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CHAPTER 77 SAFETY

7701 SCOPE.

The safety program provides safe and healthy working conditions, and safeguards laboratory personnel and property. The Office of Forensic Sciences (SF) formulates, maintains, and coordinates the laboratory system safety plan through engineering and administrative controls, work practices, and the use of personal protective equipment (PPE).

NOTE: Exhibit 1/7701 lists acronyms for this subchapter.

The goals and objectives of the safety plan:

A. Ensure that laboratory practices and procedures meet the requirements of the program.

B. Educate and influence personnel in adopting safe and healthy practices and procedures.

C. Prevent occupational accidents, injuries and illnesses.

D. Identify and minimize hazards that endanger health and safety.

E. Train personnel in the proper use of PPE.

F. Ensure personnel follow appropriate actions in the event of an emergency.

G. Ensure management maintains and evaluates the effectiveness of the safety program through periodic inspections and review of practices and procedures.

7702 DESCRIBING RESPONSIBILITIES.

NOTE: Exhibit 1/7702 lists acronyms for this subchapter

7702.1 Laboratory Director.

In addition to responsibilities in Personnel Manual (PM) 2792.5, the Laboratory Director (LD):

A. Ensures the Safety and Occupational Health Specialist (SOHS) and designated deputy are adequately trained to administer the safety program.

B. Appoints a Safety Officer for the relevant duties assigned to the SOHS.

NOTE: This only applies to the LD at the Digital Evidence Laboratory (SFL9).

C. Provides names of the SOHS and deputy to SF and the chief of Safety and Workers' Compensation Unit (HRES).

D. Ensures safety and security plans are prepared, maintained, and updated periodically.

E. Ensures that a safety education program is presented to the staff at least quarterly.

F. Ensures compliance and proper enforcement of the laboratory safety and health programs.

G. Encourages laboratory participation in safety programs and attends quarterly safety committee meetings.

H. Forwards the annual safety inspection report to the SF Safety Program Manager and to HRES.

7702.2 Safety and Occupational Health Specialist.

The laboratory SOHS has all the responsibilities assigned to the Safety Manager outlined in PM 2792.5 and the sections that follow.

The SOHS:

A. Ensures trained personnel operate forklifts. Requirements are found here: https://www.osha.gov/SLTC/etools/pit/forklift/electric.html.

B. Submits an annual safety report to the LD.

C. Prepares and updates safety and emergency plans for review by the LD. See 7703.

D. Ensures all individuals who work within the laboratory facility complete and/or attend mandatory safety training.

7702.3 Laboratory Employees.

In addition to responsibilities in PM 2792.52-3, employees have the following responsibilities**:**

A. Comply with applicable federal regulations. See the Occupational Safety and Health Administration (OSHA) Laboratory Safety Guidance (OSHA 3404-11R).

B. Ensure escorted visitors adhere to safety requirements.

7703 SAFETY AND EMERGENCY PLANS.

NOTE: Exhibit 1/7703 lists acronyms for this subchapter.

7703.1 Bloodborne Pathogen Plan.

OSHA standard 29 C.F.R. Part 1910.1030, Bloodborne Pathogens, and the Drug Enforcement Administration (DEA) PM 2792.56 require a site-specific Exposure Control Plan (ECP).

The LD:

A. Makes the Bloodborne Pathogen Plan available to laboratory personnel by posting on the Office of Forensic Sciences Document Control Center (SFDCC).

B. Reviews the Bloodborne Pathogen Plan annually.

7703.2 Respiratory Protection Plan.

OSHA standard 29 C.F.R. 1910.134, Respiratory Protection, and PM 2792.55 require the Respiratory Protection Plan.

The LD:

A. Makes the Respiratory Protection Plan available to laboratory personnel by posting on the SFDCC.

B. Reviews the Respiratory Protection Plan annually.

7703.3 Chemical Hygiene Plan.

OSHA standard 29 C.F.R. 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories, requires a site-specific Chemical Hygiene Plan (CHP).

