

Viewing MAQ reports in RSS

Objective

All buildings on UC property are subject to compliance with California Fire Code Maximum Allowable Quantities (MAQs) for hazardous materials storage and use. Department Chairs, Department Safety Coordinators, EH&S, and others may want to view building-wide reports on MAQ compliance. Understanding where issues arise can be helpful. Detailed views of hazardous materials contributing to non-compliance by container location, owner, and size, can help users identify possible problems and reach out to users directly to reduce quantities. Keep in mind that these MAQ reports and data assume that chemical inventories are accurate and control areas have been correctly identified. If that is not true, the MAQ data you are viewing may not be a true reflection of the issues.

Advantages to building managers and campus leaders viewing MAQ reports

1. Building managers can be proactive in fixing MAQ overage problems
2. When ordering new chemicals, building managers can provide guidance on how they would affect MAQ status
3. Building managers can check MAQ status regularly to maintain compliance.
4. Campus leadership can offer a high-level review of MAQ status in different buildings.

How to View MAQ data

To view MAQ Data, a user must have either the *Control Area Admin* or the *Chemical Admin – Read Only* role. Both of these roles allow the user to view ALL campus buildings and control areas. However, Chemical Admin – Read Only roles can only access this view via Analytics (Method 2 below). Control Area Admins (typically the Fire Marshal or designee) can access this data via either Method outlined below.

There are two primary methods to view the data: Method 1 – within the MAQ interface of Chemicals where Control Areas are configured, or Method 2 – in the Analytics section of Chemicals, using the MAQ Dashboard. Here are some considerations as to when and why you might use each of the methods and when both in combination might be useful.

Method 1 – Control Area Interface (Chemicals application)

This is the best way to look at the data when you are wanting to focus on the state of a single building and control areas within that building. This view also provides details about the applicable fire code and occupancy in-line with detailed data. This method displays MAQ totals organized in the same format as the Fire Code MAQ tables, where users can clearly see which hazard categories are compliant (below MAQs) and which exceed MAQs. This method also easily allows the user to view which individual containers are contributing to MAQs by selecting MAQ detail views. This data can be exported into excel spreadsheets for MAQ summary and MAQ detailed reports based upon hazard category. This method also displays where exemptions or Approved Storage have been applied.

