Chemical Safety Survey

Room:	
PI:	
Date:	

This is the checklist that EHS uses for their annual survey. The purpose of this survey is to identify unsafe conditions and/or behaviors in laboratories where chemical, biological, and/or physical hazards are present. Laboratory personnel are encouraged to utilize this survey to evaluate their work area(s) on a regular basis. Safe science is smart science.

CRITICAL	Critical Finding: A safety departure that can result in personnel injury or exposure and/or environmental contamination. Non-critical findings that continue to be unaddressed or are found to be excessive within a work area and thus present more than a moderate hazard will be elevated to a critical finding. Critical findings must be corrected by lab personnel within 24 hours following the inspection that identified the finding(s).
NON-CRITICAL	Non-Critical Finding: A safety departure that presents a moderate hazard and are generally indicative of inadequate safe work practice(s). These findings should be corrected as soon as possible, but no longer than 30 days.
ADMIN	Administrative Safety Departure: A safety departure that indicates the lack of, or deficiency in, written safety policies, procedures, rules, supervision, schedules, and/or training with the goal of reducing the duration, frequency, and severity of exposure to hazardous materials or situations. Administrative findings can be critical or non-critical in nature. Unless otherwise specified, corrective actions should be completed within 30 days.

Type	Area of Interest				
	Chemical Fume Hoods	**Y**	**N**	**N/A**	**Corrected**
	Are fume hoods or other EHS-approved engineering controls used for work involving flammables and/or inhalation hazards (e.g. volatiles, carcinogens, toxic chemicals, etc.)?				
	Are fume hoods free of clutter and unnecessary storage?				
	Are large pieces of equipment kept from being stored in the fume hood or raised to allow air flow?				
	Are items and procedures kept more than six (6) inches from the fume hood opening?				
	Is there a visual indicator of fume hood flow?				
	Is the fume hood sash kept at or below the approved height when in use and fully closed when not in use?				
	Are operations using heated perchloric acid performed in a perchloric acid fume hood?				
	Are fume hood baffles unobstructed?				
	Chemical Handling and Storage Safety	**Y**	**N**	**N/A**	**Corrected**
	Are yellow barcodes removed from containers before disposal or repurposing and returned to EHS?				
	Have all hazardous chemicals been entered into the online inventory in Safety Stratus (RRAMP)?				
	Are chemical containers in good condition?				
	Are EHS barcodes legible and affixed to the chemical container?				
	Are all chemicals segregated by storage group (as defined in Appendix AA of the Laboratory Safety Manual)? Is secondary containment used when needed?				

	Are secondary containers labeled properly?				
	Are all flammable chemicals stored in approved flammable chemical storage cabinets?				
	Are all flammable chemicals stored in approved flammable chemical storage refrigerators?				
	Is the total flammable chemical storage limited to 80 gallons (~300 L) for research and 20 gallons (~75 L) for teaching labs that are 200 sq ft or larger, with limits reduced by half for smaller labs?				
	Are chemicals stored away from intense light sources?				
	Are large chemical containers kept from being stored on high shelves?				
	Are peroxide-forming compounds labeled with receipt date, open date and/or expiration date?				
	Are peroxide-forming compounds checked for peroxide formation at least every six (6) months after the open date?				
	Are drawers/cabinets with visual barriers properly labeled when they contain chemicals, samples, or specimens?				
	Are labels removed, covered, or defaced on reused chemical containers to effectively communicate the new contents?				
	Are chemicals stored upright?				
	Are no more than 5 gallons (~20 L) of flammable liquids used at one time in the work area?				
	Are secondary containers appropriate?				
	Is secondary containment appropriate?				
	Is equipment that uses volatile hazardous chemicals operated inside a fume hood or under local exhaust ventilation? If not, are the volatile chemical containers properly sealed or equipped with filters?				
	Do original chemical labels meet the requirements of the hazardous communication and laboratory standards (29 CFR 1910.1200 and 1910.1450)?				
	Are original container labels present and legible on primary chemicals?				
	Do liquid containers (including waste containers) stored on the floor have secondary containment?				
	Compressed Gases/DI Bottles	**Y**	**N**	**N/A**	**Corrected**
	When cylinders are stored or not in use, are the caps in place?				
	Are main valves closed and the pressure regulators released when not in use?				
	Are compressed gases present only where there is ongoing use and not for indefinite storage in occupied lab spaces?				
	Are incompatible gases separated by at least twenty (20) ft?				
	Are cylinders upright/secured? Are securing devices in good condition?				
	Are compressed gas hoses and/or fittings appropriate and in good condition?				
	Are compressed gas cylinders stored away from high heat, flames, etc.?				

