

# STAFFORD COUNTY FIRE AND RESCUE DEPARTMENT POLICY - XXXXXXX SUBJECT: Cancer Prevention Program FRD 100.550 Draft for Review & Open Comments 8/2/17-8/16/7 Initiated XX/XX/XX APPROVED: Page Revised

Mark Lockhart, NRP
County Fire and Rescue Chief

#### A. PURPOSE

1.0 The focus of this program is to promote recognition of potential contamination hazards, implement precautionary measures, reduce and minimize the risk of exposure, and ensure that personnel who are exposed to contaminants document the exposures. This program is an effort to combat the incidence of cancer among our members. Protecting the health and well-being of each member and his or her family is to be a main focus of the Stafford County Fire and Rescue Department.

#### B. SCOPE

1.0 This document is directed to all members, both career and volunteer, of the Stafford County Fire and Rescue Department. It shall be adhered to by those who have the potential to be exposed to contaminants and carcinogens from firefighting operations, training evolutions and during routine tasks.

#### C. **DEFINITIONS**

#### **D.** Definitions

- **1.0** Barrier Protection: An interface device that provides physical protection from contact with potentially infective fluids, chemicals, soot or contaminants.
- **2.0** Best Practices: A method or technique that has been generally accepted as superior to any alternatives because it produces results that are superior to those achieved by other means or because it has become a standard way of doing things
- **3.0** Carcinogens: A substance capable of causing cancer in living tissue.
- 4.0 Containments: A harmful substance(s) that adversely affect living organisms.
- 5.0 Cool Down Phase: The time frame post "knock-down" required to necessitate the structure and its contents to significantly reduce the toxicant levels.
- **6.0** Detailed Decontamination: PPE and/or SCBA contaminated beyond the effectiveness of utilizing identified decontamination, it shall forwarded to a contractor for professional cleaning.
- **7.0** Direct Diesel Exhaust: A mechanical device that collects and extracts harmful vehicle exhaust fumes.
- **8.0** Gross Decontamination: The physical or chemical process of reducing and preventing the spread of contamination from the environment, persons and equipment.



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- **9.0** Immediate Danger to Life or Health (IDLH): Any condition that would pose an immediate or delayed threat to life, cause irreversible adverse health effects, or interfere with an individual's ability to escape unaided from a hazardous environment.
- **10.0** Occupational Disease: An illness or disease contracted through or aggravated by the performance of the duties, responsibilities, and functions of a fire department member.
- 11.0 Personal Decon: The process of removing or neutralizing contaminants that have accumulated on personnel and equipment
- **12.0** Protective Measures: Elements of procedures, protective clothing and equipment that when utilized correctly provide protection from risks
- 13.0 Rehab: An intervention designed to mitigate the physical, psychological, and emotional stress of firefighting in order to sustain the member's energy, improve and decrease the likelihood of onscene injury or death.

#### E. POLICY

#### 1.0 Background

- 1.1 Firefighter cancer is a looming personal catastrophe for each and every firefighter. Cancer is the most dangerous and underemphasized threat to the health and safety of firefighters. Multiple studies have demonstrated credible evidence for statistically higher rates of multiple types of cancers in firefighters compared to the general population.
- In April of 2013, the Indianapolis Fire Department hosted a workshop on firefighter cancer. The Firefighter Cancer Support Network was the driving force behind the workshop. The participants came from the legal, medical and social research communities, and the fire service including volunteer, combination and career departments and chief officers, firefighters, company officers, union leaders, and local and state fire training directors. Two firefighters who are cancer survivors participated, and every workshop participant knew firefighters who currently have cancer or who died as a result of cancer. The information and recommendations that resulted are published in a white paper on cancer in the fire service (*Taking Action against Cancer in the Fire Service*"). The White Paper, along with other cancer studies, will be made available on our department's member area. Please take the time to read the White Paper and the other cancer studies.

## 2.0 Responsibilities

2.1 As the most influential person in the company, it is the Company Officer's responsibility to promote the appropriate attitude in cancer prevention. Leadership by example and setting clear expectations concerning cancer awareness, prevention, tracking/reporting of exposures and essential operational precautions are necessary to minimize exposure to carcinogens and other toxins. It is at this position that the Department empowers and expects company leaders to enforce the safe and appropriate actions of the entire crew.



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- 2.2 Chief Officers; as a second set of eyes to the incident scene, the next level of supervision, and the person in charge of multi-unit operations, have the responsibility to provide reinforcement of policies and "Best Practices" concerning exposure and risk reduction.
- 2.3 It is the responsibility of each and every member; volunteer, career and civilian, to abide by department directives to lessen the potential of occupational exposures to carcinogens. It is imperative that members understand that not accepting these changes and enhancing their knowledge of the hazards will have a direct impact on their health.