The LD:

A. Makes the CHP available to laboratory personnel by posting on the SFDCC.

B. Reviews the CHP annually.

7703.4 Occupant Emergency Plan.

The Federal Property Management Regulation (FPMR) defines an Occupant Emergency Plan (OEP) as a short-term emergency response program that establishes procedures for safeguarding lives and property during emergencies in particular facilities.

The OEP is required by 29 United States Code 651-678, Occupational Safety and Health; 41 Code of Federal Regulations 102-74, Facility Management; and Department of Justice (DOJ) Order 1900.8, Justice Continuity and Occupant Emergency Plan. See the OEP template located on the Blank Forms section on the SFDCC.

The LD:

A. Makes the OEP available to laboratory personnel by posting on the SFDCC and in a conspicuous place within the laboratory.

B. Reviews and updates the OEP each January and July.

C. Establishes an evacuation drill program to include at least one evacuation drill per year.

D. Evaluates, documents, and reports on the results of drills to the staff.

Planning and Inspection Manual (PIM) 8512.5 and 8517.2 contain detailed reporting requirements regarding OEPs.

7703.5 Continuity of Operations Plan

DOJ Order 1900.8, Justice Continuity and Occupant Emergency Plan, requires the Continuity of Operations Plan (COOP).

The LD:

A. Submits the COOP REDACTED.

B. Updates the COOP REDACTED semi-annually.

7704 MEETING SAFETY REQUIREMENTS

NOTE: Exhibit 1/7704 lists acronyms for this subchapter.

7704.1 Educational Materials.

Laboratory management and the Environmental Management Section (SFE) provide access to safety guidelines, safety training media, and suitable references.

7704.2 Safety Seminars and Training.

The SOHS provides or coordinates safety training by qualified individuals or organizations. The safety training complies with the requirements set forth in 29 C.F.R. 1960.54-59, Occupational Safety and Health Administration (OSHA), Labor, and in DOJ Order 1779.2B - Occupational Safety and Health Program.

A. The SOHS provides and documents training for new personnel in compliance with 29 C.F.R. 1910, Safety and Health Management Guidelines, within 10 calendar days of entry on duty.

B. The SOHS, in conjunction with laboratory management, analyzes proposed new laboratory processes (e.g., new synthesis method) to identify hazards by using a Job Hazard Analysis, when necessary. (See Exhibit 2/7704 and OSHA 3071.)

C. Each laboratory will have at least four employees with formal first aid/cardiopulmonary resuscitation (CPR)/automated external defibrillator (AED) training, received from the American Red Cross, American Heart Association, Federal Occupational Health (FOH), Civil Defense, or another comparable institution.

NOTE: Employees who have received formal first aid/CPR/AED training may provide assistance.

D. The SOHS and deputy attend a safety-training course per 29 C.F.R. 1960.56. Training must completed within six months of appointment.

E. The SOHS and deputy attend an OSHA Laboratory Standard training course within one year of appointment. (See 29 C.F.R. 1960.25(a) for a general description of training required.)

NOTE: Courses are available on DEA Learning System (DEALS).

F. Personnel complete a fire safety-training course annually.

G. Laboratory management complete a supervisory safety training course per 29 C.F.R. 1960.55. Training must be completed within one year of appointment.

H. The SOHS and deputy attend meetings and training courses, and read safety and health publications, to gain knowledge of current safety standards and best practices.

I. Employees receive annual training on bloodborne pathogens and respiratory protection.

J. Personnel are provided updates when there are changes to the OEP.

NOTE: Laboratory safety plans are posted on the SFDCC.

K. The laboratory DEALS coordinator documents the training outlined above in DEALS for each employee.

7704.3 Medical Examinations.

See also PM 2792.2 for additional information.

A. All DEA employees working in the laboratory require annual physical examinations coordinated by the Health Services Unit (HRLH). All GS-1320 positions working in SF require annual physical examinations.

