

# Mechanical and Aerospace Engineering

# INJURY AND ILLNESS PREVENTION PROGRAM



Date of last Revision: 20 March, 2019

## **UC DAVIS**

## **Mechanical and Aerospace Engineering**

## **INJURY AND ILLNESS PREVENTION PROGRAM**

This Injury and Illness Prevention Program has been prepared by the University of California, Mechanical and Aerospace Engineering department in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program) and California Code of Regulations Title 8, Section 3203 (8 CCR, Section 3203).

#### **Revision History:**

March 2019: revised by Loan-Anh Nguyen Modified location for inspection records to be electronics based Revised Site Specific Orientation and Training form for HazCom Revised Annual Refresher Group Training form

September 2018: revised by Loan-Anh Nguyen Added Solar Dish Site Modified and added more JSA Various information update and modifications

September 2017: revised by Loan-Anh Nguyen Implemented new IIPP template Removed Ghausi Hall Added building contact information Updated and listed more JSA's Modified and added relevant safety training forms for Chemical Hygiene Plan and Hazard Communication labs.

## **UC DAVIS**

## **Mechanical and Aerospace Engineering**

## **INJURY AND ILLNESS PREVENTION PROGRAM**

#### **TABLE OF CONTENTS**

#### **Preface** Department Information

- I. Authorities and Responsible Parties
- **II.** System of Communications
- III. System for Assuring Employee Compliance with Safe Work Practices
- IV. Hazard Identification, Evaluation, and Inspection
- V. Accident Investigation
- VI. Hazard Correction
- VII. Health and Safety Training
- VIII. Recordkeeping and Documentation
- IX. Resources

#### **APPENDICES**

- A. Hazard Alert/Correction Form
- **B.** Job Safety Analyses
- C. Worksite Inspection Forms
- **D.** Injury and Illness Investigation Form
- E. Safety Training Attendance Record

# **Department Information**

Department Name: Mechanical and Aerospace Engineering

Department Chairperson: Stephen K. Robinson

Address: 2132 Bainer Hall • One Shields Avenue • Davis, CA 95616-5294 Telephone Number: (530) 752-0580

### **Buildings Occupied by Department**

1.	Building: Unit(s):	Bainer Hall and Bainer Wind Tunnel Building Administration, Research and Teaching
	<b>Contact:</b>	Loan-Anh Nguyen
	Phone:	530-752-8488
2.	<b>Building:</b>	Kemper Hall
	Unit(s):	Research
	<b>Contact:</b>	Loan-Anh Nguyen
	Phone:	530-752-8488
3.	<b>Building:</b>	TB207
	Unit(s):	Research
	Contact:	Loan-Anh Nguyen
	Phone:	530-752-8488
4.	<b>Building:</b>	Academic Surge Building
	Unit(s):	Administration, Research and Teaching
		Advanced Highway Maintenance and Construction Technology Research
		Center (AHMCT)
	<b>Contact:</b>	Loan-Anh Nguyen, Wil White
	Phone:	530-752-8488, 530-752-1455
5.	<b>Building:</b>	Advanced Transportation Infrastructure Research Center (ATIRC)
	Unit(s):	Research
	<b>Contact:</b>	Wil White
	Phone:	530-752-1455
6.	<b>Building:</b>	Advanced Materials Research Laboratory (AMRL)
	Unit(s):	Research
	<b>Contact:</b>	Loan-Anh Nguyen
	Phone:	530-752-8488

## I. Authorities and Responsible Parties

The authority and responsibility for the implementation and maintenance of the Injury and Illness Prevention Program (IIPP) is in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program) and California Code of Regulations (8 CCR, Section 3203) and is held by the following individuals:

#### 1. Name: Stephen K. Robinson

#### Title: Department Chairperson

Authority: Authority and responsibility for reviewing and ensuring implementation of this IIPP

 Signature:
 On File
 Date:

2. Name: Loan-Anh Nguyen

#### Title: Department Safety Coordinator

Authority: Department designated authority for implementation of this IIPP

Signature: On File Date:

All Principal Investigators and supervisors are responsible for the implementation and enforcement of this IIPP in their areas of responsibility in accordance with University Policy (UCD Policy & Procedure Manual Section 290-15: Safety Management Program).

## **Annual Review Documentation**

Responsible/Designated Authority	Date
Loan-Anh Nguyen, DSC	3/20/2019
Loan-Anh Nguyen, DSC	9/14/2018
Loan-Anh Nguyen, DSC	9/14/2017

## **II.** System of Communications

1. Effective communications with **Mechanical and Aerospace Engineering** employees have been established using the following methods:

$\square$	Standard Operating Procedures Manual
$\square$	Safety Data Sheets
	Monthly departmental operations meetings
	Internal media (department safety information is found on the department main website)
	EH&S Safety Nets
	Training videos
	Safety Newsletter
$\square$	Handouts
$\square$	Building Evacuation Plan
$\square$	E-mail
$\square$	Posters and warning labels
$\square$	Job Safety Analysis (as part of this department IIPP document)
$\square$	Other (list):
	MAE Departmental Safety Training is provided initially to newcomers to the department

MAE Departmental Safety Training is provided initially to newcomers to the department and as a refresher training for all others.

A safety bulletin is located in the main hallway near the administrative offices.

- Employees are encouraged to report any potential health and safety hazard that may exist in the workplace. <u>Hazard Alert/Correction Forms</u> (<u>Appendix A</u>) are available to employees for this purpose. Forms are to be placed in the Safety Coordinator's departmental mail box. Employees have the option to remain anonymous when making a report.
- 3. Employees have been advised of adherence to safe work practices and the proper use of required personal protective equipment. Conformance will be reinforced by discipline for non-compliance in accordance with University policy (UC Davis Personnel Policies for Staff Members- Section <u>62</u>, Corrective Action).

## **III.** System for Assuring Employee Compliance with Safe Work Practices

Employees have been advised of adherence to safe work practices and the proper use of required personal protective equipment. Conformance will be reinforced by discipline for non-compliance in accordance with University policy (UC Davis Personnel Policies for Staff Members- Section 62, Corrective Action).

The following methods are used to reinforce conformance with this program:

- 1. Distribution of Policies
- 2. Training Programs
- 3. Safety Performance Evaluations

Performance evaluations at all levels must include an assessment of the individual's commitment to and performance of the accident prevention requirements of his/her position. The following are examples of factors considered when evaluating an employee's safety performance.

- Adherence to defined safety practices.
- Use of provided safety equipment.
- Reporting unsafe acts, conditions, and equipment.
- Offering suggestions for solutions to safety problems.
- Planning work to include checking safety of equipment and procedures before starting.
- Early reporting of illness or injury that may arise as a result of the job.
- Providing support to safety programs.
- 4. Statement of non-compliance will be placed in performance evaluations if employee neglects to follow proper safety procedures, <u>and</u> documented records are on file that clearly indicate training was provided for the specific topic, and that the employee understood the training and potential hazards.
- 5. Corrective action for non-compliance will take place when documentation exists that proper training was provided, the employee understood the training, and the employee knowingly neglected to follow proper safety procedures. Corrective action includes, but is not limited to, the following: Letter of Warning, Suspension, or Dismissal.

