

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|----------------|--|---------|--------------------|
| Space Registration and/or Green Card was not accurate and/or was missing. | GS-1 | General Safety | <p>Information on the hazards, activities and /or emergency personnel for room(s) in roomset for PI/Supervisor is not up- to-date in the PI Space Registration system. This should be kept current on an ongoing basis and reviewed at a minimum of once a year.</p> <p>Green Card outside of lab/space is not accurate or missing. The Green Card is used to: (1) to be able to contact personnel 24 hours a day if an emergency occurs inside the lab/space and (2) an emergency outside the lab impacts lab equipment (e.g. water leak that may damage equipment). Knowledgeable personnel could provide valuable information about the current hazards to the MIT Emergency Response Team and the Fire Dept.</p> | * | Y |
| Rooms were not posted with warnings for the hazards present in the room. | GS-2 | General Safety | <p>One or more of the following signs required due to potential hazards as determined by PI space registration might be missing: high voltage, fire hazard, hearing protection, e.g. etc.</p> <p>Reference: OSHA Lab Standard 29CFR1910.1450 and NFPA 45</p> | | Y |
| Required EHS training was not up to date. | GS-3 | General Safety | EHS Training must be kept up to date for all current personnel. | | Y |
| Lithium ion batteries or battery packs not properly stored or charged. | GS-4 | General Safety | To reduce the flammability hazard of lithium ion batteries, Li-ion batteries used in research applications should be properly stored and charged. Batteries should only be used with the appropriate charger and should be attended while charging. Do not charge or store on a combustible surface or near combustible materials. Batteries that are hot, damaged or bulging should be disconnected and properly disposed of. Refer to the EHS guidance on lithium ion batteries for details on battery safety, handling and storage. | | Y |
| There was evidence of spills not properly cleaned up. | GS-5 | General Safety | Evidence of spills not properly cleaned up may include: liquid or solid residues, stains, discolored surfaces or puddles anywhere in space, including around benches, floors and/or equipment. | | Y |
| There was evidence of eating and/or drinking in the area. | GS-6 | General Safety | <p>No eating, drinking, gum-chewing or applying cosmetics are allowed in the lab/space. Do not store food, drink, cups or other eating and drinking utensils in the lab/space. Additionally, empty food or drink containers/wrappings must not be disposed of in the lab/space trash can, even if consumed outside the lab/space.</p> <p>Reference: Massachusetts Department of Public Health 105CMR120</p> | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|----------------|---|---------|--------------------|
| Compressed gas cylinders were not properly secured and/or labeled. | GS-7 | General Safety | <p>Compressed gas cylinders must be properly restrained and labeled. Wherever feasible, cylinders should be restrained singly, by use of a separate restraint system for each cylinder. If multiple cylinders must be restrained by a single restraint such as a belt or chain, the restraint system must be sufficient to prevent any of the cylinders from falling or rolling.</p> <p>Standing cylinders are properly restrained when a tight, sturdy chain or belt restraint is used around the body of the cylinder but above the center of gravity (about 2/3 of the way up the cylinder) at all times, including when empty. If the restraint is not tight or is too low on the cylinder, a cylinder may tip with enough force to break the restraint. The restraint must either be securely attached to a wall or sturdy work surface. Alternatively, a gas cylinder stand designed for holding cylinders may be used.</p> <p>Storing cylinders on a cart is not an acceptable storage method and the cart should be used for transport only.</p> <p>All compressed gas cylinders need to be clearly labeled as to their contents for obvious operational and emergency response purposes.</p> <p>OSHA 29 CFR 1910.101 references the Compressed Gas Association. The GCA outlines the required in-plant handling and storage practices for compressed gas cylinders.</p> <p>Reference: OSHA 29CFR1910.101 MIT EHS SOP, Compressed Gases</p> | | |
| Personnel were not aware of or following drain disposal guidelines. | GS-10 | General Safety | <p>Drain disposal guidelines must be followed. The EHS Office has developed a list of chemicals and materials that may be discharged into sinks or floor drains based on regulatory requirements, MIT EHS policy and professional judgment regarding the potential impact of a chemical if discharged down the drain. Only materials that are described in these guidelines may be discharged to drains unless authorized by EHS.</p> <p>Discharge pH must be maintained between 5.5 and 12. Some drains may be connected to treatment systems. Materials with a pH below 2 or above 12 must generally be collected as a hazardous waste. Tap water cannot be used for vacuum aspiration of chemicals or for non-contact cooling purposes.</p> <p>Inspect sink areas to determine if there is evidence of chemicals being disposed to drain, vacuum aspiration or non-contact cooling with tap water. If there is evidence or likelihood of drain disposal, ask persons working in the area what gets disposed to the drain and if they are aware of the guidelines. For more information, visit www.ehs.mit.edu and search "water."</p> | * | |
| Mechanical lifting equipment use was not restricted to only trained employees/not secure from unauthorized use. | GS-11 | General Safety | <p>An individual in the DLC who possesses the appropriate hoisting license will be the designated person responsible for the hoisting equipment program within the DLC. The remaining employees that operate hoisting equipment in the department will work under the designated person's license. Equipment operators shall be required to complete the Crane and Hoist Safety training and if using forklifts, the Powered Industrial Trucks training. Hoisting equipment includes: overhead hoists, overhead cranes, lifting devices, powered platforms, powered industrial lift trucks and fork lifts.</p> <p>Reference: 520 CMR 6.00: Hoisting Machinery MIT EHS SOP, Regulations / Guidelines for Powered Industrial Trucks</p> | | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|----------------|---|---------|--------------------|
| Lock Out Tag Out procedures were not followed where required. | GS-12 | General Safety | <p>All equipment required to have the energy source locked out during maintenance and repairs must be identified. All sources of energy are included: mechanical, electrical, hydraulic, pneumatic, chemical, and thermal.</p> <p>This would not include equipment where the energy is controlled completely by unplugging the equipment from an electric outlet and where the person doing the service or maintenance has exclusive control of the plug.</p> <p>OSHA requires that workers or researchers that service or maintain machines or equipment where the unexpected startup, energization, or the release of stored energy could cause injury, be protected from this potential hazard. The Lockout/Tagout standard requires the adoption and implementation of practices and procedures to shut down equipment, isolate it from its energy source(s), and prevent the release of potentially hazardous energy while maintenance and servicing activities are being performed. Locks are supplemented by DANGER tags which identify the person responsible for the lock out, the reason, date, etc.</p> <p>If this equipment is identified, contact EHS for further guidance.</p> <p>Reference: OSHA 29 CFR 1910.147</p> | * | Y |
