Laboratory Access Policy

PREPARED BY CHEMICAL SAFETY COMMITTEE
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1 LETTER OF PROMULGATION

The University of Alaska Anchorage Chemical Hygiene Plan (CHP) is designed to provide the University a written program which sets forth procedures, equipment, and work practices that are designed to protect employees from health hazards presented by hazardous chemicals used in the workplace and meets the requirements of 29 CFR 1910.1450(e).

While comprehensive, the CHP cannot provide guidance for every specific contingency and therefore additional policies are needed to address these contingencies. As an addendum to the CHP, the Research Lab Policy covers those faculty, employees, students, and visiting research professionals performing any internally or externally funded research activities and their responsibilities for ensuring research activities and techniques adhere to established best practices and professional ethics, proper training of personnel working in research laboratories, and the use and handling of hazardous materials in said research laboratories.

The Research Lab Policy will be reviewed periodically and whenever changes in Federal, State, and other governmental regulations or standards pertaining to research practices, techniques, hazardous materials, and other research activities occur.

This Letter of Promulgation recognizes that the Research Lab Policy as an addendum to the Chemical Hygiene Plan is a working document and is subject to updates and revisions based on changes in governing body standards and organizational changes. This policy will be actionable regardless of the status of the Research Lab Policy.

Tom Case, Chancellor
University of Alaska Anchorage

Sam Gingrich, Vice Provost
University of Alaska Anchorage
2 Introduction

Laboratories potentially pose physical, chemical, biological, and/or radiation hazards to individuals who gain access to them.

It is the objective of the University of Alaska Anchorage (UAA) to promote safety for all individuals in our laboratories. As such, this laboratory access policy shall be strictly enforced by the Provost, Deans, Directors, their subordinates, and the University Police Department (UPD).

Repercussions for violation of this policy shall be issued by the Provost, Deans, and Directors.

It should be understood that every person who enters the laboratory facilities at UAA agrees not only to following this policy, but also to following all applicable federal, state, municipal, and university policies, procedures, and laws. In addition to UAA sanctions and disciplinary actions, failure to comply may result in criminal and/or civil penalties.

Environmental Health & Safety and Risk Management Support and Emergency Management (EHSRMS & EM) shall serve as a resource for evaluation of compliance.

This policy has separate sections that describe laboratory access requirements for research laboratories (section A), teaching laboratories (section B), and laboratory facilities in general (section C). All italicized words, phrases, and abbreviations in this document are defined in section D. A resources section (section E) appears last.

Questions about the content in this document should be directed at the Chairperson of the Chemical Safety Committee or EHSRMS & EM.

3 Research Laboratory Access Policy

This section affects access to all research laboratories and facilities. It applies directly to principal investigators (PI), research lab supervisors (RLS), post-doctoral research fellows (post-docs), laboratory technicians (lab techs), graduate students, undergraduate students, volunteers, and visiting researchers.

Any person who intends to engage in research activities in any of the university’s research laboratory facilities shall participate in a UAA mandated research laboratory safety briefing conducted by university personnel trained specifically to perform these briefings. This safety briefing shall include, at a minimum, an overview of the Chemical Hygiene Plan. This briefing shall be repeated annually and records kept by EHSRMS & EM or designee. For information on the appropriate person to perform these briefings for a specific School or College, contact EHSRMS & EM.

PIs and RLSs are considered the authority on the research and other laboratory activities in which they, their post-docs, staff, and their students engage. They are also considered the responsible parties for themselves and all others that either work, study, investigate, or enter their laboratory facilities. It is ultimately their responsibility to ensure that faculty, students, staff, volunteers and visitors have all appropriate safety training completed and the required training records, liability waivers, and other documents filed with EHSRMS & EM or designee before entry into laboratory facilities shall be permitted. Enforcement of this policy for all subordinates is the responsibility of the PI or RLS.
Building closures due to emergencies, weather, or other unexpected events may prevent building and / or lab access. In these situations specific access restrictions will be announced by authorities (UAA, municipal, state, or federal) and shall be observed.

After the appropriate safety training is completed and documented, laboratory access shall be granted with the provision that the stipulations from the appropriate sections below be followed.

3.1 Principal Investigators and Research Lab Supervisors

Operating Hours:

a. Per Prudent Practices and EHSRMS & EM recommendation, nobody should ever work alone in a laboratory. PIs and RLSs may work alone in their own laboratories with the understanding that they are the responsible parties.

b. Only PIs and RLSs may perform Extreme Hazard Protocols. A trained responder present in the immediate vicinity is required for all work involving these protocols.

c. For all other protocols, a trained responder present in the same lab or lab wing is strongly recommended. For work involving Significant Hazard Protocols a check-in interval should be arranged with said individual.

d. Employees engaging in Extreme or Significant Hazard Protocols must caution all others present in the same lab or lab wing (for labs with an open floor plan). This notification shall be performed by placing a ‘Protocol in Progress’ sign on all entry doors to the lab or lab wing notifying new entrants of the impending protocol AND a verbal notification and confirmation from current lab occupants shall be carried out.

e. All lab occupants shall periodically make themselves generally aware of protocols being conducted and their proximity, and take precautions as appropriate.

After Hours:

a. Anyone entering or present in a UAA building After Hours needs to notify UPD of their presence and location.

b. If more than one person enters a lab for the purpose of performing work duties, UPD should be e-mailed with:
   - the name of the building,
   - the room number,
   - and the names of all the people in the group.

c. In the lab, protocols for Operating Hours should be followed; however, if a trained responder is not available, the PI or RLS should set up a check-in interval with a trusted, responsible person. This is especially important whenever work involves Significant Hazard Protocols.

d. Extreme Hazard Protocols shall not be performed After Hours.

3.2 Post-Doctoral Researcher Fellows and Laboratory Technicians

Operating Hours:
a. Per Prudent Practices and EHSRMS & EM recommendation, nobody should ever work alone in a laboratory.

b. For all research protocols, post-docs and lab techs shall work in the lab only when a trained responder is present in the same lab or lab wing or if pre-arranged, if the trained responder is present in an adjacent or nearby office and a check-in interval is agreed upon. An exception to this policy may be made for an individual who has met all of the following requirements:
   i. The employee has completed an annual research laboratory safety briefing and a laboratory-specific safety orientation.
   ii. The employee has a history of demonstrating prudent safety practices.
   iii. The PI or RLS completes a Laboratory Protocol and Equipment Proficiency Form, kept on file in the laboratory, to acknowledge proficiency of specific protocols and equipment used by the employee.
   iv. The employee engages in research that involves the use of sanctioned protocols and equipment only.

c. Even for employees who are permitted to work unattended, a trained responder is highly recommended when work involves Significant Hazard Protocols. If a trained responder is not available, a check-in interval could be arranged with a responsible, trusted person.

d. Employees engaging in Significant Hazard Protocols must caution all others present in the same lab or lab wing (for labs with an open floor plan). This notification shall be performed by placing a ‘Protocol in Progress’ sign on all entry doors to the lab or lab wing notifying new entrants of the impending protocol AND a verbal notification and confirmation from current lab occupants shall be carried out.

e. All lab occupants shall periodically make themselves generally aware of protocols being conducted and their proximity, and take precautions as appropriate.

f. Inside laboratories, employees may perform desk-duties alone as long as it does not involve the physical manipulation of chemicals, lab equipment, or specimens or brings them in close proximity to an operation which may put them at physical risk. Prudent safety practices shall be followed (for example, food and/or drinks are not allowed in the laboratory).

