



University of Delaware

Environmental Health and Safety

Laboratory Inspection Form and Guide



It is the aim of the Chemical Hygiene Committee and Occupational Health & Safety to work cooperatively with principal investigators and laboratory workers to achieve compliance with University safety policies, the Chemical Hygiene Plan and governmental regulations. Unsatisfactory items and laboratory safety violations will be handled, following the steps outlined in the Chemical Hygiene Compliance Policy (<http://www.udel.edu/OHS/CHCCompliancePolicy.pdf>). Issues that represent an immediate or imminent hazard to University Personnel, risk to the environment or potential to cause damage to University facilities are classified at Category 1 Deficiencies. All other items that are not an imminent hazard are classified as Category 2 Deficiencies. The potential deficiency category is listed next the laboratory inspection item. Assigned categories may change, based on the specifics uncovered in the inspection. Category 1 Deficiencies must be rectified immediately. Category 2 Deficiencies must be rectified in 30 calendar days from receipt of the inspection report.

<u>Category</u>	<u>Violation Code</u>	<u>Description</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>Deficiency Category</u>
Administrative	C01	Laboratory Unlocked/Unattended (Not Secured)? <i>Assure that the laboratory is locked when no one is present in the laboratory.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C02	Emergency posting out of date, missing, or emergency contacts not posted? <i>Contact OHS to have an updated sign created and installed. Contact OHS for a emergency contact card. Doors should be posted with a University Laboratory Sign. Faculty member's name and office/home phone number for emergency contacts should be filled out on the grey emergency contact card that is stored behind the lab sign insert. Postdoctoral Fellows and graduate students' names and numbers should also be available. This information should be updated regularly.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C03	Laboratory workers performing hazardous operations or working with hazardous materials alone? PI unaware of after hours work? <i>Laboratory workers must not perform hazardous operations or work with hazardous materials alone. A trained buddy must be in close proximity to provide assistance during and emergency. PI must be advised of all after hours work.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C04	Windows covered? <i>Windows on lab doors must not be covered. This allows emergency responders to see in the laboratory in the event of an emergency.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C05	Unauthorized personnel allowed access to the laboratory and/or unchallenged ? <i>Laboratory workers must limit access by unauthorized occupants. Children should not be allowed in the laboratory.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

Category	Violation Code	Description	Yes	No	N/A	Deficiency Category
Administrative						
	C06	Chemical Inventory Unavailable? Chemical inventory not maintained in the EHSA Online Program? <i>An up to date chemical inventory must be maintained in the EHSA program.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C07	Biological Inventory unavailable? Biological Inventory not maintained in the EHSA Online Program? <i>A biological material inventory must be maintained in the EHSA program.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C09	Updated, printed copies of a MSDS for each chemical used or stored in the lab not available? <i>Laboratories must maintain an updated printed copy of a MSDS for each chemical used or stored in the laboratory.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C10	Job Hazard Analysis or Written Safety Procedures for all Hazardous Operations and the use of Hazardous Chemicals not available? <i>Written procedures are required for all hazardous operations and use of hazardous chemicals. These written procedures should discuss the hazards involved in the operation and ways to mitigate the hazard. The written procedures should dictate the types of personal protective equipment, fume hood use and other safety practices. They should be revised whenever there is a change in procedure or a new procedure added. Please refer to the Chemical Hygiene Plan. Job Hazard Analysis/Personal Protective Equipment designations must be available for the lab personnel to reference. (See Policy 7-40: Personal Protective Equipment)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C11	Right-To-Know and Chemical Hygiene/Safety Training for all Workers in the Laboratory not completed annually? <i>All members of the lab must have Right-to-Know and Chemical Hygiene/Safety training certificates signed and on file in the department office and copied to DOHS every year. Laboratory personnel must receive task and chemical specific training on all processes, chemicals, equipments and hazards in the laboratory. The task specific and chemical specific training that is provided by the supervisor/principal investigator must be documented and kept on file as well. This includes faculty members. DOHS can provide some of this training. Contact DOHS for more information.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C12	Personal Protective Equipment (Task/Chemical Specific Gloves, Safety Glasses, Splash Goggles, Face Shield, Lab Coat, etc) unavailable? <i>Personal Protective Equipment (PPE) must be made available to all lab employees at no charge. Designated PPE must be worn. Students may be told that they are required to purchase and but must wear those items. (See Policy 7-40: Personal Protective Equipment)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C08	Evidence of Smoking, Eating or Drinking in the Laboratory <i>Smoking, Eating, Drinking, and the application of cosmetics are prohibited in University laboratories.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C13	Proper Emergency Training not provided? <i>Laboratory members should know the procedures to follow for a laboratory accident; i.e.: to pick up an emergency phone or dial 911 for help, where first aid kits are located, where to find the accident report forms, how to filed the reports with the department</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