| There was no Lock Out Tag Out kit available where required. | GS-13 | General Safety | <p>DLCs are required to have a Lock Out Tag Out kit with equipment for locking out energy sources when equipment required to be locked out is identified in the DLC. See GS-12.</p> <p>Reference: OSHA 29 CFR 1910.147</p> | | |
| An appropriate sign was not posted at a known confined space. | GS-14 | General Safety | <p>All confined spaces must be identified. A confined space meets all of the following criteria:</p> <ol style="list-style-type: none"> 1. Is large enough and so configured that a person can bodily enter and perform assigned work. 2. Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry). 3. Is not designed for continuous person occupancy. <p>Workers who are exposed to confined spaces must be informed of this by posting danger signs, or through other equally effective means. The information that must be communicated is the existence of the location, and other dangers from the confined space.</p> <p>If confined spaces are identified, contact EHS for further guidance.</p> <p>Reference: OSHA 29 CFR 1910.146(c) (2)</p> | * | Y |
| No railings in place for a platform, scaffold, and/or work surface higher than 4 feet. | GS-15 | General Safety | <p>OSHA regulations require that any platform, scaffold or work surface, permanent or temporary, that is 4 feet or greater in height be guarded by railings. If this is not feasible, then fall protection (e.g. harness & lanyard) are necessary. This would include temporary platforms on equipment that was being serviced, maintained, repaired, adjusted or tested.</p> <p>Reference: OSHA 29 CFR 1910.23</p> | * | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|----------------|--|---------|--------------------|
| Trip hazards/floor holes/openings not properly covered or guarded. | GS-16 | General Safety | Every hole, floor opening, open sided floor, pit, in which a person may fall or trip shall be guarded by the appropriate means. Specific applications are detailed in 29CFR1910.23 | | Y |
| The appearance of the area was not neat, orderly and clean. | GS-71 | General Safety | Poor housekeeping can lead to trip/fall hazards, as well as life/fire safety code violations. Examples of poor housekeeping include: storage of materials in aisle ways between laboratory benches, restricted or block exits, cluttered work surfaces, desks and bench tops, as well as blocked emergency equipment. Waste containers of all types should be emptied on a regular basis. Do not stack containers. Any items which must be stored in aisleways should be positioned on only one side. Aisleways in work areas must be maintained a minimum of 36 inches. Main corridors must be maintained a minimum of 44 inches. Leaks from pipes, ceiling or other facility related equipment should be reported immediately to the local facilities zone office. Caution tape, barriers or warning signs should be erected to warn others who may enter the area until such time as the leak has been repaired and the area cleaned. For general purpose storage, a rule of thumb is 15 pounds per sq. foot of wall mounted shelf. Heavy items should preferably be stored on free-standing storage shelving that has been designed for that purpose and the heaviest items should be stored on the lowest shelves. Avoid storing power supplies, monitors and CPUs on standard wall shelving that is intended for book storage. Storage must be kept a minimum of 18 inches from ceiling or wall mounted sprinkler heads. Storing items on the tops of fume hoods is prohibited. | | Y |
| Sharps were not properly managed. | GS-72 | General Safety | Non-contaminated sharps may include: blades and broken glass. Place these items in a puncture-proof container for disposal in the regular trash. For potential re-useable needles & syringes, dispose of them as contaminated sharps. Contaminated sharps include material having free liquids or gross contamination by hazardous chemicals. These are to be accumulated in accordance with MIT hazardous waste regulations in leak-proof, sealable, and puncture-proof containers. Containers are currently provided by the EHS Office for the accumulation of this waste. Signs of improper sharps management include overfilled containers (e.g., bouquet effect of pipettes for example), sharps in regular trash, disposal of intact chemical bottles and other non-sharp items in sharps containers and the inability to close the sharps container lid. Disposal of biological liquids and chemically contaminated liquids found in biological sharps container is also evidence of improper sharps management. To dispose of empty and intact chemical bottles, deface or remove label and place in a cardboard box for pickup. The box should be taped shut and labeled as "clean, unbroken glass bottles – trash" to be removed by custodial staff. Contact EHS for information regarding disposal of acutely hazardous chemical containers. Reference: 105 CMR 480 | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|------------------------|---|---------|--------------------|
| There was no sharps container in primary janitorial supply closet / other strategic location. | GS-73 | General Safety | To ensure there is not an accidental blood exposure to any employee or student, a sharps container must be available for disposing of any used needles, razors, or contaminated blades found on the grounds. Any contaminated or potentially contaminated material must be placed fully in the container, with no part protruding. The container should be puncture and leak proof, and have the proper "biohazard" symbol. The container should never be allowed to overfill, and therefore replaced whenever deemed necessary. Reference: 29 CFR 1910.1030(d)(2)(viii) and 1910.1030(d)(4)(iii)(A)(2)(i) | | Y |
| A Hazardous Communication summary sheet was not posted. | GS-74 | General Safety | The Hazardous Communication Standard requires that information about training, emergency phone numbers, and the location of the Material Safety Data Sheets (SDSs) that are relevant to the building / work area be posted in a team room or where chemicals are being stored. Reference: OSHA 29 CFR 1910.1200 | | |
| Refuse disposal area was not properly maintained or in clean condition and/or lacked sufficient capacity or covered containers. | GS-75 | General Safety | Keeping an orderly garbage disposal area is key to maintaining a comfortable environment. Garbage receptacles should be emptied as need and not allowed to overflow, which could cause an increase in odor and rodent complaints. Receptacles should also be kept away from areas where they could potentially disrupt egress routes. Reference: 29 CFR 1910.141(a)(4)(i) and (ii) | | Y |
| Other General Safety Finding (see details): | GS-99 | General Safety | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| Current emergency response information (e.g., flip charts, Response guide, Green Cards, etc.) was not appropriately posted in all required areas. | EP-1 | Emergency Preparedness | Green Cards see: GS-1 MIT Emergency Response Guide/ Flip Chart must be posted in every shop, hazardous waste area (SAA / MAA), and wastewater treatment area, and/or within every building in a prominent place. To order a Sign & Sticker, access the online order form by visiting ehs.mit.edu and searching "signs." Evacuation maps must be placed: next to doors leading to fire rated egress stairwells, next to elevators, and other appropriate locations that the emergency coordinator and EHS have designated. EHS Coordinators should check with their EHS Lead Contact to determine other required postings. Reference: OSHA Lab Standard 29CFR1910.1450 Fire Protection for Laboratories Using Chemicals, NFPA 45 OSHA 29CFR1910.38 Life Safety Code, NFPA 101 | | Y |
| Emergency eye wash stations/drench showers were obstructed. | EP-2 | Emergency Preparedness | Eyewash station / drench shower must be readily accessible and the locations clearly marked with signage. Remove any obstructions around eyewashes or beneath showers that would hinder the proper use of the eyewash or shower. | | Y |