## **IV.** Hazard Identification, Evaluation, and Inspection

Job Hazard Analyses and worksite inspections have been established to identify and evaluate occupational safety and health hazards.

#### 1. Job Safety Analysis:

Job Safety Analysis (JSA) identifies and evaluates employee work functions, potential health or injury hazards, and specifies appropriate safe practices, personal protective equipment, and tools/equipment. JSA's can be completed for worksites, an individual employee's job description, or a class of employees' job description. Completed JSA's are located in <u>Appendix B</u>.

The following resources are available for assistance in completing JSA's:

- Laboratory personnel, please refer to the <u>Laboratory Hazard Assessment Tool</u>
- Non-Laboratory personnel, please refer to the <u>JSA/PPE Certification Forms</u>

#### 2. Worksite Inspections

Worksite inspections are conducted to identify and evaluate potential hazards. Types of worksite inspections include both periodic scheduled worksite inspections as well as those required for accident investigations, injury and illness cases, and unusual occurrences. Inspections are conducted at the following worksites:

1)	Location: Frequency: Responsible Person: Records Location:	On-Campus Research Laboratories Annual EH&S and Fire Safety Officers, Lab PI or Lab Safety Manager Electronics, and Lab Safety Binders
2)	Location: Frequency: Responsible Person: Records Location:	Off-Campus Research Laboratories Annual EH&S Safety Officer, Lab PI or Lab Safety Manager Electronics, and Lab Safety Binders

Worksite Inspection Forms are located in <u>Appendix C</u> (C1 - General Office and C2 - Laboratory).

(Example Worksite Inspection Forms are located in Appendix C of this template (C1 - General Office and C2 - Laboratory).

## V. Accident Investigation

University Policy requires that work-related injuries and illnesses be reported to Workers' Compensation within 24 hours of occurrence and state regulation requires all accidents be investigated.

Mechanical and Aerospace Engineering employees will immediately notify their supervisor when occupationally-related injuries and illnesses occur, or when employees first become aware of such problems.

1. **Supervisors** will investigate all accidents, injuries, occupational illnesses, and near-miss incidents to identify the causal factors or attendant hazards. Appropriate repairs or procedural changes will be implemented promptly to mitigate the hazards implicated in these events. Proper injury reporting procedures can be found at <a href="http://safetyservices.ucdavis.edu/article/injury-reporting-procedure">http://safetyservices.ucdavis.edu/article/injury-reporting-procedure</a>.

The <u>Injury and Illness Investigation Form (Appendix D)</u> shall be completed to record pertinent information and a copy retained to serve as documentation. It can be completed by either the supervisor or the Department Safety Coordinator.

Note: Serious occupational injuries, illnesses, or exposures must be reported to Cal/OSHA by an EH&S representative <u>within eight hours</u> after they have become known to the supervisor. These include injuries/illnesses/exposures that cause permanent disfigurement or require hospitalization for a period in excess of 24 hours. Please refer to <u>EH&S SafetyNet #121</u> for OSHA notification instructions.

## VI. Hazard Correction

Hazards discovered either as a result of a scheduled periodic inspection or during normal operations must be corrected by the supervisor in control of the work area, or by cooperation between the department in control of the work area and the supervisor of the employees working in that area. Supervisors of affected employees are expected to correct unsafe conditions as quickly as possible after discovery of a hazard, based on the severity of the hazard.

Specific procedures that can be used to correct hazards include, but are not limited to, the following:

- Tagging unsafe equipment "Do Not Use Until Repaired," and providing a list of alternatives for employees to use until the equipment is repaired.
- Stopping unsafe work practices and providing retraining on proper procedures before work resumes.
- Reinforcing and explaining the need for proper personal protective equipment and ensuring its availability.
- Barricading areas that have chemical spills or other hazards and reporting the hazardous conditions to appropriate parties.

Supervisors should use the <u>Hazard Alert/Correction Report (Appendix A)</u> to document corrective actions, including projected and actual completion dates.

If an imminent hazard exists, work in the area must cease, and the appropriate supervisor must be contacted immediately. If the hazard cannot be immediately corrected without endangering employees or property, all personnel need to leave the area except those qualified and necessary to correct the condition. These qualified individuals will be equipped with necessary safeguards before addressing the situation.

## VII. Health and Safety Training

Health and safety training, covering both general work practices and job-specific hazard training is the responsibility of the **Principal Investigator** and immediate Supervisor(s) as applicable to the following criteria:

- 1. Supervisors are provided with training to become familiar with the safety and health hazards to which employees under their immediate direction and control may be exposed.
- 2. All new employees receive training prior to engaging in responsibilities that pose potential hazard(s).
- 3. All employees given new job assignments receive training on the hazards of their new responsibilities prior to actually assuming those responsibilities.
- 4. Training is provided whenever new substances, processes, procedures or equipment (which represent a new hazard) are introduced to the workplace.
- 5. Whenever the employer is made aware of a new or previously unrecognized hazard, training is provided.

The **Safety Training Attendance Record** forms are located in **Appendix E**.

## VIII. Recordkeeping and Documentation

Documents related to the IIPP are maintained in/at/on:

Mechanical and Aerospace Engineering website, department safety coordinator's office in Bainer 2101, and individual laboratories (safety binders and/or electronics records).

The following documents will be maintained within the department or specific laboratory's IIPP Binder for at least the length of time indicated below:

- 1. Hazard Alert/Correction Forms (Appendix A form). Retain for three (3) years.
- Employee Job Safety Analysis (Appendix B) Retain for the duration of each individual's employment.
- 3. Worksite Inspection Forms (Appendix C form). Retain for three (3) years.
- 4. Injury and Illness Investigation Forms (Appendix D form). Retain for three (3) years.
- 5. Employee Safety Training Attendance Forms (Appendix E forms). Retain for three (3) years.

## IX. Resources

- 1. UC Office of the President: Management of Health, Safety and the Environment, 10/28/05
- 2. UC Davis Policy and Procedure Manual, <u>Section 290-15</u>, Safety Management Program
- 3. California Code of Regulations Title 8, Section 3203, (<u>8CCR §3203</u>), Injury and Illness Prevention Program
- 4. Personnel Policies for Staff Members, Corrective Action, UC PPSM 62
- 5. UC Davis Environmental Health & Safety
  - <u>Safety Services Website</u>
  - EH&S SafetyNets
  - <u>Safety Data Sheets</u>
- 6. <u>MAE department website</u> and department Safety bulletin down the hall from the administrative offices.

