

EXAMPLE STANDARD OPERATING PROCEDURE

EXPOSURE PREVENTION AND DECONTAMINATION

- A. Purpose: To provide Los Angeles County Fire Department policy and procedure regarding on scene decontamination of personal protective equipment (PPE) and skin following the exposure to the products of combustion. This policy extends to decontamination of the skin using an off scene shower.
- B. Background: On scene decontamination of PPEs and skin is performed to remove contaminants following exposure to the products of combustion. On scene decontamination can reduce hazardous compounds entering the body through absorption, ingestion and inhalation. Showering as soon as possible after an incident can further reduce absorption of hazardous compounds.
- C. Scope: This instruction applies to all Department personnel involved in on scene emergency operations resulting in exposures to the products of combustion that can be removed using the prescribed procedures. The decontamination instruction outlined in other Department policies may be required when determined by the incident commander.
- D. Author: The Deputy Fire Chiefs of the Emergency Operations Regional Bureaus shall be responsible for the content, revision, and annual review of this instruction. The medical director shall be consulted for changes concerning the medical aspects of this instruction.
- E. Objective: To provide on scene decontamination of PPEs and skin to reduce the possibility of hazardous compounds found in the products of combustion from entering the body.

I. RESPONSIBILITY

- A. All uniformed personnel exposed to the products of combustion are responsible for ensuring they complete on scene decontamination as directed by the incident commander (IC) or his/her designee and after completing all operational assignments. This includes returning to the station for showers when directed by the IC.
- B. Incident commanders are responsible for:
 - 1. Determining when on scene decontamination is required.

2. Determine the level of firefighting decontamination appropriate for personnel.
 3. Identifying exposure to hazardous materials and implementing procedures outlined in Volume 11 Chapter 2 Subject 1 when appropriate.
 4. Announcing the location of where decontamination will occur.
 5. Developing a resource release schedule that limits out of service time while units return to quarters for personal showers.
 6. Ensuring personnel are compliant with directive.
- C. All officers are responsible for:
1. Monitoring their personnel for exposure to the products of combustion and ensuring decontamination of PPEs and skin occurs on scene.
 2. Complying with the resource release schedule to limit out of service time as personnel return to quarters for showers.
 3. Monitoring the assigned terminal radio operator (TRO) channel to determine need of their assigned resource while personnel and equipment are cleaned at the station.
 4. Ensuring their unit is made available for responses as soon as feasible after personnel and equipment are clean.
- D. Company officers are responsible for the daily inspection, cleanliness, and working order of the PPE of all assigned personnel. PPE requiring cleaning or repair shall be cleaned according to Department procedure.
- E. First arriving pump engineer, or other unit(s) assigned by the IC, are responsible for:
1. Identifying the location of on scene decontamination and informing the chain-of-command.
 2. Preparing the onscene decontamination area.
 3. Performing on scene decontamination.
 4. Preparing PPE doffing area.

II. POLICY

- A. Initiation of On Scene Decontamination. On scene decontamination of PPE shall be performed on incidents where personnel are exposed to the products of combustion and when the IC determines it is required.
- B. On Scene Decontamination Area. An on-scene decontamination area shall be upwind from the operational area at a distance where no additional exposure may be possible. The following items shall be positioned at this location:
 - 1. Dry brush.
 - 2. Five-gallon bucket.
 - 3. Liquid soap/water mixture: three-ounce dish soap mixed with three gallons water.
 - 4. Plastic scrub brush.
 - 5. One inch hose line from apparatus with low flow fog nozzle or garden hose with spray nozzle.
- C. On Scene Decontamination. On scene decontamination requires personnel being decontaminated to remain in full PPE with facepiece donned and breathing from the air bottle. Personnel performing decontamination shall be in appropriate PPE to support personnel in operational area; nitrile gloves, eye protection and N95 mask at minimum.
 - 1. Personnel should be assigned to on scene decontamination as assigned units. (Assignment by unit allows all personnel on the unit to be decontaminated together so they can be released to the station for showers as a unit.)
 - 2. On scene decontamination is a head to toe, and front and back, cleaning of the PPE that may consist of either of the following types as determined by the degree of exposure. The IC or his/her designee makes the determination:
 - a. Light Exposure – Exposure to dry products of combustion for a short duration.
 - 1) Decontamination requirements - Dry brush used to remove dry contaminants. See appendix for procedure.
 - b. Moderate to Heavy Exposure - Exposure to interior firefighting or exterior operations while working in close proximity to the fire for longer durations.
 - 1) Decontamination requirements - Water and soap mixture

scrub followed with water spray rinse. See appendix for procedure.

