

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### INTRODUCTION

The health and safety program for the State of Alaska Scientific Crime Detection Laboratory (SCDL) is outlined in this manual. The purpose of the program is to provide a safe environment for all laboratory employees and visitors to the laboratory, and to ensure that all laboratory employees conduct work in a safe manner.

This manual is not an all-inclusive resource of health and safety information. It is one source of information that provides basic guidelines for maintaining a healthy and safe work environment at the laboratory. All laboratory employees should use this manual as a reference guide to assist them in performing their day-to-day work activities to ensure their safety as well as the safety of those who could be impacted by those activities.

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### Section 1 – Responsibilities

#### **Organizational**

The State of Alaska is obligated to provide facilities, equipment, training, and maintenance to ensure a safe working environment.

#### **Supervisory**

**Role of the Chief, Forensic Laboratories (Chief)** - The Chief ensures there is proper funding for safety supplies and safety training at the laboratory. The Chief designates the Safety Coordinator.

**Role of the Safety Coordinator** - The Safety Coordinator is responsible for the development, implementation, and continual improvement of health and safety policies and practices either directly or through a designated Safety Committee. The Safety Committee is chaired by the Safety Coordinator. The Safety Coordinator may update, revise, and authorize the laboratory Health and Safety Manual, plan and document safety training, track and file training certificates, oversee chemical inventory and disposal, etc. The Coordinator also serves as a liaison between management and all other employees to promote communication of health and safety-related issues.

**Role of Discipline Supervisors** - Discipline Supervisors are responsible for reporting and correcting health and safety hazards and ensuring that all employees under their supervision know and comply with proper safety procedures and rules. Supervisors will designate Safety Committee members if needed.

#### **Individual**

Every employee at the laboratory is responsible for complying with the health and safety program, taking the necessary precautions to protect himself/herself and others, and bringing any hazards to his or her supervisor's attention immediately. Laboratory employees are responsible for ensuring a healthy and safe work environment.

#### **Safety Committee**

A Laboratory Safety Committee may be established to facilitate implementation of the laboratory health and safety program. The Committee is comprised of laboratory employees who have been designated by their supervisor to participate in this implementation process. The Safety Committee is chaired by the Safety Coordinator.

The Safety Committee meets on an as needed basis to perform the following duties:

- Communicate safety concerns and/or compliance issues to the Safety Coordinator and/or Discipline Supervisors
- Assist in addressing safety concerns and/or compliance issues as requested by the Safety Coordinator and/or Discipline Supervisors
- Participate in conducting an annual health and safety audit

### Section 2 – General lab health and safety principles

#### **Good Housekeeping Practices**

The following guidelines will be followed to maintain an acceptable level of cleanliness at the laboratory:

- 1) General cleaning services are provided by janitorial service personnel. Laboratory personnel are responsible for maintaining their specific areas.
- 2) Work areas should be kept as clean and uncluttered as possible.

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- 3) Clean work areas regularly and at appropriate times.
- 4) Laboratory workspaces that are shared by two or more laboratory employees should be maintained by those employees.
- 5) Trash removal from laboratory work areas is the responsibility of the laboratory employees who occupy those work areas. Trash should not be allowed to accumulate beyond the capacity of the trash receptacle. When a trash receptacle is full, trash should be bagged and disposed of in the dumpster.
- 6) Trash that is considered hazardous must be labeled as such and disposed of in the appropriate manner (refer to Sections 3 and 4 of this manual for additional information).
- 7) Responsibility for maintaining common areas (e.g., multipurpose room, classroom) is shared by all employees.

### **Good Laboratory Practices**

Good laboratory practices require that every Laboratory employee observes the following rules:

- 1) All emergency and safety equipment, first aid cabinets, and exits are clearly marked.
- 2) Hazard warning signs, such as biohazard, laser, etc., are posted at appropriate locations.
- 3) Smoking is prohibited in the SCDL building (AS 18.35.300).
- 4) No eating or drinking in laboratory work areas.
- 5) Food and beverages will not be prepared or stored in laboratory work areas.
- 6) Consumption of food and beverages is permitted in the following laboratory areas: front lobby area, classroom, reception area, multipurpose room, and offices that are completely separated by a barrier (e.g., door, window, wall) from the laboratory work area.
- 7) No laboratory work area utensils, glassware, apparatus, equipment or chemicals are allowed in non-work areas.
- 8) Horseplay and other behavior which might confuse, startle or distract workers will not be tolerated.
- 9) When needed, wear eye protection and sufficient clothing to protect you from spills. Lab coats are provided by the Laboratory for use.
- 10) Wear additional protective clothing and/or accessories when appropriate.
- 11) Closed-toed shoes shall be worn at all times in rooms where chemicals are stored or used. Perforated shoes or sandals shall not be worn in laboratories or where mechanical work is conducted. Chemical resistant overshoes or boots may be used to avoid possible exposure to corrosive chemicals or large quantities of solvents or water that might penetrate normal footwear (e.g., during spill cleanup).
- 12) Confine long hair and loose clothing while performing laboratory work procedures.
- 13) Avoid unnecessary exposure to chemicals by any route; especially do not inhale, taste or touch.
- 14) No mouth pipetting.
- 15) Avoid exposure to gases, vapors, aerosols, and particulates by using a properly functioning laboratory exhaust (fume) hood.
- 16) Consult the safety data sheet (SDS) prior to using an unfamiliar chemical and follow the proper procedures when handling or manipulating all hazardous agents.
- 17) Chemical wastes must be properly labeled and stored.
- 18) Ensure that all chemicals and biological materials are labeled and stored correctly according to the manufacturer's recommendations and any guidelines set forth in this Health and Safety Manual.
- 19) Ensure that all chemical and biological waste is disposed of properly, following SDS guidelines and any guidelines set forth in the Laboratory Health and Safety Manual.
- 20) Inspect all chemicals, equipment and instrumentation before using. Do not use if defective.
- 21) Use chemicals, equipment and instrumentation only for their intended use.
- 22) Follow operating instructions to use and maintain chemicals, equipment and instrumentation properly.

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- 23) Glassware should be handled carefully and properly stored.
- 24) Remove all protective equipment, including gloves and lab coats, before entering the restroom, front lobby area, classroom, reception area, multipurpose room and offices that are completely separated from the laboratory work area.
- 25) Wash hands with soap and water before leaving the laboratory area.
- 26) Familiarize yourself with all the special safety features of the laboratory and, most importantly, your specific work area(s). Know the location and correct use of all available safety equipment.
- 27) Familiarize yourself with any special health and safety requirements of test procedures before beginning and strictly adhere to them.
- 28) Determine potential hazards and appropriate safety precautions before beginning a new procedure and confirm that existing safety equipment is sufficient for this procedure.
- 29) Familiarize yourself with all the special sample handling and waste disposal procedures of your specific work area(s).
- 30) Familiarize yourself with spill cleanup and accident response procedures for your specific work area(s) and the laboratory in general.
- 31) Ensure that authorized visitors are equipped with the appropriate safety equipment prior to entering the laboratory work area.
- 32) Be alert to unsafe conditions; correct them or report them to your Supervisor promptly, as appropriate.
- 33) If you have any questions, keep asking until you get a satisfactory answer.

### Section 3 – Chemical Hygiene Plan

A hazardous material is defined as *any* substance which presents a physical or health hazard as determined by scientific evidence or as dictated by state or federal regulations. For many chemicals, the degree of hazard is still unknown, so good practice dictates that all chemicals used in the laboratory be treated as potentially hazardous.

Laboratory employees working with or around chemicals, biological materials, or radioactive materials are responsible for exercising caution and handling hazardous materials in a safe manner. If employees are unsure of a hazard or safety procedure, they should ask the Safety Coordinator, a Safety Committee member, the Discipline Supervisor, or refer to the safety literature, including Safety Data Sheets, before using a chemical or procedure. The policies and guidelines contained herein are intended to apply to the Laboratory facility in its entirety.

### General

1. Assume that any unfamiliar chemical is hazardous.
2. Become familiar with Safety Data Sheets (SDS) and know all the hazards of the chemicals with which you work (see Safety Data Sheet page(s) of this section).
3. Consider any mixture to be at least as hazardous as its most hazardous component.
4. Never use any substance if you are unsure of its identity or integrity.
5. Follow all chemical safety instructions.
6. Minimize your exposure to any chemical, regardless of its hazard rating.
7. Use personal protective equipment (PPE) as appropriate.
8. A person's own safety and that of his/her colleagues should be considered at all times.
9. Report any potentially hazardous situations to the Discipline Supervisor, Chief, Safety Coordinator, or a member of the Safety Committee.
10. Keep routes to exits free of obstructions.
11. Keep your work area clean and orderly and free of unnecessary chemicals, equipment and personal items.

