

UH MANOA-BASED OFF CAMPUS FACILITIES/LAB SAFETY INSPECTION CHECKLIST

Principal Investigator/Director:	Department:
Building / Lab Room #:	Date of Inspection:
Inspector(s):	Escorted By:

1	GENERAL SAFETY	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
1.1	Is the laboratory locked when not in use?					
1.2	Are emergency eye washes and showers available, unobstructed and inspected monthly and quarterly, respectively? (required if corrosive materials are present).					
1.3	Are disposable containers for broken glass provided and specifically labeled for glass disposal ("Broken Glass")?					
1.4	Is protective clothing, goggles, face shields, gloves, closed-toe shoes and other PPE available and used?					
1.5	Are protective goggles or face shields provided and worn where there is any danger of flying particles or corrosive materials?					
1.6	Have all chemical fume hoods passed inspection within the past 12 months?					
1.7	Are chemical fume hoods free from excessive storage?					
1.8	Are chemical fume hood sashes closed when not in use?					
1.9	Is good housekeeping maintained?					
1.10	Are all floors kept clean and dry and in good repair?					
1.11	Are food and beverages prepared and consumed in areas separate from chemicals?					
1.12	Are glass containers not stored on the floor?					
1.13	Are exits free of any trip hazards or obstruction? (minimum 28 inches clearance in any exit access such as hallways and aisles)					
1.14	Do refrigerators, freezers, microwaves, and ice machines designated for laboratory use have proper "No Food/Drink" signage?					
1.15	Are safety guards in place for equipment with moving parts (belts, blades, fans, etc)?					
1.16	Is there a first aid kit in the lab and is it adequately stocked?					
1.17	Employer has a written Respiratory Protection Program?					
1.18	Users are annually trained in the proper use of respirators and their limitations?					
1.19	Employees are fit tested to their respirators annually and are current in their medical clearance? Respirators are clean and maintained?					

2	CHEMICAL SAFETY	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
2.1	Are all highly flammable and toxic procedures performed in a fume hood?					
2.2	Are approved spark-proof refrigerators used for cold storage of flammable liquids?					
2.3	Are flammable chemicals stored in a safe manner (more than 10 gallons stored in an approved flammable storage cabinet)?					
2.4	Are incompatible chemicals segregated in storage? (flammables and oxidizers; nitric acid/acids; acids and bases)					
2.5	Are all chemicals properly labeled, including hazard identification, and percentages of mixtures?					

2.6	Are chemical containers kept closed and in good condition?					
2.7	Are air and water reactive chemicals properly stored?					
2.8	Does the laboratory test peroxide-forming chemicals?					
2.9	Are chemical storage areas identified with signs (e.g., flammables, corrosives, carcinogens, poisons, etc.)?					
2.10	Are combustible scrap, debris and waste materials (i.e.oily rags) stored in covered metal receptacles and removed from the worksite promptly?					
2.11	Is a chemical spill kit available (with posted procedures)?					
2.12	Is metallic mercury used in the laboratory? If yes, is a Hg spill kit available?					

3	HAZARDOUS WASTE AUDIT CHECKLIST	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
3.1	Is any hazardous waste generated in the facility or laboratory?					
3.2	Is non-hazardous chemical waste disposed of properly from the facility or laboratory?					
3.3	Does the facility generate less than 100 kg/month (220 lbs/27 G) of all hazardous waste and less than 1 kg/month (1 quart/2.2 lbs/0.27 G) of P-coded waste? (must not accumulate more than 1000 kg of hazardous waste at any time)					
3.4	Is the satellite accumulation area in the same laboratory where the waste is generated?					
3.5	Is the satellite accumulation area kept in good housekeeping condition?					
3.6	Are waste containers separated by hazard class to avoid incompatible storage?					
3.7	Are all the waste containers in good condition (e.g.,not corroded or leaking, and properly sealed or closed)?					
3.8	Are all waste containers properly labeled as to their contents (correct chemicals names, readable labels, and percentages of individual components for mixtures)?					
3.9	Are secondary containers used when required?					
3.10	Can the facility document the proper disposal of all hazardous waste?					
3.11	Is there at least one person in the facility who has attended the EHSO training for Hazardous Waste Generators?					

