Title:	Working Alone In Laboratories
Approved by:	Environmental health and Safety
Effective Date:	01/01/2015
Responsible Official:	Environmental Health and Safety
Responsible University Office:	Environmental Health and Safety
Revision History:	None
Related Legislation and University Policy:	EPA, DOT, OSHA, FDA
Review Period:	5 years
Last Review Date:	9/18/2019
Relates to:	All of CWRU Community

Summary:

Working alone in a laboratory can place a person in a hazardous situation. Should an injury occur, working alone without a plan to address injuries, accidents, or other unforeseen incidents is an unacceptable and preventable risk. This policy covers the basic requirements for working alone in a laboratory. It should be stressed that working alone is not the desired first line of planning and should be avoided. Some activities are prohibited as working alone activities and are specifically delineated.

Purpose:

To provide guidance on the requirements for working alone in laboratories and to specifically describe prohibited activities.

Definitions:

Working Alone-Per OSHA:

A person is "**alone**" at **work** when they are on their own; when they cannot be seen or heard by another person. It is important to consider all situations carefully. **Working alone** includes all employees who may go for a period of time where they do not have direct contact with a co-worker.

Proceedure:

Working Alone in the Laboratory

The University's Laboratory Safety Committee (LSC) has recognized that there are special, greater potential hazards and risks associated with laboratory personnel working alone in the lab with Biological, Chemical, Radiological materials and special hazards such as High Pressure, High Voltage, and Cryogenic physical hazards. The risk of injury is increased and so is the risk of the seriousness of the injury. These are very serious problems indeed, and ones that have occurred at other universities.

EH&S and the LSC recommended that no one work alone with hazardous materials in the lab, but we also recognize that there are circumstances where this may be necessary. As a result, a program has been developed where working alone must be authorized by the responsible Principal Investigator (PI) of the lab. The authorization form is can be found below along with a list of after-hours prohibited activities. If an activity is not prohibited, the Primary Investigator along with the research staff member can assemble a work plan to address after hours work. If the activity planned is on the prohibited list, it may still be performed in most cases after hours so long as a buddy is in attendance for the work and notification of the CWRU Communications center is given. The work plan must be approved by EH&S for any prohibited activities after hours.

- Permission To Work Alone Authorization Form-Work Plan
- Prohibited After Hours Activities

The Permission to Work Alone Authorization form requires the PI to evaluate activities that would help mitigate or prevent an accident or injury to the person working alone. These may include: limiting activity to certain hours, limiting activity with certain materials, establishing a system where one could contact help immediately (CWRU Alert), and of course, limiting the work to trained and qualified personnel. If you have a need to work alone after hours, please review the form, complete it and submit it to EH&S. If you need any assistance in establishing procedures to mitigate the hazards and risks, do not hesitate to contact us. We will be happy to help you through this process.

PERMISSION TO WORK ALONE FORM - GUIDELINES

Scope:
This applies to any work that will be performed alone involving hazardous materials, hazardous procedures or hazardous equipment.

Rationale:
The objective of Permission to Work Alone is to prevent a scenario where a worker is injured due to hazardous work and is unable to get help. It is up to each Principal Investigator (PI) to determine what level of hazard is permissible for working alone in their group. Some groups do not allow any working alone at all, while others allow varying degrees of working alone, depending on the specific hazard, the training and experience of the person working, and the safeguards that are in place. The PI and the worker need to agree that the level of risk matches the level of protection. The Permission to Work Alone form clarifies and documents this. It assures the PI that workers won't undertake unapproved hazardous processes alone and it assures the worker that the processes they are performing alone have been assessed for safety.

Chemical Hazards
"Hazardous Materials" are defined by the hazards indicated on the Safety Data Sheets, product labels or pictograms. A material is considered "hazardous" if it is classified as one or more of the following:

1. Flammable/Combustible
2. Oxidizing
3. Explosive/Reactive
4. Compressed Gas
5. Corrosive
6. Toxic to Aquatic Life
7. Acutely Toxic/Poisonous
8. Carcinogenic/Organ Affecting
9. Irritant

If the chemical has a National Fire Protection Association "safety diamond" on it, a number greater than 0 in any diamond identifies it as a hazardous material. If there is any level hazard associated with the material and a person will work alone with it, it is necessary to have the form on file. Working alone with pyrophorics (substances that ignite spontaneously upon contact with air) is always prohibited.

Biological Hazards and Toxins
Biological hazards and Toxins that rise to the level of requiring additional protection include working in BSL3 or BSL2 facilities that require containment beyond the normal precautions taken for normal bench work, work with Toxins that have no antidote or require treatment in a rapid time frame, or work with animals that might inflict serious injury require a work plan.