**After Hours:**

In addition to items a through f (above), the following conditions must also be met:

a. UPD shall be notified of the employee’s presence and location.

b. If more than one person enters a lab for the purpose of performing work duties, UPD should be e-mailed with:
   - the name of the building,
   - the room number,
   - and the names of all the people in the group.

c. In the lab, protocols for Operating Hours shall be followed.
3.3 Graduate Students, Undergraduate Students, and Volunteers

Operating Hours:

a. Per Prudent Practices and EHSRMS & EM recommendation, nobody should ever work alone in a laboratory.

b. PIs and RLSs that have not demonstrated prudent safety practices shall not be permitted to have anyone trained by them work unsupervised at any time.

c. It is the responsibility of the PI or RLS to determine when an individual may work unsupervised. The need for supervision should not only be considered in terms of proficiency with experimental protocols, but also in terms of the ability to respond adequately in case of an emergency situation such as a chemical spill or equipment malfunction.

d. Once the individual is permitted to work unsupervised, then they shall work in the lab only when a trained responder is present in the same lab or lab wing or if pre-arranged, if the trained responder is present in an adjacent or nearby office and a check-in interval is agreed upon.

e. An exception to item d. (above) may be made for an individual who has met all of the following requirements:

   i. The individual has completed an annual research laboratory safety briefing and a laboratory-specific safety orientation.

   ii. The individual has a history of demonstrating prudent safety practices.

   iii. The PI or RLS completes a Laboratory Protocol and Equipment Proficiency Form, kept on file in the laboratory, to acknowledge proficiency of specific protocols and equipment used by the individual.

f. Even if an individual is permitted to work unattended, the PI, RLS, or designated supervisor shall supervise all Significant Hazard Protocols performed by undergraduate students and volunteers and all Moderate Hazard Protocols performed by minors. Minors shall not perform any Significant Hazard Protocols and the presence of a trained responder is required for minors engaging in all Low Hazard Protocols. See Appendix B for further clarification.

g. Individuals engaging in Significant Hazard Protocols must caution all others present in the same lab or lab wing (for labs with an open floor plan). This notification shall be performed by placing a ‘Protocol in Progress’ sign on all entry doors to the lab or lab wing notifying new entrants of the impending protocol AND a verbal notification and confirmation from current lab occupants shall be carried out.

h. All lab occupants shall periodically make themselves generally aware of protocols being conducted and their proximity, and take precautions as appropriate.

i. Inside laboratories students may perform desk-duties alone as long as it does not involve the physical manipulation of chemicals, lab equipment, or specimens or brings them in close proximity to an operation which may put them at physical risk. Prudent safety practices shall be followed (for example, food and/or drinks are not allowed in the laboratory).
**After Hours:**

In addition to items a. through i. (above), the following conditions must also be met:

a. UPD shall be notified of the individual’s presence and location.
b. If more than one person enters a lab for the purpose of performing work duties, UPD should be e-mailed with:
   - the name of the building,
   - the room number,
   - and the names of all the people in the group.
c. The presence of a trained responder is strongly recommended even if the individual is permitted to work alone. If one is not available, a check-in interval shall be arranged with a trusted, responsible person.
d. Even if an individual is permitted to work unattended:
   i. The PI, RLS, or designated supervisor shall supervise all Significant Hazard Protocols performed by graduate students, undergraduate students and volunteers.
   ii. A trained responder shall be present for all Moderate Hazard Protocols carried out by undergraduate students.
   iii. Minors will be permitted After Hours access only if they are under the direct supervision of their PI or RLS.
   iv. In most cases, volunteers will be permitted After Hours access only if a trained responder is present. If a PI believes that the volunteer is proficient at his or her duties, then he or she may perform only Low Hazard Protocols unattended if a trained responder is unavailable.

See Appendix B for further clarification.

### 3.4 Visiting Researchers

In all cases, research laboratory access shall be granted to visiting researchers after receipt of all proper documentation as required by the university.

Collaborating researchers perform duties under a collaborative grant. Access privileges and responsibilities are at the PI level. From a risk management perspective these researchers fall under UAA’s liability policy and are treated similar to any employee.

Independent researchers rent lab space from UAA. Access privileges and responsibilities are at the PI level. Independent researchers provide their own liability insurance.

**Volunteer** researchers work under sponsorship of a UAA principal investigator. They are not named on a grant and have no sponsorship from their home university. As they fall under UAA’s liability policy as a volunteer, access privileges and responsibilities match those of other volunteers. See section A.3 for further details.
4 Teaching Laboratory Access Policy

This section affects access to all teaching laboratories and facilities. It applies directly to laboratory coordinators, laboratory faculty, teaching assistants, graduate students, undergraduate students, and student workers.

Any individual who intends to work or teach in or for a UAA teaching laboratory shall first participate in a UAA mandated teaching laboratory safety briefing conducted by university personnel trained specifically to perform these briefings and a laboratory-specific safety orientation conducted by the employee responsible for overseeing the operations in said laboratory and specifically trained to perform these orientations. For information on the appropriate person to perform these briefings for a specific School or College, contact EHSRMS & EM.

The Divisional Lab Manager, or where instituted, the laboratory coordinator has the responsibility to ensure that faculty, students, staff, and visitors have all appropriate safety training completed and the required training records, liability waivers, and other documents filed with EHSRMS & EM or designee before entry into laboratory facilities shall be permitted. Enforcement of this policy for all subordinates is the responsibility of the Divisional Lab Manager, laboratory coordinator, or laboratory faculty, whichever is more appropriate.

Building closures due to emergencies, weather, or other unexpected events may prevent building and/or lab access. In these situations specific access restrictions will be announced by authorities (UAA, municipal, state, or federal) and shall be observed.

After appropriate safety training is completed and documented, laboratory access shall be granted with the provision that the stipulations from the appropriate sections below be followed.

