



removal of toxic gasses or vapors that may be trapped in or off gassing from personal protective equipment (PPE). Personnel should stand in front of forced air for a minimum of 30 seconds – 15 seconds facing the fan and 15 seconds with back to the fan, arms extended out to the side and chin in an up position to allow forced air to circulate through void areas of the PPE.

#### **IV. PROCEDURE**

##### **A. Pre-Incident**

1. While on duty, all operational personnel shall maintain a minimum of one (1) clean work uniform and undergarments at all times.
2. All operational personnel shall maintain one (1) clean set of PPE to include bunker pants with suspenders, turnout coats and structural firefighting gloves at all times. Personnel shall maintain three (3) clean flame resistant hoods at all times.
3. Per **Emergency Operations Procedure #23, Section V**, PPE shall not be worn or placed into the living areas of the station.
4. When in a ready state at a fire station, an incident scene, or on the training grounds, PPE should not be placed near apparatus exhaust, chemicals or biological hazards and should be kept out of smoke and/or other toxic atmospheres.
5. When PPE is being stored in a non-ready state, it shall be kept in gear bags. In facilities that have separate rooms isolated from the living area and apparatus bay which are designated for PPE storage, the PPE does not have to be stored in gear bags. PPE stored in staff vehicles should not be subjected to sunlight.
6. Every first out engine and truck shall be equipped with the following for the gross washing decontamination process:
  - a. One (1) five (5) gallon bucket
  - b. One (1) brush head with handle
  - c. Liquid soap
  - d. Hand sanitizer
  - e. Sanitary wipes
  - f. Large trash bags
7. Apparatus and support vehicle passenger compartment areas should be cleaned on a weekly basis and any other time as deemed necessary by the company officer in order to remove potential toxic materials.
8. Station captains are responsible for ensuring that all elements of bay ventilation/exhaust systems are operating properly and that any deficiencies are addressed. This shall include diesel particulate removal systems, bay door timing components and living quarters entry door seals, etc. System component checks shall be

conducted monthly as part of the station monthly maintenance program and documented.

9. Gas powered equipment should be operated outside of the apparatus bay. In situations where it is absolutely necessary to operate inside the apparatus bay (e.g. hazardous weather), all bay doors shall be opened prior to operating the equipment. Doors leading to living areas shall remain closed until the process is complete.
10. During weekly cleaning of apparatus bay floors, the floors shall be washed down. Personnel should be aware that sweeping can cause particulates to become airborne, and should consider the use of a dust mask. Leaf blowers are prohibited from being used to clean bay floors.
11. Vehicle idling time should be minimized in the apparatus bay. Any maintenance issues, such as air leaks, that cause units to idle in the bay for prolonged periods shall be reported through the appropriate process and addressed by Resource Management Division (RMD) as soon as possible.

**B. Incident Response**

1. Fire and EMS apparatus should not be started until all personnel are on board with the doors closed.
2. Appropriate PPE and SCBA shall be worn by all personnel operating in or near a suspected or confirmed toxic environment or atmosphere. SCBA may not be required when operating on the exterior of structure fires; however, personnel shall exercise due caution when operating on the exterior because toxic atmospheres can exist in these areas. SCBA may not be required for personnel operating at a brush/wildland incident, unless deemed necessary by the incident commander and/or incident safety officer.
3. During incidents with personnel exposed to known or potential toxic environments, the incident commander is responsible for ensuring that proper personnel decontamination is established. This includes establishing forced air decontamination at structure fires.
4. Forced air decontamination shall be completed immediately after exiting a toxic environment or atmosphere and prior to removing the facepiece or the SCBA regulator from the facepiece.

Exception: At the discretion of the incident commander, during imminent threat situations (e.g. immediate patient care needs, firefighter rescues, and emergency evacuations) forced air decontamination may be delayed.

5. As soon as possible after exiting a toxic environment or atmosphere, personnel should clean their head, face, neck, arms and hands using sanitary wipes.

6. Personnel shall decontaminate their hands and face prior to ingesting food or liquids.
7. Personnel exposed to toxic atmospheres or environments should replace their flame resistant hoods with clean flame resistant hoods as soon as the incident is stabilized.
8. Personnel should carry a complement of clean uniform components to include shirt, pants, undergarments and flame resistant hoods with them on apparatus to facilitate personal decontamination.
9. Studies indicate ventilation alone post fire knock-down will not stop the production and release of toxicants. Allowing the contents and structure to cool will significantly reduce toxicant levels. Incident commanders should initiate a cool down phase after fire knock down has been complete and prior to crews reentering the building for overhaul or investigation purposes. The following guideline should be considered when determining cool down periods:
  - a. Fires confined to the room of origin: 20-30 mins.
  - b. Fires that extend past the room of origin: 45-60 mins.
10. While performing salvage and overhaul operations, or conducting fire investigations, in a suspected or confirmed toxic environment, SCBA shall be worn. Appropriate PPE ensembles shall be determined by the incident commander and incident safety officer.
11. In order to minimize exposure to potential toxic environments and atmospheres, and at the discretion of the incident commander, overhaul should be limited to what is minimally necessary to prevent rekindles and facilitate fire investigations.
12. The incident commander should employ on-scene gross wash decontamination for personnel with soiled PPE. Gross wash decontamination is performed utilizing a bucket filled with a soap and water solution and scrub brush. When performing gross decontamination at incident scenes, personnel should consider the potential for runoff and cross contamination.
13. Contaminated PPE shall be placed in a plastic bag prior to transporting in vehicle compartments.

**C. Post-Incident**

1. The priority list for conducting decontamination after exposure to any toxic environment or atmosphere should be:
  - a. Personnel
  - b. PPE and Uniforms
  - c. Apparatus passenger compartments
  - d. Tools and equipment

2. After exposure to any toxic environment or atmosphere, personnel shall clean PPE to the level determined by the company officer consistent with **Emergency Operations Procedure 23, Section IV**. This decision should be evaluated prior to personnel and units leaving the incident scene in consultation with the incident safety officer (e.g. perform an advanced, basic or no wash).
3. There shall be no transporting of contaminated PPE and/or uniforms in passenger compartments of department staff or personal vehicles. If no other transportation option exists, PPE shall be gross washed and placed in a closed plastic trash bag.
4. After exposure to any toxic environment or atmosphere, employees should shower and change into clean work uniforms prior to any non-emergency routine station activities (e.g. food preparation, completing reports).
5. At the discretion of the company officer or safety officer, personnel should change into clean PPE after an exposure to a toxic environment or atmosphere.
6. If an incident commander deems it necessary, units may remain out of service to complete personal hygiene and PPE exchange. This decision will be dictated by the level of contamination and system status levels (availability of apparatus).
7. Personnel will clean all contaminated equipment and PPE in well ventilated areas while considering potential run off and cross contamination. Personnel should use rubber gloves or EMS gloves and other appropriate precautions (ex. eye protection) when cleaning contaminated gear and equipment.
8. Any contaminated work uniforms shall be washed separately from non-contaminated items.
9. Work uniforms should be laundered at stations to minimize the potential of contaminating family members and personal property.