Radiological Hazards
Work with radiological hazards involving a high level source, or other higher risk activities require a work plan.

Physical Hazards
Work involving physical hazards such as high pressure, high voltage, extreme temperature including foundry work, machine shop rotary machinery such as a lathe or drill press or a non-manual bending or forming jig all require a work plan

Section I:

SHORT DESCRIPTION OF WORK TO BE DONE:

Please describe the specific type of work to be done (such as synthesis of X compounds, preparation of X samples, running of X equipment, conducting X type of experiment).

HAZARDS ASSOCIATED WITH YOUR WORK:

Please indicate the hazards associated with your materials, procedures or equipment. If "other" is checked, please indicate the specific hazard(s).

Section II:

DURATION OF PERMISSION:

Please indicate the duration of the permission. This can be for a specified duration (such as a semester or a year if a known endpoint has been established), or indefinitely (such as the duration of studies, duration of employment or duration of the project, etc.).

WHAT PROCEDURES HAVE YOU IMPLEMENTED TO MITIGATE THE RISKS FROM THE HAZARDS ABOVE:

Please specify the measures in place that will protect the person working alone. These can be engineering controls (such as fume hoods), personal protective equipment (gloves, lab coat, safety glasses, goggles, etc.) or administrative controls (such as arranging to have campus security or another individual check in every 30 minutes or whatever makes sense). The safeguards should match the level of risk associated with the hazard of working alone, and cover possible scenarios. **Please specify what measures will be taken beyond what would normally be done if someone else was in the room.**

The signature of the PI in Section II must match the name of the PI in Section I.

Please feel free to discuss this or specific details further with EH&S. Please submit the forms to EH&S for review.

PERMISSION TO WORK ALONE FORM

SECTION I: Applicant

Name: _____

CAMPUS PHONE NUMBER:_____CELLPHONE NUMBER: _____

PRINCIPAL INVESTIGATOR: _____

SHORT DESCRIPTION OF WORK TO BE DONE:

_____

_____

_____

HAZARDS ASSOCIATED WITH YOUR WORK:

☐ Chemical ☐ Biological ☐ Radiological ☐ Physical ☐ OTHER _____

I have completed Lab Safety and Hazardous Waste training at **CWRU**. In addition, I have received training in the proper experimental and emergency procedures from my principal investigator and understand those procedures for the work I am authorized to do.

APPLICANT SIGNATURE:_____DATE: _____

SECTION II: PRINCIPAL INVESTIGATOR APPROVAL

The applicant has been trained in the proper experimental and emergency procedures for the work to be performed and understands those procedures.

BUILDING AND LAB NUMBER(S): _____

HOURS ALLOWED ACCESS TO LAB: _____

DURATION OF PERMISSION: _____

WHAT PROCEDURES HAVE YOU IMPLEMENTED TO MITIGATE THE RISKS FROM THE HAZARDS ABOVE:

_____

_____

_____

PRINCIPAL INVESTIGATOR'S SIGNATURE:

EH&S SIGNATURE:_____DATE: _____

CAMPUS PHONE:_____EMERGENCY PHONE:

SECTION III: LAB SAFETY AND HAZARDOUS WASTE TRAINING

This applicant has completed laboratory safety and hazardous waste training provided by the Environmental Health and Safety Department (EH&S).

TRAINING DATE:

Prohibited Work Activities-Working Alone

Chemical

Pyrophoric

1) Work outside of a dry inert Glove box with pyrophoric, or water reactive materials are prohibited. If the work can be done completely inside the dry inert glove box the work is not prohibited. Exceptions are possible with an approved work plan.

2) Chemical reactions involving high pressure such as hydrogenation, polymer bomb reactions, or other high pressure reactions are prohibited unless a work plan can be established with EH&S

3) Work involving Highly Energetic Materials in excess of 100mg is prohibited at all times without an approved work plan. A work plan is required for scale up beyond 100mg at any time

4) Temperature unstable, shock sensitive, or other special property materials that can pose a threat to safety require a work plan

4) Scale up to large volume reactions such as Grignard reactions are prohibited without an approved work plan

Biological

1) Work inside of a BSL3 facility after hours is prohibited without a work plan. Checking on animals and performing husbandry are allowed with a work plan

2) Work involving toxins or chemicals that require immediate medical attention if an exposure occurs are prohibited without a work plan

Radiological

1) Tritium, iodination or other volatile radiological materials require a work plan

2) Use of high level sources such as an irradiator require a work plan

3) Use of energized equipment or Class IV lasers requires a work plan

Physical

1) Working in a machine shop requires a work plan. Use of large rotary equipment such as a lathe, drill press, or grinder may remain prohibited when working alone regardless of the time of day.

2) The use of extreme temperature, pressure, voltage, or other force requires a work plan