| Emergency eye wash stations/drench showers were not appropriately tested / inspected / tagged. | EP-3 | Emergency Preparedness | Regular testing and inspection must be performed to ensure equipment readiness in the event of an emergency. Safety Showers – run/tested twice yearly (Department of Facilities) Plumbed eyewash stations – run/cleaned on a weekly basis (DLC) Portable eyewash units – inspected to ensure that bottles are full and that expiration date is current (DLC) | | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|------------------------|--|---------|--------------------|
| Area was not equipped with sufficient drench showers and eye wash stations. | EP-4 | Emergency Preparedness | <p>Eye wash and drench showers are required where injurious corrosive materials are present. Inspection and maintenance is outlined by the American National Standard for Emergency Eyewash and Shower Safety. This standard applies to the design, location, testing, performance and maintenance of eyewash and safety showers.</p> <p>Reference: OSHA 29CFR1910.151 248 CMR 10.00 527 CMR 10.00 Z358.1</p> <p>Contact EHS for further guidance, including options to install additional units.</p> | ANSI * | |
| Fire extinguisher tag missing, outdated or monthly inspections not documented on tag. | EP-5 | Emergency Preparedness | <p>OSHA requires portable extinguishers to be visually inspected monthly. Inspection items include ensuring fire extinguisher is properly charged, ring pin and tamper seal are intact, extinguisher is in good condition. Fire extinguisher tag should be initialed and dated each month indicating that this inspection was completed. Contact Department of Facilities to replace tag or test and retag extinguisher.</p> | | Y |
| Fire extinguisher was missing, discharged, or inaccessible. | EP-6 | Emergency Preparedness | <p>Portable fire extinguishers must be readily accessible and not blocked by equipment or other obstruction, so they are available to either trained lab personnel or emergency personnel in the event of a fire.</p> <p>Reference: OSHA 29CFR1910.157 527 CMR 10.00 Portable Fire Extinguishers, NFPA 10</p> | * | Y |
| Fire alarm or other emergency strobe lights were obstructed. | EP-7 | Emergency Preparedness | <p>Storage must be kept away from strobe lights (at least 12 inches) so that the flashing light can be seen in all directions in an emergency.</p> | | Y |
| Clearance around sprinklers was less than 18". | EP-8 | Emergency Preparedness | <p>The clearance below and horizontally from the top of the sprinkler head must be 18 inches or greater from any storage/shelving/items.</p> <p>Contact EHS for further guidance.</p> | | Y |
| Chemical/biological spill kit was not readily available / missing / misplaced / supplies are not available. | EP-9 | Emergency Preparedness | <p>Biological: The spill kit should include: disinfectant (i.e. Preempt), gloves, safety glasses or face shield, shoe covers, paper towels or other absorbent material, tongs/forceps, sharp shuttle, trash bags for disposal, copy of the SOP, etc. There should be enough absorbent materials to deal with a biological spill of the dimension of a dinner plate.</p> <p>Chemical: Spill response equipment should be available to respond to minor spills of the hazardous materials present in the space. This could be as simple as paper absorbents for areas with minor chemical use. For larger users this should include a dedicated response "kit" which would include appropriate PPE, absorbents or neutralizers suitable for the types of materials used, disinfecting agents for biologic agents if applicable and containers or bags for collection of the debris. If floor drains are present, it should include material to cover or protect the drain.</p> <p>Chemical Spill kits can be customized and ordered through the EHS Office for a fee email: environment@mit.edu</p> | | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|------------------------|---|---------|--------------------|
| Evacuation maps were not posted. | EP-71 | Emergency Preparedness | Evacuation maps should be clearly marked to show building occupants their escape routes (minimum of two safe routes). Evacuation maps must be placed: next to doors leading to fire rated egress stairwells, next to elevators, and other appropriate locations that the Emergency Preparedness Coordinator and EHS have designated. Reference: OSHA 29 CFR 1910.38, NFPA Life Safety Code CH 7.4 | | |
| Non-functional or blocked illuminated exit signs. | EP-72 | Emergency Preparedness | Exit signs must be kept clear and visible at all times. Illuminated signs must be powered by a reliable source; batteries should not be a primary source of power. An unlit sign should be repaired as soon as possible. Reference: NFPA Life Safety Code, Ch 7.8 | | Y |
| Evacuation routes were not clear and accessible. | EP-73 | Emergency Preparedness | Anything that impedes a person's ability to exit a building during an emergency must be removed. This includes bicycles, furniture, supplies or other items that are stored either permanently or temporarily in corridors or near designated fire exits. Aisles should be maintained at a width of 44 inches. If photo-luminescent exit signs are used, they must be exposed to light at a strength of 5 foot candles. Reference: 29 CFR 1910.37 (a) (3) | | Y |
| Fire doors were propped open. | EP-74 | Emergency Preparedness | Fire doors are constructed of flame retardant materials to maintain a barrier between building occupants and fire. If doors are propped open, smoke (or flames) can enter the protected areas, rendering the exit unusable. Fire doors should always be closed, the only exception being if the door is connected to a fire alarm system hold-open device that will release upon fire alarm activation, allowing the door to close automatically. Reference: 29 CFR 1910.36 (a) (3) | | |
| Fire extinguishers were not located within 25 feet of flammable storage. | EP-75 | Emergency Preparedness | Any storage unit containing flammable materials, such as liquids or aerosols, must have a fire extinguisher rated at a minimum of 12-B units (able to cover a 12 square foot area). The extinguisher must be located no more than 25 ft from the storage unit, and cannot be obstructed or covered in any way. Reference: OSHA 29CFR1910.106(d)(7)(i)(b) | | |
| Other Emergency Preparedness Finding (see details): | EP-99 | Emergency Preparedness | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| There was no current exposure control plan (ECP) where applicable. | BS-13 | Biological Safety | A current Exposure Control Plan (ECP) is required in all areas where there is an occupational risk of exposure to human blood, body fluids, and/or human cell lines, or other human-derived materials. The ECP should be kept in a location that is available and known to all personnel. The ECP is submitted to, and reviewed by, the Biosafety Program annually. Each specific ECP is the responsibility of the PI or area supervisor (in non-lab spaces). Reference: The OSHA Bloodborne Pathogen Standard (BBP), OSHA 29 CFR 1910.1030. | * | |
| There is no current exposure control plan in the team room(s). | BS-71 | Biological Safety | The Exposure Control Plan should be kept in a location that is available and known to all personnel. Reference: The OSHA Bloodborne Pathogen Standard (BBP), OSHA 29 CFR 1910.1030. | * | |
| Other Biological Safety Finding (see details): | BS-99 | Biological Safety | See finding details or ask your EHS DLC Coordinator for more information. | | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|------------------------|--|---------|--------------------|
| Hazardous liquids were stored above eye level. | CS-1 | Chemical Storage & Use | No corrosive, toxic, reactive or flammable liquid should be stored where it is difficult for any employee to reach without having a clearview, i.e. eye level, because of the risk that the container could be dropped during handling, presenting a significant hazard. In addition, potential problems with containers, i.e. leaking or damaged, are obscured when the hazardous liquids are not in clear view. | | |