#### 3.0 **Personal Protective Equipment**

- 3.1 All personnel are to be issued a second set of Personal Protective Equipment (PPE) in the event their primary set is damaged or contaminated. If not issued, the On-Duty Shift Commander has the ability to obtain additional PPE through the Logistics Branch. When PPE displays signs of exposure to the products of combustion including a dirty appearance or the odor of smoke, it shall be placed out of service until it is properly washed. Personal shall have their second set of gear available within the county to accomplish this task.
- 3.2 PPE shall be located in an area of the station not to be contaminated by direct diesel exhaust. The second set of PPE shall be stored in a gear bag also not in contact with direct diesel exhaust.

#### 4.0 **Incident Operations**

- 4.1 Fires today grow at a faster rate and produce more smoke as a result of the plastics and synthetics found in all occupancy types, vehicles and dumpsters.
- 4.2 The Department must eliminate the false impression that simply wearing PPE is sufficient to limit exposure to most cancer-causing agents encountered on the incident scene; IT DOES NOT. The use of Self Contained Breathing Apparatus (SCBA) during the incident and throughout overhaul, proper PPE decontamination and the use of cleaning wipes to remove the potential of skin absorption are imperative to reduce exposure.

#### 5.0 Procedures

#### 5.1 On An Incident

- 5.1.1 PPE and SCBA (on-air) shall be worn when entering an area deemed to be an Immediate Danger to Life and Health (IDLH), as well as from the initial fire attack through salvage and overhaul operations.
- 5.1.2 The Incident Commander shall consult with the safety officer or designee to deem the atmospheric conditions acceptable prior to the removal of the SCBA facemask.



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- **5.1.3** The use of alternate respirators; Air Purifying Respirator (APR), Powered Air Purifying Respirator (PAPR) or dust mask may be utilized during overhaul if approved by the Incident Commander. Atmospheric monitoring shall be continuous to ensure that there are no contaminant levels prohibiting the use of the respirators.
- **5.1.4** Atmospheric monitoring is not the single deterring factor in the removal of the SCBA mask. Off-gassing of hazardous compounds and known carcinogens continue to occur after the production of visible smoke has stopped. The following shall be utilized as action levels for the removal of the SCBA mask as determined by atmospheric monitoring after consultation AND approval of the incident commander;
  - 5.1.4.1 Oxygen 20.9%
  - 5.1.4.2 Carbon Monoxide 0 ppm
  - 5.1.4.3 Hydrogen Cyanide 0 ppm
  - 5.1.4.4 Hydrogen Sulfide 0 ppm
  - 5.1.4.5 LEL-0%
- **5.1.5** Studies indicate ventilation alone, after fire knock-down will not stop the production and release of toxicants. Allowing the contents and structure to cool will significantly reduce these toxic levels. Incident commanders shall initiate a cool down phase after fire knock down has been completed and prior to crews reentering the building for overhaul or investigation purposes. The following guideline is to be considered when determining cool down periods:
  - **5.1.5.1** Fires confined to the room of origin: 20-30 mins.
  - **5.1.5.2** Fires that extend past the room of origin: 45-60 mins.
- **5.1.6** Gross decontamination of PPE utilizing the Apparatus Decon-Kit shall be initiated as soon as possible while on the scene to remove soot and other contaminants.
  - **5.1.6.1** Wet decontamination is the preferred method (Appendix A).
  - **5.1.6.2** Dry decontamination is utilized when this procedure might be detrimental or create additional safety concerns such as in cold inclement weather. (Appendix A).
- **5.1.7** Utilize the supplied wet cleaning wipes to remove as much soot as possible from the following areas: head, neck, throat, jaw, hands and underarms. Also wipe the inside of the helmet.
- **5.1.8** Personal Decon shall be performed immediately after removing PPE, prior to going to Rehab and before consuming food or drink.



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- **5.1.9** A hood-drop shall be initiated for the exchange of a contaminated protective hood with a clean one. Officers shall ensure their crews comply by removing their hood and place it in the designated "dirty-hood" receptacle and obtain a clean one.
- **5.1.10** Hoods shall be exchanged immediately after leaving a contaminated area or IDLH and prior to entering Rehab.
- **5.1.11** Where indicated, PPE requiring additional decontamination shall be bagged and returned to the station for further cleaning. (Appendix A).
- 5.1.12 Whenever possible, crews exposed to the greatest contaminates shall remain out of service when leaving the incident scene. Fill-in companies shall remain in place until crews complete the required PPE decontamination, take a shower and put on clean uniforms. Delaying these tasks allows contaminates to remain in contact with the skin longer and poses a potential health risk.

