NS-Building and Q-Building EH&S Inspection

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I. Assessment

1. Room(s): NS-256 and Adjoining Balcony

Description: Used as an adjunct faculty room

Slips, Trips and Falls

Sources: OSHA 1910.22(a) (1) and OSHA 1910.22(a) (3)

- Floor cluttered and messy
- Cords and items in room may pose tripping hazard

Fire Safety

- Balcony doors obstructed from inside (Photo 1 and 2)

Photo 1

Photo 2

Equipment

Source: OSHA 1910.176(b)

- Bookshelf and other equipment not secured/bracketed to wall, could pose as hazard
- Grills should not be stored/used in area – must go through Facilities (Photo 3)

Photo 3

General Area/Housekeeping

Source: OSHA 1910.22(a) (1)

- General housekeeping needed to eliminate clutter/create more space in room (Photo 4)

Photo 4

2. Room(s): NS-255, NS-255A, NS-255B

Description: Courses taught: Physical Sciences and Physics 101/102

A. NS-255

Slips, Trips and Falls

Source: OSHA 1910.22(a) (3)

- Cords across walkway and open floor plugs pose a tripping hazard (Photo 5 and 6)

Photo 5

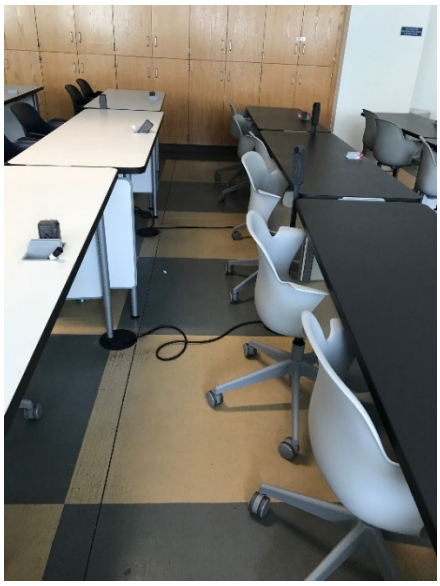


Photo 6

Fire Safety

Source: OSHA 1910.37(b)

- "Emergency Exit" sign displayed above a "Do not Enter" sign

Equipment

Source: OSHA 1910.176(b)

- Wall cabinets not locked/secured, only be magnetic strips

General Area/Housekeeping

Source: ADAAG 403.5.1

- Lack of ADA compliance between desks and walls (Photo 7)

Photo 7

Photo 8

B. NS-255A

Slips, Trips and Falls

None documented.

Fire Safety

None documented.

Equipment

None documented.

General Area/Housekeeping

Sources: OSHA 1910.22(a) (1), OSHA 1910.176(b) and OSHA 1926.250(c)

- Shelving overloaded and too high (Photo 10)
- Ceiling tile missing (Photo 9)
- Trash in sink (Photo 8)
- General clutter and stacking of storage

Photo 9

Photo 10

C. NS-255B

Note: Area used as storage and as an office space

Slips, Trips and Falls

None documented.

Fire Safety

None documented.

Equipment

- Power strip unprotected (Photo 11)

Photo 11

General Area/Housekeeping

Sources: OSHA 1910.22(a) (1), OSHA 1926.250(c) and OSHA 1910.176(b)

- Shelving overloaded
- Lock broken (Photo 12)
- No walk space and clutter (Photo 13)

Photo 12

Photo 13

3. Room(s): NS-252

Description: Courses taught: Physics 230 and 231

Slips, Trips and Falls

Source: OSHA 1910.22(a) (1)

- Floor cluttered with boxes and other items

Fire Safety

Sources: OSHA 1910.37(a) (3) and OSHA 1910.37(a) (4)

- No clear path to emergency exit – table in the way
- "kitchen" doesn't contain fire blanket
- Holes drilled into fire rated door

Equipment

- Equipment/items unsecure by ceiling and items hung from ceiling with hooks, may be unstable (Photo 14 and 15)