| Chemical containers were not properly labeled. | CS-2 | Chemical Storage & Use | Labels for all containers, including containers of non-hazardous materials, must identify contents of container and must be legible. Abbreviations may be used, but all personnel need to know either what the code or abbreviation means, or where to access the key to the code. The key must be in a prominent location. Labels must be firmly affixed. Working containers that are not the original container for a product must be labeled with chemical product name and chemical hazard, as found on the original label. | | Y |
| Incompatible chemicals were stored together. | CS-3 | Chemical Storage & Use | Detailed guidance for compatible storage can be found in the Chemical Storage SOP. The greatest concern is with liquids, but solids and liquids together also should be scrutinized for compatibility issues. Some common problems are: Organic acid stored with oxidizing acid, e.g. acetic acid and nitric acid. Acids and bases stored together. Anhydrides should be separated from all other materials wherever they are stored. Different anhydrides should be stored separately from each other. Organic chemical stored with oxidizing chemical, e.g. acetone and hydrogen peroxide. Cyanides (solid or liquid) stored with acids, or other liquids (not common, but a bad situation). Water reactives stored near liquids. Secondary containment can be used to isolate incompatible materials where space is limited for separate storage. | | Y |
| Liquid chemicals were stored on the floor without secondary containment. | CS-5 | Chemical Storage & Use | Liquid chemicals must be stored on the floor in appropriate secondary containment. Containers on the floor must be appropriately placed, e.g. not in high traffic areas or blocking egress paths, to minimize the possibility of damage to the container. Chemicals that remain in their original DOT packaging do not need secondary containment. | | |
| Chemical containers were in poor condition. | CS-7 | Chemical Storage & Use | Containers and caps should be intact, not dented, cracked or rusted. | | |
| SDSs were not readily accessible. | CS-8 | Chemical Storage & Use | Personnel working with chemicals should know how to quickly obtain an SDS. Where the number of chemicals is usually limited, it is recommended that the SDS be available in a notebook. SDSs can be obtained from a variety of sources such as the internet, the chemical manufacturer, or by contacting the EHS Office for assistance. | | |
| Chemicals were not stored appropriately when not in use. | CS-71 | Chemical Storage & Use | Improper chemical storage can include but is not limited to: leaving flammables outside of an approved cabinet, leaving cans or bottles unstoppered, or storing incompatible materials together. | | Y |
| Flammable liquids were not stored in approved flammable storage cabinet or room marked "FLAMMABLE." | CS-72 | Chemical Storage & Use | The purpose of this requirement is to ensure that flammable liquid or aerosol containers are protected in the event of a fire. Cabinets should have a conspicuous label which reads "Flammable - Keep Fire Away." Reference: 29 CFR 1910.106(d)(3)(ii) and 1910.106(d)(3)(ii)(a) | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|----------------------------------|---|---------|--------------------|
| Other Chemical Storage Finding (see details): | CS-99 | Chemical Storage & Use | <p>Some additional possible findings: The storage area is quite dirty or excessively corroded.</p> <p>The storage area has insufficient ventilation, e.g. non-flammable but volatile toxics stored in a closet or other space with no ventilation.</p> <p>A high quantity of seldom-used hazardous materials is present, indicating failure to maintain good accounting of materials present or failure to dispose of materials no longer needed.</p> <p>Storage space is limited, causing chemicals to be crowded together or stacked on top of one another.</p> <p>Chemicals are stored in an inappropriate cabinet.</p> | | Y |
| Gas piping, regulators or other components in poor condition, incompatible or not appropriate for use. | CG-3 | Compressed Gas & Cylinder Safety | Dented, rusted or otherwise damaged regulators should be replaced or serviced. The regulator should be appropriate for the gas and the cylinder and delivery pressure. Teflon tape is only needed on tapered fittings, where the threads form the seal. The tubing should be appropriate for the gas being used. Oxygen service requires a specialty regulator and piping. If you are unfamiliar with gas piping and components refer to the EHS Compressed Gas SOP and consult with knowledgeable personnel. | | Y |
| Gas monitoring system not present or functioning properly. | CG-6 | Compressed Gas & Cylinder Safety | EHS should be involved in the design and installation of gas monitoring systems. A program should be implemented for periodic maintenance and calibration of all detectors and testing of alarm systems according to the manufacturer's recommendations. This requirement should include any local or portable alarm systems. Any malfunctions or deficiencies should be addressed immediately. | * | Y |
| Toxic or flammable gas monitoring system (TGMS) not present or functioning properly. | CG-6-1 | Compressed Gas & Cylinder Safety | Toxic gas use that occurs outside of a fume hood and/or with quantities greater than those in a lecture bottle requires a Toxic Gas Monitoring System (TGMS). Monitoring for flammable gases may be required based on a risk that evaluates quantity, location, equipment. | * | Y |
| Oxygen monitoring system not present or functioning properly | CG-6-2 | Compressed Gas & Cylinder Safety | Oxygen monitors are required when the possibility of a low oxygen atmosphere exists due to limited ventilation, room size or potential for a large release. Since the sensors for most oxygen monitors use fuel as they operate, they may last only 12 to 18 months. When the sensors are spent, the monitor output, which is normally 20.9%, will drift and attempts to calibrate the monitor may fail. | * | Y |
| Chemical waste containers were not firmly closed. | SAA-1 | Satellite Accumulation Area | <p>Chemical waste containers must be firmly closed except when waste is being added to the container. A container is considered closed if material will not pour out if the container is tipped and vapors are controlled.</p> <p>Pressure relieving caps should be used for hydrogen peroxide and wastes which may continue to react and generate pressure.</p> <p>If attached funnels are used, they must be liquid tight and have closed covers. Reference: 40 CFR 265.173</p> | | |
| Multiple waste containers of a single waste stream were within an SAA. | SAA-2 | Satellite Accumulation Area | <p>Hazardous waste regulations permit only one active container of hazardous waste per process in a given SAA. Once the active container is filled and dated, a second container of the same waste stream can be started. The full container must be removed from the SAA within 3 days. (The three day issue for full containers is dealt with in SAA5). The container size cannot exceed 55 gallons for hazardous waste and 1 quart for acutely hazardous waste.</p> <p>If full containers are noted in an SAA check the date and ensure that a request for pickup has been generated online at the MIT EHS website or by calling the MIT EHS office at x2-3477. Reference: 310 CMR 30.340(6)(c) and Fact Sheet published by the MA DEP in September 2005</p> | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|-----------------------------|--|---------|--------------------|