## **Appendices – IIPP Forms**

Appendix A: Hazard Alert/Correction Form Appendix B: Job Safety Analysis Appendix C1: Office Worksite Inspection Form Appendix C2: Self-Inspection Checklist Appendix D: Injury and Illness Investigation Form Appendix F: Safety Training Attendance Forms

## Appendix A: HAZARD ALERT / CORRECTION FORM

Alert Identification No. \_\_\_\_\_ Department: \_\_\_\_\_

I. Unsafe Condition or Hazard		
Name: (optional)	Jol	0:
Title: (optional)		
Location of Hazard:		
Building:		
Date and time the condition or hazard wa		
Description of unsafe condition or hazard	1:	
What changes would you recommend to	correct the condition or ha	azard?
Employee Signature: (optional) Date:		
II. Management/Safety Committee Inv	vestigation	
Name of person investigating unsafe con-	8	
Results of investigation (What was found sheets if necessary.)	1? Was condition unsafe o	r a hazard?): (Attach additional
Proposed action to be taken to correct has Correction Report, IIPP Appendix E)	zard or unsafe condition: (	Complete and attach a Hazard
Signature of Investigating Party:		
Date:		
	rm should be routed to the appr st be maintained in department	opriate supervisor and department files for at least three years.

## HAZARD ALERT / CORRECTION REPORT

Alert Identification No. \_\_\_\_\_

Department:

This form should be used in conjunction with the "Hazard Alert Form" (IIPP Appendix A), as appropriate, to track the correction of identified hazards.

All hazards should be corrected as soon as possible, based on the severity of the hazard. If a serious imminent hazard cannot be immediately corrected, evacuate personnel from the area and restrict access until the hazard can be addressed.

Supervisor/Safety Coordinator Name:

Telephone:

Date:

Supervisor/Safety Coordinator Signature:

Description and	Date	<b>Required Action and</b>	Complet	Completion Date		
Location of Unsafe Condition	Discovered	<b>Responsible Party</b>	Projected	Actual		

IIPP–Appendix A January 2016

Completed copies of this form should be routed to the department Safety Coordinator and kept in department files for at least three years.

## **Appendix B: Job Safety Analysis**

Job Function	Potential Health or Injury Hazard	Safe Practice, Apparel, or Equipment				
Performing work in laboratories containing chemicals.	Exposure to chemicals via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Reduce exposures that cannot be avoided by minimizing exposure duration and concentration. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Implementation of proper personal hygiene habits, including washing hands and face before eating and smoking. All personnel to receive UC Laboratory Safety Fundamentals, MAE Safety training, Site-specific training inlcuding Chemical Hygiene Plan or Hazard Communication Program, Hazardous Waste Management and Minimization Training and other applicable courses before beginning work.				
Performing work in laboratories containing radiological materials.	Exposure to radiological agents via inhalation, contact, ingestion or injection.	Avoid all unnecessary exposures. Adhere to radiological material handling procedures including limiting exposures through combination of minimizing time, maximizing distances and use of appropriate shielding. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection Implementation of proper personal hygiene habits, including washing hands and face before eating and smoking. Participation in radiological monitoring program including dosimetry. All personnel to receive UC Laboratory Safety Fundamentals, MAE Safety training, Site-specific training including Chemical Hygiene Plan or Hazard Communication Program, Radiation Safety training and other applicable courses before beginning to work.				
Performing work in laboratories containing biological materials.	Exposure to biological agents via inhalation, contact, ingestion or injection.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to blood borne pathogen handling protocols. Implementation of proper personal hygiene habits, including washing hands and face before eating and smoking. Voluntary participation in Hepatitis B vaccination program. Proper adherence to biological waste handling procedures. All personnel to attend UC Laboratory Safety Fundamentals, MAE Safety training, Site-specific training inlcuding Chemical Hygiene Plan or Hazard Communication Program, EH&S Blood borne Pathogen Program training and other applicable courses before beginning to work. Participation in Facilities- specific medical clearances as required.				
Performing work in laboratories, shops and spaces containing physical hazards.	Injury from physical hazards including high voltage, lasers and ultraviolet light, compressed gases and liquids, cryogenic materials, and specialized equipment as well as falling objects.	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear and specialized equipment. Employees are not to enter restricted areas unless accompanied by a properly trained individual familiar with the hazards of the area. Employees are not to operate specialized equipment without proper training and documentation. Watch for overhead hazards and wear head protection if needed. All personnel to attend UC Laboratory Safety Fundamentals, MAE Safety training, Site-specific training inlcuding Chemical Hygiene Plan or Hazard Communication Program, and other applicable courses before beginning to work.				
Performing work in laser laboratories.	Potential exposure to specular or diffuse reflections.	Avoid all unnecessary exposures to Class 3b and 4 laser beams. Intrabeam viewing is strictly forbidden at UC Davis. Proper laser safety eyewear is mandatory when the laser is activated unless the beam has been enclosed which effectively changes the class of the laser to a Class 1 (eye safe). When aligning the laser, power down with a visible beam, preferably a Class 3a HeNe. Alignment eyewear is available but once the laser is aligned do not assume that it is eye safe, wear your laser safety eyewear. When choosing proper eye protection one must take into account the power or energy and the wavelength of the laser or laser system. Contact the campus Laser Safety Officer to calculate the Optical Density for your eyewear or check with your Principle Investigator. Employees are not to operate lasers or laser systems without proper training and documentation. Employees or visitors must take the UC Davis Laser Safety Class and be trained on the specific laser they will be using. A Standard Operating Procedure must be in place for each laser or laser system before use. Be aware that there are ancillary hazards associated with the laser and take appropriate precautions. Personnel routinely entering areas where lasers are used will receive UC Laboratory Safety Fundamentals, MAE Safety training, Site-specific training including Chemical Hygiene Plan or Hazard Communication Program, Laser Safety training, and other applicable courses before beginning work.				