	Emergency Equipment/Fire Safety	Y	N	N/A	Corrected
	Are eyewashes flushed monthly and logged?				
	Are first aid kits maintained with unexpired/unopened items?				
	Are eyewash covers in place?				
	Is there an 18-inch (~46 cm) clearance from the center of the spray from the safety shower?				
	Are safety showers/eyewashes clearly visible and unobstructed?				
	Are fire extinguishers clearly visible and unobstructed?				
	Do lab staff know the location of emergency equipment?				
	Is an 18-inch vertical clearance maintained from sprinkler heads?				
	Are exits and means of egress unlocked and unobstructed?				
	Infrastructure	**Y**	**N**	**N/A**	**Corrected**
	Are walkways unobstructed and at least thirty-six (36) inches (~90 cm) wide?				
	Are circuit breaker panels & emergency shutoffs unobstructed and labeled?				
	Is there a clearance of at least 32 inches (~80 cm) at all work area exits?				
	Are outlet, switch, and junction box covers in place & in good condition?				
	Are floors even with no holes, cracks, or tripping hazards? CFR 1910.22(a)(1)				
	Do all electrical outlets within six (6) ft of a water source have a Ground Fault Circuit Interrupter (GCFI)?				
	Are laboratory floors easily cleaned?				
	Are bench tops impervious to water and resistant to moderate heat, chemicals, and decontaminating agents?				
	Is lab furniture capable of supporting anticipated loads and uses?				
	Are vacuum lines equipped with traps?				
	Laboratory Hygiene	**Y**	**N**	**N/A**	**Corrected**
	Are work surfaces and equipment decontaminated after any spill or splash?				
	Are floors and vertical surfaces regularly cleaned and decontaminated after a spill or splash?				
	Are food, drink, medicine, cosmetics, or other personal hygiene products not stored or consumed in lab?				
	Are spaces between benches, cabinets, and equipment accessible for cleaning?				
	Is a signed EHS decontamination form attached to equipment tagged out for surplus?				
	Are aisles free of slip, trip, and fall hazards?				
	Are there appropriate disinfectants, neutralizers, absorbent materials available for potential spills?				
	Are mechanical pipetting devices present in the work area?				

	Are sinks, paper towels, and soap present?				
	Are chairs covered with easily cleaned (non-porous) material?				
	Does hand washing occur after removal of gloves and before leaving the laboratory?				
	Are appropriate solutions or neutralizers used for decontamination?				
	Are common household items used for lab work properly labeled?				
	Is broken or leaking equipment tagged out and secured for repair or removal?				
	Are bench tops, sinks, and work areas free of excess storage and clutter?				
	OCC – Personal Protective Equipment (PPE)	**Y**	**N**	**N/A**	**Corrected**
	Are used disposable gloves immediately discarded after removal?				
	Is PPE stored in such a way that the inner surfaces that contact the user are not at risk of becoming contaminated?				
	Is PPE worn according to the hazards present?				
	Is PPE in good working condition?				
	Is PPE stored in the work area and not in public areas or offices?				
	Is proper lab attire worn?				
	Is appropriate PPE available (e.g., lab coats, scrubs, eyewear, gloves)?				
	Have respirator users been approved by EHS in the past 12 months?				
	OCC – Plug-in Electrical Hazards	**Y**	**N**	**N/A**	**Corrected**
	Are extension cords used only on a temporary basis; cords and power strips not permanently attached to building components?				
	Are extension cords and/or power strips kept from being daisy-chained and cord length kept below one hundred (100) ft?				
	Are extension cords in good condition and rated for type of use?				
	Is plug-in electrical equipment certified, in good condition, and operating properly?				
	Are electrical sockets kept from being overloaded?				
	Are electrical box/switch covers undamaged and in place, electrical panels and emergency shutoffs labeled, securely closed, and unobstructed?				
	Are electrical cords kept from being concealed behind ceilings or walls, under carpets, or run through doorways or in high traffic areas?				
	Procedural Safety	**Y**	**N**	**N/A**	**Corrected**
	Do lab personnel know the location of the work area safety plan (WASP)?				
	Have all lab personnel signed the WASP acknowledgement form?				
	Are written standard operating procedures available for all operations conducted and equipment used in the work area?				
	Has the RRAMP hazard assessment been completed in Safety Stratus (RRAMP) in the last 12 months?				