#### 5.2 Rehab

- **5.2.1** No contaminated PPE shall be worn in the rehab area.
- **5.2.2** The rehab area shall be located in an area free from vehicle exhaust, smoke, or other obvious contaminants.
- **5.2.3** Food and drink in the rehab area shall only be consumed after PPE decontamination and the completion of hand and face washing.
- **5.2.4** Members shall comply with all policies and requirements of incident scene rehab.

#### 5.3 Apparatus Decon-Kit

- **5.3.1** Portable decontamination kits are provided and shall be utilized on the incident scene to reduce potential exposure to cariogenic soot and particulates. Each kit contains the following:
  - **5.3.1.1** Wet cleansing wipes
  - **5.3.1.2** Cleaning solution
  - **5.3.1.3** Scrub brush
  - **5.3.1.4** Trash bag
  - **5.3.1.5** Tyvek suits
  - **5.3.1.6** Wash cloths/towels
  - **5.3.1.7** Hose and adapter



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#### 5.4 SCBA, Hose, Tools and Equipment

**5.4.1** Barrier protection or PPE shall be utilized when cleaning any contaminated item

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- **5.4.2** SCBA shall be decontaminated utilizing the dry or wet method prior to placing back into the cab.
- **5.4.3** Transport the SCBA back to quarters in a plastic bag if further decon is required
- **5.4.4** Contaminated hose shall not be transported back to quarters inside the apparatus cab.
- **5.4.5** It is recommended to "dry" brush the hose utilizing a soft/medium bristle brush.
- **5.4.6** Utilize soapy water and a brush to clean more contaminated hose
- **5.4.7** Tools and equipment shall be cleaned utilizing soap and water prior to being returned to the apparatus.

#### 5.5 Upon Return to the station from an incident

- **5.5.1** Perform a detailed decontamination of PPE, SCBA, tools, equipment and apparatus. Utilize barrier protection and protective measures.
- **5.5.2** Thoroughly clean SCBA and facemask; inside and out. (Appendix B)
- **5.5.3** Utilize second set of PPE until contaminated set is completely dry.
- **5.5.4** Decontaminate all tools and equipment to include the compartments where these are stored. Utilize barrier protection and protective measures.
- **5.5.5** Thoroughly clean the apparatus. Wash the exterior and interior crew compartment of the apparatus, seats, seat belts, and SCBA brackets. Use a wet technique inside to reduce the spread of dust and contaminates.
- **5.5.6** Windows on apparatus shall be in the open position for at least one hour after the incident to allow the escape of vapors and gasses (weather permitting).
- **5.5.7** Contaminated work uniform, to include station work shoes shall not be worn in living quarters, common areas or station offices.
- **5.5.8** Change out of contaminated work uniform and wash as soon as possible.
- **5.5.9** Shower as soon as possible (within an hour), thoroughly wash paying attention to the head, neck, throat, jaw, underarm, behind knees and groin area.

#### 5.6 In the Station



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- 5.6.1 Utilize the diesel exhaust extraction system where installed. The system shall be attached to the apparatus exhaust pipe prior to entering the station and shall remain attached while parked.
  - **5.6.1.1** Do not run vehicles inside the station. Move the vehicle away from entrance ways to prevent diesel exhaust from permeating the facility.
  - **5.6.1.2** PPE shall not be worn or brought into living quarters, common areas or station offices.
  - **5.6.1.3** Dirty or contaminated tools or equipment shall not be brought into living quarters, common areas or station offices.
  - **5.6.1.4** PPE should be stored in an area not in direct contact with diesel exhaust.
  - **5.6.1.5** Utilize weather stripping to seal doors leading from the apparatus bay into living quarters.
  - **5.6.1.6** Food or drink shall not be consumed in any contaminated work area or dirty environment.
  - **5.6.1.7** Refrigerators and ice machines shall not be located within an area of direct contact with diesel exhaust.

#### 5.7 **Daily Apparatus Checks**

- 5.7.1 The Diesel Exhaust Extraction System shall not be utilized for the purpose of checking apparatus while running inside.
- 5.7.2 Gas powered equipment shall be operated outside of the apparatus bay.
- 5.7.3 Tools and Equipment shall not be checked with the vehicle's engine running.
- 5.7.4 Apparatus bay doors shall be closed while the vehicle is running, or shall be moved away from the station to ensure that exhaust fumes are not entering the station.