Job Function	Potential Health or Injury Hazard	Safe Practice, Apparel, or Equipment
Performing work in laboratories and animal housing facilities containing animals.	Exposure to animals and animal allergies via inhalation and contact	Avoid unnecessary exposures. Proper selection and use of personal protective equipment including gloves, protective eyewear, lab coats, and in some instances respiratory protection. Proper adherence to animal care and use protocols. Implementation of proper personal hygiene habits, including washing hands and face before eating and smoking. Participation in the occupational health program for animal workers. All personnel to receive UC Laboratory Safety Fundamentals, MAE Safety training, Site-specific training inlcuding Chemical Hygiene Plan or Hazard Communication Program, the IACUC Animal Care and Use 101, and other applicable courses before begining work. Participation in Facilities- specific medical clearances as required.
Handling and moving heavy items and equipment.	Ergonomic hazards including heavy lifting, repetitive motions, awkward motions, crushing or pinching injuries etc.	Get help with all loads that cannot be safely lifted by one person. Use mechanical means to lift and move heavy items, push carts and dolly rather than pull, attend back safety class, employ proper lifting techniques at all times. Set up work operations as ergonomically safe as practical. Wear proper hand and foot protection to protect against crushing or pinching injuries. All personnel to receive MAE Safety training, Site-specific training, and other applicable training before beginning to work.
Operation of motor vehicles	Motor vehicle accidents involving personal injury, or property damage	All drivers of University vehicles must attend the Driver Safety Awareness Course offered by Fleet Services and possess a valid California driver license. Hazardous materials may not be transported in personally owned vehicles. All personnel to receive MAE Safety training, Site-specific training, and other applicable training before begining to work.
Exposure to noise hazards	Hearing loss due to noise exposure	Voluntarily participate in the Hearing Conservation Program. Use hearing protection as required. All personnel to receive MAE Safety training, Site-specific training, and other applicable training before begining to work.
General office work	Back strain, eyestrain, repetitive motion injury. Physical injuries due to slips, trips and falls, and falling objects. Electrical hazards. Physical injuries due to fires, earthquakes, bomb threats and workplace violence.	Ensure that workstations are ergonomically correct. Keep floors clear of debris and liquid spills. Keep furniture, boxes, etc. from blocking doorways, halls and walking space. Do not stand on chairs of any kind, use proper foot stools or ladders. Do not store heavy objects overhead. Do not top load filing cabinets, fill bottom to top. Do not open more than one file drawer at a time. Brace tall bookcases and file cabinets to walls. Provide one-inch lip on shelves. Do not use extension cords in lieu of permanent wiring. Ensure that high wattage appliances do not overload circuits. Use GFCIs in receptacles in potentially wet areas. Replace frayed or damaged electrical cords. Ensure that electrical cords are not damaged by being wedged against furniture or pinched in doors. Attend emergency action and fire prevention plan training including emergency escape drills. Plan for methods to seek help in case of a workplace violent situation. All personnel to receive MAE Safety training, Site-specific training, and other applicable courses before beginning to work.

## **Appendix C1: WORKSITE INSPECTION FORM**

General Office Environment

Location:	Date:	
Inspector:	Phone	

Department:

#### Administration and Training

Yes	No	NA	1.	Are all safety records maintained in a centralized file for easy access? Are they current?
Yes	No	NA	2.	Have all employees attended Injury & Illness Prevention Program training? If not, what percentage has attended?
Yes	No	NA	3.	Does the department have a completed Emergency Action Plan? Are employees being trained on its contents?
Yes	No	NA	4.	Are chemical products used in the office being purchased in small quantities? Are Material Safety Data Sheets needed?
Yes	No	NA	5.	Are the Cal/OSHA information poster, Workers' Compensation bulletin, annual accident summary posted?
Yes	No	NA	6.	Are annual workplace inspections performed and documented?

#### **General Safety**

Yes	No	NA	7.	Are exits, fire alarms, pullboxes clearly marked and unobstructed?
Yes	No	NA	8.	Are aisles and corridors unobstructed to allow unimpeded evacuations?
Yes	No	NA	9.	Is a clearly identified, unobstructed, charged, currently inspected and tagged, wall-mounted fire extinguisher available as required by the Fire Department?
Yes	No	NA	10.	Are ergonomic issues being addressed for employees using computers or at risk of repetitive motion injuries?
Yes	No	NA	11.	Is a fully stocked first-aid kit available? Is the location known to all employees in the area?
Yes	No	NA	12.	Are cabinets, shelves, and furniture over five feet tall secured to prevent toppling during earthquakes?
Yes	No	NA	13.	Are books and heavy items and equipment stored on low shelves and secured to prevent them from falling on people during earthquakes?
Yes	No	NA	14.	Is the office kept clean of trash and recyclables promptly removed?

#### **Electrical Safety**

Yes		No		NA		15.	Are plugs, cords, electrical panels, and receptacles in good condition? No exposed conductors or broken insulation?
Yes		No		NA		16.	Are circuit breaker panels accessible and labeled?
Yes		No		NA		17.	Are surge protectors being used? If so, they must be equipped with an automatic circuit breaker, have cords no longer than 15 feet in length, and be plugged directly into a wall outlet.
Yes		No		NA		18.	Is lighting adequate throughout the work environment?
Yes		No		NA		19.	Are extension cords being used correctly? They must not run through walls, doors, ceiling, or present a trip hazard.
Yes		No		NA		20.	Are portable electric heaters being used? If so, they must be UL listed, plugged directly into a wall outlet, and located away from combustible materials.
	<b>IIPP-Appendix C1-Office</b> Completed			Co	mpleted	copies of this form should be routed to the department Safety Coordinator	

IIPP-Appendix C1-Office<br/>January 2016Completed copies of this form should be routed to the department Safety Coordinator<br/>and must be maintained in department files for at least three years.



#### Appendix C2: University of California, Davis Laboratory Self-Inspection Checklist

Principal Investigator/Laboratory Supervisor: \_\_\_\_\_

Laboratories Reviewed: \_\_\_\_\_

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

Reviewer: \_\_\_\_\_

Revised 1/2015

Ι.	SAFETY PROGRAM ADMINISTRATON			
Α.	Chemical Hygiene Plan	Yes	No	N/A
	<ol> <li>Does the laboratory have access to the campus-wide Chemical Hygiene Plan and all of the required elements?</li> </ol>			
	<ol> <li>Are there any operations that require prior approval before beginning (e.g., Radiation Safety, Bio-safety committee)?</li> </ol>			
В.	Illness and Injury Prevention Plan	Yes	No	N/A
	<ol> <li>Does laboratory have access to Department IIPP and has it been reviewed in past year?</li> </ol>			
	<ol><li>Is there documentation that all laboratory personnel have trained on IIPP?</li></ol>			
C.	Standard Operating Procedures (SOP's)	Yes	No	N/A
	<ol> <li>Are there written SOP's covering the laboratory processes and hazardous chemicals referenced in Title 8 (<i>i.e.</i>, acutely toxic substances, reproductive toxins, and regulated carcinogens)?</li> </ol>			
	2. Are there exemptions to the written SOPs and are these documented?			
	3. Training of laboratory personnel documented.			
	<ol> <li>Required specialized training complete and documented.</li> </ol>			
	5. Training is current with Chemical Hygiene Plan.			
	6. Training is complete on Hazardous waste management.			
	<ol> <li>Training is complete on Blood borne Pathogen requirements.</li> </ol>			
Π.	HAZARDOUS MATERIALS	Yes	No	N/A
	<ol> <li>Laboratory doors are labeled with emergency contact notification names &amp; numbers, hazards present &amp; necessary precautions.</li> </ol>			
	2. Labels are clean and intact on all chemical containers.			
	3. Chemical containers are clearly identified with contents and hazards.			
	4. Containers with non-hazardous substances ( <i>i.e.</i> , water) clearly labeled to avoid confusion.			
Α.	Chemical Controls	Yes	No	N/A