| Chemical waste containers were inappropriate or in poor condition. | SAA-3 | Satellite Accumulation Area | <p>Chemical waste containers should be of seamless construction and not cracked or otherwise damaged. Typically, triple- rinsed glass or plastic bottles of various sizes are used, with original labels removed or fully obscured. Containers must have lids that are in good condition. Venting or pressure relieving covers should be used for wastes which may continue to react and build pressure. Obviously inappropriate containers, such as makeshift containers, food containers, etc., should not be used.</p> <p>Containers must be compatible with the waste stored in them, e.g. Hydrofluoric acid should not be stored in glass container, corrosives not in metal containers.</p> <p>Chemical compatibility tables and charts are available for basic and common questions where chemicals are stored. For more information, search "chemicals" at EHS.MIT.EDU. Reference: 310 CMR 30.340 and 30.253</p> | | Y |
| Tags or labels on chemical waste containers were missing, incomplete, inaccurate or not legible. | SAA-4 | Satellite Accumulation Area | <p>The "Hazardous Waste" tags must be properly completed with the following information: Name of chemical(s) printed legibly in English without abbreviations or chemical formulas. The applicable hazard characteristic(s) checked, i.e. ignitable, corrosive, reactive, and/or toxic. The building and room where the waste was generated. The generator's name, i.e. the name of the person responsible for creating the specific waste stream. The name of the Principal Investigator/Supervisor overseeing the activity resulting in the hazardous waste generation. Once a container in a SAA is or nearly full, e.g. to the bottle shoulders, the date must be written on the label. Hazardous waste tags are available from the MIT EHS Office. Reference: 40CFR262.34 and 310 CMR 30.341</p> | | Y |
| Dates on labeled containers with the SAA were over 3 days old. | SAA-5 | Satellite Accumulation Area | <p>All containers, full or otherwise ready for collection must be dated. Once dated, they can be kept in an SAA for a maximum of three days. Then they must be removed. If full containers are noted in an SAA, check the date and ensure that a request for pickup has been generated online at EHS.MIT.EDU or call the MIT EHS office at x2-3477.</p> <p>Reference: 310 CMR 30.340</p> | | |
| The label identifying the SAA was missing. | SAA-6 | Satellite Accumulation Area | <p>MIT requires that a sign that reads "HAZARDOUS WASTE SATELLITE ACCUMULATION ONLY" be used at each SAA to meet Environmental Protection Agency (EPA) requirements. This sign should be readily visible on the secondary containment(s) or the immediate area to be used as an SAA. Other signs are not acceptable.</p> <p>You can obtain SAA labels from the EHS Office.</p> <p>Note: Green-and-white barber pole tape is used for Main Accumulation Areas (MAA).</p> <p>Reference: 40 CFR 260</p> | | |
| Incompatible wastes were not properly segregated. | SAA-7 | Satellite Accumulation Area | <p>Incompatible wastes cannot be stored in the same secondary containment, so that in the event of commingling (from breakage or other localized spill or release) there will be no reactivity issues. Reference: 40 CFR 264.175</p> | * | Y |
| There was lack of appropriate secondary containment. | SAA-8 | Satellite Accumulation Area | <p>All chemical waste containers must be provided with secondary containment that is free of cracks or other damage. The MIT Environmental Management Program (EMP) provides and/or approves secondary containment for all hazardous waste storage areas. Reference: 40 CFR 264.175</p> | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|-----------------------------|---|---------|--------------------|
| The SAA location was not appropriate. | SAA-9 | Satellite Accumulation Area | SAAs must be located near the point of waste generation. For example, if the generator has to go through a hallway or other public access area to get to his/her hazardous waste accumulation area, it cannot be considered at or near the point of generation. SAAs should not be near drains, sinks, or at locations where an accidental release could create a "release to the environment" such as near a sump pump or an unpaved or non-impervious areas (e.g., broken concrete floor). Reference: 310 CMR 30.340 and 40 CFR 260 | | Y |
| Hazardous waste was kept outside a properly marked SAA. | SAA-10 | Satellite Accumulation Area | Hazardous waste must be kept in a properly marked SAA. Reference: 310 CMR 30.340 and 40 CFR 260 | | |
| Non-waste materials were kept in an SAA. | SAA-11 | Satellite Accumulation Area | Hazardous waste and only hazardous waste must be kept in a properly marked SAA. | | |
| SAA(s) was (were) not inspected weekly. | SAA-12 | Satellite Accumulation Area | SAAs MUST be inspected weekly, though documentation of the inspection is not required. If weekly inspections are being done by users, problems should be minimal. Ask whether inspections are occurring and check the response against conditions you observe. Reference: 310 CMR 30.686 and 40 CFR 260 | | |
| Multiple findings were identified in an SAA area (see details): | SAA-98 | Satellite Accumulation Area | Multiple findings were identified in a single SAA (see details). | * | Y |
| Other SAA Finding (see details): | SAA-99 | Satellite Accumulation Area | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| The signage identifying the MAA was missing. | MAA-71 | Main Accumulation Area | The area must be clearly labeled with a sign that states "HAZARDOUS WASTE" in capital letters at least one inch high. Reference: 310 CMR 30.341(4) | | |
| There was lack of appropriate secondary containment. | MAA-72 | Main Accumulation Area | Underlying all containers shall be a base which is free of cracks and gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed. Reference: 310 CMR 30.342(1)(e)(1) | | |
| Chemical waste containers were inappropriate or in poor condition. | MAA-73 | Main Accumulation Area | If waste is stored using an incompatible container there may be severe rusting and apparent structural defects to the container caused by the waste. For example, storing corrosive waste in a steel container. Reference: 310 CMR 30.683 & 30.684 | * | Y |
| Chemical waste containers were not firmly closed. | MAA-74 | Main Accumulation Area | Containers holding hazardous waste shall always be closed during storage, except when waste is being added or removed. Vented containers should be vented using pressure relief valves. Reference: 310 CMR 30.685 | | |
| Tags or labels on chemical waste containers were missing, incomplete, inaccurate or not legible. | MAA-75 | Main Accumulation Area | Containers holding hazardous waste shall always be labeled with the following information: a) the words "Hazardous Waste," b) the contents of the container, c) hazards associated with the waste and d) the appropriate date (in an MAA - the date the first drop goes in). Reference: 310 CMR 30.341(2) | * | Y |
| Dates on labeled containers within the MAA were over 90 days. | MAA-76 | Main Accumulation Area | Waste accumulated in an MAA must be shipped to a treatment facility for waste management within 90 days for a Large Quantity Generator (LQG) and 180 days for a Small Quantity Generator (SQG). Reference: 310 CMR 30.341(7)(8) | | |
| Hazardous waste was kept outside a properly marked MAA. | MAA-77 | Main Accumulation Area | Hazardous waste must be kept in a labeled MAA until the shipment period. Reference: 310 CMR 30.340 | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|-------------------------------|---|---------|--------------------|
| Spill supplies were not located nearby. | MAA-78 | Main Accumulation Area | Spill supplies should be readily available to clean up small spills as part of the Institute's Hazardous Waste Prevention, Preparedness, and Contingency Plan. Reference: 310 CMR 30.341 | | |
