



# Laboratory Checklist

California Institute of Technology • McCuller Lab • March 27th, 2025

Report Generated: March 31st, 2025 at 10:35 am

## Basic Inspection Information

### INSPECTOR DETAILS

Peter King  
Institute Laser Safety Officer

### INSPECTOR CONTACT

(626) 395-2428  
pking@caltech.edu

### INSPECTION DETAILS

March 27th, 2025  
**5 Issues Identified**

## Basic Space Information

### SPACE

McCuller Lab

### BUILDING

Main Campus • BRIDGE LAB EAST

### AREAS

B111B, B111C, B111D, B111, B111A, B102B, B110, B102

### PRIMARY MEMBERS

Lee McCuller

## Inspection Responses

### Rooms Inspected

List all buildings and rooms that were part of this inspection

Rooms Inspected

East Bridge B102, B102B, B110, B111, B111A, B111B, B111C, and B111D.

## Earthquake and Life Safety

Earthquake bars needed.	No
Emergency response guide needed.	No
Equipment / furniture not seismically secured.	Yes
Exit signs not working.	No
Inadequate exit pathway.	No
Obstructed doors.	No
Obstructed egress.	No
Trip hazard present.	No

Other	No Response
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**Electrical Safety**

Blocked electrical panel.	Yes
Daisy-chained extension cords or power strips.	No
Electrical safety issue.	No
Missing electrical finishes (circuit breaker knockout cover, junction box cover).	No
Permanent extension cords.	No
Plugs, cords, and / or outlets are damaged.	No
Power strip needs to be elevated and secured.	No
Other	No Response

**Fire Safety**

Combustible material stored with flammables.	No
Deficient housekeeping.	Yes
Deficient NFPA signage.	No
Excess of 10 gallons of flammable liquid outside of approved storage cabinet.	No
Fire extinguisher out of certification.	No
Fire extinguisher safety issues.	No
Flammable chemicals not in appropriate refrigerator.	No
Flammables cabinet closer needs repair.	No
Flammables cabinet needed.	No
Gas cylinder not in use and missing valve protection cap.	No
Hazardous materials stored in corridor.	No

Improper or damaged tubing for Bunsen burners.	No
Inadequate ceiling clearance (18 in. with sprinklers, 24 in. without sprinklers).	No
Laser safety curtains missing fire marshal seal or certificate	No
Missing ceiling tiles.	No
Obstructed sprinklers (4 ft. width or length)	No
Penetrations through fire-rated construction.	No
Propane storage in building - larger than Bernzomatic torch (7 day).	No
Storage in corridors and / or in stairwell.	No
Vacuum pump tray with spilled oil or vacuum pump needs containment.	No
Other	No Response

### Waste Handling

Biohazardous waste not properly contained or labeled.	No
Chemical containers damaged and / or heavily contaminated.	No
Hazardous waste container out of date.	No
Hazardous waste needs containment (left open, secondary containment, bag dry waste).	No
Hazardous waste not tagged.	No
Hazardous waste tag not filled out correctly.	No
Improper disposal of chemicals.	No
Secondary containment needed.	No
Spill kits not available.	No
Vacuum pump tray with spilled oil or vacuum pump needs containment.	No

Other	No Response
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### Biological Safety

Biosafety cabinet out of certification.	No
Food and drink in laboratory area.	No
No food or drink sign required.	No
Obstructed eyewash or emergency shower.	No
Sharps improper waste stream.	No
Sharps not stored correctly.	No
Sharps waste is overfilled.	No
Other	No Response

### Chemical Safety

Calcium gluconate is missing or expired.	No
Chemical containers damaged and / or heavily contaminated.	No
Chemical containers not stored safely (not upright, stacked, ... etc.).	No
Empty chemical containers not defaced.	Yes
Eyewash / shower signage is not visible.	No
Flammable chemicals not in appropriate refrigerator.	No
Food and drink in laboratory area.	No
Fume hood housekeeping issue.	No
Fume hood safety issue.	No
Gas cylinder not in use and missing valve protection cap.	No
Gas detection system required or current system needs calibration.	No

Incompatible chemical storage.	No
Incompatible chemical storage (7 day).	No
Obstructed eyewash or emergency shower.	No
Open chemical containers.	No
Peroxide forming chemicals missing opening date or are expired.	No
Secondary containment needed.	No
Spilled chemical.	No
Toxic compressed gas stored outside of ventilated enclosure.	No
Unlabeled chemical storage.	No
Unlabeled containers.	No
Unsecured gas cylinder.	No
Other	No Response