Photo 14

Photo 15

General Area/Housekeeping

Sources: OSHA 1910.141(b) (2) (i), OSHA 1910.141(g) (4), OSHA 1910.22(a) (1) and OSHA 1926.250(c), PCCHP 2.4(m) and PCCHP 2.4.2 (b-g & i)

- Shelving overloaded and items not secured (Photo 19)
- Area cluttered and difficult to maneuver around some area (Photo 18)

- Butcher knife stored in sink (Photo 20)
- Using industrial water for drinking water with Brita filter (Photo 20)
- Fridge with “Biohazard” sign used for storing food (Photo 17)
- General cleanliness and housekeeping needed, with proper storage of items (Photo 18)
- Eyewash station partially blocked/items stored too close (Photo 16)

Photo 16

Photo 17

Photo 18

Photo 20

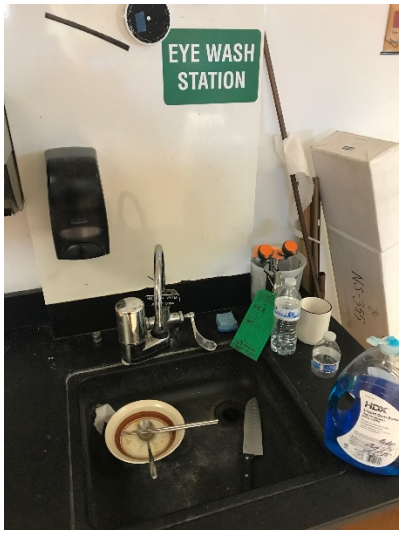


Photo 20

4. Room(s): NS-249

Description: This is a lab support room for NS-252. It has been incorrectly used as a classroom.

Slips, Trips and Falls

Source: OSHA 1910.22(a) (1) and 1910.22(a) (3)

- Clutter around floor
- Cords across floor pose tripping hazard

Photo 21

Photo 22

Fire Safety

None documented.

Equipment

Source: OSHA 1910.176(b)

- Filing cabinet unsecured

General Area/Housekeeping

Sources: OSHA 1910.176(b), OSHA 1910.159(c) (10) and OSHA 1910.22(a) (1), PCCHP 2.4 (m) and PCCHP 2.4.2 (f-g)

- Layout of chairs does not provide ample space to walk around
- Shelving is too high and overloaded (Photo 23 and 24)
- Dampness on tile adjacent to fire sprinklers, toy figure blocking fire sprinkler (Photo 25)

- General housekeeping needed and clutter needs to be removed (Photo 26)

Photo 23

Photo 24

Photo 25

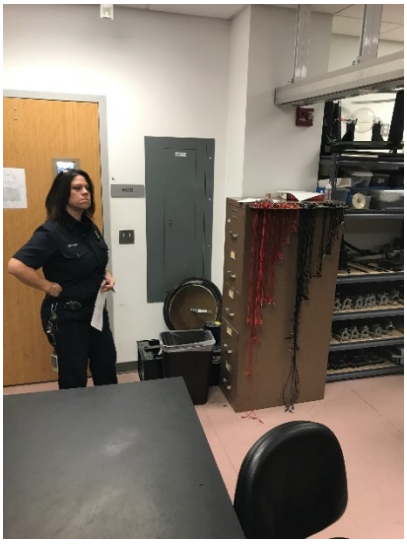


Photo 26

5. Room(s): NS-245

Description: Courses taught: Physics 231, 232 and 200-Series

Slips, Trips and Falls

Source: OSHA 1910.22(a) (1) and 1910.22(a) (3)

- Clutter/boxes stacked around desks can provide tripping hazards and making it difficult to move around with ease
- Wires/equipment tacked on doors and hanging can provide a tripping hazard (Photo 27)

Photo 27

Fire Safety

Source: OSHA 1910.36(a) (2), OSHA 1910.37(c), OSHA 1910.37(a) (4), OSHA 1910.159(c) (10) and PCCHP 2.4.2 (g)

