Haz Mat Areas Inspection Checklist Using RSS INSPECT Software

INSPECT Statement = Checklist Question	Category	Non-Compliance Issues	Findings - Write-up
Secondary chemical containers (i.e., "in-use" containers) are labeled with the chemical name and hazardous properties, OR a "user-defined label" that includes an identification of the contents and information about the hazardous properties.	CHEMICAL STORAGE	**Scenarios:** A) Hand-written label with chemical name, but no hazard properties B) Secondary (in-use) container with label that is worn, illegible, etc. C) Secondary container with no label whatsoever D) Secondary container with label that includes "shorthand" (rather than the full chemical name).	**A) One or more secondary containers were observed with a label missing hazardous properties.** **B) A secondary container was observed with a torn (worn, or illegible) label.** **C) A secondary container was observed missing a label that includes the chemical name and hazard properties.** **D) A secondary container was observed with a shorthand notation in lieu of the full chemical name. When using shorthand, be sure to include a "Key" in a readily accessible location, showing the shorthand notation and corresponding chemical name and hazard properties.**
Chemical containers are capped when not in use.	CHEMICAL STORAGE	**Scenarios:** A) Chemical container not covered B) Chemical container has a cap, but the cap I ajar C) Chemical container has a cap that doesn't fit, so it's not tight-fitting D) Chemical container cap is broken or compromised (NOTE: This may also be a housekeeping issue!)	**A) A chemical container was observed, uncapped.** **B) A chemical container was observed with a cap that was not completely closed.** **C) A chemical container was observed with a cap that doesn't fit the container.** **D) A chemical container was observed with a broken cap.**
Hazardous material containers are in good condition (e.g., no evidence of leaks, cracks, formation of crystals, etc.) and hazardous material labels are legible.	CHEMICAL STORAGE	**Scenarios:** A) Chemical container label with obvious signs of leakage (streaks, stains, etc.) B) Chemical container with evidence of cracks C) Chemical container with visible formation of crystals) D) Chemical container (i.e., manufacturer container) with label that is streaked, or illegible from chemical leaking.	**A) A chemical container was observed with signs of leakage.** **B) A chemical container was observed with evidence of cracks.** **C) A chemical container was observed with a formation of crystals.** **D) A chemical container was observed with signs of leakage.** **ADD TO FINDING: Transfer contents to a secondary container and label with the name of the chemical and hazardous properties.**

Chemical containers are labeled with the chemical name and hazard properties (e.g., flammable, toxic, corrosive).	CHEMICAL STORAGE	**Scenarios:** A) Chemical container with a label with obvious signs of leakage (streaks, etc.), where the label is no longer legible B) Chemical container label torn, worn, or otherwise illegible C) Chemical container with chemical name, but no hazard properties (typical of OLDER containers, before chemical manufacturers were required to include hazardous properties on the chemical label as part of HAZCOM!	**A) A chemical container was observed with an illegible label.** **B) A chemical container was observed with a worn (torn) label.** **C) A chemical container was observed missing hazardous properties. Be sure to add hazardous properties to older chemical containers where that information was not provided by the chemical manufacturer/supplier.**
Hazardous materials storage shelves are anchored, braced, and constructed with lip guards.	CHEMICAL STORAGE	Scenarios: A) Hazmat storage cabinet not braced to wall B) Hazmat storage shelves with no lip guards	**A) A chemical storage cabinet (Flammable, Corrosive, etc., if applicable) was observed not braced to the wall. *Be sure to add* : "Issue a Work Order to Facilities to correct the issue. Be sure to copy EHS so we can help expedite completion of the Work Order."** **B) Chemical storage shelves were observed with no lip guards.**
Hazardous Materials storage areas are clearly marked.	CHEMICAL STORAGE	Hazardous material storage areas are not marked in any way.	**Hazardous material storage area(s) were observed that were not clearly marked.**
All incompatible hazardous materials are stored separately and segregated to prevent accidental mixing (e.g., acids from bases; poisons from flammables; oxidizers from flammables; acids/bases from flammables or oxidizers, etc.)	CHEMICAL STORAGE	***Check chemical chart.*** *Check for chemicals not segregated by:* *Separate storage cabinets* *Separate secondary containment pans (for smaller chemical containers)*	**Incompatible materials were observed stored together** **If one or two examples, cite specific scenario, such as, "Acids and bases were observed stored together."** **If numerous examples, be sure to reference attached photo. Cite one or two major examples, such as, "Examples include acids and bases, and oxidizers and flammables."**
Safety Data Sheets (SDSs) are readily accessible for all substances in the lab.	CHEMICAL STORAGE	A) MSDS Binder (a good effort, but not current) B) No binder, but lab personnel seem to be able to access SDSs online	**ME Recommendation: *Acknowledge what they do have* . Examples:** **A) A MSDS Binder was present in the lab. Lab presently does not have access to an online subscription to SDSs. The finding will be forwarded to EHS for resolution.** **B) Lab personnel were able to access SDSs online for one or more chemical in the lab. Lab presently does not have access to an online subscription to SDSs. The finding will be forwarded to EHS for resolution.**