4.1 Laboratory Coordinators

Operating Hours:

a. Per Prudent Practices and EHSRMS & EM recommendation, nobody should ever work alone in a laboratory. Laboratory coordinators may work alone in their preparatory laboratories with the understanding that they are the responsible parties.

b. Only laboratory coordinators may perform Extreme Hazard Protocols. A trained responder present in the immediate vicinity is required for all work involving Extreme Hazard Protocols.

c. For all other work, a trained responder present in the same lab or lab wing is strongly recommended. For work involving Significant Hazard Protocols a check-in interval should be arranged with said individual.

d. Lab coordinators engaging in Extreme or Significant Hazard Protocols must caution all others present in the same lab or lab wing (for labs with an open floor plan). This notification shall be performed by placing a ‘Protocol in Progress’ sign on all entry doors to the lab or lab wing notifying new entrants of the impending protocol AND a verbal notification and confirmation from current lab occupants shall be carried out.
e. All lab occupants shall periodically make themselves generally aware of protocols being conducted and their proximity, and take precautions as appropriate.

After Hours:

a. Anyone entering or present in a UAA building After Hours needs to notify UPD of their presence and location.

b. If more than one person enters a lab for the purpose of performing work duties, UPD should be e-mailed with:
   - the name of the building,
   - the room number,
   - and the names of all the people in the group.

c. In the lab, protocols for Operating Hours should be followed; however, if a trained responder is not available in case of an emergency, the lab coordinator should set up a check-in interval with a trusted, responsible person. This is especially important whenever work involves Significant Hazard Protocols.

d. Extreme Hazard Protocols shall not be performed After Hours.

4.2 Laboratory Faculty and Teaching Assistants

Operating Hours:

a. Laboratory faculty and teaching assistants shall use teaching laboratory facilities for sanctioned course offerings only. Sanctioned course offerings are courses with curriculums that were pre-approved by the university’s Undergraduate or Graduate Academic Boards. If an activity is planned that is not part of the usual sanctioned course offerings, the individual shall first gain permission from the laboratory coordinator who will then consult with the department Chairperson or Director, Dean and Divisional Lab Manager.

b. Per Prudent Practices and EHSRMS & EM recommendation, laboratory faculty and teaching assistants should never work alone in laboratories while doing preparatory work or while cleaning up after students.

c. For all preparatory and cleaning protocols, laboratory faculty and teaching assistants shall work in the lab only when a trained responder is present in the same lab or lab wing or if pre-arranged, if the trained responder is present in an adjacent or nearby office and a check-in interval is agreed upon. An exception to this policy may be made for an individual who has met all of the following requirements:
   i. The employee has completed an annual teaching laboratory safety briefing and a laboratory-specific safety orientation.
   ii. The employee has a history of demonstrating prudent safety practices.
   iii. The laboratory coordinator certifies that the employee has been trained on the proper use of equipment and the proper handling and disposal of chemicals.
d. Employees engaging in Significant Hazard Protocols must caution all others present in the same lab or lab wing (for labs with an open floor plan). This notification shall be performed by placing a ‘Protocol in Progress’ sign on all entry doors to the lab or lab wing notifying new entrants of the impending protocol AND a verbal notification and confirmation from current lab occupants shall be carried out.
e. All lab occupants shall periodically make themselves generally aware of protocols being conducted and their proximity, and take precautions as appropriate.
f. Inside laboratories, employees may perform desk-duties alone as long as it does not involve the physical manipulation of chemicals, lab equipment, or specimens or bring them in close proximity to an operation which may put them at physical risk. Prudent safety practices shall be followed (for example, food and/or drinks are not allowed in the laboratory).
g. If students are present in a teaching laboratory, the laboratory faculty or teaching assistant shall not be absent from said laboratory for longer than a predetermined time period as established by the appropriate academic department and EHSRMS & EM. In laboratories with a high-risk classification, if only one student remains, the student shall physically leave the lab whenever the laboratory faculty or teaching assistant leaves the lab. The student shall not re-enter the lab without the presence of the laboratory faculty or teaching assistant.

After Hours:

In addition to items a through g (above), the following conditions must also be met:

   a. UPD shall be notified of the employee’s presence and location.
   b. If more than one person enters a lab for the purpose of performing work duties, UPD should be e-mailed with:
      - the name of the building,
      - the room number,
      - and the names of all the people in the group.
   c. The presence of a trained responder is strongly recommended for employees who are permitted to work alone. If one is not available, a check-in interval shall be arranged with a trusted, responsible person.

4.3 Graduate and Undergraduate Students

Operating Hours:

   a. Any student who intends to participate in a laboratory course at UAA shall first attend a laboratory-specific safety orientation conducted by trained university personnel, usually the instructor of the course. These safety orientations are lab and course specific and shall cover, at a minimum, the ‘Safety Agreement and Procedures’ for the appropriate course. Students who fail to attend the safety orientation for a specific course shall be refused access to said laboratory until successful completion and documentation of the safety orientation.
b. Students shall not enter teaching laboratories without the presence or permission of their laboratory faculty or teaching assistant.

c. Minors (individuals age 17 and under) enrolled in certain laboratory courses at UAA may need to complete additional documentation prior to being afforded lab access. See section D: Minor for clarification.

After Hours:

a. Students shall not enter teaching laboratories After Hours unless they wish to utilize the facilities for research purposes; in which case they shall first get permission from the lab coordinator, Divisional Lab Manager, department Chairperson or Director, and the appropriate Dean. EHSRMS & EM shall also be notified.

b. After the appropriate permissions are obtained the student shall follow all the stipulations under Section A.3: After Hours, in this document.

4.4 Student Workers (Lab Prep)

Operating Hours:

a. Per Prudent Practices and EHSRMS & EM recommendation, nobody should ever work alone in a laboratory.

b. Laboratory coordinators that have not demonstrated prudent safety practices shall not be permitted to have anyone trained by them work unsupervised at any time.

c. It is the responsibility of the laboratory coordinator to determine when a student worker may work unsupervised. The need for supervision should not only be considered in terms of proficiency with experimental protocol, but also in terms of the ability to respond adequately in case of an emergency situation such as a chemical spill or equipment malfunction.

d. Once the student worker is permitted to work unsupervised, then they shall work in the lab only when a trained responder is present in the same lab or lab wing or if pre-arranged, if the trained responder is present in an adjacent or nearby office and a check-in interval is agreed upon.

e. An exception to item d. (above) may be made for a student worker who has met all of the following requirements:

   i. The individual has completed an annual teaching laboratory safety briefing and a laboratory-specific safety orientation.

   ii. The individual has a history of demonstrating prudent safety practices.

   iii. The laboratory coordinator completes a Laboratory Protocol and Equipment Proficiency Form, kept on file in the laboratory, to acknowledge proficiency of specific protocols and equipment used by the individual.

   iv. Only protocols indicated on this form (see iii. above) may be followed while the individual is unsupervised.

   f. Even if a student worker is permitted to work unattended, the laboratory coordinator or designated supervisor shall supervise all Significant Hazard Protocols performed by student
workers. Student workers engaging in Significant Hazard Protocols must caution all others present in the same lab or lab wing (for labs with an open floor plan). This notification shall be performed by placing a ‘Protocol in Progress’ sign on all entry doors to the lab or lab wing notifying new entrants of the impending protocol AND a verbal notification and confirmation from current lab occupants shall be carried out.

g. Inside laboratories student workers may perform desk-duties alone as long as it does not involve the physical manipulation of chemicals, lab equipment, or specimens or bring them in close proximity to an operation which may put them at physical risk. Prudent safety practices shall be followed (for example, food and/or drinks are not allowed in the laboratory).