- Fire door must not stay propped open (Photo 27)
- Fire sprinklers blocked by overloaded storage in two locations (Photo 28 and 29)
- Fire doors damaged by drill (Photo 27)

Photo 28 Photo 29

Equipment

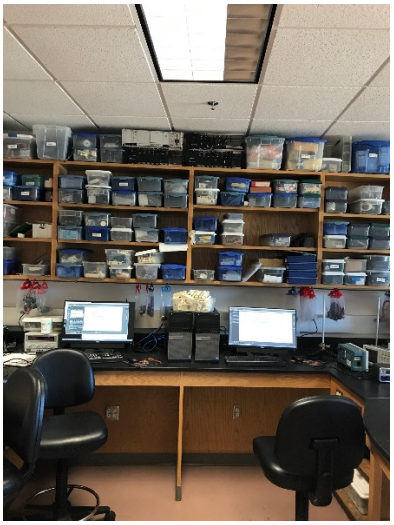
Source: OSHA 1910.176(b)

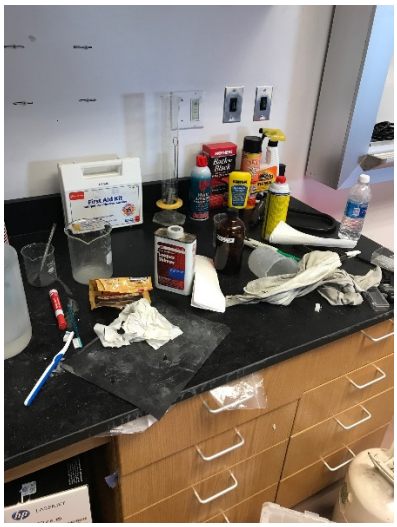
- Filing cabinets and other items stacked without being secure

General Area/Housekeeping

Sources: OSHA 1910.22(a) (1), OSHA 1926.250(c), OSHA 1910.176(b), PCCHP 2.4 (m) and PCCHP 2.4.2 (b-f & i)

- Shelving is overloaded and stacked too close to ceiling (Photo 30)
- Mess on and around desks (Photo 31 and 32)
- Lacquer thinner sitting unsecured adjacent to sink and eyewash station (Photo 31 and 32)





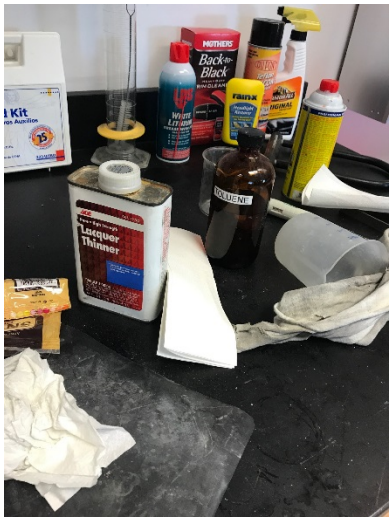


Photo 30 Photo 31 Photo 32

6. Room(s): NS-248

Description: This is a lab support room for NS-245

Slips, Trips and Falls

Source: OSHA 1910.22(a) (1)

- Furniture/equipment/boxes clutter area

Fire Safety

Sources: OSHA 1910.37(a) (4), OSHA 1910.164(f), OSHA 1910.165(e), OSHA 1910.303(g) (1) and PCCHP 2.4.2 (g)

- Door lock mechanism broken (Photo 34)
- Fire rated door drilled/damaged (Photo 35)
- Fire panel and circuit breakers blocked (Photo 33 and 36)
- Tape placed over horn sensor speaker

Photo 33

Photo 34

Photo 35

Equipment

None documented.