#### 5.8 **Diesel Exhaust Extraction System**

5.8.1 Numerous national and international studies have indicated that vehicle exhaust emissions are directly associated with certain cancers. The World Health Organization has classified diesel exhaust as a Group 1 carcinogen, which means it is known to cause cancer in humans. Additionally, exposure to diesel exhaust can cause headaches, dizziness, and irritation to the eyes, nose and throat. Diesel exhaust particulates are small enough to be inhaled and deposit in the lungs and lower respiratory system.



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- 5.8.2 Some of the Fire and EMS Stations have a vehicle exhaust extraction system (Plymovent) installed. This system, when utilized correctly will reduce potential exposure.
- 5.8.3 The use of the vehicle exhaust extraction system is mandatory where installed following these procedures:
  - **5.8.3.1** The exhaust hose shall be attached to the vehicles exhaust pipe while apparatus is in the station.
  - **5.8.3.2** Apparatus shall not be at high idle, or an increase of RPMs while in the station.
  - **5.8.3.3** The system is not used for the purpose of checking apparatus while running inside.
  - **5.8.3.4** After initial start of the engine, move at a slowly outside allowing for the exhaust pipe to safely disengage and retract.
  - **5.8.3.5** Upon returning stop prior to entering the station.
    - 5.8.3.5.1 Attach the exhaust hose and secure it to the vehicles exhaust pipe.
    - 5.8.3.5.2 Enter the station slowly.
- Additionally, best practices have been identified to reduce the emission of vehicle exhaust into the station, these include:
  - **5.8.4.1** Open apparatus bay garage doors before starting vehicles.
  - **5.8.4.2** Apparatus shall not be allowed to idle inside the station.
  - **5.8.4.3** Apparatus operations shall be at an absolute minimum in the fire station.
  - **5.8.4.4** Apparatus bay doors shall be closed while vehicles idle outside and in close proximity of the station.
  - **5.8.4.5** Tools and equipment check shall be completed while the vehicles engine is not running.
  - **5.8.4.6** Apparatus bay doors shall be left open, when weather conditions permit, for at least 10 minutes following the operations of the vehicles.
  - **5.8.4.7** Keep all doors leading from the apparatus bay to stairwells, living quarters, kitchen, offices, or other areas doors closed and sealed.
  - **5.8.4.8** Ensure automatic door closing devices are operational on all doors leading into the apparatus bay.



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> **5.8.4.9** Weather stripping or similar material on doors leading to the apparatus bay shall be inspected to ensure integrity in preventing diesel exhaust infiltration.

#### 5.9 **Other Best Practices**

- 5.9.1 Contaminated PPE or work uniforms shall not be brought home to launder
- 5.9.2 Do not transport PPE inside vehicle passenger compartment. Utilize issued gear bag and place it in trunk or exterior compartment. Limit the time that PPE remains inside vehicle, particularly in hot weather.
- 5.9.3 After washing contaminated uniform/clothing run a wash-cycle empty to remove any lasting particulates.
- 5.9.4 Use sun screen or sun block to reduce sunlight exposure.
- 5.9.5 Do not use any tobacco products, "vape" or "hookah" usage.
- 5.9.6 Limit alcohol intake.
- 5.9.7 Eat healthy.
- 5.9.8 Evaluate health with a yearly medical examination.

#### 5.10 **Medical Evaluations**

- **5.10.1** Multiple national and international studies have repeatedly reported statistically higher rates of multiple types of cancers in firefighters compared to the general American population. The University of Cincinnati published a meta-analysis of 32 studies of cancer among firefighters. Based on the analysis, there was a significantly increased risk among firefighters for a number of cancers, including multiple myeloma, non-Hodgkin's lymphoma, prostate and testicular cancer.
- **5.10.2** The Stafford County Fire and Rescue Department provides annual physicals to uniformed career personnel as directed in NFPA 1582 (2013 ed.) Standard on Comprehensive Occupational Medical Program for Fire Departments. These are outlined in Administrative Policy: Comprehensive Occupational Medical Program FRD100.114 (March.12.14).
- 5.10.3 Medical evaluation and subsequent follow-up with a private medical professional is imperative. Early detection and treatment has been proven to result in a favorable outcome.

#### 5.11 **Exposure Record Keeping**

**5.11.1** Currently no National registry exists for the reporting of an exposure to a carcinogen or when a member is diagnosed with cancer. An occupational disease such as cancer takes years to develop. It's the result of years of



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responding to fires, breathing toxic smoke and fumes, and exposure to diesel exhaust. Because cancer develops over time, it's impossible to say "this specific emergency response caused my disease". It is incumbent upon members to document these exposures in an organized fashion to recall them if needed to file a workers compensation claim.