					UNIVER
	1.	Chemicals are not stored on laboratory benches in excessive quantities.			
	2.	Expired or chemicals not used (for more than one year) are disposed of as hazardous waste.			
	3.	Secondary containment is provided for strong acids and strong bases.			
	4.	Incompatible chemicals are segregated and stored with compatible hazard classes.			
	5.	All chemical containers are closed, except when actively adding or removing materials from them ( <i>i.e.</i> , no open funnels left in container).			
	6.	Containers of peroxide-forming chemicals are dated upon receipt and disposed of as hazardous waste within one year of receipt.			
	7.	Safety Data Sheets (SDS) and laboratory chemical inventory are up-to-date and readily available.			
	8.	Chemicals (liquids) are stored below eye level and not directly on the floor, unless in secondary containment.			
	9.	Dedicated chemical storage (cabinets, refrigerators, freezers) clearly labeled with contents and hazard warnings.			
Β.	Fla	Immable & Combustible Liquids	Yes	No	N/A
	1.	Flammable liquids stored in 1-gallon or smaller containers or kept in 2-gallon or smaller safety cans.			
	2.	Flammable liquids (including flammable liquid waste) stored outside of a storage cabinet does not exceed 10 gallons.			
	3.	If more than 10 gallons of flammable liquids are present does the laboratory have an approved flammable storage cabinet?			
	4.	Flammable liquids, stored in flammable storage cabinets limited to 60 gallons per fire rated area.			
	5.	Flammable liquids requiring reduced temperature stored in flammable-rated refrigerator/freezer.			
C.	Pa	rticularly Hazardous Substances	Yes	No	N/A
	1.	Have all particularly hazardous substances been identified?			
		Designated area(s) for acutely toxic materials, reproductive toxins and/or carcinogens clearly marked.			
		Are all users adequately trained? Documentation available?			
		All necessary PPE (personal protective equipment) available and used as needed.			
D.	Ra	dioactive Materials	Yes	No	N/A
	1.	Stock materials of radioactive materials are secured against unauthorized removal?			
	2	Do personnel wear lab coats and gloves when handling			

Pg. 2



					UNIVERSITY OF
	3.	Are all radioactive materials registered with the EH&S Health Physics Program?			
	4.	Radioactive Waste – Properly labeled, segregated, and shielded?			
III.	Cł	IEMICAL WASTE		4	
Α.	Ste	prage	Yes	No	N/A
	1.	Are chemical waste containers properly segregated, sealed with tight-fitting caps and stored with EH&S Hazardous Waste Labels attached?			
	2.	All hazardous chemical waste is arranged to be picked up by EH&S — not drain disposed or evaporated.			
	3.	Hazardous chemical waste has been accumulating for less than 270 days. Extremely hazardous waste has been accumulating less than 90 days.			
	4.	All hazardous chemical waste is secondary contained.			
	5.	Training for personnel handling hazardous waste is documented?			
	6.	EH&S is called for waste pick up when containers are full (90% capacity or full line) or have reached their accumulation date threshold.			
	7.	Waste containers sturdy, compatible with the waste, routinely checked for leaks and kept closed when not actively being filled.			
В.	La	beling	Yes	No	N/A
	1.	All hazardous waste containers have the proper labels with contents and accumulation start date.			
	2.	The hazardous waste accumulation area is clean with waste containers clearly marked.			
IV.	BI	OHAZARDOUS WASTE			
Α.	Ste	prage	Yes	No	N/A
	1.	Solid bio hazardous waste is bagged in red polyethylene bags as per the Medical Waste Management Plan.			
	2.	Bio hazardous liquid waste is managed per the Medical Waste Management Plan.			
	3.	Sharps stored in puncture-proof containers and labeled appropriately, not past fill line.			
В.	La	beling	Yes	No	N/A
	1.	Secondary containers for laboratory medical waste storage or transport labeled with the international biohazard symbol and the word "Biohazard."			
V.	PE	RSONAL HEALTH AND SAFETY			
Α.	Fo	od and Drink	Yes	No	N/A
	1.	Sinks labeled "Industrial Water – Do Not Drink".			
	2.	Food and drink is not permitted in laboratories.			
	3.	Food and drink is stored only in refrigerators/freezers			



В.	Standard Practices	Yes	No	N/A
	1. Employees wash areas of exposed skin prior to leaving the laboratory.			
	<ol> <li>Sink is available and hands washed after removing gloves and before leaving laboratory.</li> </ol>			
	<ol> <li>Cosmetic applications, taking medication, touching eyes, nose or mouth avoided in laboratory.</li> </ol>			
VI.	HEALTH AND SAFETY EQUIPMENT			
Α.	Safety Showers and Eye Washes	Yes	No	N/A
	1. Approved safety showers and eye washes provided within 10 seconds travel time from the work area for immediate use, with no barriers ( <i>i.e.</i> doors) for use or storage of corrosives.			
	2. All eyewashes and showers have unobstructed access.			
	<ol> <li>Units inspected and activated monthly. Annually certification by Facilities Management for proper functioning.</li> </ol>			
	4. Sign indicating location of safety shower and eye wash unobstructed.			
В.	Personal Protective Equipment	Yes	No	N/A
	1. Has the correct PPE been selected based on a hazard assessment or SDS recommendation?			
	2. PPE required for laboratory work: () Lab Coats,			
	<ul> <li>() Safety glasses with side shields/goggles,</li> <li>() Hearing protection,</li> <li>() Face Shield,</li> <li>() Proper foot-wear,</li> <li>() Gloves,</li> <li>() Aprons</li> </ul>			
	3. All necessary equipment is available, in good condition, and properly used.			
С.	Laboratory Fume Hoods	Yes	No	N/A
	1. Storage inside of hood is kept to a minimum.			
	<ol> <li>Equipment in use does not interfere with proper functioning of the hood.</li> </ol>			
	3. All work is done at least 6 inches inside hood.			
	4. Front sash is lowered when hood is not in use.			
	<ol> <li>Certified annually by Facilities Management, semi- annually for Title 8 §5209 "listed" Carcinogens.</li> </ol>			
	6. Hood has continuous flow monitor.			
	7. The back ventilation slot is not obstructed.			
	<ol> <li>Drains are protected from hazardous materials entering.</li> </ol>			
D.	Biological Safety Cabinet	Yes	No	N/A
	1. Certified within the last year.			
	2. Proper type of hood for work being conducted.			
	3. Equipment is properly labeled for the hazard present (radiation, UV,), Manufacturer approved for hazard.			
	4. Hood ducted per manufacturer and ASHRAE requirements and meets the bio-safety specifications.			