**After Hours:**

In addition to items a. through g. (above), the following conditions must also be met:

a. UPD shall be notified of the student worker’s presence and location.

b. If more than one person enters a lab for the purpose of performing work duties, UPD should be e-mailed with:
   - the name of the building,
   - the room number,
   - and the names of all the people in the group.

c. The presence of a trained responder is strongly recommended even if the student worker is performing Low Hazard Protocols. If one is not available, a check-in interval shall be arranged with a trusted, responsible person.

d. A trained responder shall be present for all Moderate Hazard Protocols carried out by student workers.

### 4.5 Student Workers (Open-Lab Monitors)

**Operating Hours:**

Open-lab monitors shall not be absent from the open-lab for longer than a predetermined time period as established by the appropriate academic department and EHSRMS & EM. Student workers shall never be in charge of any high-risk laboratory.

**After Hours:**

Open-lab monitors shall have no access to lab facilities After Hours.

### 5 Laboratory Facilities Access Policy

This section pertains to all UAA laboratory facilities. It affects laboratory support personnel, service providers, emergency personnel, service animals, passive observers, and special users.

#### 5.1 Laboratory Support Personnel

**Operating Hours:**
Laboratory support personnel shall use discretion when performing support duties in laboratories. If the support duty has a low-risk classification, personnel may perform the duty by themselves. If potential injury is of concern, personnel should utilize a trained responder.

**After Hours:**

Laboratory support personnel may be required to respond to emergencies in laboratory facilities After Hours.

a. UPD should be notified that the support person is in the laboratory After Hours, responding to an emergency.
b. Support personnel shall utilize a trained responder whenever they perform emergency work duties After Hours.
c. If there is no alternative to working alone, the employee should set up a check-in interval with a trusted, responsible person.

### 5.2 Service Providers and Emergency Personnel

This section pertains to maintenance workers, custodial staff, UPD, ITS, GSS, contractors, vendors, and other service providers.

**Operating Hours:**

Entry approval is required for all non-routine service providers. During emergency situations approval is desirable. Room advisors and their phone numbers are listed on a sign outside the door of each laboratory. A room advisor must give verbal permission and in some cases additional training to service providers prior to performance of non-routine services. If a room advisor cannot be reached, the room or laboratory should not be entered unless an individual’s life is in danger or additional damage to facilities is anticipated. The decision to enter should be weighed against the possible exposure service providers and emergency personnel will have to dangers unknown to them, inherent in the environment that is being entered.

**After Hours:**

If one of the listed room advisors (see above) cannot be found, UPD can assist in tracking one down.

### 5.3 Service Animals and Accommodations

UAA is an AA/EO employer and educational institution. Under the Americans with Disabilities Act of 1990, service animals shall be allowed in UAA laboratories.

Any student or employee who feels they may need a reasonable accommodation to participate in laboratory activities based on the impact of a disability should contact Disability Support Services, in the case of students or the Office of Equity & Compliance, in the case of employees.

Laboratories may present occasions of exposure to chemicals through skin, eyes, mouth, and lungs. Remnants of broken glassware may be present on the laboratory floor. The handler may contact their PI, RLS, lab coordinator,
or laboratory instructor (whomever is most appropriate) for additional information regarding potential hazards that may be present in the lab.

UAA personnel may ask an individual to remove their animal from the laboratory only if one or more of the following is true:

a. The animal is out of control and the animal’s handler does not take effective action to control it.
b. The animal engages in behavior that is undesired or disruptive.
c. The animal is not housebroken.

Pets are prohibited from entering all laboratory facilities.

### 5.4 Passive Observers

**Operating Hours:**

a. Groups of passive observers may need administrative approval prior to gaining entry to any laboratory. PIs or RLSs in the case of research labs and laboratory coordinators in the case of teaching labs should contact their supervising Dean for guidance.
b. Passive observers must have the permission of the appropriate PI, RLS, or laboratory coordinator prior to entering laboratory facilities.
c. After permission has been granted, it is the responsibility of the appropriate PI, RLS, or laboratory coordinator to give each visitor a tailored safety orientation before entry is gained.
d. Passive observers shall be accompanied by a designated supervisor or by the appropriate PI, RLS, or laboratory coordinator at all times inside the laboratory and in other restricted areas.
e. As the name implies, no contact is permitted with chemicals, specimens, equipment, or lab benches.

**After Hours:**

a. Passive observers shall not enter any laboratory After Hours unless accompanied by the appropriate PI, RLS, or laboratory coordinator at all times.
b. The PI, RLS, or laboratory coordinator must notify UPD by telephone that they will be entering a laboratory After Hours. It should be stated that they will be accompanying a passive observer and they must give specific reasons for the need to enter the premises with said observer.
c. UPD must be contacted again upon departure from the building.

### 5.5 Special Users

Laboratory access shall be granted to special users on a case-by-case basis. Users who do not fall into one of the categories above and who are not affiliated with the university may request the use of UAA laboratory facilities for a fee and upon proof of liability insurance. In some cases, one or both requirements may be waived. Special users should contact the appropriate Divisional Lab Manager and EHSRMS & EM for further details.
Minors who wish to utilize UAA laboratory facilities or equipment may need to complete additional documentation prior to being afforded lab access. See section D: Minor for clarification. Restrictions on minors supersede language used under all “Special Users,” “Undergraduate,” and “Volunteer” sections in this document.

6 Definitions and Abbreviations

Access Hours:

Access Hours fall into two categories. “Operating Hours” and “After Hours” vary depending on whether the building is:

a. Academic and administrative (review the ‘Building Access Policy’).

b. Independently operated (consult with the building manager for applicable hours).

c. Off-site or leased (consult with the party responsible for the site).

See ‘Facilities and Campus Services 101: Building Access’ in Section E for further details.

After Hours:

See “Access Hours.”

Check-in:

For the purpose of this document, a check-in is a visual or auditory confirmation by a trained responder or a trusted, responsible person to determine that an individual working in a laboratory is uninjured and does not require assistance. Check-ins with off-site contacts can be performed through texting, e-mailing, or calling by phone, among other ways. The person utilized for check-ins should be provided with the name of the building, lab room number, check-in interval time, and UPD’s phone number in case contact cannot be established within the agreed-upon time or if an incident has occurred and UPD’s assistance is required. The check-in interval time should correspond to risk and likeliness. Check-ins should be more frequent during higher risk protocols.

Chemical Hygiene Officer:

The Chemical Hygiene Officer is an employee of EHSRMS & EM and in lab and chemical matters acts as an agent of EHSRMS & EM.

Chemical Hygiene Plan (CHP):

The University of Alaska’s Chemical Hygiene Plan is an OSHA-mandated document that outlines the university’s Safety First Approach to chemicals and chemical handling and describes the university’s cradle-to-grave policies for chemicals.