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**5.11.2** A Personal Exposure Record form has been developed to assist department members in the documentation to an exposure. This form shall be completed and forwarded to the Training and Occupational Safety Division for inclusion within the members personnel file. The form is located in Appendix C as well as on the Departments web site in the member's area.

#### 5.12 Training

5.12.1 Personnel will receive initial training on the hazards of exposure to carcinogens during recruit school. Continuing training at the company level shall occur periodically, when updated research dictates the need and yearly during the month of October during National Cancer Awareness month.

#### **5.13** Family Responsibilities

- **5.13.1** It is incumbent on members to follow the policies and procedures within this document to reduce or eliminate the possibility of being diagnosed with cancer. It is also the personal responsibility of members to ensure that family members are protected in the event of an unforeseen incapacitating illness or death.
- **5.13.2** Even at the best of times the handling of financial matters can be difficult, but coupled with the emotional stress that accompanies an illness or death, such responsibilities can quickly become overwhelming. Settlement of some matters are time sensitive, and if information is not available in an organized and structured way, loved one(s) may lose the opportunity to claim important benefits owed to them.
- **5.13.3** It is important that members seek legal advice to establish a will, power of attorney and an advanced medical directive. These are legal documents and must be maintained and updated as such. These documents in addition to any life insurance policies should be reviewed with loved one(s) in advance and located in an easy to find place.

## **5.14** Support

- **5.14.1** It is important to establish a support system of family members and co-workers so that you and your loved one(s) do not have to go through this alone.
- **5.14.2** Many organizations and advocates exist to assist you and your family
  - **5.14.2.1** See the member's area of the Fire and Rescue Departments web site for these organizations.

#### 5.15 Additional Information and Resources



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**5.15.1** Located within the member's area of the Fire and Rescue Departments web site will be a section dedicated to educational materials. It will be updated as needed.





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## Appendix A

#### **PPE Decontamination Procedures**

## Contaminated PPE or work uniform shall not be brought home to launder.

#### On Scene

#### **Dry Decontamination**

Dry decontamination is utilized when soaking the gear and SCBA might be detrimental or create additional safety concerns such as in cold and inclement weather. If the firefighter is too dirty to for a dry decontamination, then proceed to utilizing the wet process. If at all possible, the SCBA facemask shall remain in place and the user on-air.

- 1. Utilize the brush from the Apparatus Decon-Kit to remove all large particulates working from the head downward.
- 2. Use a damp towel to wipe the area around the facemask.
- 3. Remove PPE in the following order; SCBA, helmet, hood, gloves, coat and bunker pants
- 4. Significant exposure to contaminates shall require the bagging of all PPE for detailed decontamination.

#### **Wet Decontamination**

Utilize the Apparatus Decon-Kit for this process.

- 1. Remove the contents of the Apparatus Decon-Kit.
- 2. Mix a detergent solution in the tub.
- 3. If at all possible, SCBA facemask shall remain in place and the user on-air.
- 4. Rinse the firefighter thoroughly utilizing a garden hose or hose line at a low pressure
- 5. Rinse the firefighter from head to toe utilizing caution at the SCBA face piece and regulator.
- 6. Apply a soapy solution utilizing the brush, then rinse.
- 7. Remove PPE in the following order; helmet, SCBA and facemask, hood, gloves, coat and bunker pants.
- 8. Utilize a wet wipe to clean the inside of the helmet, liner and chin strap.



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9. Utilizing the wet wipes; wipe around the eyes, face, ears, neck, throat, and through hair. Continue with additional wipes for hands, arms, if possible underarms and groin area.

- 10. Get a fresh wipe anytime the wipe becomes visibly soiled or dry.
- 11. Blow nose several times as debris can be lodged in nasal passages. .
- 12. Significant exposure to contaminates shall require the bagging of all PPE for detailed decontamination. Utilize a Tyvek jump suit if a second set of PPE is not readily available

#### **In-Station**

#### **PPE Washing**

Personal Protective Equipment shall be cleaned in accordance with the manufacturer's instructions and as directed in NFPA 1851 (2014 ed.) *Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.* 

- 1. Clean bunker gear at least every six months or as soon as possible after an incident. It must be washed in an Extractor; located at Fire Stations 1, 2, 12 and at the TLC.
- 2. When possible, flush bunker gear with water at the fire scene after operations has been completed.
- 3. If gear is contaminated with chemical, radiological, biological or hazardous materials, it shall not be cleaned in-station and will be sent out for detailed cleaning.
- 4. Utilize universal precautions while handling PPE.