4	COMPRESSED GAS CYLINDERS	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
4.1	Are cylinders legibly marked to clearly identify the gas contained?					
4.2	Are incompatible gases properly segregated when not in use? (i.e.oxygen and flammable gases must be separated by minimum 20 feet).					
4.3	Are cylinders secured properly (recommend chains) and protective caps in place when not in use?					
4.4	Are cylinders located or stored in areas where they will not be damaged by passing or falling objects or subject to tampering by unauthorized persons?					
4.5	Are oxygen cylinders stored 20 feet apart from combustible material or acetylene cylinders, or separated by an approved fire wall (at least 5 feet high) having a fire resistant rating of at least ½ hour?					

4.6	Multiple gas cylinders shall be securely stored in a cylinder rack and not by strap.					
4.7	Cylinders of different heights/sizes are not strapped together by one chain/strap.					
4.8	Cylinders have been hydrotested within the last 5 years to determine their integrity for current and further use.					
4.9	Cylinders are in good condition (no rusting, sidewall indentations, bulging, crack and fissures).					
4.10	Gas tubing used for gas cylinders are in good condition, show no leaks and are not pinched.					
4.11	Tygon tubing is not used for flammable gases (i.e. hydrogen) since it can cause static electricity.					

5	ENVIRONMENTAL COMPLIANCE	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
5.1	Are best management practices (BMPs) in place to prevent illicit discharge and pollutants from entering the storm drains?					
5.2	Are storm drains regularly inspected and placarded?					
5.3	Oil-storage tanks (ASTs, day tanks, transformers) are regularly inspected for leaks and corrosion? (SPCC Plan required if oil storage exceeds 1320 gallons)					
5.4	Are drain disposal restrictions posted and followed according to the facility's Industrial Waste Water Discharge Permit?					
5.5	If underground storage tanks are in place, has the facility completed monthly monitoring requirements and proper DOH notification?					
5.6	If large capacity cesspools (>20 people per day or multi-unit housing) are in place, does the facility have a plan to shut down the cesspool?					
5.7	If a septic tank system is in place, does the facility maintain the system?					
5.8	Have all spills been cleaned up, documented and reported if necessary? Document below.					
5.9	Drip plans are used to control leaks from vehicles or equipment?					
5.10	Does the facility handle any pesticides meeting WSP requirements?					
5.11	Are employees trained on environmental compliance regulations?					
5.12	Does site have a current NPDES permit?					
5.13	Does site have a Industrial Wastewater Discharge Permit (IWDP) and follow proper drain disposal regulations?					

6	FIRE SAFETY / ELECTRICAL SAFETY	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
6.1	Are the cords of all electrical equipment in good condition?					
6.2	Are cords used properly (e.g., no piggy-backing of surge protectors; clear of burners, sinks, aisles; no use of extension cords)					
6.3	Are electrical panel readily accessible and not blocked? (3 foot clearance in front & 30 inch working width clearance)					
6.4	Gasoline portable containers are approved metal safety cans with a spring-closing lid and spout cover?					
6.5	Are fire extinguisher(s), and fire pull stations readily accessible? Is the building fire alarm system tested annually?					
6.6	If you have outside private fire hydrants, are they flushed at least once a year and on a routine preventative maintenance schedule in accordance with the county water requirements?					

6.7	Are fire-rated doors not propped open?					
6.8	Are exits visibly marked and illuminated?					
6.9	Is storage at least 18 inches below the ceiling/sprinkler heads (24 inches for rooms without sprinklers)?					
6.10	Are equipment that draw large amounts of power (e.g. refrigerators, microwaves) plugged directly into an outlet?					
6.11	Equipment with exposed heating elements are unplugged when not in use (hot plates, coffee makers, toasters)?					
6.12	Does each electrical outlet, plug box, junction box, and cabinet have a faceplate, cover or canopy cover and are unused openings in cabinets and boxes effectively closed?					
6.13	When electrical equipment or lines are to be serviced, maintained or adjusted, are necessary switches opened, locked-out and tagged whenever possible?					
6.14	Combustible material is not stored in boiler, mechanical or electrical rooms.					
6.15	Does the facility have a written fire emergency plan? Have fire drills been conducted?					