E. (	Compressed Gas Cylinders	Yes	No	N/A
1	. Cylinders stored in well protected, well vented and dry locations away from combustible materials.			
2	2. Flammable gases stored away from oxidizers.			
3	<ol> <li>Cylinders are secured to a rigid structural component of the building with non-flammable restraints located 1/3 and 2/3 (preferred) or ½ the height of the cylinder.</li> </ol>			
Z	<ol> <li>Protective caps in place while cylinders are in storage and full/empty tags attached.</li> </ol>			
Ę	<ol> <li>Proper regulators are being used and closed when cylinders are not in use.</li> </ol>			
F. I	Housekeeping & Miscellaneous Laboratory Safety	Yes	No	N/A
1	. Bench tops clean, organized and environs maintained to eliminate harmful exposures or unsafe conditions.			
2	<ol> <li>Supplies stored at minimum of 24 inches from ceiling and off the floor.</li> </ol>			
3	<ol> <li>Vacuum lines equipped with traps designed specifically to accumulate/filter the hazardous materials being evacuated.</li> </ol>			
L	<ol> <li>All moving machinery (<i>i.e.</i>, vacuum pumps) belts adequately protected by a rigid belt guard or housing.</li> </ol>			
Ę	5. All sharps disposed properly.			
E	The condition of the broken glass box is adequate and placed out of the way.			
7	7. Ceiling tiles present and in good condition.			
8	8. Refrigerators/freezers labeled according to use.			
G. E	Electrical Safety	Yes	No	N/A
1	. High voltage equipment (>600V) labeled, grounded and insulated.			
2	2. No equipment has damaged or frayed cords.			
3	B. Extension cords are not connected together.			
L	<ol> <li>Power strips used only if they are equipped with circuit breakers.</li> </ol>			
5	5. All equipment is grounded via 3-prong plugs.			
e	b. Damaged equipment tagged out to prevent use.			
Н. С	General Safety	Yes	No	N/A
1	. Cabinets and bookshelves are secured.			
2	<ol> <li>Overhead storage is minimized and restrained from falling (i.e., shelf lips, rails).</li> </ol>			
2	B. Heavy equipment is secured or braced from falling.		ľ	

I. Respiratory Protection	Yes	No	N/A
<ol> <li>Use of respiratory protection conforms to UC Davis Policy.</li> </ol>			
2. Respirators are inspected monthly and before use.			



					UNIVERSITIV
	3.	The user has been fit tested by the Occupational Health Services.			
	4.	Cartridges are changed on designated schedule and are the appropriate cartridge for the hazard.			
J.	La	ser Safety	Yes	No	N/A
	1.	Does the laboratory use any Class 3b or 4 lasers?			
	2.	Are the lasers registered with EH&S Health Physics Program?			
	3.	Are the Standard Precautions for lasers prominently posted for each laser?			
	4.	Are appropriate warning signs and labels posted?			
	5.	Does the laboratory entrance have a warning light or lighted sign showing when the laser is in use?			
	6.	Have all workers attended the EH&S Laser Safety course?			
	7.	Does the laboratory have appropriate laser eyewear?			
К.	No	n-Ionizing Radiation (NIR) Source	Yes	No	N/A
	1.	Have proper warning signs been posted?			
L.	En	nergency Planning & Procedures	Yes	No	N/A
	1.	Emergency Response Guide and evacuation map visibly posted and current.			
	2.	Chemical spill kit/cleanup materials available.			
	3.	Training in spill clean-up procedures provided and documented.			
	4.	First aid materials kept in adequate supply (in a sanitary and usable condition) and made readily available.			
М.	Fir	e Prevention	Yes	No	N/A
	1.	Appropriate fire extinguisher mounted, unobstructed, available within 75 feet, in working order and inspected within the last year. A fire extinguisher should be available in a room containing flammable and/or combustible liquids.			
	2.	Fire extinguisher sign is clearly visible.			
	3.	18-inch vertical clearance maintained from sprinkler head ( <i>i.e.</i> , over shelving).			
	4.	Are all laboratory doors kept closed? Closure devices in place?			
	5.	Storage of combustible material is minimized.			
Ν.	Ex	its	Yes	No	N/A
	1.	Exits and aisles are clear and free of obstructions in case of emergency.			
	2.	Exit signs clearly visible.			

# IIPP – Appendix D January 2016

Please access the **Injury Reporting Procedure** page on the Safety Services website.

http://safetyservices.ucdavis.edu/article/injury-reporting-procedure

Complete the electronic **Employer's First Report** as soon as practicable.

	UCD Employer's Ro	eport of Occupa	tional Injury	or Illnes	s
UNIVERSITY POLIC	Y REQUIRES THAT INDUSTRIAL INJUR STATE REGULATIONS REQUIRE THAT	Y/ILLNESS BE REPO	RTED TO WORK	CERS' COMP	ENSATION WITHIN 24 HOURS OF
In the event of a serie	ous injury or hospitalization, call Workers' Co 752-3439 to Workers' Compensation. Omi	ompensation immediate	ely at (530) 752-72	243. This form	must be completed in its entirety and
	COMPLETE THESE SECTIONS:	ssion or information co	did result in a dela	ay or benefits.	
Employee Name:			Employee's UCI	Davis ID #:	
Address:			Harry Dharry (	~	
City/State/Zip:			Home Phone: (	) Date o	f Birth:
H Department/Loca	tion:	Sex: CF	emale 🗌 Male		
Department/Loca		Date of Hire:	Employee's Wor		) al Gross Salary:
d Payron Interio.		Date of Hire.		\$	a Gross Salary.
Supervisor's Nam	le:	Superv	isor's Work Phone	e:()	
Employee () V	olunteer () Student-Employee ()	()hours per d	ay ()da	ys per week	( ) total weekly hours
Specific Injury/Illn		Bo	dy Part(s) affecte	d:	Date of injury/illness:
<b>E</b>	jury or illness occurred:				rs Injured?  Yes  No
Щ	materials or chemicals caused the injury/illn			Who	witnessed this injury?
Explain in detail h	ow the injury occurred. Include specific activ	vities/tasks performed	at the time.		
<u>н</u>					
Medical Treatmer C Medical Treatmer Employee He Private Physic Eirst Aid non	nt provided by: alth ServicesSutter Davis Hospital E	D Olher (Dem	ide Name & Phon	- 41)	
Private Physic	cian UC Davis Medical Cen		ide Name & Priori	e #)	
Employee Signat	nedical care needed. ure:		Te	day's Date:	
EMDLOYER'S ININ	ESTICATION AND STATEMENT (EM				
After the investig	ESTIGATION AND STATEMENT (EM ation, explain in detail how the injury/illness			erformed:	
DXE					
0 a					
5	ry, illness or exposure?				
INITIAL CAUSE	CONTRIBUTING FAC	TORS AND ACTIVITIE	S		PREVENTIVE ACTIONS
Struck by or against object	Equipment	Ventilation	n issues ic factors		SOR WILL: p/revise safety procedures and
(indicate)	Equipment failure Equipment unavailable	Employee		update	IIPP or Chem. Hyg. Plan
Caught in/under/	Improper equipment or material used for job	Employee Physically not Employee fati	gue	Order n	ew equipment
between	Personal protective equipment	Unbalanced of or motion	poor position	Order n     Remov	ew personal protective equipment e equipment from use and
Fall / Slip / Trip	☐ Not worn ☐ Not readily available	Incorrect proc	edures used for	repair/n	eplace
or lifting	Not adequate for the task Personal protective equipment	task	practice	Schedu	le preventive maintenance ain employee before task is
Chemical	failure	Assistance		re-assig	aned.
exposure Body fluid	Training/Experience	Difficult to per without help	form task	update	on-site review of work activity, job safety analysis.
exposure:	Safety training provided, not followed	Safety feature readily availa			gure work area inicate corrective actions to others
Needle stick Sharps	New task for employee or lack	Assistive devi	ces not used	in job c	ategory.
Animal bite	of experience Work Area	Lack of policy/p		Other_	
Other, Explain	Work area set up improperly	Other (explain) _			
	Inadequate lighting or noise			Name	e actions will be completed by:
	Housekeeping issues     Environmental factors			Expected of	date of completion
SUPERVISOR'S OR	(rain, wind, temp. etc) MANAGER'S SIGNATURE:	Use additional page	es as needed		ate of Investigation:
DEPARTMENT HEA	D'S SIGNATURE:			Da	ite:
IIPP-Appendi	G THIS FORM IS NOT AN ADMISSION OF UNIVERSITY	LIABILITY			7/2011 ER: WC/H/MJB
January 2016					