Washing procedure (to be posted at all washing stations):

- 1. Separate inner liners from outer shells of pants and coat
- 2. Turn inner liners inside-out, so the moisture barrier is on the inside
- 3. Fasten and secure all Velcro, closures, snaps, hooks, and clips
- 4. Remove DRD from coat liner
- 5. Begin first cycle of liners from pants, liners from coat and protective hood
- 6. Removable helmet liners and DRD may be washed in this cycle



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- 7. Remove contents of first cycle and begin to dry
- 8. Begin second cycle of pants and coat outer shells and structural gloves
- 9. Remove items from second cycle and begin to dry
- 10. Remove all items from dryer, return liners so that moisture barrier is outside and reassemble all components
  - Turnout gear items are NOT to be dried in tumble dryer
  - Do not place any footwear in the washer or dryer
  - Appropriate wash settings and load sizes will also be posted at each station.

#### **Protective Hood and Glove Washing**

- 1. Protective hoods shall be washed immediately after an incident.
- 2. Wash gloves in a decon sink, scrub the exterior on both sides, rinse and then hang to dry. Do not wring out the gloves or place in a dryer as the lining may become dislodged from the shell.
- 3. Wash hood and gloves after e

#### **Detailed Decontamination Procedures**

When PPE and/or SCBA are contaminated beyond the effectiveness of utilizing either the Wet or Dry procedures; or by a chemical, radiological, or biological hazardous materials, the following procedures shall be instituted;

- 1. Contact the Support Services Chief or designee.
- 2. Place the contaminated items in a plastic bag and seal with duct tape.
- 3. Attached a label to the bag with the members name and work location.
- 4. Complete a work request, identify the type of contaminate (soot, chemical name, etc.).
- 5. Utilize second set of PPE.



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## Appendix B

### **SCBA Mask Cleaning Procedures**



PROCEDURE FOR USE

#### DISINFECTING/SANITIZING SCOTT FACEPIECES, FACEPIECE ADAPTERS, AND MASK MOUNTED REGULATORS

#### WARNING

READ AND UNDERSTAND THESE INSTRUCTIONS COMPLETELY REAU AND UNDESTAND THESE INSTRUCTIONS COMPLETELY BEFORE PROCEDURES ARE INTENDED TO BE USED ON RESPIRATORS WHICH MAY SUPPORT HUMAN LIFE IN HAZARDOUS ATMOSPHERES. FAILURE TO CAREFULLY FOLLOW THESE INSTRUCTIONS OR FAILURE TO CHECK THE RESPIRATOR AS INSTRUCTED HEREIN MAY RESULT IN SERIOUS INJURY OR DEATH.

#### DESCRIPTION

The Wescodyne Plus disinfectant/sanitizer is recomm on most SCOTT facepieces such as the AV-2000, AV-3000, and the

#### DILUTION REQUIRED BEFORE USE

The SCOTT recommended iodine based disinfectant/sanitizer, Wescodyne Plus, is supplied as a small quantity of concentrate in either in a 16 oz. bottle or a one gallon bottle with sprayer. Prior to use, review the Wescodyne Plus concentrate Material Safety Data Sheet (MSDS) provided.

The concentrate in the bottle MUST BE DILUTED with potable (drinking) tap water as shown on the bottle label instructions. Adding water to the concentrate makes a highly diluted form of the Wescodyne Plus. Unlike the concentrate, the diluted form of the disinfectant/sanitizing cleaner is not expected to cause chemical burns, but it may cause irritation to the eyes, skin, and mucous membranes. Avoid confact with the spray. Direct the spray away from you and others. Wear personal protective equipment, if needed. If exposed, follow first aid measures for the concentrate as stated in the MSDS and on the product label. Except for the Health Information and Protection (Section 3), Regulatory Information (Section 9), and Notes (Section 10) sections, the Wescodyne Plus MSDS provides accurate guidance for the handling and storage of the dilute product.

ADD WATER TO THE LINE SHOWN ON THE BOTTLE. REPLACE THE CAP, AND SHAKE WELL TO MIX.

USE CAUTION WHEN HANDLING THE CONCENTRATE. DILUTE ONLY AS DIRECTED, DO NOT ADD ANY OTHER CHEMICALS OR CLEANING AGENTS TO THE SOLUTION.

The Wescodyne Plus disinfectant/sanitizer in the concentrate form has a shelf life of approximately three (3) years.

The diluted product must be used within six (8) months. After dilution, immediately mark the six (6) month expiration date on the bottle label in the space provided with a permanent marker.