Designated Supervisor (DS):

A PI, RLS, lab tech, visiting researcher, or graduate student trained in lab safety to a level designated by the PI or RLS. This DS must be proficient at the protocols they are supervising.
Divisional Laboratory Manager:

The divisional laboratory manager falls under Laboratory Support and is the supervising individual overseeing the management of laboratories. (There is no HR position with this specific title. The title of a person performing this function will be different depending on the School or College and Division he or she works for.)

Employee:

Employees are individuals who are currently employed by and receive a paycheck from the University of Alaska Anchorage. This term makes no distinction between full-time and part-time employees.

Environmental Health & Safety and Risk Management Support & Emergency Management (EHSRMS & EM):

Environmental Health & Safety and Risk Management Support employees perform their duties under the authority of Board of Regents Policy 05.09 which can be found at http://www.alaska.edu/bor/policy/05-09.pdf. Among other duties, said employees are mandated to “stop any activity that presents an unreasonable health and safety risk to employees, students, visitors or the environment”.

In case of an emergency, call 911. EHSRMS & EM may be reached at 786-1300 or ehsrms@uaa.alaska.edu for all non-emergencies.

All incidents and injuries should be reported to EHSRMS & EM as soon as possible, but no later than 48 hours after the event occurred.

The Chemical Hygiene Officer falls under EHSRMS & EM.

Extreme Hazard Protocol:

See “Hazard Classification.”

Graduate Student:

A student that has been accepted to a graduate program at UAA and is not on deferred status.

Hazard Classification:

The hazard level of each protocol shall be determined through a risk assessment based on the PI’s SOP. EHSRMS & EM serves as a resource, as needed, for developing a risk assessment.

Low Hazard Protocol: Facilities, types of chemicals, types of equipment, and procedures that pose a low risk. For the purpose of this document, low risk is defined as an action / inaction with an adverse outcome that is of “minor consequence and remote likelihood” or of “moderate consequence and remote likelihood” or of “minor consequence and moderate likelihood” as defined on the Risk Map in Appendix C.
Moderate Hazard Protocol: Facilities, types of chemicals, types of equipment, and procedures that pose a moderate risk. For the purpose of this document, moderate risk is defined as an action / inaction with an adverse outcome that is of “significant consequence and remote likelihood” or of “moderate consequence and moderate likelihood” or of “minor consequence and high likelihood” as defined on the Risk Map in Appendix C.

Significant Hazard Protocol: Facilities, types of chemicals, types of equipment, and procedures that pose a high risk. For the purpose of this document, high risk is defined as an action / inaction with an adverse outcome that is of “significant consequence and moderate likelihood” or of “moderate consequence and high likelihood” as defined on the Risk Map in Appendix C.

Extreme Hazard Protocol: Facilities, types of chemicals, types of equipment, and procedures that pose an extreme risk. For the purpose of this document, extreme risk is defined as an action / inaction with an adverse outcome that is of “significant consequence and high likelihood” as defined on the Risk Map in Appendix C. Only PIs / RLSs / Lab Coordinators may engage in activities involving extreme risk and only if they have all proper training and safety equipment in place to do so. A trained bystander is required WITHOUT EXCEPTION. This type of protocol shall not be performed After Hours.

Laboratory (lab):

Research laboratory (section A): The laboratory of a specific PI. An individual, who has certain permissions in the laboratory of one PI, shall have no permissions in the laboratory of another PI, unless granted by the other PI.

Teaching laboratory (section B): The laboratory associated with a specific course and teaching faculty or assistant.

Laboratory facilities (section C): All teaching and research laboratory facilities.

Laboratory Access:

In this document, the term “laboratory access” refers specifically to keyed or electronic (code or key-card) access given to a specific individual for a specified time of day and day(s) of the week. Laboratory access is evaluated semesterly or annually, depending on the position held by the individual. Initial access is contingent on the completion and documentation of specified safety training as determined by lab coordinators / PIs / RLSs, with assistance from the divisional lab manager and approval from EHSRMS & EM.

Laboratory Coordinator:

The laboratory coordinator for a department or division is the person charged, among other duties, with overseeing the lab curriculum, staffing, student workers, training, facilities, safety compliance, equipment maintenance, and lab orders for their respective department or division.

Laboratory Faculty:
Laboratory faculty refers to currently employed tenured faculty, tenure-track faculty, term instructors, and adjunct instructors who teach laboratory courses as part of their contract with the university.

Lab Group:

A lab group is a group of employees and/or students that work for and are subordinate to a PI or RLS. The individuals in this group perform most of their duties in a common lab space.

Laboratory Protocol and Equipment Proficiency Form:

All entries made on this form acknowledge proficiency of specific protocols and equipment use. It should be understood that the PI or RLS is ultimately responsible for ensuring that the individual has received proper training in following these protocols and using indicated equipment, and that the individual knows how to respond to emergencies in case any occur. See Appendix A.

Laboratory-Specific Safety Orientation:

Individuals engaged in any laboratory research or teaching/prepping must attend an annual lab safety orientation conducted by the PI or RLS (for research labs) or lab coordinator (for teaching labs) in which lab-specific safety procedures and protocols are covered. Laboratory faculty and teaching assistants are, in turn, responsible for offering a similar safety orientation to the students enrolled in their laboratory courses. During these orientations, training is to be performed on the Chemical Hygiene Plan, lab access considerations as outlined in this policy, locations and functions of safety equipment, lab- and building evacuation procedures, chemical spill procedures, waste disposal procedures, radiation hazards, biohazard procedures, and physical hazards. For occupants of laboratories with physical hazards that approximate those of a workshop, shop safety guidelines can be found on the EHSRMS & EM website.

Laboratory Support:

Laboratory Support is herein referred to as Lab Support and is any UAA division or entity responsible for the management of laboratories. The divisional lab manager falls under Lab Support.

Laboratory Technician:

A laboratory technician is anyone with the UA job classification of Research Professional (Levels 1–3) or Research Technician (Levels 1–4).

Low Hazard Protocol:

See “Hazard Classification.”

Minor:

A minor is an individual age 17 and under. Minors who wish to utilize UAA laboratory facilities or equipment may need to first complete a Volunteer Qualification Checklist, available from Human
Resource Services (HR), and/or a Liability Waiver, available from EHSRMS & EM. This documentation shall be kept on file by the sponsoring department or Divisional Lab Manager. Access to facilities is contingent upon receipt and approval of this documentation by the appropriate Dean or Director, HR, and EHSRMS & EM. Restrictions on minors supersede language used under all “Special Users,” “Undergraduate,” and “Volunteer” sections in this document.

Moderate Hazard Protocol:

See “Hazard Classification.”

Operating Hours:

See “Access Hours.”