7	FACILITIES / WORKSHOP SAFETY	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
7.1	Are work surfaces elevated more than 4 feet above the floor or ground provided with standard guardrails? (top rail 42" high, w/ intermediate rail halfway between top rail and floor).					
7.2	Are all elevated surfaces (beneath which people or machinery could be exposed to falling objects) provided with standard toeboards?					
7.3	Is every floor hole or opening guarded by a standard railing or hole cover?(including skylights).					
7.4	Light bulbs/fluorescent tubes are protected by guards or enclosures to avoid breakage?					
7.5	Path to ground is permanent and continuous (ground wire and ground pin are in place and in good working order).					
7.6	Are only trained and authorized personnel permitted to operate powered industrial trucks or utility vehicles?					
7.7	Are pre-operation inspections performed on facility-owned powered industrial trucks before use? Are ones that are in need of repair or unsafe, taken out of service until they are restored to a safe operating condition?					
7.8	Is compressed air used for cleaning purposes reduced to less than 30 psi?					
7.9	Are all hand and power tools functioning and in safe condition?					
7.10	Are machine guards provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips, and sparks?					
7.11	Are portable circular saws equipped with guards above and below the base shoe?					
7.12	Are circular saw guards checked to assure they are not wedged up, thus leaving the lower portion of the blade unguarded?					
7.13	Are machines designed for a fixed location (e.g. drill presses, saws) securely anchored to prevent walking or moving?					
7.14	Are work rests on abrasive wheel machinery (grinders) kept closely adjusted to the wheel with a maximum opening of 1/8 inch? (Tongue guards within ¼ inch?)					
7.15	Are ladders adequately maintained and inspected?					

7.16	Are ladders appropriately used?					
7.17	Is employee exposure to welding fumes controlled by ventilation, use of respirators, exposure time, or other means?					
7.18	Does battery charging area provide general ventilation to control hydrogen gases emitted by lead-acid and nickel cadmium batteries?					

8	CRANE OPERATION	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
8.1	Are cranes visually inspected for defective components prior to beginning of any work shift?					
8.2	Are all electrically operated cranes effectively grounded?					
8.3	Is a crane preventive maintenance program established?					
8.4	Is the load chart clearly visible to the operator?					
8.5	Are operating controls clearly identified?					
8.6	Is a fire extinguisher provided at the operator's station?					
8.7	Is the rated capacity visibly marked on each crane?					
8.8	Is an audible warning device mounted on each crane?					
8.9	Are cranes of such design, that the boom could fall over backwards, equipped with boomstops?					
8.10	Are crane inspection and maintenance records on file and available for inspection?					

9	RADIATION SAFETY	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
9.1	Radioactive areas are clearly marked (tape and radioactive hazard symbol)?					
9.2	Radioactive waste stored properly?					
9.3	Absorbent material readily available to contain any spill?					
9.4	Adequate & sufficient shielding provided & used?					
9.5	Radioactive material securely stored?					
9.6	Radioactive areas are clearly marked (tape and radioactive hazard symbol)?					

	DOCUMENTATION	Y	N	N/A	Inspector Comments	PI Comments/ Date Corrected
	Is a current Chemical Hygiene Plan available?					
	Does the facility have a current individual hazardous material and hazardous waste management program (HMMP) on file?					
	Are Standard Operating Procedures available for experiments, or equipment, that pose an increased hazard?					
	Does the lab have a written (annually updated) chemical inventory?					
	Are Safety Data Sheets (SDS) available for all chemicals in the lab (hardcopy or accessible online by all lab members)?					
	Have personnel received appropriate safety trainings? (Lab safety, Hazard Communication, Ladder Safety, Fire Safety, Respirator Training, etc). Are the training records on file?					
	Are emergency notification procedures, contacts with current phone numbers, and hazardous warning signs posted at the entry to the lab or facility?					
	Is the "HIOSH Workplace Poster" displayed in your workplace where all employees are likely to see it?					

ADDITIONAL INSPECTOR COMMENTS/ISSUES/PICTURES:

Once each identified problem has been rectified, state the date it was corrected and include any comments if you wish. The PI or Facility manager has 30 days upon receipt of this checklist to respond with corrective action(s). Please electronically sign and email the form to Carolyn Oki-Idouchi at the UH Manoa EHSO (coki@hawaii.edu). A follow-up inspection may be conducted to ensure corrections were made.

I certify that all rectifications required are complete, and to the best of my knowledge, true and accurate. By typing in my name I agree that it is equivalent to my handwritten signature.

Facility Manager/PI:

Type or Print Name

Date