	Satellite Accumulation Area	Y	N	N/A	Corrected
	Are waste containers filled no more than three-quarters full?				
	Do all chemical waste containers have the EHS waste label?				
	Are EHS waste labels correctly filled out and in good condition?				
	Are waste containers properly capped?				
	Are wastes properly stored and segregated?				
	Are vented caps used for waste streams subject to pressurization?				
	Are waste containers free of contamination (e.g., outside of liquid collection containers and inner portions of solid collection containers)?				
	Are waste containers appropriate and in good condition?				
	Is chemical and other hazardous waste kept from being disposed down the sink or in regular waste bins?				
	Is waste generated in the work area kept in the work area until pick up from EHS?				
	Is waste generated by work area personnel under their control and management?				
	Are waste determinations complete and available?				
	Does the SAA have less than 55 gallons (~208 L) and/or 1 quart (~1 L) or 1 kilogram of acutely hazardous waste?				
	Is the SAA free of spills?				
	Special Procedures for Carcinogens, Teratogens, and Highly Toxic or Reactive Chemicals	**Y**	**N**	**N/A**	**Corrected**
	Is unexpired calcium gluconate gel available where hydrofluoric acid (HF) is present?				
	Is picric acid stored hydrated at all times? Is an appropriate usage log maintained?				
	Are designated work areas and fume hoods for highly hazardous (i.e., carcinogens, teratogens, mutagens, highly toxic or reactive) materials present and labeled?				
	Have adequate written procedures been created for the use of highly hazardous materials?				
	Are safety procedures for highly hazardous materials posted in the immediate work area?				
	Are storage group 9 chemicals stored according to their SDS?				
	Waste	**Y**	**N**	**N/A**	**Corrected**
	Is glass waste decontaminated before disposal in the glass waste container?				
	Is glass waste segregated from regular trash or other wastes?				
	Are glass waste containers not overfilled?				
	Are appropriate sharps waste containers used for sharps disposal? Are only sharps disposed of in the sharps waste container?				
	Are sharps containers not overfilled?				
	Are glass waste containers appropriate?				
	When sharps containers are full, is the lid secured for EHS pick up?				
	Are needles intact and not bent/removed before disposal?				

	Work Practices	Y	N	N/A	Corrected
	Is broken or chipped glass secured for repair or properly disposed of in a glass waste container?				
	Are sharps secured?				
	Are closed systems under heat or pressure contained behind a blast shield or in a fume hood with the sash closed?				
	Are the doors to the lab work area kept closed? Are doors locked when the work area is vacant?				
	Are devices containing mercury secured with secondary containment or replaced with safer alternatives where possible?				
	Do soldering stations have a 10-foot zone of clearance from desks and seating areas?				
	Are needles kept from being recapped? If needles are recapped, is an EHS-approved SOP in place and posted?				
	Are ignition sources kept from where flammable materials are used or stored?				
	Are pulleys, belts, and other moving parts properly guarded?				
	Are freezers periodically defrosted to prevent ice build-up?				
	Are soldering stations using lead-based solder exhausted/contained (i.e., local exhaust, inside a fume hood, or a table-top scrubber)?				
	Are sharps containers available in the immediate area where sharps are used?				
	Are cryogenic liquids stored in Dewar flasks or cold traps wrapped with screens, friction tape, or a metal jacket?				