## **Appendix E: Safety Training Attendance Forms**

- 1) Chemical Hygiene Plan (CHP) Site Specific Orientation and Training Form for New Personnel
- 2) Hazardous Communication Program (HazCom) Site Specific Orientation and Training Form for New Personnel
- 3) Annual Refresher Group Training for All Laboratories



#### Site-Specific Safety Orientation & Training for New Laboratory Personnel

Revised - 07/2014

Prior to completing this site safety orientation and training, all laboratory personnel must have successfully completed the <u>UC Laboratory Safety Fundamentals</u> course. Completion of this training is required prior to personnel being granted unescorted access to the laboratory. This serves to satisfy components of the <u>University of California Policy - Laboratory Safety Training</u> and UC Davis policy <u>PPM290-56</u>.

I	confirm receipt of training on the listed topics on
(print name, trainee)	
from	All of my questions regarding
(date)	(print name, trainer)
this material have been answered. applicable.	Topics have been initialed, or marked with an "X" where not

(signature, trainee)

(signature, trainer)

Initial	Торіс	Action
	EMERGI	ENCY PROCEDURES
	Fire Alarm Pull Station:	Show location(s) and proper activation.
	Eye Wash / Safety Showers:	Show location(s) and proper operation.
	Spill Procedures	Show location of spill kit(s), SafetyNets $\frac{#13}{2}$ and $\frac{#127}{2}$ (if applicable), and describe procedures.
	First Aid Kits:	Location(s) and description of contents.
	Phone:	Location(s), detail dialing instructions, '911' dialing instructions, bomb threat card.
	Emergency Response Guide:	Location(s) of flipchart guide, discuss scenario actions
	Emergency Action Plan:	Review Emergency Action Plan. Demonstrate both paths to Emergency Assembly Area. Review evacuation procedures for disabled employees if applicable.
	Warn Me:	Enroll in UC Davis <u>Warn Me</u> emergency alert system, recommend registering cellular phone number.
	ENGINI	EERING CONTROLS
	Chemical Fume Hood(s):	Demonstration of proper use, instruction on adjustable controls, flow sensor function, and training requirements.
	Biological Safety Cabinet(s):	Demonstration of proper use, instruction on adjustable controls and training requirements.
	Chemical Storage Location(s):	Location(s) and segregation rules, volume limits (>10 gallons requires flammable storage cabinet).
	Other Controls ( <i>e.g.</i> , Glove Boxes, Snorkels, Gas Cabinets, Paint Booths, Laminar Flow Benches):	Demonstration of proper use, instruction on adjustable controls.

Describe in detail:



Laboratory Safety Manual (incl. Chemical Hygiene Plan):	Location and content description. Also, any applicable Laboratory Safety Plan(s) location and content.
Safety Data Sheets (SDSs):	Demonstrate electronic access and describe laborator repository of hard copy SDSs, if applicable
Standard Operating Procedures (SOPs):	Location of lab's SOPs, describe required approvals. Identification of chemical processes / areas requiring specific SOP use, and laboratory safety rules.
Describe in detail:	

Determine Hazard-Specific Safety Training:	PROTECTIVE EQUIPMENT Consult <u>UC Davis Training Matrix for Laboratory</u> <u>Personnel</u> , enroll in courses
	Provide at no cost fitted laboratory coats. Some labs/hazards require flame resistant coats.
Lab Coat:	Type:      Cotton/Blend      Barrier      Flame Resistant
	Size:
Eye Protection:	Provide at no cost pair(s) of safety eyewear. Glasses must fit appropriately, be comfortable to wear, and stay securely in place. For labs where goggles must be wo provide pair(s) of fitted chemical splash goggles. When a face shield is required, demonstrate proper use, care and storage.
	Corrective Prescription Y / N
	Model:
Gloves:	Location(s), provide knowledge and resources to select correct type. Instruct proper procedure to don and dof
	OTHER
Department IIPP:	Location and review
Hazardous Waste:	Overview of laboratory hazardous waste procedures. Location(s) of accumulation area, demonstrate proper labeling, describe proper storage requirements, and detail pickup/removal procedures.
Specialized Equipment:	Review of safety procedures for proper operation. <i>e.g.</i> UV light, laser, high voltage equipment, superconduction magnets, cryogen handling, high/low vacuum, etc



#### Site-Specific Safety Orientation & Training for New Personnel (HazCom Spaces)

**Supervisor or Designated Trainer:** Review and select topics below that are applicable to the employee/trainee. Mark programs with an "X" if applicable or "NA" if not applicable. Add additional topics/programs under the "Other" column. Campus-wide applicable topics are identified with an "X". Review identified topics with trainee and provide or schedule training. <u>Training must be completed **prior** to trainee engaging in hazardous tasks.</u> Enter initial and date in "Trainer Initial/Date" column upon completion of training. Retain record for at least three years.

*Employee/Trainee*: Review applicable topics with Supervisor or Designated Trainer. Enter initial and date in "Trainee Initial/Date" column once training is completed. Initial and date only if your questions regarding the material have been completely answered.

Trainee	
(Print Name/ Signature/Date)	Department
Supervisor/Trainer	
(Print Name/Signature/Date)	Supervisor/Trainer Job Title

Applicable	Trainee Initial	Торіс	Action	
EMERGENCY PROCEDURES				
Х		Emergency Action Plan	Review Emergency Action Plan. Demonstrate both paths to Emergency Assembly Area.	
Х		Emergency Response Guide	Location(s) of flipchart guide, discuss scenario actions.	
Х		Fire Alarm Pull Station	Show location(s) and proper activation.	
Х		Injury Reporting	Review immediate reporting of work-related injuries and illnesses to supervisor. Use <u>online injury reporting form.</u>	
Х		Phone	Location(s), detailed dialing instructions, '911' dialing instructions, bomb threat card.	
Х		Warn Me	Enroll in UC Davis <u>Warn Me</u> emergency alert system, recommend registering cellular phone number. https://warnme.ucdavis.edu/	
Х		Eye Wash/Safety Shower	Show location(s) and proper operation.	
Х		First Aid Kits	Location(s) and description of contents.	
Х		Spill Procedures	Show location of spill kit(s), SafetyNets $\frac{#13}{2}$ and $\frac{#127}{127}$ (if applicable), and describe procedures.	
			PROGRAMS	
х		<u>Injury and Illness</u> Prevention Program (IIPP)	Review content and location of IIPP; emphasis on annual review of Job Safety Analysis, injury and hazard reporting and training documentation.	
		<u>Confined Space</u> <u>Entry (CSE)</u>	Review <u>Cal/OSHA requirements</u> . Show confined space 'permit-required' locations, train on proper completion of the CSE permit and use of equipment and personal protective equipment (PPE).	
		Crane operation, hoisting and rigging	Per <u>Cal/OSHA</u> only <i>qualified employees</i> and trained employees can operate cranes and need training on <u>Indoor Hoisting and Rigging</u> . Review <u>Cal/OSHA operating rules</u> .	
		Electrical Safety	Complete <u><i>Electrical Safety</i></u> training; requirements for lockout and verification testing of energized equipment; if working "hot", proper use of arc-rated clothing/PPE based on an NFPA 70e arc-flash assessment; and shock hazard analysis insulated tools.	
		Ergonomics	Train employee on proper body mechanics	