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12. Use proper lifting techniques for heavy items.

### **Personal Precautions**

1. No food or drink is allowed in the areas of the laboratory where evidence or chemicals could be present.
2. Smoking is prohibited in the building.
3. Wash hands frequently with soap especially if skin contact is made with any chemical.
4. Avoid touching unprotected body areas with gloved or unwashed hands.
5. Use caution when wearing contact lenses because of solvent, acidic and basic fumes.
6. Personal protective equipment such as safety glasses, shields, gloves, and lab coats should be used when handling chemical materials.
7. Laboratory coats should be removed prior to leaving laboratory areas in order to prevent the spread of contamination.
8. Eye protection should be worn whenever there is danger of injury to the eyes. Appropriate eye protection shall be worn when using sources of ultraviolet, infrared, alternate light sources, and laser radiation.
9. Do not place objects which may become contaminated into the mouth (e.g. pens).

### **Procedural**

1. Always read the label on a container before using the contents. Do not use chemicals from unlabeled bottles.
2. Do not return unused chemicals to the original stock container. Discard into the appropriate waste container.
3. When diluting an acid, pour the acid slowly into water, never the reverse.
4. Do not pour solvents down sinks or drains. Waste containers should be utilized for disposal.
5. Procedures involving potentially hazardous materials shall be performed in fume hoods whenever possible.
6. Keep fume hoods clean and orderly. Store only those chemicals which are used regularly. Large quantities should be stored elsewhere in the proper storage area.
7. A solution such as hypochlorite (bleach) or a disinfectant spray may be used for routine decontamination procedures.
8. Crime Lab employees must use caution in order to avoid exposing others to chemical hazards.
9. Whenever possible, separate tasks to avoid contaminating another employee, his or her work area, or equipment.

### **Emergency**

1. Know the location of exits, fire alarms, first aid kits, Narcan® opioid overdose rescues kits, AED and emergency phone numbers.
2. Know the location and proper use of safety equipment such as the emergency showers, eyewashes, fire extinguishers, and chemical spill kit.
3. Contain chemical spills and clean them up as soon as possible. Notify the safety coordinator or the maintenance staff as soon as the spill is identified.

### **Hazard Communication**

State and federal regulations have been enacted to protect employees against hazardous materials on the job. To remain compliant with these regulations the lab shall require:

- A yearly inventory of chemicals within the laboratory
- Access to Safety Data Sheets for each hazardous chemicals used
- Proper labeling of all containers of hazardous materials

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- A Safety Manual and Chemical Hygiene Plan (this section)
- An employee training program covering the hazardous substances with which they work.

With assistance from the Safety Coordinator, the Discipline Supervisor should ensure that information on newly acquired chemicals is added to the chemical inventory, SDS are maintained for all chemicals stored in their Discipline, proper labeling guidelines are being followed, and new employees are informed of safety policies and practices within the Laboratory. Yearly chemical inventories conducted by each discipline will be submitted to the Safety Coordinator and stored.

### **Community Right-to-Know Program (CRTK)**

Owners or operators of facilities that have hazardous chemicals on hand in quantities equal to or greater than set threshold levels must submit Tier Two forms annually by March 1 online. The Safety Coordinator, a member of Top Management, or a member of maintenance is responsible for completing this annually. The purpose of the Tier Two form is to provide State and local officials and the public with specific information on hazardous chemicals present at our facility during the past year. Currently, the 1-liter nonflammable gas mixtures utilized in the Breath Alcohol program require annual reporting.

This program also details the requirements for the National Fire Protection (NFPA) placards that are posted at the front, employee and service entrances.

The website used for filing the form is <https://tier2.erplan.net/onlinefiling/filingLogin.htm> and the laboratory's User ID is 1061503. The password can be updated as needed by the person filing annually.

Additional information regarding this program is stored with the Safety Coordinator and can be found on the municipality website here: <http://www.muni.org/departments/fire/prevention/pages/crtk.aspx>. Updates to local reporting thresholds and requirements can also be found at the municipality website and on the state's Division of Spill Prevention and Response webpage: <https://dec.alaska.gov/spar/ppr/prevention-preparedness/tier-ii-reporting/>. The following website can be used to plan the filing of the Tier II form: <https://erplan.net/news/Tier2SubmitUsersGuide/UsersGuide.html>. The EPA website offers more information about the Tier II Form as well. <https://www.epa.gov/epcra>

### **Safety Data Sheets**

A Safety Data Sheet (SDS) is prepared by the manufacturer of a product containing 1% or more of a hazardous substance (or 0.1% if it is a carcinogen). The SDS is a document containing a description of the hazards and precautions associated with a product. A product may contain more than one hazardous substance, but will require only one SDS.

Manufacturers and distributors are required to provide an SDS to any purchaser. If one is not received, it should be requested. The Safety Coordinator has information on obtaining a missing SDS.

SDS sheets for the laboratory and individual disciplines are filed online at:  
<https://chemmanagement.ehs.com/9/faed3d29-422f-49f2-a8e1-0245e3600752/ebinder/?nas=True>

In addition, a backup file will be created by the safety coordinator and provided to discipline supervisors annually. Once received, the prior year's backup file will be destroyed. Employees shall utilize the online version rather than the backup files where possible. It is the responsibility of each Supervisor to ensure that personnel within the discipline know where SDS information is located. Personnel should be aware of the hazards presented by chemicals used in the discipline.



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### **Chemical Labeling**

- All **primary** containers of chemicals must be clearly labeled with the following minimum information: contents, date prepared (or received), initials of preparer (or receiver), date opened and appropriate hazard warnings. Existing labels on incoming containers of hazardous chemicals may not be removed or defaced. When you transfer a chemical from its original container to another container, the container you transfer it into is called a “secondary container.”
- All **secondary** containers of chemicals must be clearly labeled with the contents and appropriate hazard information.

When using chemicals, laboratory employees shall read the manufacturer’s label and note the hazards indicated.

A number of different systems exist for labeling hazards. In the laboratory, primary responsibility is placed upon each laboratory employee for reading manufacturer’s labels and following precautionary statements on the container and in the SDS. Beyond commercial labeling, the laboratory supplies specific labels for carcinogens and also NFPA (National Fire Protection Association) rating labels.

### **Chemical Storage**

Chemicals should be purchased in quantities that will be utilized within a reasonable period of time. Chemicals must be segregated by hazard for safe storage. Separate storage areas have been designated for flammables and acids. Care should be taken to ensure that incompatible chemicals are not stored together. For a resource on incompatible chemicals, see Prudent Practices in the Laboratory, Handling and Disposal of Chemicals, by the National Resource Council.

Quantities of flammable solvents in excess of daily needs are kept in OSHA-approved cabinets below desk level. Acids, bases, and corrosives are never to be stored above head level. Chemicals must not be stored on open shelves. Designated storage shelves in the Chemical Storage/Preparation Rooms within the individual disciplines have restraining doors.

Specific precautions include:

- Acids  
Store in low cabinets with neutralizer material in case of spills.
- Peroxide-forming chemicals (ether, picric acid)  
Store in airtight containers in a cool, dark, dry place.
- Carcinogens  
Precautions that will be followed include labeling all containers with a “carcinogen” sticker and storing according to the hazardous nature of the chemical.

### **Chemical Waste Disposal**

An item is considered chemical waste if it contains a chemical component that meets one or more of the following criteria:

- Ignitability (flashpoint <60°C or supports combustion)
- Reactivity (e.g., water reactive, cyanides, explosives, unstable chemicals)
- Corrosivity (pH <4 or >10)
- EP toxicity (e.g., pesticides, heavy metals, poisons)
- Material is not excluded from regulations



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Each laboratory employee is responsible for properly identifying the hazardous waste he/she generates and for ensuring that the chemical waste is positioned in a designated area for proper disposal.

Items that have been identified as expired or ready for disposal will be moved to the Chemical Disposal cabinet in Room 1177. The Chemical Disposal Cabinet contains a clipboard with a form provided by the waste disposal vendor or similar. The form should be completed as thoroughly as possible for each item that is being placed in the cabinet. A current SDS for each item being placed in the cabinet should be printed from the laboratory's ebinder and attached to the clipboard by the person disposing of the chemical. For items that contain multiple chemicals (ie: prepared reagents, waste bottles, etc.), the chemical composition of the container needs to be estimated and documented either on the bottle or on the form and an SDS for each chemical that could be present in the container added to the clipboard. Contact the safety coordinator for assistance or questions. The chemical disposal will be batched for removal but will occur at least annually. This occurs with coordination between the safety coordinator and the maintenance staff.