EXCEPTION: Laboratory employees at the digital evidence laboratory and digital laboratory satellite locations do not require annual physical examinations unless the employee is certified to respond to clandestine laboratories.

B. The LD provides a memorandum to the HRLH chief to place new employees on the roster to receive future medical examinations. The memorandum includes the name, date of birth, series, and title of the employee.

C. The SOHS maintains a current list of employees that require annual physicals to ensure periodic examination.

7704.4 Clandestine Laboratory Safety

The Office of Training provides clandestine laboratory training. Clandestine laboratory certified analysts require annual recertification to maintain competency. See PM 2792.23.

Certified analysts participating in clandestine laboratory seizures:

A. Know what hazards are present or expected, and the precautions required to avoid injury.

B. Document exposure. Follow PRO-7704.4, Documenting Work-related Injury.

7705 PRACTICING SAFETY.

NOTE: Exhibit 1/7705 lists acronyms for this subchapter

7705.1 Laboratory Rules.

Employees who work in laboratory areas:

A. Keep laboratory work space in a clean and orderly manner pursuant to 29 C.F.R. 1910.22(a).

B. Do not work in the laboratory area outside of normal duty hours without a member of the laboratory management present.

C. Do not work alone in laboratory areas.

EXCEPTION: Digital forensic examiners are permitted to work alone in laboratory spaces.

D. Do not eat, drink any liquid, or prepare or store any food in designated areas.

E. Remove laboratory coats and gloves prior to entering the eating and administrative areas (e.g., library, restrooms, etc.) to prevent contamination.

F. Do not take any forms or paperwork used in the laboratory area into the eating area.

G. Do not wear contact lenses in the laboratory area.

EXCEPTION: The employee's health care provider must forward a written statement supporting the use of contact lenses for treatment of medical conditions. The employee forwards a copy of this documentation to the DEA Health Services Unit for their review and approval prior to use.

If approved for use of contact lenses in the laboratory (or during clandestine laboratories), the SOHS ensures adherence to recommendations listed in National Institute of Occupational Safety and Health (NIOSH) Current Intelligence Bulletin 59, *Contacts Lens Use in a Chemical Environment,* prior to allowing contacts in the laboratory. Additionally, when wearing contacts, non-vented safety goggles for eye protection must be worn at all times when in the designated area requiring eye protection.

7705.2 Biohazard Material.

A. Employees:

1. Familiarize themselves with the Bloodborne Pathogens Program (see PM 2792.56) and guidelines on the handling of biohazard material.
2. Place a biohazard label on the outer packaging of evidence suspected of contaminants. Evidence (e.g., body carries, needles, syringes, etc.) suspected of contamination with bodily fluids is considered hazardous. See 7709 for policy related to the handling and analysis of contaminated items.
3. Do not accept needles or syringes for analyses, unless authorized by the LD.

NOTE: Employees may accept properly packaged sharps for storage and/or destruction.

B. Analysts:

1. Repackage needles and syringes in appropriate containers designed for that purpose (if approved for analysis by the LD).
2. Use disposable equipment whenever possible and perform work in a fume hood.
3. Disinfect non-disposable items after completing the analyses.

7705.3 Disposal of Infectious Waste.

Laboratory personnel:

A. Place non-evidentiary materials contaminated with blood and bodily fluids in receptacles designed for biohazards. Place sharps in puncture-resistant containers labeled with a biohazard label.

B. Place potentially-contaminated clothing and disposable materials (e.g., single-use PPE) in leak-proof containers.

C. Label infectious waste containers accordingly. Incinerate at a facility authorized to accept biohazard waste.

7706 MAINTAINING SAFETY IN THE LABORATORY.

NOTE: Exhibit 1/7706 lists acronyms for this subchapter.

7706.1 Occupational Health and Safety Standards.

Personnel adhere to applicable requirements found in 29 C.F.R. 1910, Occupational Safety and Health Standards, and 29 C.F.R. 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters.

Exhibit 2/7706 contains a list of recommended references.