Passive Observer:

A passive observer is an individual who is not affiliated with a lab group, who has gained entry into a lab with all proper permissions, and is simply there to observe. Passive observers are not permitted to participate in the manipulation of any chemicals, lab equipment, specimens, or be in close proximity to an operation which may put them at physical risk. In instances where there is any chance of passive observers being at risk from an ongoing protocol, appropriate personal protective equipment shall be provided to and worn by the passive observer.

Post-Doctoral Research Fellow:

A post-doctoral research fellow (post-doc) is a person holding a doctoral degree and is engaged in mentored research under a PI. Post-docs frequently serve in a supervisory capacity in assistance to the PI over a lab group that may have other research professionals and/or technicians and/or graduate students and/or undergraduate students and/or volunteers.

Principal Investigator (PI):

The principal investigator is the lead scientist for a particular research project. If the PI has staff and/or students working for him or her, then he or she is also responsible for the training and safety of his or her subordinates. The PI shall be proficient in all protocols associated with his or her lab and research, and the PI of a lab is responsible for his or her lab facilities.

Research Laboratory Safety Briefing:

Individuals engaged in research lab work must attend an annual research laboratory safety briefing offered by the research lab manager, designated staff, or someone holding an equivalent position but not necessarily with the same title. The level of detail of these orientations shall be determined by individual campuses, Colleges or Schools, federal law, and local ordinances. At a minimum, the university’s Chemical Hygiene Plan and this policy shall be covered. This briefing shall be repeated annually and records kept by EHSRMS & EM or designee.

Research Laboratory Supervisor (RLS):
A research lab supervisor is considered the head of a lab and has the same level of expertise and responsibility as that of a principal investigator. For the purpose of this document, a research lab supervisor is anyone with the UA job classification of Research Professional, level 4 or 5.

Risk Assessment:

A risk assessment is performed by a PI or RLS with assistance from EHSRMS & EM when requested. A risk assessment involves the identification and evaluation of estimated levels of risk involved in the use of a protocol which may involve chemical, biological, physical, or radioactive hazards. An estimation of severity of consequences and likelihood of occurrence occurs with the aid of pre-formulated risk maps.

Room Advisor:

Laboratories and other rooms across campus with restricted access, have signs posted on entry doors stating that authorized personnel only have access. If a service provider needs to enter any of these facilities, they need to first contact a room advisor for permission, and in some instances, additional training or counseling before entry will be permitted. These room advisors are people who have complete knowledge of the unique hazards and/or sensitive operations that are ongoing in these facilities. A list of advisors is prioritized on the aforementioned signs. They should be contacted in the stated order until one is reached and clearance is given before entry is gained.

Safety Record:

An individual’s safety record is based on incident reviews performed by EHSRMS & EM.

Sanctioned Protocol:

A sanctioned protocol is a protocol that has been evaluated and approved by the appropriate PI and EHSRMS & EM (Chemical Hygiene Officer) and is documented on the Laboratory Protocol and Equipment Proficiency Form.

Significant Hazard Protocol:

See “Hazard Classification.”

Special Users:

Laboratory access shall be granted to special users on a case-by-case basis. Users who do not fall into one of the categories listed throughout this document and who are not affiliated with the university may request the use of UAA laboratory facilities for a fee and upon proof of liability insurance. In some cases, one or both requirements may be waived. Special users should contact the appropriate Divisional Lab Manager and EHSRMS & EM for further details.

Staff:

Staff refers to University of Alaska Anchorage employees that are not faculty.
Student Worker:

For the purpose of this document, a student worker is a UAA student employed in the “Student Worker” category with lab-specific duties. Teaching laboratories employ two types of student workers that work inside the lab - students who set up lab equipment and make solutions (prep work), and students who serve as lab monitors for open labs.

Teaching Assistant:

A teaching assistant is a student that teaches or facilitates a course or courses in exchange for a stipend, or a tuition waiver / remission and a stipend.

Teaching Laboratory Safety Briefing:

Any employee who intends to utilize the university’s teaching laboratory facilities shall first participate in a UAA mandated laboratory safety briefing conducted by trained university personnel. The level of detail of these briefings is determined by individual campuses, Colleges or Schools, federal law, and local ordinances. This safety briefing shall include, at a minimum, an overview of the university’s Chemical Hygiene Plan and this policy. This briefing shall be repeated annually and records kept by EHSRMS & EM or designee.

Trained Responder:

An individual trained specifically by the PI or RLS (for research) or lab coordinator (for teaching) to respond appropriately to emergencies in a given lab for given chemicals, equipment, and procedures regardless of hazard level. A trained responder cannot simply be assigned. They have to agree to the responsibility of acting as a trained responder for another individual. If the trained responder leaves the laboratory or office, the other lab occupants shall quit working and leave the building or contact a person they trust to establish a check-in interval (as required by circumstances and whichever is appropriate). Minors may not be designated as trained responders.

Undergraduate Student:

A student that has been accepted to UAA as an undergraduate and who is currently registered in courses.

University of Alaska Anchorage (UAA):

UAA is the “university” in this document and refers to the Anchorage campus only. Satellite campuses are responsible for either developing their own lab access policy or adopting the Anchorage campus policy as a whole. In cases of adoption, the terms “UAA” and “university” apply to the adopter as well.

University Police Department (UPD):
For all emergencies, call 911. UPDs phone number is 786-1120 when dialing from a phone located off-campus or from a cell phone. From an on-campus phone, dial 6-1120. To contact UPD by e-mail, use aypolice@uaa.alaska.edu.

Visiting Researcher:

A visiting researcher is a collaborator from another academic institution or government facility performing research on the UAA campus.

Volunteer:

Volunteers are typically individuals who are performing duties in research labs without being enrolled in a research course or being paid or otherwise compensated as an employee. All UAA lab volunteers must complete a Volunteer Qualification Checklist and be pre-approved by the appropriate academic department’s Dean or Director, Human Resource Services, and EHSRMS & EM.