#### WARNING

KEEP THIS IODINE BASED DISINFECTING/SANITIZING CLEANER OUT OF REACH OF CHILDREN. IT IS A VIOLATION OF FEDERAL LA TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THESE INSTRUCTIONS AND IT'S LABELING. IMPROPER USE OR HANDLING OF THIS PRODUCT MAY RESULT IN SERIOUS INJURY OR DEATH.

#### CLEANING PROCEDURES

- Drinking (potable) water running or in a spray bottle,
   Air supply of lubricant free, dry breathing air, maximum 30 psig, for drying,
- Soap or detergent solution,
- Properly diluted iodine based disinfectant/sanitizer in a spray bottle (either 16 oz. or one gallon).

NOTE
NEVER USE A QUATERNARY AMMONIUM TYPE OF CLEANER ON ANY PART OF A SCOTT RESPIRATOR.

CLEANING A SCOTT RESPIRATOR FACEPIECE

1. With the regulator or facepiece adapter removed, carefully wash the facepiece assembly with warm (110° F / 44° C maximum) soap or detergent solution and thoroughly rinse in clean water NOTE

A NOSE CUP IS DESIGNED TO BE AN INTEGRAL PART OF THE FACE-PIECE AND DOES NOT NEED TO BE DISASSEMBLED FOR CLEANING.

PIECE AND DOES NOT NEED TO BE DISPASSIMEDED TO ACCOUNT.

Disinfect/santitize the facepiece by spraying three (3) full pumps of the properly diluted disinfectant/sanitizer on the regulator/adapter side of mask and three (3) full pumps on the face side of the mask, wetting entire mask including all rubber and plastic areas. ALLOW ATEN (10) MINUTE CONTACT TIME TO CLEAN PRIOR TO RINSING.

#### NOTE

THE KEVLARI AND NYLON HEAD HARNESSES ARE MADE OF POROUS MATERIAL. SCOTT RECOMMENDED DISINFECTANT/SANITIZER MAY NOT BE EFFECTIVE ON POROUS MATERIAL.

- Rinse with drinking water using a spray bottle or running water.
- Shake excess water off of facepiece and then dry with a clean, lint free cloth or gently blow dry with clean, dry breathing air of 30 psig or less pressure. Do not use shop air or any other air containing lubricants or

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CLEANING A MASK MOUNTED REGULATOR
NOTE
AFTER CLEANING A REGULATOR, VERIFY THAT ALL MOISTURE
HAS BEEN REMOVED FROM THE REGULATOR AS DESCRIBED IN

- THE REGULATOR CHECK SECTION OF THIS INSTRUCTION.

  Remove the breathing regulator from the facepiece by pulling back on the locking clip and rotating the regulator 1/4 turn clockwise as described in the OPERATING AND MAINTENANCE Instructions supplied with the
- Remove any obvious dirt from the external surfaces with warm (110° F / 44° C maximum) soap or detergent solution and thoroughly rinse in clean water.
- 3. Inspect the inside of the regulator assembly through the regulator opening (see FIGURE 1). If excessive dirt or soil is present, forward regulator assembly to SCOTT trained authorized pernel for thorough cleaning.



4. Depress the donning/air save switch, close the purge knob by turning fully clockwise.

FIGURE 1

- To disinfect/sanitize the regulator, spray a minimum of six (6) full pumps of the disinfectant/sanitizer into the regulator opening. Make sure to also wet the immediate area around the opening (see FIGURE 1). Swirl to completely cover internal components. Turn regulator opening face down and shake excess liquid out. ALLOW FOR TEN (10) MINUTES OF CONTACT TIME TO CLEAN PRIOR TO
- or with drinking water using a spray bottle or gently running tap water.
- 8. Shake excess water out of regulator, Completely air dry the regulator

NOTE
TO SPEED DRYING OF THE REGULATOR, GENTLY BLOW DRY WITH CLEAN, DRY BREATHING AIR OF 30 PSIG MAXIMUM. DO NOT USE SHOP AIR OR ANY OTHER AIR CONTAINING LUBRICANTS OR MOISTURE.

- If regulator was disconnected from air supply for cleaning, reconnect and open purge valve to remove any moisture from regulator spray bar. Close purge valve.
   Perform REGULATOR CHECK as detailed below.

SEE REGULATOR CHECK ON PAGE 2...