7706.2 Fire-Fighting Equipment.

Fire extinguishers located in the laboratory will meet or exceed the local fire code or General Services Administration (GSA) recommendations. Refer to 29 C.F.R. 1910.157 for detailed information on portable fire extinguishers.

7706.3 Glassware Hazards.

Laboratory employees:

A. Use shields to prevent injuries from glassware rupture during chemical reactions. Use a transparent shield around equipment under reduced atmospheric pressure, or around a reaction vessel for dangers from an explosion, a runaway reaction, or a boil-over.

B. Use safety glasses to prevent eye injuries from flying glass.

C. Store heavier pieces of glassware on lower shelves, preferably no higher than an individual can easily reach without the use of a ladder or step stool. Store delicate pieces of glassware in cartons, clearly marked as to contents.

D. Use good laboratory practices when handling, using or maintaining glassware:

1. Do not carry glassware by projections, such as the sidearm of a distilling flask.
2. Do not carry beakers full of liquids by their rims.
3. Do not shake one liter or larger volumetric flasks by the neck.
4. Discard chipped, cracked, badly stained, etched, or poorly annealed glassware.
5. Discard broken glassware in specially marked containers, separate from regular laboratory trash.
6. Use puncture resistant gloves when attempting to free glass stoppers that have frozen in place.

E. Fire-polish the ends of glass tubing and rods before use. Use a towel (or gloves) when cutting glassware, or when inserting tubing or rods into stoppers. Properly anneal glassware prepared or altered by glassblowing to relieve thermal stress.

F. Enclose glass vacuum vessels in suitable shields before evacuation. Only use glass containers designed for vacuum work.

G. Support a heavy glass apparatus with rigid, padded clamps.

7706.4 Safety Data Sheets.

A. OSHA requires Safety Data Sheets (SDS) for chemicals on the premises.

B. Personnel maintain all SDSs received with incoming shipments of chemicals.

C. The SOHS will acquire and maintain a collection of SDSs for chemicals in the facility. Each SDS in the collection will be maintained in electronic and hard copy formats. The SOHS informs personnel of the location of the collection. All personnel must have access to the SDSs.

NOTE 1: The DEA Safety Website on Webster contains SDSs.

NOTE 2: Upon request, SF will provide assistance in obtaining SDSs.

NOTE 3: OSHA-3514, *Hazard Communication Standard: Safety Data Sheets,* contains additional information regarding SDSs.

7706.5 Compressed Gases.

A. Exercise precautionary measures when handling compressed gases.

NOTE 1: Compressed Gases exhibit properties such as high pressure, rapid diffusion, low flash points for flammable gases, lack of odor and color for most gases, transparency, and the cooling effect on rapid release.

NOTE 2: The diffusion of leaking gases causes the contamination of the atmosphere, potentially giving rise to toxic or anesthetic effects, asphyxiation, or formation of explosive concentrations of flammable gases.

B. Employees who receive, handle or use compressed gases, or gas systems, will receive training on safe handling and use as part of training for new personnel. See 7704.2.B.

C. Examine compressed gas cylinders when received. If damaged, leaking, or improperly identified, decline receipt. If already received when the damage is discovered, remove the cylinders to an isolated area and return them to the supplier as soon as possible.

D. Exercise care in handling cylinders. Store compressed gases in a separate room, or in an enclosure especially designed for this purpose.

E. Store cylinders upright in racks, or in a secured in position away from sources of heat and direct sunlight. Except when cylinders are in use, the steel protective caps will be threaded onto the cylinder body until tight.

F. Use a hand truck specially designed for the purpose of transporting gas cylinders. Fasten the cylinder to the hand truck for transport.

G. Do not use a gas cylinder near heat or an ignition source. Always use a pressure regulator compatible with the gas for which it is being used. Refer to 29 C.F.R. 1910 for additional information on precautions for storing, handling, and using compressed gases.