7 LIST OF ABBREVIATIONS

- Alaska Occupational Safety and Health Administration……………………………………..AKOSH
- American Conference of Governmental Industrial Hygienists……………………………ACGIH
- Anchorage Fire Department………………………………………………………………………AFD
- Anchorage Police Department…………………………………………………………………..APD
- Centers for Disease Control………………………………………………………………………CDC
- Chemical Hygiene Officer…………………………………………………………………………..CHO
- Chemical Hygiene Plan………………………………………………………………………………CHP
- Code of Federal Regulations……………………………………………………………………..CFR
- Deoxyribonucleic acid………………………………………………………………………………DNA
- Department of Environmental Conservation…………………………………………………DEC
- Department of Homeland Security……………………………………………………………DHS
- Department of Transportation…………………………………………………………………DOT
- Drug Enforcement Agency………………………………………………………………………..DEA
- Environmental Health & Safety, Risk Management & Emergency Management……..EHSRMS&EM
- Environmental Protection Agency……………………………………………………………EPA
- Globally Harmonized System……………………………………………………………………GHS
- Institutional Animal Care and Use Committee………………………………………………IACUC
- International Agency for Research on Cancer………………………………………………IARC
- Municipality of Anchorage………………………………………………………………………MOA
- National Institute of Health………………………………………………………………………NIH
- Nuclear Regulatory Commission……………………………………………………………..NRC
- Occupational Safety and Health Administration………………………………………..OSHA
- Particularly Hazardous Substance…………………………………………………………….PHS
- Permissible Exposure Level……………………………………………………………………PEL
- Personal Protective Equipment…………………………………………………………………PPE
• Principal Investigator ........................................................................................................ PI
• Radiation Safety Officer ................................................................................................ RSO
• Radioactive Materials ...................................................................................................... RAM
• Research Lab Supervisor ................................................................................................ RLS
• Safety Data Sheet ............................................................................................................. SDS
• Safety First Approach ..................................................................................................... SFA
• Standard Operating Procedure ....................................................................................... SOP
• Underwriters Laboratory ................................................................................................. UL
• United States Department of Agriculture ....................................................................... USDA
• United States Department of Health and Human Services ............................................. USDHHS
• University of Alaska Anchorage .................................................................................... UAA
• University Police Department ......................................................................................... UPD
• U.S. Department of Agriculture ...................................................................................... USDA
• U.S. Department of Health and Human Services ............................................................. USDHHS
• Very Small Quantity Generator ..................................................................................... VSQG

8 Resources
• Chemical Hygiene Plan
  o http://ehsrms.uaa.alaska.edu/CMS/Laboratory/Chemical%20Hygiene%20Plan.pdf
• Facilities and Campus Services 101: Building Access
  o https://www.uaa.alaska.edu/about/administrative-services/departments/facilities-campus-services/_documents/building-access-policy.pdf
• Shop Safety Guidelines
• Appendix A – Laboratory Proficiency and Equipment Form
• Appendix B – Supervisory / Attendee Requirements
• Appendix C – Risk Map
• Appendix D – Flow Chart for Post-doctoral Research Fellows and Laboratory Technicians
• Appendix E – Flow Chart for Graduate Students of Research
• Appendix F – Flow Chart for Undergraduate Students of Research
• Appendix G – Flow Chart for Minors of Research
• Appendix H – Flow Chart for Volunteers of Research
• Appendix I – Flow Chart for Lab Prep Student Worker
• Appendix J – Protocol in Progress Sign
9 Appendix A – Laboratory Protocol and Equipment Proficiency Form

Post doctorate allowed to make recommendations but proficiency is only granted by Principal Investigator. All listed protocols are on file with the CHO as approved SOPs.

Principal Investigator: Click here to enter text

PI Signature:

Grantee name: Click here to enter text has shown proficiency in the following protocols:

Grantee Signature:

<table>
<thead>
<tr>
<th>Protocol/ Equipment</th>
<th>Date approved</th>
<th>Grantee Initials</th>
<th>PI Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
10 Appendix B – Supervisory / Attendee Requirements

Special Note: The following are minimum requirements. Even if an individual is permitted to perform a particular level of protocol unattended, it is always better to have a trained responder on stand-by. If one is not available, a check-in interval should be arranged with a trusted, responsible person. Stipulations for minors supersede all other language.

If an individual is permitted to work unsupervised and all the requirements in section A.3.e. (under Operating Hours) are met, then the following requirements shall also be met:

### Operating Hours

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students</td>
<td>TR recommended</td>
<td>TR recommended</td>
<td>TR recommended</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>TR recommended</td>
<td>TR recommended</td>
<td>PI / RLS / DS</td>
</tr>
<tr>
<td>Minors</td>
<td>TR required</td>
<td>PI / RLS / DS</td>
<td>Not Allowed</td>
</tr>
<tr>
<td>Volunteers (not minors)</td>
<td>TR recommended</td>
<td>TR recommended</td>
<td>PI / RLS / DS</td>
</tr>
</tbody>
</table>

For example, an undergraduate student requires the supervision of their PI, RLS, or DS in order to carry out a Significant Hazard Protocol. The hazard level of a procedure is indicated on the Laboratory Protocol and Equipment Proficiency Form.

### After Hours

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Graduate Students</td>
<td>TR recommended</td>
<td>TR recommended</td>
<td>PI / RLS / DS</td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td>TR recommended</td>
<td>TR required</td>
<td>PI / RLS / DS</td>
</tr>
<tr>
<td>Minors</td>
<td>PI / RLS</td>
<td>PI / RLS / DS</td>
<td>Not Allowed</td>
</tr>
<tr>
<td>Volunteers (not minors)</td>
<td>TR required*</td>
<td>TR required</td>
<td>PI / RLS / DS</td>
</tr>
</tbody>
</table>

*If the PI believes the volunteer is proficient at his / her duties, then he / she may perform low hazard protocols unattended.

For example, a volunteer requires the presence of a TR in order to carry out a moderately hazardous protocol. The hazard level of a procedure is indicated on the Laboratory Protocol and Equipment Proficiency Form.

The following designations are defined in Section D:

- PI – Principal Investigator
- RLS – Research Lab Supervisor
- DS – Designated Supervisor
- TR – Trained Responder
## Risk Maps Guide Mitigation Efforts

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant</td>
<td>High/Low/Remote</td>
<td>Manage and Monitor</td>
<td>Highest Risk Management</td>
<td>Highest Risk Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risks (3)</td>
<td>and Monitoring (4)</td>
<td>and Monitoring (5)</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>Low/Remote</td>
<td>Acceptable Risks</td>
<td>Manage and Monitor</td>
<td>Manage and Monitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>with Monitoring (2)</td>
<td>Risks (3)</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>Low/Remote</td>
<td>Acceptable Risks</td>
<td>Acceptable Risks with</td>
<td>Manage and Monitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>Monitoring (2)</td>
<td>Risks (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low/Remote</td>
<td>Moderate</td>
<td>High/Certain</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table Legend

- **Low Hazard Protocol**
- **Moderate Hazard Protocol**
- **Significant Hazard Protocol**
- **Extreme Hazard Protocol**

For Numbers (1), (2), (3), (4), (5) see Assessing Risks: Consequences – on the next page
## Assessing Risks: Consequences

<table>
<thead>
<tr>
<th></th>
<th>Service Disruption Affects Funding &amp; Processes</th>
<th>Reputation</th>
<th>Failure to Meet Legal Obligations</th>
<th>People</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5</strong></td>
<td>Total failure of service, extremely expensive $$$$</td>
<td>National publicity &gt;3 days Resignations</td>
<td>Multiple Criminal/Civil Suits, Claims or Fines &gt;$5M</td>
<td>Fatality of 1+ employees or citizens</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Serious disruption to service, costly $$</td>
<td>National public and press interest and coverage</td>
<td>Litigation, Claim or Fine of $500K-5M</td>
<td>Serious injury/ disability of 1+ people</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Disruption to service, moderately costly $$</td>
<td>Local public and press interest and coverage</td>
<td>Litigation, Claim or Fine of $100K-500K</td>
<td>Major injury to people</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Some minor impact on service, minor cost $</td>
<td>Contained within department by known by entity</td>
<td>Litigation, Claim or Fine of $10K-100K</td>
<td>Minor injuries to people</td>
</tr>
<tr>
<td><strong>1</strong></td>
<td>Annoyance, small or no impact on service and costs</td>
<td>Contained within department</td>
<td>Litigation, Claim or Fine of &lt;$10K</td>
<td>Minor injury to an individual</td>
</tr>
</tbody>
</table>
## Assessing Risks: Likelihood