### **Receiving Chemicals –SDS Sheets – Chemical Inventory**

Verification - verify that the chemicals received match the chemicals listed on the packaging invoice by placing initials and date of all the chemicals received.

Online SDS - search the online SDS database/ebinder for each chemical and manufacturer in the order. For instance, if there is an SDS online for acetone manufactured by Sherwin-Williams, but the acetone you received is manufactured by Honeywell, an SDS sheet for Honeywell acetone would have to be added to the online SDS database. Employees should add the SDS sheet to the database if one does not exist. The database will automatically send an email to the SDS administrator to approve the update. Alternatively, if there is no SDS in the database, notify the Safety Coordinator, and they will add the SDS sheet to the database.

Chemical Inventory - to remain compliant with State and Federal regulations, a yearly inventory of chemicals shall be performed by each discipline. Yearly chemical inventories conducted by each discipline will be submitted to the Safety Coordinator and records retained.

## **Section 4 – Biological Safety**

To ensure minimal exposure, laboratory employees must assess the hazards associated with their work and determine how to apply the appropriate biosafety guidelines. The following biosafety guidelines should be used when working with infectious agents or infected material:

### **Personal Hygiene Guidelines**

- 1) Wash your hands thoroughly:
  - After working with any biohazard
  - After removing personal protective equipment
  - Before eating, drinking, smoking, applying cosmetics, or other activity that involves touching your face
- 2) Do not touch your face when handling biological material
- 3) Never eat, drink, smoke, or apply cosmetics in the laboratory work area
- 4) Always wear appropriate personal protective equipment when working with infectious agents or infected material
- 5) Do not wear potentially contaminated clothing outside the laboratory work area

### **Handling Procedures**

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- 1) Use mechanical pipetting devices
- 2) Minimize aerosol production
- 3) Use secondary leak-proof containers when transporting samples containing bio hazardous materials
- 4) Biosafety Cabinets are available when processing bio hazardous materials
- 5) Limit access to laboratory work areas when working with infectious or biohazardous agents or material that may contain infectious or biohazardous agents
- 6) Ensure that appropriate signage is posted on laboratory work area doors where infectious or biohazardous agents may be present

**Disinfection and Sterilization**

Biological safety depends on proper cleanup and removal of potentially harmful agents. Disinfection and sterilization are two ways to help ensure biological safety in the laboratory:

- Disinfection – reduction of the number of pathogenic organisms by the direct application of physical or chemical agents.
- Sterilization – total destruction of all living organisms.

The method of disinfection or sterilization used depends on the target organism to be removed and the characteristics of the area to be cleaned. The following guidelines should be used when working with potentially harmful agents:

- 1) Frequently disinfect floors, cabinet tops, and equipment where biohazardous materials are used.
- 2) Minimize the amount of materials and equipment present when working with infectious agents.
- 3) Properly store biohazard-containing material at the end of each day.

**Bloodborne Pathogens Exposure Control Plan**

Bloodborne Pathogen training is required annually for all laboratory employees. This training will be pre-scheduled and provided through the laboratory and/or an approved vendor at no cost to the employee. Laboratory employees should refer to Chapter 205 (Communicable Diseases) of the Department of Public Safety Operating Procedures Manual for additional information.

**Section 5 – Control Measures and Emergency Equipment**

Safety is achieved by continual awareness of hazards and by keeping the hazards under control by using precautions such as control measures. There are three general types of controls: engineering controls, personal protective equipment and hygiene practices. Laboratory personnel should be familiar with precautions to be taken, including the use of engineering and other safeguards. All laboratory employees should be alert to detect the malfunction of engineering and other safeguards.

**Criteria for Use**

These criteria will be used to determine and implement control measures to reduce employee exposure to hazardous chemicals. The following control measures that guard against these routes of entry are to be used.

- 1) All work which may generate significant amounts of vapor, aerosol, mists or dusts of hazardous materials will be done in a chemical fume hood, biological safety cabinet or specifically designed hood for that operation.
- 2) Protection from skin and eye contact is routinely used. It includes, at a minimum whenever hazardous or potentially hazardous materials are used, the use of laboratory coats, gloves and safety glasses.
- 3) Additional levels of protection are provided by goggles and face masks. Other types of appropriate protective clothing are to be implemented when warranted. Both the worker involved in the

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- operation and the Supervisor evaluates the need for use of additional protective apparel and/or equipment. The Supervisor will make the protective items available and the worker will use them. Appropriate hygiene practices will be observed. These include immediately washing of areas of skin contact, removal of contaminated clothing, decontamination of clothing and work area, as necessary, disposal of contaminated items and use of eyewash and safety showers, as indicated.
- 4) In general, before leaving work areas for breaks, lunch or at the end of the work day, clean up the work area to minimize hazards, remove protective apparel and store properly; and wash hands thoroughly with soap and water.

### **Engineering Controls**

These controls involve the use of proper building ventilation including an adequate number of appropriately designed exhaust hoods, fans and ducts in use.

Fume and laminar flow hoods are the primary control in this category. Their two primary methods of protection are: removing airborne hazards and providing a physical barrier between the worker and the operation being performed inside the hood.

Laboratory equipment which exhausts hazardous materials will be vented to an area minimizing employee exposure. Before any current equipment is moved or new equipment installed, these considerations will be addressed.

### **Use of Personal Protective Equipment**

Personal Protective Equipment (PPE) includes all clothing and work accessories designed to protect employees from workplace hazards. PPE should not replace engineering, administrative, or procedural controls for safety. Rather, it should be used in conjunction with these controls. All laboratory employees are required to wear PPE appropriate for the potential hazard associated with the laboratory work they are performing. PPE will be considered appropriate only if it does not permit blood and other potentially infectious materials to pass through to or reach the employee's clothes, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time which the PPE will be used. Appropriate PPE will be covered in the discipline training programs and is provided to all laboratory employees at no cost.

PPE clothing (e.g., laboratory coats and Scene Investigation coveralls) should be placed in the appropriate bin for laundering, as needed. PPE clothing is laundered by a private contractor or in the laboratory facility at no cost to laboratory employees.

### **General Equipment Safety**

#### **Sharps**

Employees can be punctured or cut by improperly disposed of needles, scalpels and broken glass. To avoid injury and possible infection, it is important to handle these and other "sharps" carefully and dispose of them in a sharps container. Sharps containers should be closable, puncture-resistant containers, with leak-proof sides and base, and must be labeled as containing sharps. Sharps containers should be closed before removal to prevent spillage or protrusion of contents during handling or transport.

Needles and/or scalpels should never be recapped, broken, or shorn. If necessary, they should be moved with the aid of forceps, pliers, or other mechanical device. For disposal, needles should be collected with the aid of a broom and dustpan and placed in a sharps container. Broken glassware should never be picked up directly with the hands. It should be swept or brushed into a dustpan for disposal in a sharps container.

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### **Fume (exhaust) Hoods and Biosafety Cabinets**

Where practical, procedures involving hazardous substances should be performed in a fume hood (e.g. drug screening, serial number restoration, etc.) or Biosafety Cabinet (e.g. biological hazards). Alternatively, such a procedure should be performed in a laboratory workspace with minimal traffic and an appropriate breathing filter should be worn by the laboratory employee performing the procedure. All chemical spraying should be done in a fume hood.

- Biosafety Cabinets - may be utilized for processing bio hazardous materials. They are certified by an outside company when purchased and monitored by the maintenance staff. Documentation will be stored with the quality assurance program.
- Fume Hoods - provide protection to the laboratory worker when used in procedures involving chemicals or chemical reactions that give off toxic, flammable, noxious, or hazardous fumes and vapors. When these procedures are performed in a fume hood, these fumes and vapors are captured and exhausted to the external environment, where they are diluted by ambient air. It should be noted that smoke detectors and sprinklers are in the fume hoods and will activate the fire alarm. Fume hoods are monitored by the building automation system (BAS) for air flow and fire suppression. Fume hoods will be inspected and adjusted, if necessary, annually by in house maintenance staff. Documentation will be stored with the quality assurance records.