7706.6 Storage Safety.

Laboratory personnel:

A. Keep storage areas clean and in an orderly manner.

B. Notify the SOHS or management if chemicals are found to be deteriorated or unfit for use. Withdraw the chemicals from storage and prepare them for hazardous waste disposal.

C. Do not store incompatible chemicals together.

NOTE 1: The Federal Hazardous Substances Act defines a hazardous substance as the following: *"A substance or mixture of substances that is toxic, corrosive, a strong sensitizer, flammable or combustible, an irritant, or which generates pressure through combustion, heat, or other means."*

NOTE 2: Chemicals may have more than one hazardous property.

D. Store flammable chemicals in cabinets designed for that purpose. For flammable chemicals that require refrigeration, only use explosion-proof type units.

E. Maintain supplies in good condition, and observe safe practices in storage and distribution.

F. Maintain at least 18 inches between stored materials and sprinklers.

G. Do not allow apparatuses and glassware to project beyond front shelf limits.

H. Store heavy items on, or as near to, the floor as possible.

I. Mount drums horizontally and securely brace them to prevent rolling.

1. Do not re-use empty drums for the storage of hazardous waste.
2. Use a faucet with a spring closing action and locking pin to withdraw contents from a drum.
3. Attach a static grounding wire to drums containing flammable solvents before dispensing the contents.

J. Use safety siphons or an inclinator when dispensing acids or other liquids from carboys.

K. Do not maintain private stocks of flammable solvents at workbenches, except for minimal amounts of such solvents that are used regularly during the day.

7706.7 First Aid Procedures.

Each laboratory will have at least four individuals who have received formal first-aid training from the American Red Cross, the American Heart Association, or other comparable sources. These trained individuals will be consulted, and their expertise used, when first aid is necessary.

7707 MEETING SAFETY INSPECTION REQUIREMENTS.

The SOHS or Safety Program Manager:

A. Conducts periodic inspections.

B. Uses the Safety Checklist located on the Blank Forms section on the SFDCC to prevent oversight of critical elements of the safety inspection.

C. Submits a written report to identify unsafe conditions or equipment, and provides the proposed corrective action.

NOTE: Exhibit 1/7707 lists acronyms for this subchapter.

7707.1 Monthly Inspections.

The SOHS:

A. Inspects first aid supplies to ensure adequate amounts are available and that expired items are removed.

B. Inspects safety equipment to ensure functional working order.

C. Documents the inspection of self-contained breathing apparatuses (SCBA). (See OSHA 1910.134(h)(3)(i)(B).)

D. Uses checklist to document inspection.

E. Prepares a report documenting inspections to the LD and requests supplies and/or repairs.

7707.2 Semi-Annual Inspections

The SOHS documents laboratory personnel awareness of the evacuation plan indicated in the OEP.

7707.3 Annual Inspections.

The SOHS:

A. Documents tests performed on Class ABC and Class D fire extinguishers (see 29 C.F.R. 1910.157), and ensures the refill of extinguishers with a loss of more than ten percent.

B. Documents an annual safety audit of the laboratory. Uses checklist for inspection (see Blank Forms, OSHA Annual Safety Inspection Checklist).

C. Prepares the Annual Field Occupational Safety and Health Inspection of the laboratory summarizing the safety program and forwards to the LD, SF, and the DEA Safety Manager.

7707.4 Correcting Nonconformances.

The LD corrects or initiates a plan to resolve any safety or health deficiency within 15 calendar days of notification, including, but not limited to, deficiencies reported by the SOHS or an external safety professional. See Chapter 71 for addressing nonconformances.

7708 MANAGING WORK-RELATED INJURY AND ILLNESS.

NOTE: Exhibit 1/7708 is a list of acronyms for this subchapter

7708.1 Injury or Illness.

When an employee experiences an occupational injury or illness (e.g., cuts, burns, inhalation of solvents, accidental ingestion or inhalation of drugs, etc.):

A. The employee and supervisor will complete PRO-7704.4, Documenting Work-related Injury.

B. The supervisor completes paperwork in the event of a traumatic injury in accordance with PM 2792.13.

C. For accidents requiring professional attention, a laboratory employee will accompany the patient to the emergency room of the nearest hospital.