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# **Appendix C**

# **Personal Exposure Record Form**

	Pe	ersonal Exp	osure Record		
				Г	
Name		[	Date of Exposure	Work Loca	tion Shift
Incident Location			In	cident Numb	per
Incident Type			Exposure	Time	
Incident Activity (	check all that apply)				
Extinguishment	Search/Rescue	□ Ve	entilation	Salvage	Overhaul
■ EMS/Patient Care	Vehicle Extricati	on 🔲 Ha	az Mat Op's	Support Activ	ites 🗌 Rehab
Command	Incident Investig	ation 🗌 Ot	ther:		
Exposed To:					
PPE (check all tha	t annly)				
FFE (CHECK all tha	Bunker Coat	☐ Bunker i	Pants ☐ FF 0	Sloves	☐ Work Gloves
- Hennet	Duriner Cour	_ bunner.	rans L	NUVES	THUR CIOTES
□ Hood	☐ Eve Protection	☐ Hearing	Protection   World	k Unifrom	
☐ Hood ☐ SCBA	☐ Eye Protection ☐ PAPR	☐ Hearing ☐ APR	Protection World		
	PAPR	☐ APR	_		
SCBA Haz Mat Entry Su	PAPR it (Specify): Level	☐ APR	□ N95		
SCBA	PAPR it (Specify): Level	☐ APR	□ N95		☐ Back
SCBA Haz Mat Entry Su Exposure Area (ch	PAPR it (Specify): Level eck all that apply) ace Neck	APR L	N95 evel B ☐ Le	vel C	☐ Back
SCBA Haz Mat Entry Su  Exposure Area (ch	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)	APR A Le	N95 evel B	vel C	☐ Back
SCBA Haz Mat Entry Su  Exposure Area (ch Head Fa Arm H  Was Decon Proced	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)  lures Followed?	APR  A C Le  Mouth Leg	N95 evel B	vel C	☐ Back
SCBA  Haz Mat Entry Su  Exposure Area (ch  Head  Arm	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)  lures Followed?  all that apply)	APR A Le Mouth Leg Yes	N95 evel B	vel C Chest Other	☐ Back  Back  Back
SCBA  Haz Mat Entry Su  Exposure Area (ch Head Fa Arm H  Was Decon Procect	☐ PAPR it (Specify): ☐ Level eck all that apply) ace ☐ Neck and ☐ Finger(s) lures Followed? all that apply)	APR A C	N95 evel B	vel C Chest Other	adache/Light Headed
SCBA Haz Mat Entry Su  Exposure Area (ch Head For Head Head Head Head Head Head Head Head	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)  lures Followed?  all that apply) on Cuts/Bruise/Al	APR A C	N95 evel B Lungs Feet No Skin Irritation/Rash	vel C  Chest Other	adache/Light Headed
SCBA Haz Mat Entry Su  Exposure Area (ch Head Fa Arm H  Was Decon Procect  Symptoms (check Respiratory Irritation Eyes Irritated	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)  lures Followed?  all that apply) on Cuts/Bruise/Al	APR A C	N95 evel B Lungs Feet No Skin Irritation/Rash	vel C  Chest Other	adache/Light Headed
SCBA Haz Mat Entry Su  Exposure Area (ch Head Fa Arm H  Was Decon Procect  Symptoms (check Respiratory Irritation Eyes Irritated	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)  lures Followed?  all that apply) on Cuts/Bruise/Al	APR A C	N95 evel B Lungs Feet No Skin Irritation/Rash	vel C  Chest Other	adache/Light Headed
SCBA Haz Mat Entry Su  Exposure Area (ch Head Fi Arm H  Was Decon Procect Symptoms (check Respiratory Irritati Eyes Irritated Other:	PAPR it (Specify): Level  eck all that apply) ace Neck and Finger(s)  lures Followed?  all that apply) on Cuts/Bruise/Al	APR A C	N95 evel B Lungs Feet No Skin Irritation/Rash	vel C  Chest Other	adache/Light Headed



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## Use and Completion of the Personal Exposure Record Form

## Complete all sections

- Enter the station and shift where you were located at the time of the exposure, not where you assigned.
- Enter the length of time that you were exposed, not the time that you were on the incident.
- Complete ALL remaining categories
- Enter any additional details in the comment section if appropriate.
- Print a copy and forward it to the FRD-Occupational Safety Section
- Print a copy for your records.



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## Appendix D

#### References

Firefighter Cancer Support Network

"Taking Action against Cancer in the Fire Service"

## NFPA 1582;

Standard on Comprehensive Occupational Medical Program for Fire Departments.

### NFPA 1962;

Standard for the Inspection, care, and use of Fire Hose

## NFPA 1851;

Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting.

SCOTT Safety; Disinfecting/Sanitizing SCOTT Face pieces – procedural document

Stafford County Fire and Rescue Department Administrative Policy

Comprehensive Occupational Medical Program FRD100.114 (March.12.14).