No more than 5 gallons (19 liters) of flammable liquids are stored outside an approved flammable storage cabinet.	FLAMMABLE STORAGE	*Probably not a common finding.* Look for flammable liquid containers outside a storage cabinet that add up to more than 19 liters.	**Flammable liquids in excess of 5 gallons (19 liters) were observed stored outside a flammable storage cabinet.**
When transferring flammable liquids (> 1 gallon or 4 liters) from one container to another, both containers are bonded and grounded.	FLAMMABLE STORAGE	Probably not something you'll see in labs. Contact Juliana, DK, or me if you see this scenario.	**Containers were observed not bonded or grounded when transferring flammable.**
Flammable Liquids are kept away from sources of ignition.	FLAMMABLE STORAGE	Flammable liquid container(s) near a source of ignition. *A common scenario in a lab may be a Isopropyl alcohol bottle (used for cleaning) near a Bunsen burner* .	**A flammable liquid container was (or "One or more flammable liquid containers were") observed near a source of ignition. (Bunsen burner)**
Hazardous waste containers display hazardous waste tags (or labels).	HAZARDOUS WASTE	A hazardous material container marked "WASTE" or a hazardous waste container missing a hazardous waste label or tag.	**A hazardous waste container was observed missing a hazardous waste tag (label).**
Hazardous waste containers display hazardous waste tags (or labels) which include all of the required information including: the words, "HAZARDOUS WASTE," Generator name and address (University), Lab information (if required for I.D. purposes), accumulation start date, description of hazardous waste, physical state (solid, liquid), and hazardous properties (corrosive, toxic, flammable, reactive).	HAZARDOUS WASTE	A hazardous waste label or tag that IS present, BUT missing one or more required items. See list.	**One (or more) hazardous waste tag (label) was observed missing the following information:** ***List missing information.***
In satellite accumulation areas, the accumulation start date is less than one year, or the time allowable by the campus.	HAZARDOUS WASTE	**High -priority finding. Please bring this to Juliana's attention immediately.**	**A hazardous waste container was observed with an accumulation start date of (list date), in excess of 10-month limit. THIS IS A HIGH PRIORITY. PUT A CHECK ON VERIFICATION REQUIRED. ROUTE TO EHS LEAD**

