



FETI

DRILL GUIDE



Topic: Decontamination after Structure Fire

Reference #: DG 16-04

Level of Instruction: In service personnel

Time Required: 3 hours

Instructor Preparation:

This drill requires basic preparation in order for it to be successfully conducted. Preparation includes having a safe location to conduct the drill and a large enough area. See "Set Up" for further detail. This topic may be new to many of the participants, so there are hyperlinks included for videos and more information. **NOTE: There is a video that goes with this class at <https://youtu.be/JTtxW6bOD8U>** by Black Helmet Films for LSU-FETI.

Goals:

The goals of this drill are:

- To help reduce the harmful contaminants that accumulate on PPE, including SCBA
- Stress how clean PPE helps protect us from the carcinogens that we come in contact with
- Help develop policies, or procedures for your department after firefighting and over haul have been completed to decontaminate our personnel

Materials:

- Your department's equipped fire apparatus.
- Spray bottle for soap (use appropriate strength - do not use full strength)
- Soft brushes of some type-inexpensive from a discount store
- A bucket with lid (a new 5 gallon paint bucket) to hold soapy water. If you don't have a decon kit, now is a good time to make it and train your crew on how to use it.
- Inexpensive baby wipes (individually wrapped is best, can carry in your coat pcket, avoid wipes with alcohol)

References:

- Jones & Bartlett Fundamentals of Fire Fighter Skills 3rd edition, Chapter 3



Decon kits are inexpensive and can help save your life and protect the PPE that protects you. Get 5 gallon paint buckets with a lid at most home supply, paint or hardware stores.

- NFPA 1851: Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
- <http://www.firefightercancersupport.org/wp-content/uploads/2013/08/Taking-Action-against-Cancer-in-the-Fire-Service.pdf>
- <http://inpublicsafety.com/2015/09/fight-cancer-at-your-fire-department/>

Instructor Set-up:

The practical portion of this drill is relatively simple and doesn't take much time at all to set up and involves a minimal amount of equipment. Soapy water, brushes, and a water supply of high pressure, low volume is all. A booster line off of your department's rig is an excellent choice for water supply.

Student Motivation:

Cancer in the fire service is another hazard of our occupation. We are 2.2 times more likely to get cancer than the general population. Prevention, by cleaning our PPE, decontamination after a fire, and using simple baby wipes to clean off our face and neck area will help reduce the many cancer causing products we come in contact with at every fire we encounter. Contaminated PPE continues to give off harmful gasses for up to four hours after a fire. Improper storage, i.e. inside of apparatus or personally owned vehicles exposes us to those gasses. Decon is necessary not just after structure fires, but any smoky fire like vehicle fires, dumpsters, or other fires involving man-made products.

Compared to the general population, firefighters are at a much higher risk for the following cancers:

- Testicular cancer (2.02 times greater risk)
- Multiple myeloma (1.53 times)
- Non-Hodgkin's lymphoma (1.51 times)
- Skin cancer (1.39 times)
- Prostate cancer (1.28 times)
- Malignant melanoma (1.31 times)
- Brain cancer (1.31 times)
- Colon cancer (1.21 times)
- Leukemia (1.14 times)
- Breast cancer in women (preliminary study results from the San Francisco FD)

From the [Firefighter Cancer Support Network](#).

Drill:

1. Review the article referenced above from Firefighter Cancer Support Network
2. Have the crew assemble in an area free of traffic or other hazards
3. Have your crew don their PPE, including SCBA and go through a very simple decontamination using soapy water, and a fresh water rinse
4. After the member has been washed and rinsed from head to toe, have the member doff the PPE.
5. Follow up with using baby wipes around the head and neck area, paying attention to the amount of contaminants that have accumulated on the wipes. After cleaning from the decontamination line, the PPE should be thoroughly cleaned according to manufacturer's instructions, or the referenced NFPA standard and dried.
6. Finally, remind the members that they should shower and don clean uniforms/clothes after each fire.

Review:

This drill is an excellent opportunity to discuss the hidden harms that we face. Often times we are negligent in keeping our PPE clean for one reason or another, but the fact that we are more likely to contract cancer should be enough motivation to keep it clean. Our protective hood is the area of least protection, and often overlooked in cleaning. There is a National campaign to dedicate Sundays as "Wash your Hood Sunday". By immediately decontaminating our PPE on scene, not storing our contaminated gear in our apparatus or POV, not washing the PPE in our home clothes washer, we can reduce the chances of cancer.



The Roanoke Fire-EMS Department's decon equipment includes: 5 gallon bucket, 25 feet of garden hose along with 2 ½" blind cap and garden spigot added to it, scrub brush, bottle of turnout gear washing spray, wet wipes, and individual packets of SPF 30 to be used while out training or during long-duration incidents.

Not in article: A booster line can replace the garden hose, 2½" X spigot and nozzle.

<http://inpublicsafety.com/2015/09/fight->

[cancer-at-your-fire-department/](http://inpublicsafety.com/2015/09/fight-cancer-at-your-fire-department/)

Notes:

Cleansers generally fall into two categories, detergents and soaps. All cleaning agents are clearly labeled as being either detergents or soaps; and we (Globe) recommend liquid detergents, since they are less likely to leave any residue on the clothing. It should also be noted that NFPA 1851, *Standard on Selection, Care, and Maintenance for Structural Firefighting and Proximity Firefighting Ensembles* requires that cleaning and contamination solutions shall have a pH range of not less than 6.0 pH and not greater than 10.5 pH.

<http://globeturnoutgear.com/education/care-and-cleaning/basic-turnout-gear-care-and-cleaning>)

SUGGESTION: Stick to liquid detergent that is appropriate for babies. That means balanced pH, avoid ingredients like: Optical Brighteners, Quaternium-18, Sodium Laureth Sulfate, Sodium Laurel Sulfate, Formaldehyde, Bleach, Nonylphenol Ethoxylates, and fragrance. Make sure it is phosphate free. <http://www.safelaundrytips.com/2012/05/04/top-ten-safe-laundry-detergents-for-baby/>

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