Trainee Initial	Торіс	Action
	Fall Protection	Review the <u>Cal/OSHA requirements</u> . Training on proper inspection, use and wear of harnesses, lanyards for restraint, positioning or arrest. Review identified compliant anchorage locations, areas requiring proper use of beam wraps, and connections to existing SRL's, existing vertical/horizontal lifelines, overhead systems, or cable/rope grabs.
	Forklift and Aerial Lift Operations	Review required use of written pre-use inspection (forklift & aerial lift) and site assessment (aerial lift) forms. Training must include lecture and practical 'hands on' demonstration of skills.
	<u>Hazard</u> <u>Communication</u> <u>Program</u>	<u>General HazCom Program</u> location and content description. <u>Department-Specific HazCom Program Summary</u> location and content. Demonstrate electronic SDS access and describe repository of hard copies, if applicable. Maintain chemical inventory in <u>CIS</u> .
	Hearing Conservation	Employees exposed at or above a time-weighted average of 85 dBA must participate in the Hearing Conservation Program
	<u>Heat Illness</u>	Train employees who work outdoors on heat illness prevention
	Lockout/Tagout	For employees 'authorized' to work on energized equipment, show the energy isolation, lockout locations for equipment, review <u>Cal/OSHA</u> <u>requirements</u> for lockout, and review of written lockout/tagout procedures.
	Operating Tractor	Review the operating rules and for hands on training.
	Shop Safety Program	Review and train on the <u>Shop Safety Manual</u> , the site specific <u>Shop</u> <u>Safety Plan</u> , and equipment SOPs.
	Welding and Cutting	Review the 72 hour <u>hot work permit requirements</u> . Provide <u>Cal/OSHA</u> <u>compliant ventilation</u> and respiratory protection as needed.
	Other (describe)	
	PERSO	DNAL PROTECTIVE EQUIPMENT
	Hazard Assessment	Review completed Job Safety Analysis (JSA) as per IIPP. See <u>JSA/PPE</u> <u>Certification Forms</u> .
	PPE Certification	If PPE is identified in JSA, compete and review PPE certification form; provide properly fitted PPE; demonstrate proper selection, use, care and storage.
	Specific PPE	Protection for:  Head Eye/Face Body Lungs Upper Extremity Lower Extremity List Specific PPE:
		OTHER
	<u>Chemical Fume</u> <u>Hood</u> (s)	Demonstrate proper use, instruction on adjustable controls, flow sensor function, and training requirements.
	Chemical Storage Location(s)	Location(s) and segregation rules, volume limits (>10 gallons requires flammable storage cabinet).
	Compressed Gas Cylinders	Storage locations, regulators, transport, safety considerations.
	Glass & Sharps Waste Containers	Location(s) of accumulation area, demonstrate proper labeling, describe proper storage requirements, and detail pickup/removal procedures.
	Hazardous Waste	Overview of <u>WASTe</u> and hazardous waste procedures. Location(s) of accumulation area, demonstrate proper labeling, describe proper storage requirements, and detail pickup/removal procedures.
	Needle sticks	Train on needle and syringe safety ( <u>SafetyNet #62</u> )
	Specialized Equipment	Review safety procedures for proper operation. <i>e.g.</i> , UV light, laser, high voltage equipment, autoclave, cryogen handling. List specialize equipment:
		Fall ProtectionFall ProtectionForklift and Aerial Lift OperationsHazard Communication ProgramHearing ConservationHearing ConservationHeat IllnessLockout/TagoutOperating Tractor Shop Safety ProgramWelding and Cutting Other (describe)Welding and CuttingOther (describe)PERSCHazard AssessmentPPE CertificationSpecific PPEChemical Fume Hood(s)Chemical Storage Location(s)Compressed Gas CylindersGlass & Sharps Waste ContainersHazardous Waste Needle sticksNeedle sticksSpecialized

## ANNUAL GROUP SAFETY TRAINING RECORD for year \_\_\_\_\_

The signature list of this training record applies to the following:

1)	Injury, Illness, and Prevention Plan (IIPP)	4) Hazard Communication Program
	a) Job Safety Analysis (JSA) – applicable to work	a) Spill Kit and Procedures (SafetyNet #13)
	b) Reporting Hazards & Near misses	b) Globally Harmonized System (GHS)
	c) Seeking Medical Help & Reporting Injuries	c) Chemical Segregation (SafetyNet #42)
	d) Reporting Serious Injuries (SN#121)	d) Carcinogen Use and SOP's (lab specific)
2)	Emergency Action Plan (EAP)	e) Chemical Waste Management (SafetyNet #8)
	a) Emergency Contact Information (lab specific)	Note: for CHP labs, use #3. For HazCom labs, use #4
	b) Evacuation Route(s)	5) <u>Biosafety &amp; Biohazards (lab specific)</u>
	c) Assembly Area location	a) Biological Use Authorization (BUA)
	d) First Aid Kit	b) Bloodborne Pathogen Exposure Control Plan
	e) Emergency Eyewash & Shower	i) Hepatitis B declination
3)	<u>Chemical Hygiene Plan (CHP) (Lab Safety Manual)</u>	c) Medical Waste Management Plan
	a) Spill Kit and Procedures (SafetyNet #13)	d) Bio.Spill Kit and Procedures (Safetynet # 127)
	b) Globally Harmonized System (GHS)	6) <u>Specialized Equipment (lab specific)</u>
	c) Chemical Segregation (SafetyNet #42)	a) Standard Operating Procedures ( <u>SOPs</u> )
	d) Carcinogen Use and SOP's (lab specific)	Each user of the SOP: sign and date at least annually
	e) Chemical Waste Management (SafetyNet #8)	b) Operating manuals and emergency shutdown
	Training Material: Handout	s, Safety Nets and lab specific plans.
Pri	ncipal Investigator:	
Na	me of Trainer:	
De	partment & Location:	
D.:		
rri	Int Trainee Name Signatu	re Date
Pri	nt Trainee Name Signatu	re Date
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