Category	Violation Code	Description	Yes	No	N/A	Deficiency Category
Administrative	C13	<i>office and DOHS, etc. Researchers need to develop procedures to make operations safe should a ventilation or power failure occur. Lab members should know where the emergency gathering point is located.</i>				
	C14	Lab Doors or Windows Open <i>Lab doors should remain closed at all times to assure optimum laboratory ventilation. Keeping lab doors closed also helps prevent the spread of smoke in the event of a fire.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C09A	Material Safety Data Sheet Location not known to laboratory personnel <i>All laboratory personnel must know where and how to access the material safety datasheets (MSDS) for the hazardous materials they use in their operations. Researchers and students must consult two MSDS resources for every chemical they plan to use before they start the experiment or procedure. This review should be used in the development of the standard operating procedure and process safety review. An annual review of all MSDS should be included as part of the annual chemical safety training refresher.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C72	Sink not available for hand washing. Soap and paper towels not available to assure proper decontamination. <i>On leaving the designated area or the laboratory area, remove protective apparel and thoroughly decontaminate or dispose of contaminated items. Thoroughly wash hands and forearms with soap and water.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Chemical Concerns	C35	Chemical spill kits not available? Laboratory personnel do not know the location of the chemical spill kit? <i>Chemical spill kits should be readily available during the hours of laboratory operation. They must be kept stocked at all times. Kits can be obtained from UDMart.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C36	Chemicals stored alphabetically (Not by Hazard)? Organic Acids stored with Inorganic Acids? Pyrophorics and water reactive chemicals not stored in designated areas? Oxidizing chemicals stored with flammable liquids or organic materials? <i>Chemicals need to be stored by hazard class, not alphabetically, i.e. Reactives, Flammables, Poisons, Oxidizers, Inorganic Acids, Organic Acids, Caustic Materials, etc. See http://www.udel.edu/OHS/chemcompatstorage.html. Chemicals should be removed via the hazardous waste program before the expiration date is reached. Pay close attention to special storage requirements such as refrigeration, dry atmospheres created by desiccant, inert atmospheres, etc.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C37	Chemicals stored improperly (liquids above eye level, on a shelf without a lip, on the floor, not in an approved cabinet, etc)? <i>Liquids must not be stored above eye level and should be stored in the appropriate cabinet in secondary containment. Chemicals must not be stored on the floor. Whenever possible all shelves used to store liquid chemicals should have a lip.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C38	Flammable and combustibles not stored properly (in residential refrigerators or not in flammable liquid cabinets)? <i>Flammables and combustible chemicals must be stored in refrigerators or freezers that are lab safe or explosion proof. Regular</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