### **Compressed Gases**

Cylinders containing compressed gases should be securely strapped onto a cylinder transport cart when being transported from one location to another within the laboratory facility. The proper regulator is to be used for each compressed gas cylinder in question and may not be adapted for use on another gas cylinder. Each tank should be equipped with a safety shut-off valve. Reference Safe Cylinder Handling and storage guidelines posted near cylinder storage locations. **Note:** this does not apply to the 1 liter nonflammable dry gas standards used by the Breath Alcohol program.

### **Electrical**

All electrical wiring and equipment should meet current National Electrical Code Standards. All electrical devices must be grounded (manufactured with a three-wire cord and a three-prong plug) or double-insulated (an attached label will be marked "double insulated"). Frayed or damaged electrical cords should never be used. Electrical cords may not be extended across doorways, aisles or other areas where they can pose a hazard. Any Laboratory employee who detects a potential electrical hazard should immediately report it to his/her Discipline Supervisor for appropriate action.

### **Alternate Light Sources**

Forensic alternate light sources are hazardous when used improperly or by untrained personnel. Proper eye protection must be worn at all times. Permanent eye damage can occur from direct illumination to the eye, or reflected or refracted light hitting the eye.

- Do not use inappropriate or incorrect goggles.
- Remove all unnecessary reflective surfaces from the area or exam room, and avoid looking at reflections in shiny objects such as doorknobs, watch crystals, tools, jewelry, windowpanes, mirrors, or any other surface that may reflect light.
- Exposing the skin to the beam of light directly from the unit can cause burns and other skin damage. There is no hazard with skin exposure to the beam emitting from the liquid light guide of fiber optic cables as temperatures are decreased.

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**Firearms Safety**

- All firearms should be handled as if they are loaded.
- Firearms should be rendered safe by an analyst prior to processing the firearm.
- All personnel in a test firing area will wear suitable safety glasses and hearing protection. Body and face shields should be used in all situations where bullet fragments could be deflected towards the shooter or observers.
- The bore of the firearm should be checked for obstructions prior to loading. All ammunition shall be thoroughly inspected before use in test firing.
- Water tanks should be kept in a locked area.
- Fire extinguishers should be readily accessible when test-firing into a bullet recovery trap.
- The velocity limitation of the trap should be clearly posted and should not be exceeded. The trap should be routinely cleaned to minimize chance of ricochet.
- For indoor test firing, ventilate the area in a manner that removes discard residue from the shooter's face.
- The range door shall be closed for indoor test firing.
- Verbally announce the commencement of firing and/or clear the areas when test firing is to begin.

**Ergonomics**

Ergonomics is the applied science of designing the workplace to fit the worker. It covers all aspects of the work environment, from the physical stressors that can impact the worker's health to the environmental factors that can impact a worker's health and general well-being. Ergonomics is important to the productivity and long-term health and safety of laboratory employees. If a laboratory employee has concerns about physical stressors and/or environmental factors in the workplace, these concerns should be brought to the attention of the appropriate Discipline Supervisor so they may be addressed.

**After-Hours Safety and Working Alone**

All Laboratory policies and procedures, including the laboratory health and safety program, are in effect during the after-hours period as they would be during official work hours. Extra vigilance on the part of the laboratory employee working after-hours is required in order to ensure personal safety, especially if the employee is working alone. Due to safety considerations, no one should be alone in the laboratory while conducting scientific examinations, particularly those involving chemical or biological reagents, firearms, or other hazardous materials. Personnel may work alone in the office area to conduct administrative duties such as: scientific report review; reports; paper or memo preparation; court preparation; friction ridge verifications; etc. Personnel may also operate analytical instrumentation workstations for data handling and printing of analytical results. Anyone who wishes to work after hours in the laboratory must have prior approval of their Supervisor. This does not apply to Scene Investigation response.

**FIRST AID KITS**

There are first aid kits throughout the laboratory.

First aid kits are re-stocked on an as-needed basis. The safety coordinator may designate an individual to ensure that the first aid kits are adequately stocked. If a laboratory employee observes that one or more first aid kit items need to be replenished, he/she should notify the Safety Coordinator or designee.

**NARCAN® OPIOID OVERDOSE RESCUE KITS**

Plastic cases containing Narcan® nasal spray for emergency opioid overdose response are located in the first aid kits in Evidence, the Seized Drug laboratory vestibule, and the Friction Ridge laboratory vestibule.

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All other disciplines have access to at least one Narcan kit in a first aid kit in their discipline. Instructions for the proper use of the Narcan® opioid overdose rescues kits are contained within each kit. The expiration dates for the Narcan® opioid overdose rescues kits are listed on the outer packaging of each dose. The provider of Narcan® opioid overdose rescues kits for the State of Alaska, in conjunction with the FDA has issued a one year extension to the expiration dates listed on the kits as of August 2020. If a laboratory employee consumes a kit for emergency response or notes that one or more doses have reached their expiration date, he/she should notify the Safety Coordinator or designee.

### **AED (Automatic External Defibrillator)**

An AED is located in classroom A, the training classroom and also in each of the laboratory main hallways. CPR equipment (gloves, breathing mask, etc.) is stored with the AED. Each discipline is responsible to check assigned AEDs quarterly. This will be logged on the appropriate Appendix C and stored on the Internal Network Drive or SharePoint.

### **FIRE EXTINGUISHERS**

Class A-B-C multipurpose fire extinguishers are available if there is a fire in the Laboratory facility. There is also a class D fire extinguisher located in the firearms discipline.

Remember the acronym “APASS”

(Alert people in the area, Pull the pin, Aim low, Squeeze the lever, Sweep side-to-side)

Do NOT attempt to fight a fire unless it is small and controllable. When fighting a fire, always maintain an escape route – NEVER allow a fire to block your exit.

An approved vendor will check fire extinguishers at least annually as part of the annual fire inspection. Records are stored with the Maintenance Specialist files.

### **SHOWER AND EYEWASH STATIONS**

Shower and eyewash stations are located in each laboratory work area. Laboratory employees should become familiar with the location of the shower and eyewash stations in their work area as well as the shower and eye wash stations in other parts of the Laboratory facility in the event that they may need to use this equipment.

Designated personnel will test shower and eyewash stations *at least* quarterly to ensure that they are working properly (i.e., that the flow of water is unobstructed and that the water exiting the station is tepid). Tepid is defined as a flushing fluid temperature conducive to promoting a minimum 15-minute irrigation period (Reference: A guide to the ANSI Z358.1-2009 standard for emergency eyewashes and shower equipment).

The Shower/Eyewash Quarterly check log (Appendix C) will be utilized to document the results. If any results are unacceptable the Safety Coordinator will be notified in writing (i.e. email) and an appropriate course of action will be initiated. Records will be scanned to the SAFETY folder on Lab Share and stored or added to SharePoint.

### **FIRE ALARM PULL STATIONS**

Fire alarm pull stations are located throughout the Laboratory.

### **SPILL STATIONS**



A chemical spill station is located near the center hub on each floor and mobile spill carts are located in each laboratory. The spill stations and carts are re-stocked on an as-needed basis. If a Laboratory employee observes that one or more spill cart items need to be replenished, he/she should notify the Safety Coordinator or designee.

### **FLAMMABLE STORAGE CABINETS**

Flammable storage cabinets will be used for the storage of flammable chemicals.

#### **Acid Cabinets**

Acid cabinets will be used for the storage of acidic chemicals.

#### **Smoke Detectors**

Smoke detectors located in the Laboratory corridors will respond to the solid and liquid aerosols produced by a fire (i.e., smoke). Since smoke detectors cannot distinguish between smoke particles and other particles such as steam, all Laboratory employees need to be aware of smoke detector locations and be considerate when working around them.

An approved vendor will check smoke detectors at least annually as part of the annual fire inspection. Records are stored with the Maintenance Specialist files.

#### **Sprinkler System**

The purpose of water sprinkler systems is to help extinguish and minimize the spread of fires. Sprinklers are normally activated only by heat. They are NOT connected to emergency pull stations. To ensure that sprinklers are effective in the event of a fire:

- 1) Maintain at least 18 inches of clearance between any equipment or storage items and the ceiling.
- 2) Never hang anything from a sprinkler head.
- 3) Arrange work areas to facilitate sprinklers and allow even water distribution.

An approved vendor will check the sprinkler system at least annually as part of the annual fire inspection. Records are stored with the Maintenance Specialist files.

#### **Emergency Access and Exit**

Emergency access and exit are critical during an emergency situation. Effective emergency egress ensures that building occupants can exit a building easily to avoid injury.