| Other MAA Finding (see details): | MAA-799 | Main Accumulation Area | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| PPE suitable for the hazards in the workplace was not available, stored appropriately, and/or maintained in generally good condition. | PPE-1 | Personal Protective Equipment | <p>All PPE must afford effective protection against the type of hazard present in the workspace, must fit and be worn properly, and must be stored and maintained so that the PPE does not become contaminated or exhibit wear and tear that diminishes its protective features.</p> <p>PPE includes protective headgear, earphones and earplugs, gloves (chemical, cut and heat/cold resistant), safety shoes/foot protection, respirators/masks, safety glasses/goggles/face shields, and any special clothing specifically designed to protect the limbs and body from chemical, biological, and other physical hazards. Since disposable PPE is not designed for repeated use, it must not be reused as pinhole tears and other failures not visible to the naked eye may develop.</p> <p>Instructions for obtaining PPE, as well as a PPE hazard assessment form, can be found by searching "PPE" at EHS.MIT.EDU. OSHA law requires MIT (or your employer if not MIT) to provide PPE free of charge, provided the PPE is not used as street clothes.</p> | * | Y |
| Respiratory protection was not appropriate, maintained or stored properly. | PPE-3 | Personal Protective Equipment | <p>Respirators must be stored in an area with a relatively consistent temperature and humidity and away from direct sunlight in order to remain in good, usable condition. Generally, it's good practice to keep respirator facepieces in their original bags or cases. Respirators must NOT be hung by the headstraps for storage – this can stretch out the headstraps and potentially warp the mask. Heavy items like books and tools should not be stored on top of respirators. Finally, respirators must be kept in a clean, relatively contaminant-free environment. Exposure to contaminants can not only degrade certain respirator parts but can also lead to the premature expiration of respirator filters and cartridges.</p> <p>Proper respirator care and storage will generally facilitate proper respirator maintenance. Respirators should be clean and free from visible damage (warping, cracking, tears, rusting). Headstraps should have plenty of elasticity. The view lens should be clear and free from cracks and excessive scratches. Finally, the valves (both inhalation and exhalation) should still be flexible, free of cracks and warping, and moving freely without sticking.</p> | | Y |
| Respirators are being used without an EHS evaluation and approval. | PPE-4 | Personal Protective Equipment | <p>All respirator users must consult with EHS and MIT Medical before using a respirator even if they use it voluntarily. Voluntary use of respirators is defined as respirator use when exposure potential is low but an individual conservatively elects to use a respirator (respirator is not required for protection).</p> <p>In this section, the word "respirators" refers to any tight-fitting respiratory protection device (i.e., air-purifying respirators, supplied air respirators, and filtering "facepieces/dust masks"). This does not include the voluntary use of N95 dust masks.</p> <p>EHS keeps paperwork on file that confirms whether a medical evaluation and fit test(s) have been performed for a specific individual.</p> <p>Reference: OSHA 29CFR1910.134</p> | * | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|-------------------------------|--|---------|--------------------|
| Personnel were not wearing eye protection, lab coats, gloves and other appropriate PPE. | PPE-71 | Personal Protective Equipment | <p>Personnel must wear appropriate PPE. Eye Protection: OSHA, along with several MIT policies and programs, requires employers to provide employees with appropriate eye protection, and identifies classes of hazardous activity where eye protection may be necessary. Potential eye hazards include: biological or hazardous chemical material/waste handling; certain light-generating activities (e.g., welding); and, activities generating airborne debris that can cut or abrade eye tissue. Many DLCs require eye protection at all times, and post "Eye Protection Required" signs in designated areas. Appendix D of the EHS SOP "Personal Protective Equipment" provides guidance on eye protection selection and instructions on ordering prescription safety glasses.</p> <p>Protective Clothing: Protective clothing includes Tyvek coveralls, jackets/aprons, and any special jackets/shirts/pants designed to provide a level of protection against workplace hazards or special clothing/uniform that is not worn outside the workspace. Work with hazardous substances requires that personnel wear laboratory coats with long sleeves, long pants (trousers) or long skirt that cover your legs and shoes (no open toed shoes or shoes made of woven material) that cover your feet. Lab coats are required for Biosafety Level 2 (BL2) laboratories and are highly recommended for Biosafety Level 1 (BL1) laboratories. Appendix A of the SOP "Personal Protective Equipment" provides guidance on selection of protective clothing appropriate to the hazard.</p> <p>Gloves: General guidance is given here for chemical and biological hazards. Select and wear appropriate hand protection, generally gloves, to prevent injury to hands or exposure by absorption of chemicals through the skin of the hands. Gloves for work with chemicals must be selected based on the potential contact hazard, and the permeability of the glove material. For incidental skin contact with small amounts of chemicals on a surface, or work with most powders, disposable nitrile gloves are usually adequate. For work involving materials that are readily absorbed through the skin, the glove must be carefully selected using glove impermeability charts. Silver Shield brand gloves work well for many common laboratory chemicals that can be absorbed through the skin, but you should verify their effectiveness for your application. You should also evaluate need for hand protection from physical hazards such as extreme heat or cold, and make sure you use appropriate gloves. Gloves are required for all work with all potentially infectious biological materials. Appendix C of the SOP "Personal Protective Equipment" provides guidance on the appropriate selection of gloves.</p> <p>Head/Foot Protection: Hardhats bump hats, helmets, and safety shoes are generally required where overhead obstructions or objects, falling/sharp objects, or chemical or electrical hazards may result in injury to the head or feet. Safety shoes are rated, and must be selected to the hazards present (falling/sharp objects, hazardous chemicals, water/electrical resistance).</p> <p>Hearing Protection: If you are unable to hear someone speaking at a normal volume that is within 2 feet of distance from you, that area may be above 85 db. EHS stocks both ear muffs and ear plugs for DLCs to purchase. Contact EHS for advice on selection and care of hearing protection and to conduct noise monitoring.</p> <p>Respiratory Protection: Addressed in guidance for PPE-3. Note: MIT has a formal written Respiratory Protection Program and guidance materials which may be accessed by searching "PPE" at EHS.MIT.EDU</p> | | Y |
| Other PPE Finding (see details): | PPE-99 | Personal Protective Equipment | See finding details or ask your EHS DLC Coordinator for more information. | | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|-------------------|--|---------|--------------------|