Category	Violation Code	Description	Yes	No	N/A	Deficiency Category
Chemical Concerns						
	C38	<i>refrigerators and freezers should bear the caution statement prohibiting storage of these materials. Contact DOHS at x8475 for these labels. Flammables and combustible materials should be stored in flammable storage cabinets wherever possible and always kept away from ignition sources.</i>				
	C39	Chemical containers, including wash bottles, soaps, etc not labeled or labels are damaged, fading, improper? <i>All chemical containers must be labeled and the labels must be securely affixed to the container. Reaction flasks must be labeled as well. Abbreviations or trade names should not be used to label containers. Common chemical or IUPAC nomenclature should be used.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C40	Excessive quantities of chemicals? <i>Quantities of chemicals kept in the lab should not be excessive. Outdated chemicals should be disposed of using proper disposal methods outlined in the flow chart for waste management procedures. See http://www.udel.edu/OHS/chemcompatstorage.html for more information.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C41	No Standard Operating Procedures or approvals for Highly Toxic, Carcinogenic Materials Reproductive toxins or for highly hazardous work such as explosive materials, pyrophoric materials or vacuum and pressure operations? <i>All work with chemicals that are Highly Toxic, Carcinogenic Materials Reproductive toxins or highly hazardous work such as explosive materials, pyrophoric materials or vacuum and pressure operations require a Standard Operating Procedure. See http://www.udel.edu/OHS/labsop.html and http://www.udel.edu/OHS/toxiccarcinogenicprogram.html.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C35A	Laboratory personnel not trained in proper hazardous material spill response and clean up protocols? <i>A laboratory pesonnel must know how to safely and properly respond to and clean up a hazardous materials spill. Training is offered by DEHS. Laboratory spill clean up procedures are found at http://www.udel.edu/OHS/chemspillkit/chemspillguide.html.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C73	Peroxide formers, such as ethyl ether and tetrahydrofuran, not dated when the material was recieved and when opened. Material is stored past the manufacturer's expiration date. <i>Date all peroxidizables upon receipt and upon opening. Unless an inhibitor has been added by the manufacturer, materials should be properly disposed of after 18 months from the date of receipt or 3 months from the date of opening. If an inhibitor is added, dispose of the material based on the manufacturer's expiration date.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C75	Mercury thermometers and metallic mercury use? <i>Laboratories should eliminate the use of metallic mercury. Replace all mercury thermometers with digital or alcohol thermometers. Eliminate metallic mercury monometers and sphygmanometers (blood pressure units). Contact EHS for proper disposal and recycling of the units and equipment.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Compressed Gas						
	C62	Unnecessary or improper storage of gas cylinders?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

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Compressed Gas						
	C62	<i>Gas cylinders should not be stored in laboratories unless they are being used for the current operation. Empty cylinders should be moved out as soon as possible. Some gas companies will accept their cylinders back empty or partially full. These companies should be used to minimize chemical waste.</i>				
	C63	Storage of gas cylinders between a user and an exit, in an egress aisleway, or in an area without proper ventilation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C64	Gas cylinder not capped, restrained or labeled as appropriate? <i>Caps should be kept on the cylinders when not in use. Cylinders need to be individually restrained by chains at approximately two-thirds height from the floor. Gas cylinders must be labeled with the contents. Unknown gas cylinders are very hazardous and expensive to dispose of.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C65	Improper lines or regulators on compressed gas systems? <i>Gas supply lines need to be compatible with the gas being used. The suppliers can provide information about proper line material. The lines also must be rated to handle 2 ½ times the pressure used.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C66	Regulators not inspected? <i>Regulators should be replaced or recertified on a regular basis. Laboratories must have a regulator inspection program in place. Regulator types are matched to the type of cylinder and gas being used. Contact the gas supplier with questions.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C67	Lab personnel have not received training on compressed gases and gas cylinder safety? <i>Laboratory personnel must receive task and chemical specific training on all processes, chemicals, equipments and hazards in the laboratory. DOHS can provide some of this training. Contact DOHS for more information.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Electrical						
	C15	Frayed power cords, unsafe electrical operations, open/exposed wires, grounding prong removed, etc? <i>Adequate electrical service is necessary in the lab to avoid the use of unsafe practices such as permanent use of extension cords. Electrical equipment must be maintained in good condition.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C16	Extension Cords in use? <i>Extension cords are allowed for temporary use provided the weight of the cord is adequate for the load applied. Contact Electrical Services x2621 for additional guidance. Check to be sure the extension cord is three pronged and that no cords are frayed. Multiplug devices are allowed provided they are UL listed with a built-in circuit breaker and used in accordance with the manufacturer's intended use. See Policy 7-13: Extension Cords.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C17	Circuit Breakers unidentified (if the lab has access to the panel box)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