## **SECTION 6 – EMERGENCY AND EVACUATION PLANS**

### **IN CASE OF A MEDICAL EMERGENCY**

#### **If the injury is life threatening:**

- 1) Remain calm.
- 2) Dial 911 and report the injury.
- 3) Call for help in the work area verbally.
- 4) When help arrives, one person stays with the injured person; another person seeks an employee trained in CPR/AED and/or First Aid.
- 5) While Alaskans are protected by the “Good Samaritan Law” when administering First Aid to a victim, it is important to remember that the person administering the aid must not put himself/herself in danger, thereby creating an additional medical emergency.



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- 6) Have someone go to the front of the laboratory to meet emergency personnel and escort them back to the injured employee.
- 7) As soon as practical, inform your Supervisor of the situation.

### If an opioid overdose is suspected:

- 1) Check for heroin/opioid overdose signs which may include:
  - Failure to respond when spoken to
  - Failure to wake up when prompted
  - Slow or no breathing
  - Tiny pupils (the center part of the eye)
- 2) Locate a Narcan® opioid overdose response kit
- 3) Locate the red and white instruction pamphlet contained in the kit
- 4) Follow the instructions to administer the Narcan® nasal spray
- 5) Call 911 to get the person emergency medical attention
- 6) Have someone go to the front of the laboratory to meet emergency personnel and escort them back to the injured employee
- 7) As soon as practical, inform your Supervisor of the situation

### For injuries that are not life threatening, but require medical attention:

- 1) Report the injury to your Supervisor.
- 2) Make arrangements for the injured employee to be transported to a medical facility. Do not permit the injured employee to drive himself/herself home or to another location for medical attention.

### If the injury is not life threatening, and does not require medical attention:

- 1) Report any significant injury to your Supervisor within 24-hours of occurrence.
- 2) First Aid supplies are located throughout the laboratory.
- 3) Emergency eyewash stations and showers are located in each laboratory work area.

## **IN CASE OF FIRE**

The following procedure should be implemented in responding to a fire within the laboratory facility:

- 1) Extinguish small fires by using the nearest portable fire extinguisher.
- 2) If you are not certain of your ability to contain the fire, leave the area immediately. Do not attempt to extinguish the fire unless you are confident you can safely exit the area.
- 3) When a fire occurs, the person discovering the fire may pull the nearest fire alarm to begin evacuating the building. Fire alarms are located throughout the laboratory. Pulling the alarm will notify the security company and the fire department.
- 4) If you are not in immediate danger, call 911 to report the fire. If there is immediate danger, you must evacuate the building immediately.
- 5) As time permits, and at no risk to personal safety, employees may secure confidential information and valuables in the event of a drill or an actual emergency.
- 6) It is the responsibility of everyone to check the areas around them to assure complete evacuation as they leave an area.
- 7) A laboratory employee exiting through the employee entrance/exit double doors shall grab the Emergency Clipboard as they exit the area. The Emergency Clipboard is located above the fire alarm-pull to the right of the employee exit doors.

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- 8) Proceed quickly and calmly to the nearest and safest laboratory exit and proceed to the employee parking lot. This is the designated meeting area.
- 9) Once outside the building and at the designated meeting area, report to your Supervisor. Supervisors or Acting Supervisors are responsible for verifying that all employees are accounted for at the assembly area. The Emergency Clipboard has a checklist of employee's names that can be used to account for employees.
- 10) Remain in the designated meeting area until advised to re-enter the building.

### IN CASE OF A CHEMICAL SPILL

#### If a chemical spill involves:

- No large quantities of hazardous material
- No significant respiratory hazard
- No significant fire or explosion and no potential for a significant fire or explosion

#### DO THE FOLLOWING:

- Barricade the spill area
- Put on appropriate protective wear
- Contain spill against spreading
- Ventilate area
- Transfer a dry spillage to an appropriate waste container.
- Pick up liquid spillage using sorbent pillows, sorbent sheets, etc. and transfer to an appropriate waste container.
- Clean up any remaining chemical residue
- Decontaminate cleanup personnel
- Report the incident to the Safety Coordinator or Maintenance Staff immediately once the spill is contained. Include in the information provided the chemical that was spilled, an SDS for all components, any incident resulting from the spill, a description of how the spill occurred, the location of the spill, and how the response measures already taken.

#### If a chemical spill involves:

- Large quantity of hazardous material
- Significant respiratory hazard
- Significant fire or explosion or the potential for a significant fire or explosion

#### DO THE FOLLOWING:

- The person discovering the spill will pull the nearest fire alarm. Fire alarms are located throughout the laboratory. Pulling the alarm will notify the security company and the fire department.
- The person familiar with the spill will brief the Fire Department when they arrive.
- As time permits, and at no risk to personal safety, employees may secure confidential information and valuables in the event of a drill or an actual emergency.
- It is the responsibility of everyone to check the areas around them to assure complete evacuation as they leave an area.
- A laboratory employee exiting through the employee entrance/exit doors shall grab the Emergency Clipboard as they exit the area. The Emergency Clipboard is located above the fire alarm-pull to the right of the employee exit doors.

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- Proceed quickly and calmly to the nearest and safest laboratory exit and proceed to the employee parking lot. This is the designated meeting area.
- Once outside the building and at the designated meeting area, report to your Supervisor. Supervisors or Acting Supervisors are responsible for verifying that all employees are accounted for at the assembly area. The Emergency Clipboard has a checklist of employee's names that can be used to account for employees.
- Remain in the designated meeting area until advised to re-enter the building.

### **IN CASE OF A BOMB THREAT or THREATENING PHONE CALL**

- 1) Remain calm.
- 2) If your phone has caller ID display, record the number of the incoming call.
- 3) As much as possible, write down the exact words of the caller.
- 4) Ask questions to obtain as much information as possible to try to determine the exact nature of the threat.
- 5) If the situation presents immediate danger to people or property, call 911.
- 6) Report the call immediately to any member of laboratory management.
- 7) Follow directions of the Chief or your Supervisor.
- 8) Upon notification of a bomb threat, employees shall not touch anything, including electrical switches, furniture and equipment. Unidentified items in work area and/or items suspected of containing a bomb should be reported to explosives personnel.
- 9) If required, evacuate the building in an orderly manner.
- 10) As time permits, and at no risk to personal safety, employees may secure confidential information and valuables in the event of a drill or an actual emergency.
- 11) It is the responsibility of everyone to check the area around them to assure complete evacuation as they leave an area.
- 12) The laboratory employee exiting through the employee entrance/exit doors shall grab the Emergency Clipboard as they exit. The Emergency Clipboard is located above the fire alarm-pull to the right of the employee exit doors.
- 13) Proceed quickly and calmly to the nearest laboratory exit and proceed to the employee parking lot. This is the designated meeting area.
- 14) Once outside the building and at the designated meeting area, report to your Supervisor. Supervisors or Acting Supervisors are responsible for verifying that all employees are accounted for at the assembly area. The Emergency Clipboard has a checklist of employee's names that can be used to account for employees.
- 15) Remain in the designated meeting area until advised to re-enter the building.

### **SUSPICIOUS LOOKING PACKAGES**

Incoming packages to the Laboratory that have one or more of the following characteristics should be handled with caution:

- 1) Excessive postage
- 2) Missing return address
- 3) Misspelling of common words
- 4) Oily stains, discoloration, or odor
- 5) Protruding wires or aluminum foil
- 6) Markings indicating a chemical or biological agent release

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Most packages are received at the Service Receiving Area and at the Evidence Room Receiving Area. It is important that the Laboratory employees working in these areas take notice of incoming packages with these and other unusual characteristics.

Laboratory employees should wear gloves and other appropriate personal protective equipment when handling suspicious-looking packages. If there is a concern that a package may pose a significant threat to health and safety, the Laboratory employee should NOT attempt to open it.

The Discipline Supervisor and Chief should be notified about the package and emergency personnel (e.g., Anchorage Police Department or Anchorage Fire Department) should be contacted.

The package should be isolated from other Laboratory employees to minimize exposure to any potential health and/or safety hazards.

### IN CASE OF AN ACTIVE SHOOTER EVENT

The FBI's Quick Reference Guide is inserted below with recommended actions if you find yourself in an Active Shooter Event:

**When law enforcement arrives:**


- Remain calm and follow instructions.
- Drop items in your hands. (e.g., bags, jackets)
- Raise hands and spread fingers.
- Keep hands visible at all times.
- Avoid quick movements toward officers, such as holding on to them for safety.
- Avoid pointing, screaming or yelling.
- Do not ask questions when evacuating.