NOTE: See PM 2792.13 for Emergency Medical Treatment.

7708.2 Reporting Accidents.

A. Laboratory personnel will report safety-related accidents to laboratory management as soon as possible.

B. The LD will report safety-related accidents involving personnel to the SF Safety Program Manager within 48 hours of the incident.

C. SFE reviews the report and conducts an on-site inspection, if necessary.

7709 PROTECTING STAFF.

NOTE: Exhibit 1/7709 lists acronyms for this subchapter.

7709.1 Guidelines.

A. Laboratory management:

1. Maintains an adequate supply of PPE.
2. Identifies and designates those areas requiring the use of PPE (e.g., safety glasses, laboratory coats, etc.).

B. Laboratory management requires personnel to:

1. Wear proper PPE when in designated areas of the laboratory.
2. Remove the lab coat prior to leaving the laboratory area.

NOTE: Laboratory coats will be laundered as necessary.

3. Wear protective gloves when handling hazardous chemicals, evidence or solvents.
4. Wear the proper respirator and use engineering controls when handling hazardous dry chemicals or powders.

5. Work in a fume hood when handling hazardous materials, preparing chemical reagents, and any other operation that is expected to cause dusts or mists.
6. Wear PPE consistent with the hazards of the situations involved in their work (e.g., air-purifying respirator (APR), disposable Tyvek suits, protective footwear, etc.). See 7710 for information regarding biohazards.

7709.11 Handling Sealed Evidence

EXCEPTION: This section does not apply to evidence handled at SFL9 or the sub-regional digital laboratories.

When handling sealed evidence, all employees must:

A. Wear protective gloves and laboratory coats.

B. Wear safety glasses.

7709.12 Processing Evidence

EXCEPTION: This section does not apply to evidence handled at SFL9 or the sub-regional digital laboratories.

In addition to the requirements when handling sealed evidence, when processing evidence (e.g., opening evidence containers), all employees:

A. Wear particulate respirators (e.g., N95 disposable respirator) (See PM 2792.55 of for detailed information regarding use of respirators.).

B. Use a fume hood when opening exhibits, sampling and compositing material, and re-packaging evidence.

C. Wear APRs with appropriate cartridges whenever the handling or processing evidence may result in an appreciable amount of dust (e.g., bulk evidence).

7709.13 Using Laboratory Stockpiles and Other Non-Evidentiary Items

A. When handling stockpiles and/or collections (e.g., drug standards, REDACTED, training samples, proficiency test samples, etc.), all employees:

1. Wear protective gloves and laboratory coats.
2. Wear safety glasses.

B. When using or processing items from stockpiles and/or collections (e.g., drug standards, REDACTED, training samples, proficiency test samples, etc.), all employees:

1. Wear particulate respirators (e.g., N95 disposable respirator) (See PM 2792.55 for detailed information regarding use of respirators.).
2. Use a fume hood when opening REDACTED training items, sampling and compositing material, and re-packaging, at a minimum.
3. Wear APRs with appropriate cartridges whenever the handling or processing REDACTED, proficiency test samples, or training items that may result in an appreciable amount of dust.

7709.2 Protective Equipment.

Laboratory management ensures availability of safety items for use.

NOTE: See OSHA 3151-12R for guidance on selecting proper PPE.

A. Safety glasses face shields, and/or goggles. Personnel:

1. Wear safety glasses with attached side shields upon entering any designated laboratory area.
2. Order or obtain a pair of safety glasses from the SOHS to make sure that they meet or exceed the standards established by the American National Standards Institute (Z87.1-2010), *Occupational and Educational Personal Eye and Face Protection Devices*.
3. Use special or extra eye protection for unusual hazards (e.g., full face shields for chemical splashes).

B. Protective clothing. Personnel:

1. Wear laboratory coats upon entering any designated laboratory area.
2. Wear laboratory coats, rubber aprons, coveralls, etc., appropriate for the activity (e.g., low temperature resistant apron when handling liquid nitrogen).