| Extension cords were not used properly (e.g., daisy chained, used in place of permanent wiring). | ES-1 | Electrical Safety | <p>Extension cords (including power strips) are not to be used as a substitute for the fixed wiring of a structure. Extension cords are prohibited for equipment in continuous service, with the exception of computers. Computer peripherals are not exempt. Cube taps (outlet multipliers) should not be used. Strip outlets with overload protection may be used, but only with low-amperage devices, and within the capacity of the strip. Grounding plug adapters should not be used. Nearly all electrical outlets are three-prong type; therefore, this will unlikely be seen at MIT.</p> <p>Cords and cord-use applications must be evaluated based on the following criteria:</p> <p>Grade of the cord: It should be of commercial grade and in sound, non-compromised condition. Shop-made cords or any non UL or ANSI cords must not be used. Commercial-grade cord sets will have an outer cover enclosing the inner conductors (which themselves are insulated). Narrow gauge home-use types are not acceptable in most applications. Actual reading of the classification of the cord is not necessary, but it should be evident that the cord is of reasonable quality and durability.</p> <p>Placement of the cord: The cord must not be draped over, on or under objects which crimp, crush, or cut the cord or conductors within. The cord must not cause a trip hazard. Cords should not be used in series.</p> <p>Devices served by the cord: Use of high-demand devices (which draw high current/amperage) for long periods, such as resistance heaters, broilers, large motors, air conditioners, compressors, etc., should be more closely evaluated as to whether they exceed the rated capacity of the cord. These devices generally have specific restrictions on length and gauge of cord required, if an extension cord is used. Manufacturers of certain high-demand devices prohibit the use of extension cords.</p> <p>Simpler devices such as computers, monitors, simple light fixtures, radios, small electronics, etc., are less likely to draw current that will exceed commercial extension cords. The distinction regarding these devices requires that knowledge and judgment be used in the assessment process.</p> <p>If an application is encountered that is clearly questionable, but is not readily or confidently answered, it should be flagged for further evaluation. For example, if a large refrigerator is temporarily being run from heavy-gauge but relatively long extension cord you will not be able to determine if the length for the gauge is adequate. This should be noted as an item for further investigation but not a finding.</p> <p>Reference: OSHA 29 CFR 1910.305 and EHS SOP Guidelines for Inspecting Extension Cords</p> | | Y |
| Access to an electrical panel was obstructed. | ES-4 | Electrical Safety | <p>Access to electrical panels needs to be unobstructed to allow for quick access in the event of an emergency if power needs to be de-energized.</p> <p>OSHA: A minimum of 36 inch working clearance in front of electrical panels is required and the working space may not be used for storage. When normally enclosed live parts are exposed for inspection or servicing, the working space, if in a passageway or general open space, shall be suitably guarded.</p> <p>Reference: OSHA 29CFR1910.303 527 CMR 12.00</p> | | Y |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|-------------------|--|---------|--------------------|
| An area where wet conditions are anticipated was not protected by a ground fault circuit interrupter (GFCI). | ES-5 | Electrical Safety | <p>Ground Fault Circuit Interrupters (GFCI) are required for any area where wet conditions are expected or anticipated nearby; this would include bathrooms, janitors closets, outlets near sinks of any kind or wet process areas.</p> <p>Any workplace or work classification that comprises non-fixed, non-standard activities should be considered as a construction activity. For construction activities, all portable and temporary electrical devices are required to be used with a GFCI.</p> <p>A GFCI is a device intended for the protection of personnel that functions to de-energize a circuit within an established period of time when a current to ground is 6 mA or higher.</p> <p>GFCIs can be the outlet itself or at an outlet downstream of a number of outlets on the same circuit or at the breaker panel. It is harder to verify the breaker panel as being GFCI protected as you usually have to look at the breaker itself. Sometimes outlets that are protected at the breaker are so indicated as GFCI protected. If you are not sure contact the Department of Facilities. GFCIs can also be present as an adapter or as part of an extension cord. GFCIs work with two or three prong plugs.</p> <p>Reference: OSHA 29 CFR 1910, Subpart S</p> | * | |
| Exposed electrical components were observed. | ES-6 | Electrical Safety | <p>Electrical wiring, terminals, connectors and other components should be run through conduit, insulated, isolated or guarded to prevent inadvertent contact or keep personnel at a safe distance. Lab wired experiments or apparatus should be reviewed by qualified personnel.</p> <p>Reference: OSHA 29 CFR 1910, Subpart S</p> | * | |
| Portable electric tools and equipment were not grounded/double insulated. | ES-7 | Electrical Safety | <p>All small, portable electrical devices must either have a three pronged cord, or be of “double insulated” design (two pronged plug). Generally this means that the housing and parts that the user touches are non-conductive (e.g. plastic) or that the internal conductors cannot contact the housing (shielded). The designation of “double insulated” is usually on the device. Nearly all UL approved devices are double insulated or have three-pronged plugs. Older, non-standard devices would be most suspect and should be checked.</p> <p>You can generally see that a plug is three-pronged by the shape of it, without unplugging the device. Generally you should not unplug devices to determine this.</p> <p>Reference: OSHA 29 CFR 1910, Subpart S</p> | | Y |
| Electrical panel latch inoperable or panel not capable of being closed. | ES-8 | Electrical Safety | <p>All Electrical Panels shall be maintained so that the panel door or enclosure works as originally intended by the manufacturer. 29CFR1910.303(b)2 Listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling.</p> | | |
| GFCI not working. | ES-9 | Electrical Safety | <p>A ground fault circuit interrupter (GFCI) is a device intended for the protection of personnel from electrical shock. It functions to de-energize a circuit or portion thereof before injury when a current to ground is 6 mA or higher. GFCIs in wall outlets have a test function button that enables the sensing circuitry and mechanical switch within the GFCI to be tested. It is important to conduct the test at the interval recommended by the manufacturer since GFCIs may be wired incorrectly and are subject to failure as they age.</p> <p>Reference: NFPA 70E, OSHA 1926.404(b)(2), OSHA 1910.304(b)(3)(i)</p> | * | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|--|------------|-------------------|--|---------|--------------------|
| Other Electrical Safety Finding (see details): | ES-99 | Electrical Safety | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| Machine guarding was not present or was inadequate. | SS-1 | Shop Safety | <p>Wherever possible, guards shall be in place during machine use. Guards must be securely attached to the machine at the point of operation (e.g. where the part or stock) meets the blade, drill, or cutter.) Also, don't forget to check for guards covering motors and drive assemblies that run the machines as these are often removed during service or repairs and not reinstalled when the job has been completed. Do a 360 degree walk around each machine to make sure that the front, back and side panels are in place. These panels generally act as guards for any moving parts (pulleys belts, etc.) located inside which drive the machine.</p> <p>Guards are intended to protect the operator as well as bystander(s) from flying particles (e.g. lathes, drill presses, grinders) nip points (e.g. grinders, shears) as well as rotating parts (e.g. belts/motors/pulleys) and cuts from blades (e.g. table saw, band saw, metal shears.)</p> | * | Y |