**Information to provide to 911 operators:**


- Location of the active shooter.
- Number of shooters.
- Physical description of shooters.
- Number and type of weapons shooter has.
- Number of potential victims at location.

**For questions or additional assistance contact:**  
Your local FBI Office:

FBI Headquarters National Press Office: (202) 324-3691

 **Federal Bureau of Investigation**  
935 Pennsylvania Avenue, NW  
Washington, DC 20535

U.S. Department of Justice  
Federal Bureau of Investigation



**ACTIVE SHOOTER EVENT**  
QUICK REFERENCE GUIDE

An active shooter is an individual actively engaged in killing or attempting to kill people in a populated area.

- › Victims are selected at random.
- › Event is unpredictable and evolves quickly.
- › Knowing what to do can save lives.

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### ACTIVE SHOOTER EVENTS

When an Active Shooter is in your vicinity, you must be prepared both mentally and physically to deal with the situation.

**You have three options:**

#### 1 RUN

- Have an escape route and plan in mind.
- Leave your belongings behind.
- Evacuate regardless of whether others agree to follow.
- Help others escape, if possible.
- Do not attempt to move the wounded.
- Prevent others from entering an area where the active shooter may be.
- Keep your hands visible.
- Call 911 when you are safe.

#### 2 HIDE

- Hide in an area out of the shooter's view.
- Lock door or block entry to your hiding place.
- Silence your cell phone (including vibrate mode) and remain quiet.

#### FIGHT 3

- Fight as a last resort and only when your life is in imminent danger.
- Attempt to incapacitate the shooter.
- Act with as much physical aggression as possible.
- Improvise weapons or throw items at the active shooter.
- Commit to your actions... your life depends on it.

The first officers to arrive on scene will not stop to help the injured. Expect rescue teams to follow initial officers. These rescue teams will treat and remove the injured.

Once you have reached a safe location, you likely will be held in that area by law enforcement until the situation is under control and all witnesses have been identified and questioned. Do not leave the area until law enforcement authorities have instructed you to do so.

### IN CASE OF AN EARTHQUAKE

During the earthquake:

- 1) Keep calm, do not run or panic.
- 2) Remain in the general area. Do not try to run outdoors.
- 3) Take cover under tables, desks, etc., in doorways or against inside walls.
- 4) Stay away from glass windows and doors. If you cannot get away from glass windows or doors, turn your back towards them.
- 5) Stay clear of shelves and high piled material.
- 6) If you are outdoors, move away from buildings, poles and downed wires.

Following the earthquake:

- 1) Check your immediate area to see if anyone requires medical assistance. Report injuries to any member of laboratory management.
- 2) Follow all instructions issued by supervisory or emergency service personnel.
- 3) Evacuate the building if told to do so.
- 4) As time permits, and at no risk to personal safety, employees may secure confidential information and valuables in the event of a drill or an actual emergency.
- 5) It is the responsibility of everyone to check the areas around them to assure complete evacuation as they leave an area.
- 6) A laboratory employee exiting through the employee entrance/exit double doors shall grab the Emergency Clipboard as they exit the area. The Emergency Clipboard is located above the fire alarm-pull to the right of the employee exit doors.
- 7) Proceed quickly and calmly to the nearest and safest laboratory exit and proceed to the employee parking lot. This is the designated meeting area.
- 8) Once outside the building and at the designated meeting area, report to your Supervisor. Supervisors or Acting Supervisors are responsible for verifying that all employees are accounted for at the assembly area. The Emergency Clipboard has a checklist of employee's names that can be used to account for employees.

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- 9) Remain in the designated meeting area until advised to re-enter the building.

**IN CASE OF A VOLCANIC ERUPTION**

Volcanic ash abrades and jams machinery. Therefore, the following precautions will be taken at the Laboratory in the event of a volcanic eruption:

- 1) The laboratory Maintenance Specialist or designee will shut down the air handling system located in Penthouse A and Penthouse B - C.
- 2) Dampen ash in the Laboratory parking lot to reduce suspension.
- 3) Keep doors closed and place damp towels at door thresholds and other draft sources; seal draft windows with tape.
- 4) Protect dust-sensitive electronics (e.g., computers, specialized instruments, etc.) with plastic covering.
- 5) Dust surfaces using a vacuum cleaner rather than a dusting cloth to reduce chance of abrading surfaces.

**IN CASE OF OTHER SITUATIONS DEEMED EMERGENCY**

In the case of other situations deemed emergencies (ie: pandemic):

- 1) Key Management will meet to determine the best steps to address the emergency.
- 2) The laboratory should follow, at minimum, state guidelines as they become available.
- 3) The laboratory may use meetings and email to communicate with staff the steps and plans as they develop for this type of emergency as regular manual updates may not be sufficient of timely to ensure the safety of laboratory employees.

**SECTION 7 – HEALTH AND SAFETY MONITORING**

**Employee Health Monitoring**

The goal of employee health monitoring is to ensure that measures to protect the employee from workplace hazards are effective by carrying out medical surveillance programs for the early detection of adverse health effects. While it is the responsibility of the employer to communicate potential workplace risks to each employee and to insure that the appropriate workplace controls are in place to minimize these risks, it is the responsibility of all employees to be aware of potential workplace risks and to perform his/her duties in a manner that is consistent with the health and safety guidelines set forth in this manual.

Annual Physical Exam

Laboratory employees who in the performance of their regular duties come in contact with pathogenic, carcinogenic, and toxic substances or with infectious blood-borne (or other bodily fluid-borne) diseases may be entitled to partial reimbursement for an annual physical exam performed for the purpose of employee health monitoring (article 29.02 in the GGU contract and article 28.5 in the Supervisory Unit contract).

Immunization Guidelines

Laboratory employees who may be exposed to human blood or other human bodily fluids as a result of their job duties (e.g., employees working in Scene Investigation and Biology) are encouraged to receive Hepatitis A (HAV) and Hepatitis B (HBV) vaccinations for their protection from potential infection with these blood-borne pathogens. Vaccination against these pathogens and titer checks are offered by the Laboratory at no cost to the Laboratory employee.

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### Hearing Tests – Baseline and Follow-Up

Laboratory employees who may be exposed to loud noises as a result of their job duties (e.g., employees working with firearms) are eligible to receive a baseline hearing test at the initiation of their exposure on the job and a follow-up hearing test every year while performing their job for the purposes of monitoring their hearing. This benefit is offered by the Laboratory at no cost to the Laboratory employee whose job duties may impact their hearing.

### Blood Lead Level Tests

Laboratory employees who may be exposed to lead (e.g., employees working with firearms) are eligible to receive a baseline blood lead level test at the initiation of their exposure on the job and a follow-up blood lead level test every year while performing their job for the purposes of monitoring their exposure to lead. This benefit is offered by the Laboratory at no cost to the Laboratory employee whose job duties may result in lead exposure.

## **SECTION 8 – REPORTING PROCEDURES**

### **Injury / Exposure Reporting**

A job-related injury or illness must be reported to the Supervisor as soon as possible. The Department of Administration Division of Risk Management has provided a general Claim Reporting Procedures booklet to assist in completing the correct forms for documentation of job-related injuries or illnesses. The Administrative Assistant will assist the Supervisor in providing the employees with the appropriate documentation forms.

Any injury caused by a “sharps” must be reported by memo to the Safety Coordinator, through the Supervisor, as soon as possible. The memo should include the following information:

- 1) Date and time the incident occurred.
- 2) Location where the incident occurred.
- 3) Type of material (blood, etc.) that potentially infectious materials were involved in the incident.
- 4) Source of the material
- 5) Under what circumstances and the type of work being performed when the incident occurred.
- 6) How the exposure was caused.
- 7) Personal protective equipment being used at the time of the incident.
- 8) Actions taken as a result of the incident.
  - Employee Decontamination
  - Cleanup
  - Notifications made

When applicable, the memo will be used in conjunction with the appropriate Department of Administration Division of Risk Management documentation of job-related injuries, and, if applicable, the *DPS Bloodborne Pathogens Post-Exposure Evaluation and Checklist* form. Additional information can be found in the *Department of Public Safety (DPS) Bloodborne Pathogens Exposure Control Plan* found in Chapter 205 (Communicable Diseases) of the DPS Operating Procedures Manual.