C. Protective gloves. Personnel:

1. Wear gloves when handling or processing evidence.
2. Wear gloves appropriate for the solvent being handled.
3. For other activities, wear protective gloves appropriate for the activity (e.g., heat and/or low temperature-resistant, cut-resistant, etc.).

D. Self-Contained Breathing Apparatus (SCBA).

1. PM 2792.55 contains detailed requirements.
2. SOHS ensures each laboratory has a minimum of two SCBA units available for an emergency situation.

E. Air-purifying respirators (APRs).

1. The SOHS ensures the laboratory has APRs available for use and that employees are fit-tested.
2. Use NIOSH-approved filters appropriate for the specific contaminant.
3. Laboratory employees will wear an APR when handling evidence where appreciable dust is present or anticipated to be generated (e.g., composite formation or destruction).
4. Clandestine laboratory certified employees will wear an APR when processing clandestine laboratories (once the atmosphere has been determined to be otherwise suitable).

F. Clandestine laboratory equipment.

1. Clandestine laboratory coordinators inspect equipment monthly.
2. Clandestine laboratory responders:
   a. Stock disposable protective equipment prior to leaving the laboratory.
   b. Inspect equipment before use.

7709.3 Safety Equipment

A. Protective shields.

1. Personnel use shatterproof shields when glass vacuum systems or pressurized operations are involved.
2. Personnel use shields whenever there are hazards of any type that expose the face or upper body to injury (i.e., the handling of reactive metal hydrides).

B. Fire blankets.

1. SOHS ensure each main laboratory has a fire blanket.
2. Personnel use blankets as a protective screen to smother an ignited spill.

NOTE: Use of a fire blanket on a clothing fire may direct hot, toxic gases and flames toward the victim's breathing zone (see National Fire Protection Association (NFPA) 45, April 2015).

C. Emergency showers.

1. Showers are available in laboratories.
2. Personnel use showers for drenching in emergency situations where acids, strong alkali, chemical reagents, or hazardous waste has splashed onto skin or clothing.

D. Fire extinguishers.

1. SOHS ensures the availability of fire extinguishers throughout the laboratory.
2. Fire extinguishers are rated for their intended use. Personnel use:
   a. ABC rated extinguishers to quench ordinary combustibles (A), flammable liquids (B), and energized electrical systems (C).
   b. D rated extinguishers to quench combustible metals.

E. Spill kits. Personnel:

1. Choose a suitable kit for liquid spills.
2. Neutralize alkali and acid spills.
3. Dispose of used materials to contain or clean spills as hazardous waste.

F. Flashlights and lanterns. The SOHS ensures the availability of battery-powered lanterns and flashlights for emergency situations.

G. Fume Hoods

1. Personnel will not use fume hoods to dispose of volatile waste materials by evaporation.
2. Personnel dispose of filters from ductless fume hoods as hazardous substances in accordance with Resource Conservation and Recovery Act (RCRA) regulations.

H. Eye Wash Stations.

1. Eye wash stations are available in laboratories.
2. SOHS ensures the availability of eye wash bottles in locations without a station.

7709.4 Medical Equipment

A. First aid kits.

1. The SOHS ensures availability of supplies for minor cuts, burns, and bruises in each laboratory.
2. Personnel trained in first aid may administer assistance.

B. Automated External Defibrillator (AED).

1. The SOHS ensures availability of at least one AED in each laboratory for emergencies.
2. Personnel trained to use the AED may administer assistance.

C. Opioid antagonist delivery devices.

1. The LD ensures that, at a minimum, all analysts, supervisors, SOHS and evidence specialists receive training on the use of opioid antagonist delivery devices (e.g., naloxone auto injector, nasal spray, etc.).

2. The SOHS ensures availability of at least one opioid antagonist in each laboratory, the main evidence vault area, and any other areas deemed necessary.
3. The SOHS refers to manufacturer recommendations for the disposal of used or expired delivery devices.