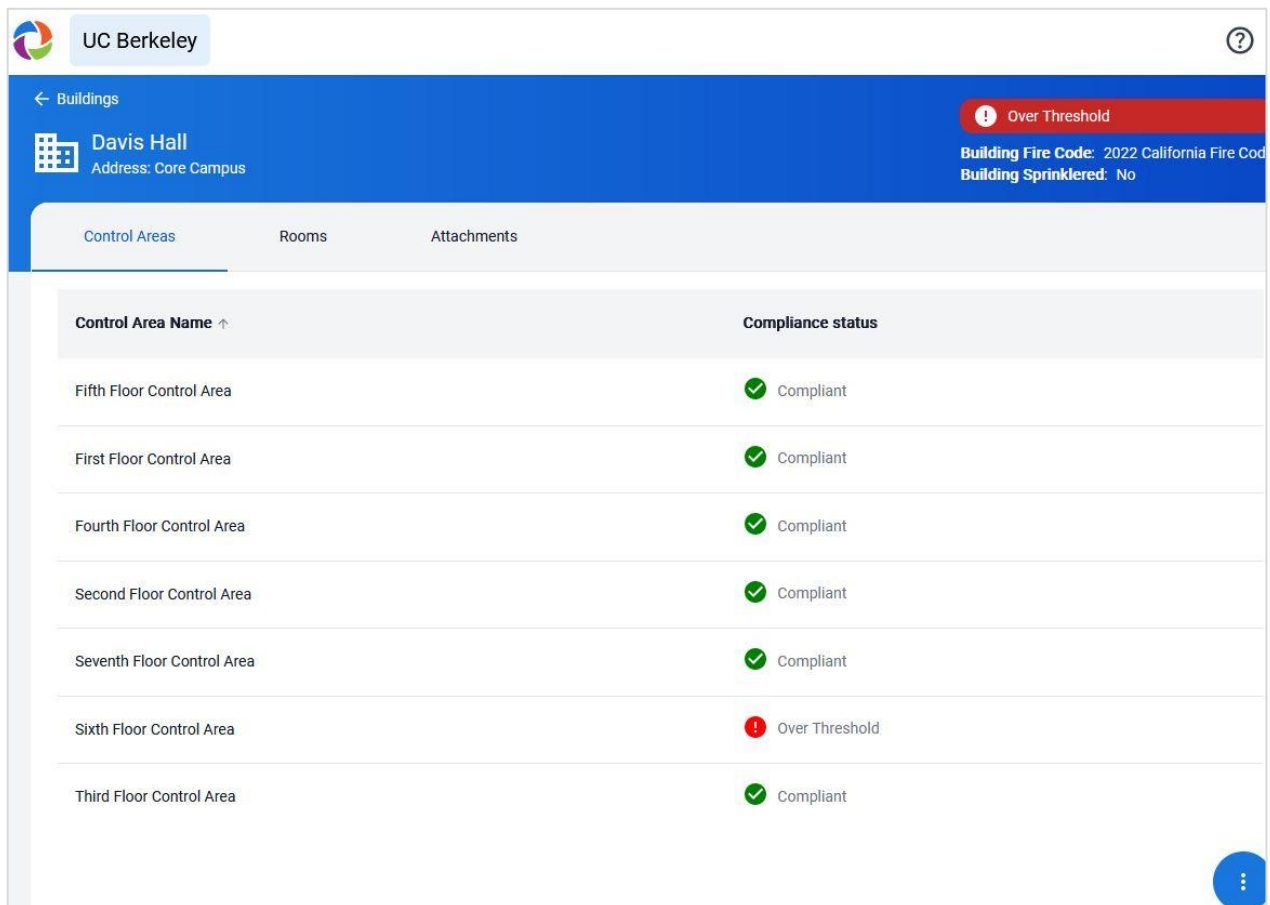
Method 2 – The MAQ Dashboard (Analytics application)

This method allows users to see MAQ details about multiple buildings across an entire campus at one time. It provides MAQ Thresholds as a percentage, and users can easily see which Chemical hazard categories are contributing to the totals and by how much. It allows the user to view summary information like the total number control areas in a building, the total number of rooms in a control area, and applicable fire code. This dashboard allows users to filter their view to only include control areas that exceed MAQs (over threshold). The data in Analytics is not real-time, it is synced with real-time data approximately every 24 hours, so recent changes will not be immediately visible. You cannot edit any data in the dashboard. Data can be exported. Data is not represented in a way that is consistent with MAQ tables, and detailed views do not filter by hazard class of interest. Therefore, users seeking to learn more about individual containers contributing to MAQ issues will need to do some data manipulation. Individual containers contributing to MAQ issues are not identified, but users can locate rooms, owners and names of chemicals that are contributing to MAQ problems.

Step-by-Step Guide

Method 1 – Control Area Interface in Chemicals:

1. [Log in](#) to Chemicals
2. Select Chemical Admin
3. Scroll down to Reports, Select **Control Areas**
4. Select MAQ on the left
5. Search target building by name. Select appropriate building (e.g., Davis Hall)
6. Target building will list all control areas within the building, with compliance status (see below)



| Control Area Name ↑ | Compliance status |
|----------------------------|-------------------|
| Fifth Floor Control Area | ✓ Compliant |
| First Floor Control Area | ✓ Compliant |
| Fourth Floor Control Area | ✓ Compliant |
| Second Floor Control Area | ✓ Compliant |
| Seventh Floor Control Area | ✓ Compliant |
| Sixth Floor Control Area | ! Over Threshold |
| Third Floor Control Area | ✓ Compliant |

UC Berkeley

← Buildings

Davis Hall
Address: Core Campus

Over Threshold

Building Fire Code: 2022 California Fire Code
Building Sprinklered: No

Control Areas Rooms Attachments

7. Select any control area. For example, Sixth Floor Control Area. Details about the control area are provided, including occupancy type, floor level, exemptions or approved storage.