### **CHEMICAL SPILLS**

All chemical spills must be reported by memo to the Safety Coordinator, through the Supervisor. The memo should include the composition of the spill, extent of the spill, personnel involved, description of exposure, and clean up procedure used. Any injury, illness or reaction incurred should be reported on the Report of Occupational Injury or Illness form found online at the Department of Administration, Division of Risk Management.



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### **Safety Concerns**

Safety concerns should be documented and brought to the attention of the Discipline Supervisor and Safety Coordinator for resolution. If the safety concern is discipline specific, the Safety Coordinator will work with the Supervisor of the involved Discipline to resolve the concern. If the safety concern is Laboratory-wide, the Safety Coordinator will work with the Chief and all Discipline Supervisors to resolve the concern.

In both instances, Laboratory employees will be notified of the safety concern and the action steps needed in order to resolve the concern.

Safety concerns will be reported by memo or email to the employee's Supervisor or the Safety Coordinator.

## **SECTION 9 – TRAINING PROGRAMS**

### **New Employees**

All new employees to the Scientific Crime Detection Laboratory will receive health and safety information as part of their orientation. The orientation must include reading this manual and successful completion of online Bloodborne Pathogen, Fire Extinguisher training, and Firearms handling training. The Discipline Supervisor or designee will provide specialized safety training, as needed. Safety training will be completed before the new employee begins work assignments. Documentation of an employee's safety training should be on file with the Safety Coordinator prior to a new employee beginning his or her work assignments.

### **Refresher Training**

Employees transferring to a new laboratory discipline must receive safety training for that new work discipline. The training will be completed before the employee begins work assignments. The Discipline Supervisor or designee will provide this training.

### **Annual Training**

Bloodborne Pathogen and Fire Extinguisher training are required annually for all laboratory employees. Hands on Fire Extinguisher training may be provided every other year. This training will be pre-scheduled and provided through the Laboratory and/or an approved vendor at no cost to the employee. Records are stored in the LIMS in accordance with the current LIMS manual. For consistency in tracking the training, these annual trainings should take between 30 mins and 1 hour depending on the course that is assigned.

First Aid, AED and CPR training are also available for designated personnel through the laboratory by an approved vendor at no cost to the employee. Records are stored in the LIMS in accordance with the current LIMS manual.

At a minimum, the laboratory will practice evacuation procedures on an annual basis. During an evacuation procedure, all laboratory employees should exit the building in a timely manner and congregate at the employee parking lot. A laboratory employee will take a head count using the Emergency Clipboard to ensure all employees are present or accounted for. The laboratory building may be re-entered when the Chief or Safety Coordinator deems the building safe to re-enter. Records are stored in the LIMS or SharePoint.

Safety refresher training will be incorporated into the monthly staff meetings as needed.

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If an employee has concerns regarding the efficacy of the content or extent of the safety training, this matter should be brought to the attention of the Discipline Supervisor or the Safety Coordinator.

**SECTION 10 – AUDITING THE HEALTH AND SAFETY PROGRAM**

**Annual Health and Safety Audits**

The Safety Coordinator will organize and conduct an annual, laboratory wide health and safety program audit to include all disciplines of the laboratory. Each Discipline Supervisor or Safety Committee member should perform an annual health and safety program audit for his/her discipline and record audit findings on the Discipline Health and Safety Audit Checklist (Appendix A). In addition, each employee should complete the Employee Health and Safety Audit Checklist (Appendix B).

The Discipline Supervisor or Safety Committee member will share the results of the discipline audit with his/her discipline and the Safety Coordinator. The Discipline Supervisor will document correction of the deficiencies on the Health and Safety Audit Checklist where indicated.

The Discipline Supervisor and Safety Coordinator will prepare an action plan to correct any health and safety deficiencies found during the audit process.

The Safety Coordinator will share the results of the annual audit with the Chief. Documentation will be stored with the Safety Coordinator.

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### SECTION 11 - REVISION HISTORY

2020 R0	2021 R0	Location	Revision made
-	-	all	Updated spacing, grammar, spelling as needed.
-	-	all	Removed MSDS term and initialism from entire manual
7	7	Community Right To Know	Added multiple websites, the laboratory user ID and further instruction to completing the annual requirement
7	7	Safety Data Sheets	Updated hyperlink to lab's ebinder
9	9	Chemical Waste Disposal	Updated entire section
14	14	Narcan	Added "The provider of Narcan® opioid overdose rescues kits for the State of Alaska, in conjunction with the FDA has issued a one-year extension to the expiration dates listed on the kits as of August 2020."
18	18	Chemical Spill	Added, "Report the incident to the Safety Coordinator or Maintenance Staff immediately once the spill is contained. Include in the information provided the chemical that was spilled, an SDS for all components, any incident resulting from the spill, a description of how the spill occurred, the location of the spill, and how the response measures already taken."
23	23	Annual Training	Added to the end of the 1st paragraph suggested times that each training should take for tracking purposes. Added SharePoint as a location for storing laboratory building evacuation records.

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### APPENDIX A: DISCIPLINE HEALTH AND SAFETY AUDIT CHECKLIST

Discipline/Location: \_\_\_\_\_ Date: \_\_\_\_\_

Inspected by: \_\_\_\_\_ Supervisor Reviewed: \_\_\_\_\_

#### GENERAL ENVIRONMENT

YES NO

Are doors in proper working condition? \_\_\_\_\_

Are walkways free from hazards? \_\_\_\_\_

Is wiring in good condition, not frayed, abraded, or corroded? \_\_\_\_\_

Are combustible materials kept a safe distance from ovens and heat? \_\_\_\_\_

Are gloves, goggles, masks and/or face shields available? \_\_\_\_\_

Is storage in overhead cabinets secure? \_\_\_\_\_ NA \_\_\_\_\_

Are air lines, valves, regulators, etc. in good condition? \_\_\_\_\_ NA \_\_\_\_\_

Are drains in working condition? \_\_\_\_\_ NA \_\_\_\_\_

Are lights, bulbs, indicator lights operative? \_\_\_\_\_ NA \_\_\_\_\_

Are lab refrigerators free from food storage? \_\_\_\_\_ NA \_\_\_\_\_

Comments / Action Taken: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

Issued: 06/02/2021  
Effective: 06/07/2021

Version: HSM 2021 R0  
Status: Active

### CHEMICAL AND MATERIAL HANDLING AND DISPOSAL

**YES NO**

Are there separate waste containers for glass, chemicals, and solids?

\_\_\_

Are combustible chemicals kept a safe distance from ovens and heat?

\_\_\_

Are chemicals properly labeled and in adequate containers?

\_\_\_

Are hazardous wastes properly labeled?

\_\_\_

Are chemicals properly stored (with respect to compatibility, flammability, etc)?

\_\_\_

Are there written procedures for preparing reagents?

\_\_\_

Are there SDS's for all chemicals used in the Discipline?

\_\_\_

Are procedures involving potentially hazardous materials performed in fume hoods?

\_\_\_

**Comments / Action Taken:**\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### **FIRE EXTINGUISHERS** If no Extinguishers in Discipline, write NA here \_\_\_\_\_

**YES NO**

Are fire extinguishers at the correct pressure?

\_\_\_\_\_

(i.e is the yellow arrow in the green zone on the valve?)

Note: you do not need to remove the fire extinguisher from its location, simply peer in the window.

What was the date the fire extinguishers were last inspected? \_\_\_\_\_

**Comments / Action Taken:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### **BIOSAFETY CABINETS** If no Biosafety Cabinets in Discipline, write NA here \_\_\_\_\_

#### **NUMBER OF BIOSAFETY CABINETS IN DISCIPLINE** \_\_\_\_\_

**YES NO**

Cabinet(s) clean uncluttered, and not used for long term storage

\_\_\_\_\_

Cabinet(s) air intake and exhaust functions operational

\_\_\_\_\_

Date cabinet was last inspected? \_\_\_\_\_

**Comments / Action Taken:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

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**FUME HOODS** If no fume hood in Discipline, write NA here \_\_\_\_\_

**NUMBER OF FUME HOODS IN DISCIPLINE** \_\_\_\_\_

	YES	NO
Hood(s) clean, uncluttered, and not used for long term storage?	_____	_____
Hood fan/blower(s) operational?	_____	_____
Hood sash(es) operate properly?	_____	_____
Date hood was last inspected? _____		

**Comments / Action Taken:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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**GAS CYLINDERS** If no gas cylinders in Discipline, write NA here \_\_\_\_\_

**YES NO**

Are operating procedures for handling cylinders posted  
or otherwise available?