<table>
<thead>
<tr>
<th></th>
<th>1 or fewer Persons</th>
<th>1-10 Persons</th>
<th>10-30 Persons</th>
<th>30-90 Persons</th>
<th>90+ Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extreme</strong></td>
<td>70-90%</td>
<td></td>
<td></td>
<td></td>
<td>Fatality of 1+ employees or citizens</td>
</tr>
<tr>
<td><strong>Very High</strong></td>
<td>50-70%</td>
<td></td>
<td></td>
<td></td>
<td>Serious injury/disability of 1+ people</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>30-50%</td>
<td></td>
<td></td>
<td></td>
<td>Major injury to people</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>10-30%</td>
<td></td>
<td></td>
<td></td>
<td>Minor injury to people</td>
</tr>
<tr>
<td><strong>Negligible</strong></td>
<td>0-10%</td>
<td>Minor injury to an individual</td>
<td>Minor injury to people</td>
<td>Minor injury to people</td>
<td></td>
</tr>
</tbody>
</table>

### Table Legend

- **Low Hazard Protocol**
- **Moderate Hazard Protocol**
- **Significant Hazard Protocol**
- **Extreme Hazard Protocol**
12 Appendix D - Flow Chart for Post-doc Research Fellows and Lab Technicians

- Always think Safety First.
- Try to never work alone.
- Practice situational awareness.
- Notify others of impending Significant Hazard Protocols.
- Cannot perform Extreme Hazard Protocols.
Appendix E - Flow Chart for Graduate Students of Research

1. Laboratory Protocol and Equipment Proficiency Form on file for intended protocols?
   - Yes
   - No

2. Completed an annual research lab safety briefing?
   - Yes
   - No

3. Completed a laboratory-specific safety orientation this year?
   - Yes
   - No

4. Have a history of demonstrating prudent safety practices?
   - Yes
   - No

**During Operating Hours:**
- PI / RLS / DS required.

**After Hours:**
- Notify UPD of location.
- PI / RLS / DS required.

**During Operating Hours:**
- Trained responder required.

**After Hours:**
- Notify UPD of location.
- Trained responder required for Low and Moderate Hazard Protocols.

I certify that I will:
- Always think Safety First.
- Try to never work alone.
- Practice situational awareness.
- Notify others of impending Significant Hazard Protocols.

I have lab access:

____________________
____________________
____________________
____________________
14 Appendix F - Flow Chart for Undergraduate Students of Research (Not minors)

Laboratory Protocol and Equipment Proficiency Form on file for intended protocols?

- Yes

Completed an annual research lab safety briefing?

- Yes

Completed a laboratory-specific safety orientation this year?

- Yes

Have a history of demonstrating prudent safety practices?

- Yes

During Operating Hours:
- PI / RLS / DS required.

After Hours:
- Notify UPD of location.
- PI / RLS / DS required.

During Operating Hours:
- Trained responder required for Low and Moderate Hazard Protocols.

After Hours:
- Notify UPD of location.
- Trained responder required for Low and Moderate Hazard Protocols.

I certify that I will:
- Always think Safety First.
- Try to never work alone.
- Practice situational awareness.
- Notify others of impending Significant Hazard Protocols.

I have lab access:

______________________________

______________________________

______________________________

______________________________
15 Appendix G - Flow Chart for Minors of Research

Undergraduate student?

Volunteer?

Dean/Director, HR, and EHSRMS & EM approval?

Laboratory Protocol and Equipment Proficiency Form on file for intended protocols?

Completed an annual research lab safety briefing?

Completed a laboratory-specific safety orientation this year?

Have a history of demonstrating prudent safety practices?

Volunteers must have Dean/Director and HR approval via the Volunteer Qualification Checklist and EHSRMS & EM approval via the Liability Waiver before lab access will be granted.

During Operating Hours:
- PI / RLS / DS required for Low and Moderate Hazard Protocols.

After Hours:
- Notify UPD of location.
- PI / RLS required for Low and Moderate Hazard Protocols.

I certify that I will:
- Always think Safety First.
- Never work alone.
- Practice situational awareness.
- Never perform a Significant Hazard Protocol.

I have lab access:

__________________________
__________________________
__________________________
__________________________

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16 Appendix H - Flow Chart for Volunteers of Research

Dean/Director, HR, and EHSRMS & EM approval?

Yes

Laboratory Protocol and Equipment Proficiency Form on file for intended protocols?

No

Volunteers must have Dean/Director and HR approval via the Volunteer Qualification Checklist and EHSRMS & EM approval via the Liability Waiver before lab access will be granted.

Yes

Completed an annual research lab safety briefing?

No

During Operating Hours:
- PI / RLS / DS required.

After Hours:
- Notify UPD of location.
- PI / RLS / DS required.

Yes

Completed a laboratory-specific safety orientation this year?

No

During Operating Hours:
- Trained responder required for Low and Moderate Hazard Protocols.

After Hours:
- Notify UPD of location.
- Trained responder required for Low and Moderate Hazard Protocols.

Yes

Have a history of demonstrating prudent safety practices?

No

I certify that I will:
- Always think Safety First.
- Try to never work alone.
- Practice situational awareness.
- Notify others of impending Significant Hazard Protocols.

Yes

During Operating Hours:
- Trained responder optional but recommended for Low and Moderate Hazard Protocols.

I have lab access:

________________________________________

________________________________________

________________________________________

________________________________________
17 Appendix I - Flow Chart for Lab Prep Student Workers

During Operating Hours:
- Lab Coordinator / DS required.

After Hours:
- Notify UPD of location.
- Lab Coordinator / DS required.

During Operating Hours:
- Trained responder required for Low and Moderate Hazard Protocols.
- Lab Coordinator / DS required for Significant Hazard Protocols.

After Hours:
- Notify UPD of location.
- Trained responder required for Low and Moderate Hazard Protocols.
- Lab Coordinator / DS required for Significant Hazard Protocols.

I certify that I will:
- Always think Safety First.
- Try to never work alone.
- Practice situational awareness.
- Notify others of impending Significant Hazard Protocols.

I have lab access:

________________________
________________________
________________________
________________________
Date: ______________  Time: ______________  Location: ____________________

Hazards present:

Emergency response:

Call 911 – for Police, Fire, or Medical emergency response

Call 6-1330 – for EHS Hazardous Materials response