← Davis Hall
Over Threshold

⌵ Sixth Floor Control Area
 Building Fire Code: 2022 California Fire Code
Building Sprinklered: No

Details
Rooms

ⓘ General

Occupancy: B

Outdoor: No

Floor Level: 6

⊘ Exemptions

Exemption Reason: N/A

Exemption Notes: N/A

Approved Storage: Flammable Liquid: IA (liquid), Flammable Liquid: IA, IB, IC (liquid), Flammable Liquid: IB, IC (liquid)

⚠ Nearing Threshold: Materials over 80%, but under 100% of the limit allowed of the Maximum Allowable Quantity threshold.

🔴 Exceeding Threshold: Materials exceeding the Maximum Allowable Quantity threshold.

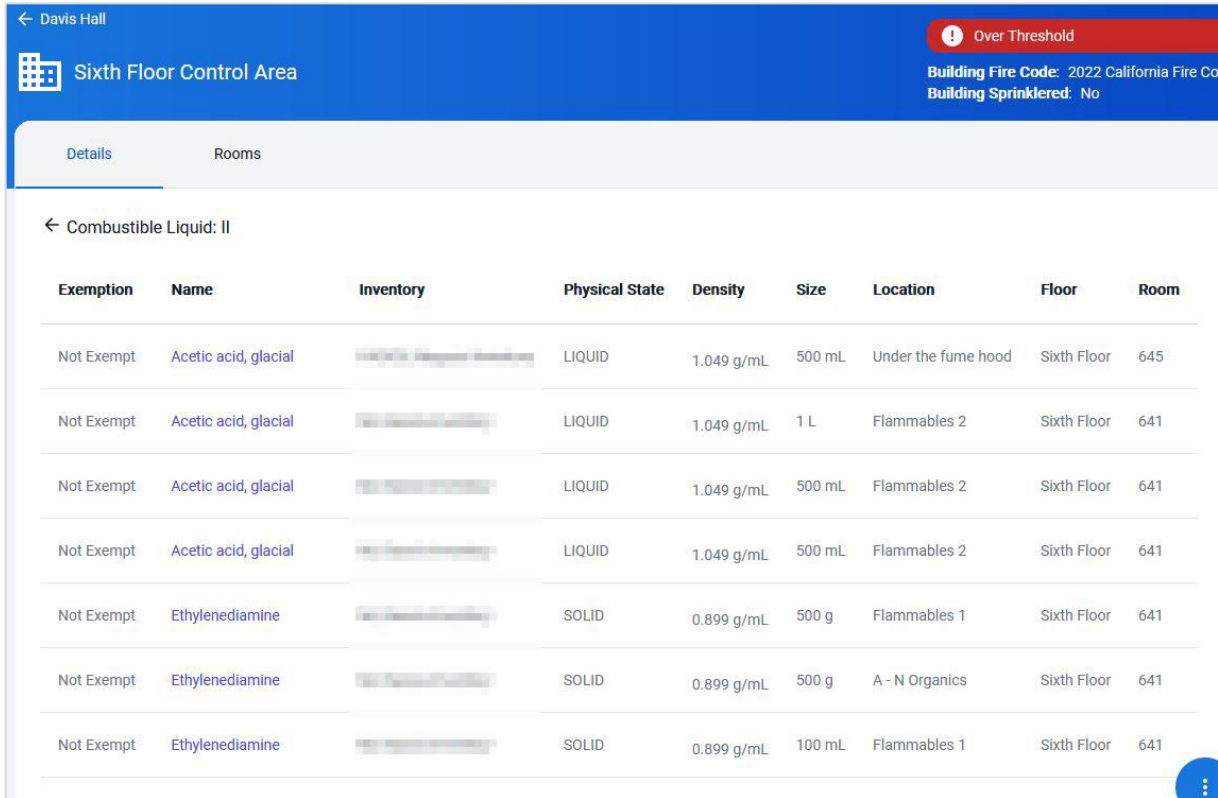
8. An MAQ Summary report for all hazard categories within that control area is provided in a table.