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Electrical	C17	<i>Circuit breakers that service laboratory equipment should be identified as such. Contact Electrical Services for assistance.</i>				
	C18	No Ground Fault Protection on outlets within 36 inches of a water source? <i>Outlets located near sinks (within three feet) or other sources of water should be on a ground fault circuit or otherwise ground fault protected. Contact Electrical Services for assistance. Departmental/Laboratory funds will be required to install ground fault outlets.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Engineering Controls and Ventilation	C58	Fume hoods, local exhaust ventilation, biosafety cabinets required, but not available? <i>If operations in the lab involve materials which present an inhalation exposure hazard, a fume hood, LEV or biosafety cabinet must be available for use. These operations include, but are not limited to, work with carcinogens, reproductive toxins, acutely toxic materials, flammable liquids, materials with high vapor pressures, dusts, mists, volatile materials, soldering operations, welding operations, or with any chemical that has an occupational exposure value.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C59	Fume hoods, LEV's or biosafety cabinets not inspected as appropriate? Audible/Visual Alarm not functioning. <i>Fume hoods and LEV's are inspected by the DOHS for proper operation twice per year. Biosafety cabinets are inspected annually. An inspection tag should be present to verify this. The acceptable flow rate is approximately between 90 and 115 linear feet per minute.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C60	Improper use of fume hoods LEV's or biosafety cabinets? User working with sash above the marked approval level? Working in the front six inches of the hood? Open chemical bottles in the hood? <i>Fume hood work should be performed approximately six inches into the hood, i.e. not right at the front edge. The sashes should be positioned to produce the flow rate indicated on the certification sticker. Fume hoods should not be used for storage of chemicals. LEV's can only be used under certain circumstances. Biosafety cabinets should not be used in place of a fume hood. These cabinets should be certified annually and should have a current sticker. Check to be sure the cabinet is free from clutter.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C61	Fume hood cluttered, dirty or unorganized? <i>Large equipment must be raised about 1 inch from the fume hood deck. Only chemicals, materials and supplies for the current experiment or operation should be in the fume hood. Fume hoods must be kept clean and should be decontaminated on a periodic basis.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Fire Safety Concerns	C30	Fire extinguishers are not available, damaged, not accessible, blocked or not inspected? <i>Fire extinguishers should be located nearby and accessible from the hallway. They should be inspected monthly and bear two tags: one indicating the monthly University inspection and the other indicating the date of the last annual maintenance performed by the DOHS fire extinguisher inspection contractor. Check to make sure the extinguisher is charged and is not damaged. Report any deficiencies to Facilities at x1141. (See Fire Extinguisher Inspection Program)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

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Fire Safety Concerns						
	C31	Equipment or supplies within 18 inches of sprinklers head, heat detectors or audio/visual (strobe) devices? <i>If there are smoke/heat detectors, audio/visual devices or sprinklers in the lab, make sure that nothing is stored near them that would interfere with their intended operation. No storage within 18 inches of sprinkler heads. Some labs have automatic extinguishing systems in addition to sprinklers such as carbon dioxide, dry chemical or FM200. Visually check for physical damage or leaks. Report any deficiencies to Facilities at x1141.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C32	Excess combustible storage (paper, boxes, etc) or combustibles stored within 18 inches of hot surfaces or equipment? <i>Check for excess storage of combustibles or combustibles near any hot surfaces or equipment. Maintain at least 18 inches from hot surfaces or equipment.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C33	Special concerns, such as combustible trays/materials used in drying ovens, use of Bunsen burners not addressed? <i>If drying operations are performed in the lab, are procedures written for safe operation; i.e. are lab personnel instructed not to use combustible trays for holding materials to be dried? Limit the use of Bunsen burners. If necessary, move combustibles away and develop written safety procedures to train lab workers.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C34	Lab personnel not aware that all fires must be reported to Public Safety (911) even if they are extinguished without incident. <i>All fires must be reported to Public Safety (911) even if they are extinguished without incident.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
General Safety						
	C19	Poor Housekeeping? Egress aisle spaces less than 36"? <i>Housekeeping must be maintained so that the aisles are clear to allow for emergency egress. Could a person exit the lab quickly without tripping over objects? Storage is not permitted in exit ways (hallways). Materials, chemicals and debris should not be stored on the floor or in the path of egress.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C20	Tripping and/or slipping hazards exist? <i>Floors should be in good repair, i.e. no tripping hazards caused by cracks, holes, protrusions, missing tiles, ethernet cords, wires, hoses, tubing, etc.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C21	Surplus equipment in the laboratory? <i>Excess or surplus equipment should be disposed of or relocated to a storage location. When transferring equipment for disposal, be sure hazardous materials are removed prior to transfer.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