- D. Doffing PPEs after Decontamination. PPE doffing shall take place next to the decontamination area and downwind but adjacent to the rehabilitation/medical treatment area. The following items shall be positioned at this location:
 - 1. Impermeable gloves.
 - 2. Sanitation wipes.
 - 3. Respiratory protection masks.
 - 4. Large plastic trash bags for PPE and trash (soiled sanitation wipes and disposable towels).
- E. Cleaning of skin during Doffing of PPEs. Personnel shall use Department approved sanitation wipes to remove contaminants on the skin during the doffing process.
- F. Compliance with incident rehabilitation/medical treatment plan is required immediately after doffing of PPE is completed.
- G. On Scene Doffing of Contaminated PPEs. Personnel shall limit skin contact with PPEs at the conclusion of decontamination by wearing impermeable gloves while removing PPEs. Contaminated turnout coat, pants gloves, and hood should be placed in a plastic bag with the top secured and transported back to the station in a compartment where exposure is minimized.
- H. Resource Release Schedule. Resources with exposed personnel shall be released in a systematic fashion so operational personnel remain on scene to complete incident objectives. Released resources shall remain assigned to the incident while en route to the station for showers. Resources shall go available as soon as feasible after exposed personnel have showered and placed clean PPEs on the apparatus.
- I. Showering Following Exposure. On scene decontamination extends to showering at the station as soon as feasible following exposure to the products of combustion for a more thorough washing of the skin.
- J. Engines, trucks and quints shall maintain items required for on scene decontamination and doffing of equipment as per this instruction.
- K. Elements of this policy may not apply when emergency incidents require immediate engagement of personnel and equipment.

L.

III. PROCEDURES

See Appendix A.

APPENDIX A

- A. Firefighting operations that result in exposure to products of combustion.
- B. Determine the need for on scene decontamination in collaboration with rehabilitation/medical. IC shall:
 - 1. Recognize hazard and determine on scene decontamination requirements (type, location, equipment and personnel resource needs).
 - 2. Assign unit(s) to be responsible for on scene decontamination and provide direction on type of decontamination required for personnel.
 - 3. Transmit decontamination expectations and location of on scene decontamination area on Command and Tactical radio channels.
- C. Preparing on scene decontamination area.
 - 1. Personnel assigned to on scene decontamination unit(s) shall locate and prepare the area upwind from the incident and downwind from the rehabilitation/medical treatment area. Personnel decontaminating others shall don appropriate PPE as per policy.
 - 2. Position dry brush for use.
 - 3. Position 1" hose line charged to pump pressure with nozzle adjusted to medium flow and medium fog stream. Garden hose with spray nozzle can also be used.
 - 4. Prepare soap water mixture of three-ounce dish soap with three gallons water in five gallon bucket with brush.
- D. Personnel to be Decontaminated.
 - 1. Enter decontamination area after completing all operational assignments and while in full PPE and breathing air from SCBA.
 - 2. Close all PPE pockets and open storm flaps exposing zipper.

3. The individual being decontaminated stands upright with arms extended away from body at 90 degrees and feet shoulder width apart.
4. Perform decontamination as indicated by degree of exposure. Decontamination is head to toe and front and back.
 - a. Dry brush used for light exposure of dry contaminants. Begin at head and brush in a downward fashion until entire body has been brushed.
 - b. Water applied head to toe and front and back followed by soap applied with a scrub brush used for moderate to heavy exposures resulting from extended time in close proximity to the fire and smoke. Starting at the head, scrub with water soap mixture and work around the body to the feet. Rinse with water from hose line.

E. Doffing PPE.

1. Personnel shall move from the decontamination area to the designated doffing area.
2. Position firefighter near large plastic bag used for transporting all PPE. Place items in bag as removed.
3. Remove structure gloves. Place in plastic bag. Avoid skin contact with exterior of glove.
4. Use sanitation wipes to clean hands. Place soiled wipe in trash bag.
5. Dry hands with clean disposable towel.
6. Don impermeable gloves.
7. Remove all PPE beginning with the facepiece and SCBA and working toward the feet. Place helmet, hood, face piece, jacket and pants and turnout boots in plastic bag with gloves.
8. Seal plastic bag.
9. Remove impermeable gloves and place in trash bag.
10. Use sanitation wipes to clean skin areas susceptible to exposure of contaminants. These areas include but are not limited to: face, ears, neck, arms, wrists, and legs. Place soiled wipe in trash bag.

F. Follow incident rehabilitation/medical treatment requirements as directed.

- G. Returning to quarters for showers as soon as operationally feasible.
 - 1. Personnel shall return to quarters in uniform.
 - 2. Secure bagged PPEs in apparatus compartment or location where exposure is minimized.
 - 3. Resource remains assigned to incident while en route to the station and until all exposed personnel have showered and clean PPEs are placed on apparatus. This shall be completed in an expeditious manner so the resource can be available for responses. Assigned TRO frequency should be monitored during showering period so critical emergencies can be addressed expeditiously.
- H. Resource in-service and available for responses.
 - 1. Resource shall be made available for responses when company officer determines personnel and equipment are response ready.
- I. Cleaning of contaminated PPE returned to the station.
 - 1. Contaminated PPEs shall be cleaned following the Department approved process.