A partial MAQ Table is provided below as an example.

| Physical Hazards | Solid | | | Liquid | | | Gas | | |
|--------------------------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| | Actual | MAQ ⓘ | Units | Actual | MAQ ⓘ | Units | Actual | MAQ ⓘ | Units |
| Combustible Liquid: II 🚫 | 0.00 | N/A | lbs | 27.73 | 15 | gal | 0.00 | N/A | ft3 |
| Combustible Liquid: IIIA | 0.00 | N/A | lbs | 1.90 | 41.25 | gal | 0.00 | N/A | ft3 |
| Combustible Liquid: IIIB | 0.00 | N/A | lbs | 1.13 | 1650 | gal | 0.00 | N/A | ft3 |
| Cryogenic Flammable | 0.00 | N/A | lbs | 0.00 | 5.625 | gal | 0.00 | N/A | ft3 |
| Cryogenic Inert | 0.00 | N/A | lbs | 0.00 | NL | gal | 0.00 | N/A | ft3 |

In the above example, Class II Combustible Liquids have exceeded MAQs (Actual = **27.73 gallons**, MAQ = 15 gallons). Other hazard categories in this example do not exceed MAQs. This MAQ summary report can be exported into an excel file.

- To view which containers are contributing to the MAQ exceedance, click on the “Combustible Liquid: II” for an MAQ detailed report.



← Davis Hall

Sixth Floor Control Area

Over Threshold

Building Fire Code: 2022 California Fire Co
Building Sprinklered: No

Details Rooms

← Combustible Liquid: II

| Exemption | Name | Inventory | Physical State | Density | Size | Location | Floor | Room |
|------------|----------------------|-----------|----------------|------------|--------|---------------------|-------------|------|
| Not Exempt | Acetic acid, glacial | | LIQUID | 1.049 g/mL | 500 mL | Under the fume hood | Sixth Floor | 645 |
| Not Exempt | Acetic acid, glacial | | LIQUID | 1.049 g/mL | 1 L | Flammables 2 | Sixth Floor | 641 |
| Not Exempt | Acetic acid, glacial | | LIQUID | 1.049 g/mL | 500 mL | Flammables 2 | Sixth Floor | 641 |
| Not Exempt | Acetic acid, glacial | | LIQUID | 1.049 g/mL | 500 mL | Flammables 2 | Sixth Floor | 641 |
| Not Exempt | Ethylenediamine | | SOLID | 0.899 g/mL | 500 g | Flammables 1 | Sixth Floor | 641 |
| Not Exempt | Ethylenediamine | | SOLID | 0.899 g/mL | 500 g | A - N Organics | Sixth Floor | 641 |
| Not Exempt | Ethylenediamine | | SOLID | 0.899 g/mL | 100 mL | Flammables 1 | Sixth Floor | 641 |

This detailed MAQ report provides an itemized list of all containers that contribute, in aggregate, to this hazard class. They are broken down by chemical name, inventory owner, quantity and location. This MAQ detail report by hazard class can be exported into an excel file.

Method 2 – MAQ Dashboard in Analytics:

- [Log in](#) to Analytics
- Select MAQ Report
- In the Overview tab, Filter by **Building of interest** in drop down menu (e.g., Science Hall)
- Select “MAQ Report” tab. This will display all Fire Code hazard classes with chemicals present in each control area for that building.

- If you wish to view MAQ overages, select “Yes” for the Only show Over button (left hand menu). This will display all of the hazard classes with MAQ problems per control area. Example view below:

| Control Area Name | Code | Rooms | Occupancy | Floor | GradePlane | Containers | Hazard Class | State | Actual | MAQ | Units | % of MAQ |
|----------------------------|------|-------|-----------|-------------|------------|------------|-----------------------------|--------|-----------|--------|-------|----------|
| ◆ Sixth Floor Control Area | 2016 | 2 | B | Sixth Floor | +7 | 14 | Combustible Liquid II | Liquid | 29.18 | 15.00 | gal | 195% |
| ◆ Sixth Floor Control Area | 2016 | 2 | B | Sixth Floor | +7 | 2 | Corrosive | Gas | 250.00 | 101.25 | ft3 | 247% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 64 | Flammable Liquid IA, IB, IC | Liquid | 48.18 | 30.00 | gal | 161% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 64 | Flammable Liquid IB, IC | Liquid | 48.18 | 30.00 | gal | 161% |
| ◆ Sixth Floor Control Area | 2016 | 2 | B | Sixth Floor | +7 | 7 | Highly Toxic | Liquid | 20.02 | 1.25 | lbs | 1,602% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 30 | Highly Toxic | Solid | 15.07 | 1.25 | lbs | 1,205% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 14 | Oxidizers 1 | Solid | 28,442.88 | 500.00 | lbs | 5,689% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 47 | Oxidizers 2 | Solid | 45.22 | 31.25 | lbs | 145% |
| ◆ Sixth Floor Control Area | 2016 | 2 | B | Sixth Floor | +7 | 11 | Oxidizers 3 | Solid | 15.87 | 1.25 | lbs | 1,270% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 153 | Oxidizing Gas | Gas | 523.16 | 187.50 | ft3 | 279% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 94 | Toxic | Liquid | 151.57 | 62.50 | lbs | 243% |
| ◆ Sixth Floor Control Area | 2016 | 4 | B | Sixth Floor | +7 | 102 | Toxic | Solid | 72.15 | 62.50 | lbs | 115% |
| ◆ Sixth Floor Control Area | 2016 | 2 | B | Sixth Floor | +7 | 12 | Water Reactive 3 | Solid | 7.17 | 0.63 | lbs | 1,146% |

In the above example, the Sixth Floor Control Area has 29.18 gallons (aggregate) of Combustible, Class II liquids. The MAQ for Combustible, Class II liquids for this control area is 15 gallons. This is 195% of the MAQ.

- To learn more about which containers are contributing to the MAQ overage, select the Hazard Class of interest (e.g., Combustible Liquids, II) and the control area of interest (sixth floor) in the drop-down menu on the left side of the screen. Select “MAQ with inventory” tab. This will list the location, owner, and number of containers included as Combustible Liquids, Class II.

| Control Area Name | Code | Rooms | Occupancy | Floor | Inventory | Inventory Owner | Department | Hazard Class | State | Containers | Actual | MAQ | Units | % of MAQ |
|--------------------------|------|-------|-----------|-------------|-----------|-----------------|--------------------------|-----------------------|--------|------------|--------|-------|-------|----------|
| Sixth Floor Control Area | 2016 | 1 | B | Sixth Floor | Inventory | | Civil & Environ Engineer | Combustible Liquid II | Liquid | 10 | 27.60 | 15.00 | gal | 184% |
| Sixth Floor Control Area | 2016 | 1 | B | Sixth Floor | Inventory | | Civil & Environ Engineer | Combustible Liquid II | Liquid | 4 | 1.59 | 15.00 | gal | 11% |

7. The MAQ apportionment tab will provide a further breakdown on the chemicals, separated by sublocation.

| Fire Code Hazard | Hazard Class | State | Room - Sublocation | Inventory | Owner | Chemical Name | CAS # | Quantity | Units |
|--------------------|--------------|--------|---------------------------|-----------|-------|--------------------------|-----------|---------------------|-------|
| Combustible Liquid | II | Liquid | Total | | | | | 110,339.90 g | |
| | | | 641 - A - N Organics | Inventory | | Ethylenediamine | 107-15-3 | 500.00 | g |
| | | | 641 - Flammables 1 | Inventory | | Ethylenediamine | 107-15-3 | 589.90 | g |
| | | | | | | N,N-Dimethylformamide | 68-12-2 | 100,500.00 | mL |
| | | | | | | Titanium(IV) butoxide | 5593-70-4 | 250.00 | mL |
| | | | 641 - Flammables 2 | Inventory | | Acetic acid, glacial | 64-19-7 | 2,000.00 | mL |
| | | | | | | Tetraethyl orthosilicate | 78-10-4 | 500.00 | mL |
| | | | 645 - Under the Fume Hood | Inventory | | Acetic acid, glacial | 64-19-7 | 6,000.00 | mL |

This does not show a breakdown *only* for the hazard class of interest. It lists ALL hazard classes. User will need to scroll or sort by Fire Code Hazard to locate the chemicals of interest. It provides an aggregate quantity for chemicals in the hazard class of interest, which could include 1 or multiple containers. It does not allow the user to locate or view individual containers contributing the MAQ issue.