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General Safety	C22	Hot surfaces or equipment not protected and/or signed? <i>Hot surfaces or equipment should be posted with an appropriate warning sign or have a mechanism to indicate that the surface is hot.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C23	Residential refrigerators or freezers used to store food for human consumption, flammable, combustible or corrosive materials? Refrigerators and freezers not appropriately labeled? <i>Laboratory refrigerators and freezers are not allowed to be used for the storage of food or drink for human consumption. Refrigerators and freezers used to store flammable, combustible and corrosive chemicals must be approved and certified. Make sure they are signed appropriately. Signs are available through the DOHS.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C24	ANSI approved Safety Shower and Eye Wash blocked; not within 100 feet or 10 seconds in a chemical use area or not inspected? <i>Safety showers and eyewash units should be located in the lab or nearby (within 10 seconds). Safety Shower Eyewash must be in the laboratory if corrosive materials are used. They should be kept accessible at all times. They should bear a tag indicating an inspection within the last year by the Plumbing Shop. Eye wash units should be tested weekly by lab occupants wherever possible. (See Policy 7-29: Facility Safety Equipment). Eye Wash Station should be double stream and mounted in the sink or to the wall.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C25	Potable water not protected <i>Caution should be taken to prevent contamination of the potable water supply. Hoses connected to sink faucets should not extend below the plane of the sink surface or back flow preventers should be installed. (See Policy 7-30: Protection of Potable Water Supply)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C26	First Aid Kit not available or improperly stocked? <i>There should be a first aid kit available in case of minor injuries. It should be accessible during the hours of operation of the lab. It must be stocked as per Policy 7-04.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C27	Uncapped needles on the open bench top or on other work surfaces? Needles and syringes unsecured? <i>Needles and/or syringes must be kept secured at all times. This means kept in a locked drawer or cabinet or in a locked laboratory and under surveillance of lab personnel when the lab is unlocked. Do not leave uncapped needles in fume hoods or on laboratory benches.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C28	Insufficient emergency lighting? <i>Is there adequate emergency lighting? If there is a unit in the area, depress the test button to determine if the light is operational. Any problems should be reported to FIXIT or x1141.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C29	Ice machines or microwaves for laboratory use unlabeled or not labelled properly? <i>Laboratory microwaves or ice machines must not be used with food or drink for human consumption. Make sure they are signed as appropriately. Signs are available through the DOHS.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

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General Safety						
Other						
	C68	Items of concern/ observations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Personal Protective Equipment						
	C54	Improper laboratory attire? <i>In general, proper lab attire must consist of safety glasses, lab coats, gloves, pants/dresses that come below the knees and closed-toe shoes. Efforts must be made to minimize all exposed skin. Sandals, short skirts or shorts and sleeveless shirts are not appropriate for the lab.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C56	Laboratory workers not wearing eye protection or using improper eye protection? <i>Eye protection is mandatory in all University laboratories except laboratories used exclusively for computers. (See Policy 7-23: Eye Protection Policy)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C57	Workers wearing contaminated PPE, not managing contaminated PPE properly or wearing gloves in the hallways and/or non-laboratory areas? <i>PPE contaminated with chemicals must be stored, labeled and disposed of as chemical waste. PPE must not be worn in clean areas.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
Physical and Environmental Concerns						
	C46	Equipment not clean and operable? <i>All lab equipment should be clean and in good working order. Damaged/out of service equipment must be tagged and removed from the lab for proper disposal or repair.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C47	Insufficient laboratory lighting? <i>Laboratory lighting should be adequate for the tasks being performed. Special task lighting may need to be provided.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C48	Unprotected moving parts, belts, or entanglement hazards present? <i>All belts, blades or other moving parts on equipment should be guarded or otherwise protected.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C49	Excessive noise? <i>Some operations or equipment may produce noise at a level of concern. The DOHS has equipment to evaluate noise concerns.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2