\_\_\_\_

Location of gas cylinder handling procedures for Discipline

\_\_\_\_\_

Are gas cylinders properly labeled?

\_\_\_\_

Are gas cylinders secured tightly and clamped in an upright position?

\_\_\_\_

Are tubing and valves adequate and valve protection caps  
in place on both empty and full containers?

\_\_\_\_

Are empty cylinders marked and removed promptly?

\_\_\_\_

Are handcarts used for moving cylinders?

\_\_\_\_

Are hand tools in good condition?

\_\_\_\_

**Comments / Action Taken:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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Status: Active

### Appendix B: Employee Health and Safety Audit Checklist

**This form is completed by each Laboratory employee as part of the Annual Safety Audit.  
After completion, give this form to the Safety Coordinator for review.**

Name: \_\_\_\_\_ Discipline: \_\_\_\_\_

Read the Laboratory Health and Safety Manual located in controlled documents on the Lab Share.

After you have finished, initial and date below

Initial \_\_\_\_\_ Date: \_\_\_\_\_

### Answer the following Safety Questions

**If you do not know the answer, ask your Supervisor**

#### Where is the nearest.....

Fire extinguisher: \_\_\_\_\_

Eyewash Station: \_\_\_\_\_

Safety Shower: \_\_\_\_\_

Spill Control Station: \_\_\_\_\_

First Aid Kit: \_\_\_\_\_

Laboratory Exit: \_\_\_\_\_

AED: \_\_\_\_\_

Fire alarm-pull station: \_\_\_\_\_

#### Where is.....

The Online SDS Located (web address): \_\_\_\_\_

The Laboratory Emergency Evacuation Clipboard: \_\_\_\_\_

The gathering point after Emergency Evacuation: \_\_\_\_\_

#### How do you.....

Report a Sharps or safety incident: \_\_\_\_\_

Where do you find required information to include in the Report: \_\_\_\_\_

#### ---- REMINDER ----

**Discipline or laboratory safety concerns should be addressed to your Supervisor or Safety Coordinator**

Reviewed by Safety Coordinator (Initial and Date): \_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### APPENDIX C: SHOWER/EYEWASH/AED/FIRSTAID QUARTERLY CHECK LOG

#### Biology

Discipline	Room Location	Shower/ Eye Wash	Comments	Acceptable	Unacceptable
	2199	Shower			
	2199	Eye Wash			
	2199	Sink Eye Wash			
	2200	Shower			
	2200	Eye Wash			
	2200	Sink Eye Wash A			
	2200	Sink Eye Wash B			
	2200	Sink Eye Wash C			
	2200	Sink Eye Wash D			
	2201	Shower			
	2201	Eye Wash			
	2201	Sink Eye Wash			
	2212	Shower			
	2212	Eye Wash			
	2212	Sink Eye Wash A			
	2212	Sink Eye Wash B			
	2213	Sink Eye Wash			
	2215	Shower			
	2215	Eye Wash			
	2215	Sink Eye Wash A			
	2215	Sink Eye Wash B			

#### Check Functions:

1. Water Pressure – appropriate to reach eyes; not too hard; not too soft
2. Temperature – appropriate for eyes; not boiling
3. Clean – area accessible; free from rust, dirt and clutter

#### AED Check for Green Status

	Location	Comments	Acceptable	Unacceptable
#3	C-Wing 2 <sup>nd</sup> Floor			

Continued on Next Page.

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### First Aid Kits

Room	Comments: Supplies needing Refilled	Acceptable	Unacceptable
2195			
2210			
2214			
2225			
2229			

If Unacceptable, date and method Safety Coordinator was notified \_\_\_\_\_

Number of Narcan® kits present and expiration date: \_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### APPENDIX C: SHOWER/EYEWASH/AED/FIRSTAID QUARTERLY CHECK LOG

#### Chemistry

Discipline	Room Location	Shower/ Eye Wash	Comments	Acceptable	Unacceptable
	2116	Shower			
	2116	Eye Wash			
	2116	Sink Eye Wash			
	2117	Shower			
	2117	Eye Wash			
	2117	Sink Eye Wash			
	2118	Shower			
	2118	Eye Wash			
	2118	Sink Eye Wash A			
	2118	Sink Eye Wash B			
	2118	Sink Eye Wash C			
	2118	Sink Eye Wash D			
	2118	Sink Eye Wash E			
Breath	1171	Sink Eye Wash			

#### Check Functions:

1. Water Pressure – appropriate to reach eyes; not too hard; not too soft
2. Temperature – appropriate for eyes; not boiling
3. Clean – area accessible; free from rust, dirt and clutter

#### AED Check for Green Status

	Location	Comments	Acceptable	Unacceptable
#4	A-Wing 2 <sup>nd</sup> Floor			

#### First Aid Kits

Room	Comments: Supplies needing Refilled	Acceptable	Unacceptable
2114			
1171			

Number of Narcan® kits present and expiration date: \_\_\_\_\_

If Unacceptable, date and method Safety Coordinator was notified: \_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### APPENDIX C: SHOWER/EYEWASH/AED/FIRSTAID QUARTERLY CHECK LOG

#### Evidence

Discipline	Room Location	Shower/ Eye Wash	Comments	Acceptable	Unacceptable
	1152	Shower			
	1152	Eye Wash			
	1152	Sink Eye Wash			
	1158	Sink Eye Wash			
TRNG Lab	1117	Shower			
	1117	Eye Wash			
	1117	Sink Eye Wash			
	1116 (Blood Spatter)	Eye Wash			
AST	Office	Shower			
	Office	Eye Wash			

#### Check Functions:

1. Water Pressure – appropriate to reach eyes; not too hard; not too soft
2. Temperature – appropriate for eyes; not boiling
3. Clean – area accessible; free from rust, dirt and clutter

#### AED Check for Green Status

	Location	Comments	Acceptable	Unacceptable
#1	A-Wing First Floor			
#5	Classroom			
#6	Training Lab			

#### First Aid Kits

Room	Comments: Supplies needing Refilled	Acceptable	Unacceptable
1152			

Number of Narcan® kits present and expiration date: \_\_\_\_\_

If Unacceptable, date and method Safety Coordinator was notified: \_\_\_\_\_

# Alaska Scientific Crime Detection Laboratory

## Health and Safety Manual

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### APPENDIX C: SHOWER/EYEWASH/AED/FIRSTAID QUARTERLY CHECK LOG

#### Firearms

Discipline	Room Location	Shower/ Eye Wash	Comments	Acceptable	Unacceptable
	2160	Shower			
	2160	Eye Wash			
	2160	Sink Eye Wash			
	2157	Shower			
	2157	Eye Wash			
	2157	Sink Eye Wash			
	2156	Sink Eye Wash			

#### Check Functions:

1. Water Pressure – appropriate to reach eyes; not too hard; not too soft
2. Temperature – appropriate for eyes; not boiling
3. Clean – area accessible; free from rust, dirt and clutter

#### First Aid Kits

Room	Comments: Supplies needing Refilled	Acceptable	Unacceptable
2156			

Number of Narcan® kits present and expiration date: \_\_\_\_\_

If Unacceptable, date and method Safety Coordinator was notified: \_\_\_\_\_



# Alaska Scientific Crime Detection Laboratory

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### APPENDIX C: SHOWER/EYEWASH/AED/FIRSTAID QUARTERLY CHECK LOG

#### Physical

Discipline	Room Location	Shower/ Eye Wash	Comments	Acceptable	Unacceptable
CSI	1220 (Garage)	Shower			
	1220 (Garage)	Eye Wash			
Friction Ridge	1205	Shower			
	1205	Eye Wash			
	1205	Sink Eye Wash (SW)			
	1205	Sink Eye Wash (NE)			
	1205	Sink Eye Wash (W)			
	1206	Sink Eye Wash (NW)			
	1207	Sink Eye Wash (SE)			
	1209	Shower			
	1209	Eye Wash			
	1209	Sink Eye Wash (NE)			

#### Check Functions:

1. Water Pressure – appropriate to reach eyes; not too hard; not too soft
2. Temperature – appropriate for eyes; not boiling
3. Clean – area accessible; free from rust, dirt and clutter

#### AED Check for Green Status

	Location	Comments	Acceptable	Unacceptable
#2	C-Wing 1st Floor			

#### First Aid Kits

Room	Comments: Supplies needing Refilled	Acceptable	Unacceptable
1212			
1205			

Number of Narcan® kits present and expiration date: \_\_\_\_\_

If unacceptable, date and method Safety Coordinator was notified: \_\_\_\_\_