### Laser Safety

Laser safety barriers or curtains required.	No
Laser safety curtains missing fire marshal seal or certificate.	No
Laser warning sign missing.	No
Laser eye protection damaged.	No
Other	No Response

### Documentation

Biosafety cabinet out of certification.	No
Deficient NFPA signage.	No
Emergency eyewash and shower out of certification.	No

Fume hood flow rate certification out of date (more than 1 year).	No
Hazard assessment needs to be updated.	No
Inadequate knowledge of procedure for incident reporting.	No
No food or drink sign required.	No
Risk assessment out of date.	No
SOP missing or needs to be updated.	No
Workplace specific safety training needs to be updated.	No
Other	No Response

### Top 10

Deficient housekeeping.	No
Deficient NFPA signage.	No
Fire extinguisher out of certification.	No
Flammables cabinet closer needs repair.	No
Hazardous waste container out of date.	No
Hazardous waste not tagged.	No
Secondary containment needed.	No
Unlabeled containers.	No
Unsecured gas cylinder.	No
Vacuum pump tray with spilled oil or vacuum pump needs containment.	No

### Tool Safety

inadequate machine guarding.	No
PPE is damaged and / or heavily contaminated.	No

PPE is not accessible and / or worn.	No
Other	No Response

**Issues Identified**

**1 - Blocked electrical panel.**

Description	Please relocate the boxes and items in front of the electrical panels and switch. A 3 ft. stay clear area in front of electrical panels needs to be maintained.
Location	Floor: B1 • Area: B111C
Risk	None Given
Responsible Contact	Daniel Grass
Status	Pending • Due 4/30/2025
Safety Category	Electrical Safety
EH&S response	None Given
Type	Inspection Issue
Date Occurred	3/27/2025
Date EHS Notified	None Given



**REFERENCE**

Blocked electrical panel.

## 2 - Deficient NFPA signage.

Description	Please place an NFPA door sign at the entrance to B111.  Information regarding the sign and how to fill it out is on the EH&S website under <a href="https://safety.caltech.edu/documents/13968/NFPA_Laboratory_Emergency_Information_Signs_Landing_Page.pdf">https://safety.caltech.edu/documents/13968/NFPA_Laboratory_Emergency_Information_Signs_Landing_Page.pdf</a>
Location	Floor: B1 • Area: B111 • At the entrance to the room.
Risk	None Given
Responsible Contact	Daniel Grass
Status	Pending • Due 4/30/2025
Safety Category	Fire Safety
EH&S response	None Given
Type	Inspection Issue
Date Occurred	3/27/2025
Date EHS Notified	None Given



### REFERENCE

Deficient NFPA signage.

## 3 - Deficient housekeeping.

Description	Please reduce the number of no longer needed cardboard boxes in the lab, to help reduce the amount of combustible material present.
Location	Floor: B1 • Area: B111A
Risk	None Given
Responsible Contact	Daniel Grass
Status	Pending • Due 4/30/2025
Safety Category	Fire Safety
EH&S response	None Given
Type	Inspection Issue
Date Occurred	3/27/2025
Date EHS Notified	None Given



#### REFERENCE

Deficient housekeeping.

#### 4 - Empty chemical containers not defaced.

Description	Please do a better job of defacing the two empty Winchester bottles on the floor. The name of its previous contents should not be visible nor legible.
Location	Floor: B1 • Area: B110
Risk	None Given
Responsible Contact	Daniel Grass

Status	Pending • Due 4/30/2025
Safety Category	Chemical Safety
EH&S response	None Given
Type	Inspection Issue
Date Occurred	3/27/2025
Date EHS Notified	None Given



**REFERENCE**

Empty chemical containers not defaced.

**5 - Equipment / furniture not seismically secured.**

Description	Please restrain the instrumentation rack and the ladder
Location	Floor: B1 • Area: B111B
Risk	None Given
Responsible Contact	Daniel Grass
Status	Pending • Due 4/30/2025
Safety Category	Earthquake and Life Safety
EH&S response	None Given
Type	Inspection Issue

Date Occurred	3/27/2025
Date EHS Notified	None Given



**REFERENCE**

Equipment / furniture not seismically secured.