NOTE: Some delivery devices contain lithium batteries and must not be incinerated.

7710 MINIMIZING EXPOSURE TO BODILY FLUIDS.

NOTE: Exhibit 1/7710 is a list of acronyms for this subchapter

7710.1 Managing Exposure to Bodily Fluids.

DEA Bloodborne Pathogens Program contains DEA regulations regarding handling of potential biohazard materials. See PM 2792.56 and laboratory Bloodborne Pathogen plans located on the SFDCC site.

7710.2 General Precautions.

Personnel may be exposed to body fluids (e.g., vomit, feces, blood, saliva, etc.) from accidents, illnesses, field response, evidence handling, and evidence analysis. The PPE guidance below is a minimum standard, and specific scenarios may require additional precautions. Consult with the SOHS regarding the most appropriate PPE to mitigate exposure to biohazards.

A. Evidence containing, or suspected of containing bodily fluids (e.g., bodily cavity evidence, syringes, saliva, etc.) is considered to be contaminated.

B. Employees who clean, decontaminate, analyze, or process biohazard evidence will do so in a laboratory hood located in a room designated for biohazard evidence, if available.

C. Personnel will routinely use appropriate barrier precautions to prevent skin and mucous membrane (i.e., mouth, eye, and nose) contact with blood or other bodily fluids of others. Personnel:

1. Wear appropriate gloves when handling, decontaminating, or analyzing potential biohazard evidence.
2. Change gloves after contact with bodily fluids.
3. Wear appropriate PPE (i.e., water-resistant gowns, full-face shields or goggles, and masks to cover the nose and mouth).
4. Consider wearing disposable suits to protect clothing from potential contamination (depending upon the type of activity performed).

D. Personnel must take the following precautions to prevent injuries caused by hypodermic needles and other sharp instruments contaminated with bodily fluids:

1. Do not search evidence by advancing unprotected hands into areas that cannot be seen.
2. Do not cap or recap needles which have been purposely bent or broken (even in commercial mechanical devices), removed from syringes, or otherwise manipulated.
3. Place needles, syringes, and sharp objects retained as evidence in puncture-resistant containers and seal them in plastic bags to prevent leakage. Clearly label the plastic bags with a biohazard label to warn others that the container contains potentially infectious material.
4. Dispose of non-evidentiary syringes and other sharp objects by placing the objects in puncture-resistant containers.

E. Decontaminate work surfaces and materials (e.g., laboratory glassware, tools, etc.) contaminated by blood or other bodily fluids with an appropriate chemical germicide or by steam autoclaving. See decontamination procedures below.

F. Wash hands thoroughly with soap and water immediately after completing laboratory activities, and remove PPE before leaving the laboratory areas.

7710.3 Decontamination Procedures for Potential Biohazard Evidence.

A. Analysts decontaminate and analyze evidence as soon as practical.

B. Employees will follow PRO-7709.3, *Handling and Decontamination of Biohazard Items*.

NOTE: The Environmental Protection Agency (EPA) website (http://www.epa.gov) lists commercially produced disinfectants meeting the criteria for the Centers for Disease Control and Prevention (CDC) for use against the Ebola virus, and other types of viruses. Search for selected EPA-registered disinfectants.

7711 MONITORING IONIZING RADIATION AND LASER HAZARDS.

NOTE: Exhibit 1/7711 lists acronyms for this subchapter.

A. Laboratory management assigns an employee to monitor instruments and equipment that produce ionizing radiation (e.g., X-ray machines, passive static reducing equipment, ion scan, etc.).

B. The SOHS ensures employees who use radiation-producing equipment (e.g., X-ray machine) receive training prior to use.

Training includes:
1. Risks from exposure to ionizing radiation.
2. Regulatory requirements.
3. Facility requirements.
4. Proper operation of the specific equipment to be used.
5. Proper disposal.

C. The SOHS ensures employees who use laser systems receive training prior to use.