General Area/Housekeeping

Sources: OSHA 1910.22(a) (1), OSHA 1926.250(c), OSHA 1910.176(b), PCCHP 2.2 (m) and PCCHP 2.2.4 (d & f)

- Items cluttered and in walkway
- Shelving too high and overloaded (Photo 36)
- Housekeeping needed for general cleanliness

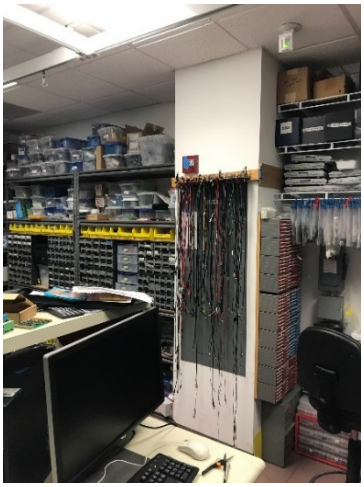


Photo 36

7. Room(s): NS-246

Description: This room was designated as an office but has been converted into a workroom

Slips, Trips and Falls

None documented.

Fire Safety

None documented.

Equipment

Sources: OSHA 1910.101, OSHA 1910.176(b) and OSHA 1910.303(g) (1)

- Possible overload of cords in corner of room (Photo 37)
- Pressure tank not permitted; needs to be secured (Photo 38)
- Machinery stacked on cabinet in an unstable manner, not secured and no roll stops (Photo 40)
- Space between electrical equipment may not be sufficient distance from work area

Photo 37

Photo 38

Photo 39

Photo 40

General Area/Housekeeping

Sources: OSHA 1910.22(a) (1), OSHA 1910.252(a) (2) (vi), OSHA 1926.252(c) and OSHA 1926.252(e)

- AC controls are not accessible (blocked by machinery), proper ventilation for equipment? (Photo 39)
- Layout of furniture is cramped with little space for movement
- Walls scraped and dirty
- Waste method to/from machinery undetermined and not in compliance (Photo 42)
- Housekeeping needed – area is dirty with no storage of items/equipment (Photo 41 and 43)
- Is cutting, welding or brazing occurring and is it authorized in this area? (Photo 41 and 43)

Photo 41

Photo 42

Photo 43

8. Room(s): Q-10 and Q-10 Support Room

Description: Courses taught: Engineering courses; Q-10A is access door inside classroom

Slips, Trips and Falls

Source: OSHA 1910.22(a) (1)

- Areas cluttered with boxes/equipment may pose tripping hazard (Photo 44)

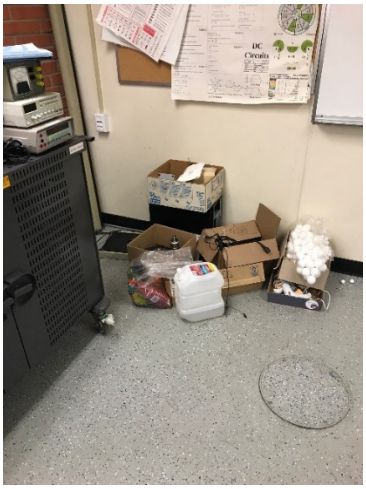


Photo 44

Fire Safety

Source: OSHA 1910.157(c) (1)

- Fire extinguisher blocked (Photo 45)

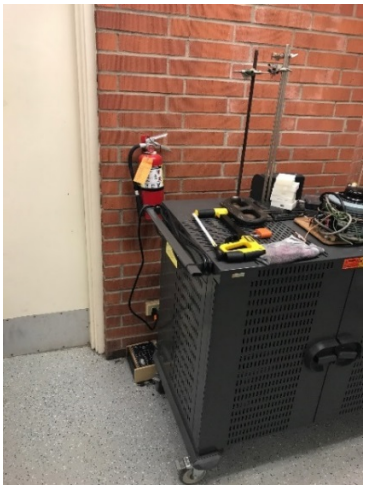


Photo 45

Equipment

- Extension cords should be unplugged when not in use and should not be used as a permanent means of connection (Photo 46)
- Trollies not secured and left in walkway (Photo 46)

Photo 46

General Area/Housekeeping

Sources: ADAAG 403.5.1, OSHA 1910.22(a) (1), OSHA 1926.250(c), and OSHA 1910.176(b)

