fire apparatus interior shall be swept out and cleaned to remove fire debris.
- If tools and equipment require additional decontamination, it shall be performed upon returning to quarters.
- All turnout gear (including gloves and Nomex hood) shall be washed per manufacturer's recommendations within 24 hours of response. If turnout gear cannot be washed prior to another emergency response, members shall utilize secondary Nomex hood provided by fire department.
- Personnel shall clean fire helmet, including the interior of helmet.
- SCBA utilized in fire suppression activities shall be cleaned and dried per manufacturer's recommendations.
- SCBA face pieces shall be washed per manufacturer's recommendations.
- It is strongly encouraged that all clothes be washed in the firehouse approved washing machine separately from other laundry items. Following washing of clothes worn during a fire, a rinse cycle shall be run. DO NOT take contaminated clothes or PPE home or store it in your vehicle.
- It is strongly encouraged that members engage in 60 minutes of aerobic fitness (running, elliptical, or stationary bike) within 24 hours of response to assist in sweating out toxins absorbed by the skin.

#### **Care & Maintenance**

The following are procedures for washing PPE according to the manufacturer's recommendations and NFPA

- Clean your PPE at least annually or, as soon as possible, after an incident where it has been soiled or exposed to blood or body fluids, tars, fuels, resins, paints, acids, by-products of combustion, or other hazardous materials.



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- When possible, flush bunker gear with water at the fire scene after emergency operations are completed.
- If PPE is contaminated with body fluids, wear universal precautions while handling.
- Separate liners from coats and pants.
- Do not run more than 1 set of PPE in the extractor machine at a time.
- Do not place bunker gear in direct sunlight – **air dry** using the Gear drying rack or in gear dryer on low setting only.
- Helmets should be cleaned with soap or mild detergent and warm water. Helmets are to be washed/cleaned after any exposure to any firefighting function (rubbish, vehicle, structure, etc.)
- Nomex hoods should be washed in the extractor machine **DO NOT USE BLEACH**. Nomex hoods should be washed any time the individual has been involved in any actual firefighting (rubbish, vehicle, structure, etc.)
- Boots should be washed with mild soap and water.
- Gloves can be washed in the extractor machine **OR** with mild soap and warm water (not hot). **DO NOT USE BLEACH**.

Any part of PPE should be washed **ONLY** in the designated extractor machine utilizing detergent specifically for structural firefighting PPE. Wash PPE separately from any other garments or items to eliminate the possibility of flammable chemicals transferring to your PPE.

**Documentation**

Documentation of decontamination procedures utilized shall be included in the incident report narrative.

**Post Incident / Live-Burn Training Decontamination Checklist**

**Decontamination Kit**

	One 5 Gallon Bucket with lid
	One scrub brush
	Liquid soap
	Hand sanitizer
	Wet wipes
	Large clear trash bags
	Sunscreen (SPF 30)
	25' Garden hose
	Garden hose nozzle
	2.5" with garden hose thread



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**Wet Decontamination**

	Add dish soap to the brush
	Brush and wash off your gloves
	Close all pockets and flaps
	Slowly, without tipping it, remove and wash your helmet
	Clutch collar to minimize water entering through the neck opening
	With your gloves on remove your face piece and regulator to wash them off. Do not remove
	your hood to wash until other items have been removed
	While removing your face piece be careful to keep it from any contaminated areas on your gear
	Wash your SCBA tank and connections

**Dry Decontamination**

	Attempt to remove all of the visible contaminants
	Brush off all large particles from the PPE, working from the head down
	Use damp towels to wipe the area around the firefighter's face piece to suspend any particulate matter

**On Scene Decontamination**

	Individuals should wear eye protection, minimal N-95 respirator, and latex gloves
	All equipment and hose will be hosed down thoroughly prior to being placed on the apparatus
	PPE shall be doffed, sprayed, brushed with liquid dish soap, and rinsed off
	All PPE should be placed in a trash bag in order to reduce contamination of the interior of the apparatus
	Once on Scene Decontamination is completed, then all contaminated equipment should be placed in the back of a service vehicle and returned to the station.