| Chemical (product) list was unavailable or incomplete. | SS-2 | Shop Safety | <p>There must be a list of chemicals used in the shop.</p> <p>The OSHA Hazard Communication Standards require that those working with potentially hazardous chemicals be informed of the hazards and measures established to protect them from those hazards.</p> | | Y |
| Local ventilation was in need of evaluation. | SS-4 | Shop Safety | Machining / woodworking / welding equipment may require ventilation. Evidence of inadequate ventilation includes large accumulation of dust on surfaces in area or accumulation of oily residual on surfaces for machining operations. Employees may also complain about breathing fumes/mists or bad odors from the processes they are doing. | * | Y |
| There was no current hot work permit, where required. | SS-5 | Shop Safety | <p>Fixed locations, where hot work is routinely conducted, must be defined as Designated Hot Work Areas. These areas must be isolated by screens, walls or noncombustible partitions. Areas must be kept free of combustible materials and provided with exhaust ventilation to remove fumes and smoke.</p> <p>Hot Work Permits for Designated Hot Work Areas (such as welding shops,) must be issued and renewed annually, by the MIT EHS Office.</p> <p>Reference: OSHA 29 CFR 1910.251 – 255 527 CMR 39.00 Hot Work Permit SOP, EHS-0058</p> | * | |
| Stationary power equipment was not secured in place. | SS-6 | Shop Safety | <p>Securing a machine is most often done by bolting it to the floor, bench top or wall. Not all machines need to be secured. According to OSHA, if the machine is equipped/constructed with features allowing it to be secured (bolt holes etc.) then it must be fastened to the floor or wall to prevent tipping, walking or creep. This can be interpreted to mean that a machine not equipped in this way is not required to be secured. However, if there is a risk of tipping, an alternate method to secure it may need to be implemented, such as the use of straps or other means.</p> <p>From a practical point of view, the inspections should focus on upright machines to determine if they are secured in some way, as these have the greatest potential to tip over, especially when loaded with heavy parts or stock. Some typical examples of upright machines include pedestal mounted drill presses, band saws and grinders.</p> | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|-----------------|--|---------|--------------------|
| Emergency power cutoff switch not accessible or was not working. | SS-7 | Shop Safety | Machines should be equipped with an on/off button or panic button or kill switch within the operator's reach while at the machine. The operator should not have to leave a running machine unattended to turn off the power. | * | Y |
| Doors to and from shops were not kept closed when required. | SS-71 | Shop Safety | For security access purposes, only people with authorization should be in the shop at any time. This includes instructors, students and anyone performing maintenance on the equipment. Good Management Practice. | | |
| All electrical service panels were not enclosed. | SS-72 | Shop Safety | Electrical service shall be totally enclosed with an approved cabinet/enclosure, rated for the voltage. Reference: Massachusetts Electrical Code 527 CMR 12. | | |
| There was evidence of current oil leaks on machinery and equipment. | SS-73 | Shop Safety | Oil leaks can prevent the machinery from operating safely. Any leak should be reported to the supervisor and the machine tagged out until it has been repaired. Good Management Practice. | | Y |
| Machinery/equipment/portable power tools were not clean (free of oil/grease/dust), or electrical cords were not in good condition. | SS-74 | Shop Safety | To maintain the safety and longevity of all tools, they should be kept clean and stored in a dry place to prevent damage from people, pests or elements. Electrical cords should not have any exposed wiring or bent prongs. If cords show signs of deteriorating, they should be removed from service immediately. Reference: OSHA 29 CFR 1910.334 | | Y |
| Other Shop Safety Finding (see details): | SS-99 | Shop Safety | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| Universal wastes were not in appropriate boxes or containers. | UW-71 | Universal Waste | Containers shall be closed, structurally sound, compatible with the contents of the waste, and shall lack evidence of leakage, spillage or damage that could cause a release to the environment. Reference: 310 CMR 30.1034 | | Y |
| Universal Wastes were not properly labeled with the words "Universal Waste," waste type and date. | UW-72 | Universal Waste | The words "Universal Waste" shall be used on the label of each container accumulating universal waste items. The type of waste & date the collection started are also needed. Reference: 310 CMR 30.1034 | | |
| Broken lamps were mixed with universal wastes. | UW-73 | Universal Waste | Broken lamps shall be stored separately from intact lamps in closed containers. Broken lamps are considered Hazardous Wastes and shall be managed under the HW regulations. Reference: 310 CMR 30.1034(5) | | |
| Universal wastes have been stored for more than one year. | UW-74 | Universal Waste | Universal Waste must be shipped within one year of the original start date to a recycling facility for waste management. Reference: 310 CMR 30.1034(6) | | |
| Other or multiple Universal Waste Finding (see details): | UW-799 | Universal Waste | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| Kitchen fires suppression systems were not appropriately tested, inspected and/or tagged. | KS-71 | Kitchen Safety | The fire systems are to be inspected by a trained person(s) at least every 6 months. After passing inspection, a tag should be filled out and signed by the inspector and attached to a pull station. If a system has failed inspection, the Dining Operations Manager should be contacted as soon as possible and the system fixed and re-inspected. Reference: NFPA 96, Ch. 11 | * | Y |
| Cooking oil or grease storage areas were not in generally clean condition. | KS-72 | Kitchen Safety | Drums/containers should be marked "Waste Cooking Oils," tightly sealed and floors should be free of spilled oil. | | |
| Cooking oil or grease storage areas had evidence of leaks or spills. | KS-73 | Kitchen Safety | Areas where there has been a spill should be cleaned up as soon as possible to prevent insect attraction or slipping hazards. | | Y |
| Used cooking oil/grease containers were not stored appropriately to prevent a leak and oil entering a drain / waterway / or the ground. | KS-74 | Kitchen Safety | Drums/containers should be stored away from drains, or with dedicated secondary containment if drains are in the area. | | Y |
| Used cooking oil / grease was not stored in covered containers. | KS-75 | Kitchen Safety | Containers should be tightly sealed at all times unless being added to or emptied. | | |

2021 DSL Finding Guidance

| FINDING | Label Code | Group | GUIDANCE | DCR (*) | Finding Detail (Y) |
|---|------------|----------------|---|---------|--------------------|
| Kitchen hoods cleaning was past due and/or sticker was missing. | KS-76 | Kitchen Safety | Commercial kitchen hoods shall be cleaned to remove grease or oily sludge from surfaces. Inspection frequency varies based on the frequency of cooking, and a sticker is required. A fire hazard is present when cooking equipment isn't properly cleaned as it allows grease residue to build up inside of the hood, ductwork, and exhaust fan. If a fire was to occur, all of these grease deposits allow the fire to spread to all portions of the building. Reference: NFPA 96 11.6.1, NFPA 96 11.6.2 | * | Y |
| Other Kitchen Safety Finding (see details): | KS-799 | Kitchen Safety | See finding details or ask your EHS DLC Coordinator for more information. | | Y |
| Other Finding (see details): | OTH-99 | Other Findings | See finding details or ask your EHS DLC Coordinator for more information. | | Y |