- Possible lack of ADA compliance with desk space (Photo 47 and 48)
- Shelving overloaded in Q-10A
- General housekeeping needed, equipment and tools should be put away when not in use, area should be kept tidy and orderly (Photo 49)

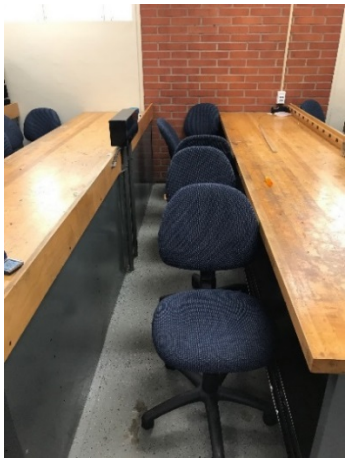


Photo 47

Photo 48

Photo 49

UPDATED **Room(s):** Q-10 Support Room

Slips, Trips and Falls

Source: OSHA 1910.22(a) (1)

- Areas cluttered with boxes/equipment may pose tripping hazard (Photo 50)

Fire Safety

None documented.

Equipment

- Filing cabinets and shelves need to be secured to the wall (Photo 50)

General Area/Housekeeping

Sources: OSHA 1910.22(a) (1), OSHA 1926.250(c), OSHA 1910.159(c) (10), and OSHA 1910.176(b)

- Shelving overloaded (Photo 50)
- General housekeeping needed, equipment and tools should be put away when not in use, area should be kept tidy and orderly (Photo 50)
- Layout of furniture is cramped with little space for movement (Photo 50)
- Housekeeping needed – area is dirty with no storage of items/equipment (Photo 50) (Photo 51)

Photo 50

Photo 51

II. References

ADAAG 403.5.1

Clear Width. Except as provided in 403.5.2 and 403.5.3, the clear width of walking surfaces shall be 36 inches (915 mm) minimum

OSHA 1910.22(a) (1)

All places of employment, passageways, storerooms, service rooms, and walking-working surfaces are kept in a clean, orderly, and sanitary condition.

OSHA 1910.22(a) (3)

Walking-working surfaces are maintained free of hazards such as sharp or protruding objects, loose boards, corrosion, leaks, spills, snow, and ice.

OSHA 1910.36(a) (2)

An exit must be separated by fire resistant materials. Construction materials used to separate an exit from other parts of the workplace must have a one-hour fire resistance-rating if the exit connects three or fewer stories and a two-hour fire resistance-rating if the exit connects four or more stories.

OSHA 1910.37(a) (3)

Exit routes must be free and unobstructed. No materials or equipment may be placed, either permanently or temporarily, within the exit route. The exit access must not go through a room that can be locked, such as a bathroom, to reach an exit or exit discharge, nor may it lead into a dead-end corridor. Stairs or a ramp must be provided where the exit route is not substantially level.

OSHA 1910.37(a) (4)

Safeguards designed to protect employees during an emergency (***e.g.***, sprinkler systems, alarm systems, fire doors, exit lighting) must be in proper working order at all times.

OSHA 1910.37(b)

[Regarding exits] Lighting and marking must be adequate and appropriate.

OSHA 1910.37(c)

The fire retardant properties of paints or solutions must be maintained. Fire retardant paints or solutions must be renewed as often as necessary to maintain their fire retardant properties.

OSHA 1910.101 (a)

"Inspection of compressed gas cylinders." Each employer shall determine that compressed gas cylinders under his control are in a safe condition to the extent that this can be determined by visual inspection. Visual and other inspections shall be conducted as prescribed in the Hazardous Materials Regulations of the Department of Transportation (49 CFR parts 171-179 and 14 CFR part 103). Where those regulations are not applicable, visual and other inspections shall be conducted in accordance with Compressed Gas Association Pamphlets C-6-1968 and C-8-1962, which is incorporated by reference as specified in Sec. 1910.6.OSHA 1926.250(a)

OSHA 1910.141(b) (2) (i)

Outlets for nonpotable water, such as water for industrial or firefighting purposes, shall be posted or otherwise marked in a manner that will indicate clearly that the water is unsafe and is not to be used for drinking, washing of

the person, cooking, washing of food, washing of cooking or eating utensils, washing of food preparation or processing premises, or personal service rooms, or for washing clothes.