Hazardous wastes are stored in compatible containers.	HAZARDOUS WASTE	More likely applies to secondary containers. Reference chemical compatibility chart for containers. Obvious examples include: - Acids in metal containers - Hydrofluoric acid (HF) in glass containers (HF EATS through glass) - Compromised container	**One (or more) container was observed not compatible with the waste being stored. See Photo.** ***Be sure to reference an attached photo.***
Hazardous waste containers are in good condition (i.e., no evidence of spills, leaks or crystal formation).	HAZARDOUS WASTE	Containers with spill or leaks that appear to compromise the container (such as crystal formation), or where chemical residue is present. Note; If a container shows signs of spills or leaks that are historical (such as staining) to the extent it compromises the label, cite as a label finding.	**One (or more) hazardous waste container was observed in poor condition.** ***Be sure to reference attached photo (and describe problem, such as evidence of leaks; crystal formation around cap, etc.)***
Liquid waste containers are provided with appropriate secondary containment free of spills and exterior contamination.	HAZARDOUS WASTE	A hazardous waste label or tag that IS present, BUT missing one or more required items. See list.	**A) One (or more) liquid hazardous waste container was observed without secondary containment.** **(B) One (or more) secondary containment pan was observed with spilled material present. Note: The secondary containment system "must have sufficient capacity to contain at least 10% of the total volume of the primary containers or 100% of the volume of the largest container, whichever is greater."**
Hazardous waste containers are closed (except when adding or removing a waste).	HAZARDOUS WASTE		**One (or more) hazardous waste container was observed:** **(A) not capped (or closed).** **(B) with a cap not completely closed.** **(C) with a funnel that was not the self-closing type.**

Incompatible wastes are separated and placed in segregated secondary containment.	HAZARDOUS WASTE	Incompatible wastes stored in common secondary containment pan.	**Incompatible wastes were observed stored in the same secondary containment pan.**
Hazardous waste containers are placed in an area, easily distinguished from usable hazardous materials.	HAZARDOUS WASTE	Usable chemical containers and hazardous waste containers stored in an area (such as under a hood) with no nominal separation, such as chemicals to one side, hazardous waste to another side.	**Hazardous waste containers were observed stored along side usable hazardous material containers (with no nominal separation).** 
Gas cylinders~~—~~ hoses, lines, and regulators are in good condition.	COMPRESSED GAS CYLINDERS	Look for signs of poor condition. Be sure to take photos!	**Compressed gas hoses, lines, regulators were observed in poor condition.** ***Be sure to reference attached photo.***
Gas cylinders are stored away from excessive heat.	COMPRESSED GAS CYLINDERS	Look for heat sources in proximity of compressed gas cylinders.	**One (or more) compressed gas cylinder was observed stored near a source of heat/ ignition.**
Compressed Gas Cylinders are clearly marked with the name of the contents.	COMPRESSED GAS CYLINDERS	**Scenarios:** A) Compressed gas cylinder missing a label or displaying an incomplete label B) Compressed gas cylinder label is not visible (facing wall or otherwise obstructed)	**(A) One (or more) compressed gas cylinder was observed missing a label showing the contents** **(B) One (or more) compressed gas cylinder was observed with the label not clearly visible. Be sure cylinders are placed with the label facing outward.**
Compressed gas cylinders are stored upright and adequately secured (typically with two non-combustible chains at 1/3 and 2/3 height of cylinder).	COMPRESSED GAS CYLINDERS	**Scenarios:** A) Compressed gas cylinder stored on its side (or otherwise not upright B) Compressed gas cylinder not secured with two restraints (for larger cylinders).	**One (or more) compressed gas cylinder was observed** **(A) laying on its side** **(B) Not properly secured with two non-combustible chains at 1/2 and 2/3 height of the cylinder.**

Gas cylinders have protective valve caps in place when not in use or hooked up to a regulator.	COMPRESSED GAS CYLINDERS		**One (or more) compressed gas cylinder not in use was observed missing a protective valve cap.**
Oxidizing gas (e.g., Oxygen) cylinders are separated from flammable gas (e.g. Hydrogen) cylinders by at least 20 feet or a non-combustible barrier.	COMPRESSED GAS CYLINDERS	***High-priority finding. Please report to Juliana, DK or me immediately.***	**One (or more) oxidizing gas cylinder was observed stored near a flammable gas cylinder.**
Fire extinguishers are mounted in accessible locations, free from obstructions, clearly marked and visible.	FIRE PROTECTION	**Scenarios:** A) Fire extinguisher not mounted (sitting on floor) B) Fire extinguisher location not accessible (obstructions observed). (C) Fire extinguisher not properly marked	**One (or more) fire extinguisher was observed:** **(A) not properly mounted for use** **(B) in an area with obstructions** **(C) not properly marked for visibility**
Portable Fire Extinguishers display a tag showing an annual maintenance certification date within the last year, and an inspection within the last month.	FIRE PROTECTION	**Scenarios:** A) Portable fire extinguisher missing a tag (FSE issue) B) Portable fire extinguisher tag missing one or more monthly inspections (FSE Issue) (C) Portable fire extinguisher tag missing annual inspection or not current (FSE contractor issue)	**(A) The portable fire extinguisher was observed missing the inspection tag. The finding will be forwarded to FSE for resolution.** **(B) The portable fire extinguisher was observed missing one or more monthly inspections. *(Specify missing months.*) The finding will be forwarded to FSE for resolution.** **(C) The portable fire extinguisher annual inspection was not current.**