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Physical and Environmental Concerns						
	C50	Sharp edges or points present? <i>Check for sharp edges or points sticking out on equipment, furniture etc. that could cause an injury.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C51	Shielding on potentially explosive operations, pressurized operations, or operations under vacuum not utilized/available? <i>Shields should be used when conducting experiments that could explode or if there is the possibility of a flying projectile or object.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C52	Laboratory is too hot or too cold? <i>Temperature ranges in the labs should be approximately between 65 and 75 degrees Fahrenheit</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C53	Wet floors? <i>If operations cause floors to be wet or slippery, mats should be used to help prevent slipping.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C69	No oil mist filters installed on oil filled vacuum pumps? Oil mist filters not maintained properly? Oil on the floor, in the exhaust lines or other indications of a leak or issue. <i>Vacuum pumps exhaust oil mist and toxic materials, depending on the specific operation, into the laboratory or laboratory exhaust. The oil mist collects on equipment, the floor and in the horizontal runs of the laboratory exhaust ductwork. The oil mist is a health hazard which can be magnified if organic solvents and other toxic materials are used with the vacuum pump systems. Install a manufacturer's recommended oil mist filter on the vacuum pump exhaust. • Maintain the oil mist filter based on the manufacturer recommendations. Some mist filters require the replacement of a filter matrix; others simply require the collected oil to be drained.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
	C74	High overhead storage unsafe or not secured. A rated/proper ladder not available to retrieve overhead storage <i>Overhead storage should be minimized. Liquids and heavy equipment/materials should not be stored overhead. Shelving must be rated for the weight. A ladder or other rated and safe mechanism must be in place to remove the equipment safely from the overhead storage.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2
Waste Management						
	C42	Excessive quantities of chemical waste (full containers or more than 55-gallons of waste) <i>Chemical waste should be removed from a laboratory in a timely manner. Do not allow too much chemical waste to accumulate. A chemical waste collection can be arranged by using the Waste Disposal Form-Chemical Waste Pick Up Request. See http://www.udel.edu/OHS/wastepickup.html. Follow the directions and fill out the necessary form. Contact DOHS at 831-8475 if you are unable to use the online form.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C43	Waste improperly stored or secured (improper container, not in secondary containment, open waste containers, improperly boxed infectious waste, etc)? <i>Waste containers (both liquid and solid) must be capped or sealed at all times unless material is actually being added. Waste containers must be compatible with contents. All liquid waste must be in a LDPE Nalgene type container or a Justrite container.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1

Category	Violation Code	Description	Yes	No	N/A	Deficiency Category
Waste Management						
	C43	<i>Liquid waste must be stored in a secondary container. Do not fill liquid waste containers over 90% full. Solid waste should be kept in a properly labeled sturdy cardboard box lined with a heavy plastic bag, currently provided by DOHS. The DOHS has a laboratory waste flow chart available for persons not familiar with waste management procedures. This poster should be displayed near the chemical waste storage area.</i>				
	C44	Waste improperly labeled with a DOHS Orange Chemical Waste Label? Labels not available? <i>All wastes must be labeled with tags or labels provided by the DOHS and stored according to the hazards associated with the waste. A supply of chemical waste labels should be readily available in the lab. Abbreviations or trade names must not be used to identify contents. Common chemical or IUPAC nomenclature must be used. Label every constituent added to the container, especially with heavy metals in the parts per million range. Unknowns are forbidden and if discovered will be disposed of at the department's expense.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C45	Evidence of improper waste disposal? <i>All chemical waste must be disposed of through the Chemical Waste Program. Normal trash cans or recycle bins should not contain inappropriate materials, i.e. used PPE or materials that can be construed as chemical waste. Sinks should be free of stains and waste containers should not be stored in close proximity to sinks unless they are in secondary containers. Clean broken laboratory glass is to be collected in "glass only" boxes, closed up and taken to the outside dumpster by lab personnel. Chemical bottles must be triple rinsed and the labels defaced prior to disposal as laboratory glass. Triple rinse labels are available from DOHS. All other chemically contaminated glassware must be disposed of as hazardous waste. Solid waste should be kept in a properly labeled sturdy cardboard box lined with a heavy plastic bag.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1
	C45A	Lab personnel have not received chemical waste disposal training? <i>All personnel who work with chemicals or have the potential to generate, or are generating, chemical waste must attend chemical waste training annually. Contact DOHS for more information.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2