OSHA 1910.141(g) (4)

Sanitary storage. No food or beverages shall be stored in toilet rooms or in an area exposed to a toxic material.

OSHA 1910.157(c) (1)

The employer shall provide portable fire extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury.

OSHA 1910.159(c) (10)

Sprinkler spacing. The employer shall assure that sprinklers are spaced to provide a maximum protection area per sprinkler, a minimum of interference to the discharge pattern by building or structural members or building contents and suitable sensitivity to possible fire hazards. The minimum vertical clearance between sprinklers and material below shall be 18 inches (45.7 cm).

OSHA 1910.164(f)

Number, location and spacing of detecting devices. The employer shall assure that the number, spacing and location of fire detectors is based upon design data obtained from field experience, or tests, engineering surveys, the manufacturer's recommendations, or a recognized testing laboratory listing.

OSHA 1910.165(e)

Manual operation. The employer shall assure that manually operated actuation devices for use in conjunction with employee alarms are unobstructed, conspicuous and readily accessible.

OSHA 1910.176 (b)

Secure storage. Storage of material shall not create a hazard. Bags, containers, bundles, etc., stored in tiers shall be stacked, blocked, interlocked and limited in height so that they are stable and secure against sliding or collapse.

OSHA 1910.252(a)(2)(vi)

Prohibited areas. Cutting or welding shall not be permitted in the following situations:

1910.252(a)(2)(vi)(A)

In areas not authorized by management.

1910.252(a)(2)(vi)(B)

In sprinklered buildings while such protection is impaired.

1910.252(a)(2)(vi)(C)

In the presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts with air), or explosive atmospheres that may develop inside uncleaned or improperly prepared tanks or equipment which have previously contained such materials, or that may develop in areas with an accumulation of combustible dusts.

1910.252(a)(2)(vi)(D)

In areas near the storage of large quantities of exposed, readily ignitable materials such as bulk sulfur, baled paper, or cotton.

OSHA 1910.303(g)

(1) Working space for equipment likely to require examination, adjustment, servicing, or maintenance while energized shall comply with the following dimensions, except as required or permitted elsewhere in this subpart:

OSHA 1910.303(g) (1)

Space about electric equipment. Sufficient access and working space shall be provided and maintained about all electric equipment to permit ready and safe operation and maintenance of such equipment.

OSHA 1926.252(c)

"Housekeeping." Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control will be exercised when necessary.

OSHA 1926.252(e)

All solvent waste, oily rags, and flammable liquids shall be kept in fire resistant covered containers until removed from worksite.

PCCHP 2.4 (m)

Keep lab spaces, including fume hoods, clean and uncluttered to prevent accidental spills and glass breakage.

PCCHP 2.4.2 (b)

All spills on lab benches or floors shall be cleaned immediately and properly disposed of.

PCCHP 2.4.2 (c)

The lab benches shall be kept clear of equipment and chemicals except those necessary for the work currently being performed.

PCCHP 2.4.2 (d)

The work area shall be cleaned at the end of each operation and each shift. Instructors shall be responsible to see that the laboratory is cleaned at the end of each class period.

PCCHP 2.4.2 (e)

All apparatus shall be cleaned thoroughly and returned to storage upon completion of use.

PCCHP 2.4.2 (f)

Aisles and hallways shall remain unobstructed.

PCCHP 2.4.2 (g)

Access to exits, utility control and electrical disconnects, and emergency equipment including fire extinguishers, eyewashes, and showers shall remain unobstructed

PCCHP 2.4.2 (i)

Chemical containers shall be clean, properly labeled, and returned to storage upon completion of usage.