Combustible rags/scrap, debris, and hazardous waste are stored in an approved metal container.	FIRE PROTECTION	More likely applies to Fine Arts, Creative Arts where paints and thinners are used. Combustible rags/ scrap material stored in regular-type trash bin rather than a fire-rated container. 	**Combustible rags, debris were observed stored in a container that is not flammable-rated.**
All exit routes and emergency doors are free from obstruction.	FIRE PROTECTION	***Look for evidence of clutter or office furniture (such as chairs) obstructing exit routes.***	***Describe scenario (such as):*** **Obstructions *(describe)* were observed in pathway of emergency exit routes and/or emergency doors. *Be sure to reference attached photo.***
Emergency access to electric panels is unobstructed, AND workspace access to electric panels is at least 30" wide, 36" deep and 78" high (or more as necessary to access equipment).	FIRE PROTECTION	3-ft. clearance not maintained around electrical panel.	***(Describe obstruction)* was observed blocking electrical panel.**
Standard trash cans are free of what appears to be contaminated laboratory material, chemical containers, or sharp-edged objects capable of piercing the plastic trash can liner bags.	HOUSEKEEPING	Look for evidence of food, sharps and universal waste such batteries, lamps, and glass	**Standard trash can was observed containing:**

All work, storage, mixing areas are kept clean and orderly.	HOUSEKEEPING	Look for evidence of poor housekeeping issues. Examples include: - Excessive clutter around hazardous materials - Hazardous material containers stored on bench (clearly not in use) rather than being replaced into chemical storage cabinets (if present)	***Describe scenario (such as):*** **Work areas were observed with excessive clutter.** ***Be sure to reference attached photo.***
Food and beverages are stored or consumed in areas separate and away from hazardous materials.	HOUSEKEEPING	***Look for evidence of food or beverage containers in proximity of hazardous materials (including hazardous waste).***	**Evidence of food/ beverages were observed in areas where hazardous materials are stored or used.**
Eyewash & safety showers are unobstructed, and tested monthly.	HOUSEKEEPING	**Scenarios:** A) Eyewash/ safety shower obstructed by portable item (lab issue) B) Eyewash/ safety shower obstructed by fixed object that needs to be removed, relocated by Facilities personnel (FSE Issue) (C) Eyewash/ safety shower missing a tag (D) Eyewash/ safety shower displaying a tag with missing monthly inspections (FSE issue) Secondary (in-use)	**One (or more) eyewash/ safety shower station was observed:** **(A) obstructed by** ***(specify & reference photo).*** **(B) obstructed by** ***(specify & reference photo)*** **. Issue a Work Order to FSE to resolve the issue.** **(C) missing a monthly inspection tag. Issue will be forwarded to FSE for resolution.**
In storage areas serving only employees, aisles meet the minimum 24-inch clearance.	HOUSEKEEPING	*Look for office areas that don't have adequate aisle space (24-inch clearance).*	***(Specify area)*** **was observed with cluttered aisle spaces.**
Spill clean-up materials (spill kits, consisting of absorbent, pads, bags, etc.) are clearly labeled, visibly located, and available for use in ready-condition.	HOUSEKEEPING	Spill kit missing or not clearly labeled	***Spill kit*** **was not visibly located.. Contact Linda Vadura to obtain a spill kit.**

Blue text = examples
Red text = special attention