

Fitwel Enhanced Indoor Air Quality Monitoring Policy



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This document provides project teams with a policy that can be used as a template and adopted in full to comply with requirements of the Fitwel Enhanced Indoor Air Quality Monitoring Policy. Project teams can either use the exact content of this document to establish new policies, or update existing policies by adding any missing components from the below.

A qualifying enhanced indoor air quality (IAQ) monitoring policy must include the following:

1. Implementation

- ☐ when implementing the policy in multi-tenant commercial and residential buildings, the protocol will apply to all areas under the control of the building management, including common elevator banks on tenant floors.
- ☐ when implementing the policy in single tenant buildings and commercial interior spaces, the protocol will apply to all areas within tenant spaces.

2. Required Monitoring Metrics

All indoor air quality monitoring will follow the protocols under Section 3, and will meet the following metrics:

- ☐ Required metrics for PM_{2.5} and CO₂:
 - The following air quality monitoring metrics must be monitored to confirm compliance with the recommended metrics:
 - PM_{2.5}: less than 12 µg/m³
 - CO₂: less than 1000 ppm.
- ☐ Additional required metrics:
 - A minimum of **three** of the following air quality metrics must be monitored* to confirm compliance with the recommended limits:
 - TVOC: less than 500 µg/m³ or 132.73 ppb (ug/m³ = ppb * 3.767).
 - Relative Humidity: between 30-60%
 - Ozone: less than 0.07 ppm
 - CO: less than 9 ppm
 - Formaldehyde: less than 27ppb.

*Testing, following the protocols under Section 4 may be used instead of monitoring to demonstrate compliance with the required metrics under section b.

3. Monitoring Protocols

Air quality monitoring must be conducted:

- ☐ To continuously show monthly averages and peaks lasting for more than one hour during work hours while HVAC systems are operating at design parameters
- ☐ On every 25,000 square foot or per Air Handling Unit (AHU) zone, whichever is more stringent
- ☐ Using monitors that meet **all** of the following requirements:
 - Has a data output of at least once every 5 minutes
 - Has a data loss rate of 10% or less
 - Has a minimum operating range for temperature of 0 - 40 °C (or 32 - 104 °F).
 - Has a minimum operating range for relative humidity of 5-85% RH, non-condensing
 - Requires permanent installations
 - Is calibrated and confirmed functional without defect prior to shipping.

4. Testing Protocols

Air quality testing must be conducted:

- ☐ annually post-occupancy in all required areas
- ☐ after any construction and major renovations prior to occupancy within all required areas.
- ☐ post occupancy following all long-term closures (2 weeks or more) or significant reduction in occupancy (more than 25%), within all required areas.
- ☐ every 25,000 square ft, or per Air Handling Unit (AHU) zone, whichever is more stringent
- ☐ to show the average levels measured for each required zone
- ☐ during work hours while HCA systems are operating at design parameters
- ☐ in the breathing area between 3 to 8 feet from floor level
- ☐ using **one** of the following testing methods as applicable:
 - Direct reading from IAQ testing devices for TVOC, PM₁₀, PM_{2.5}, CO, CO₂ and relative humidity
 - EPA: Compendium Methods IP-10 (PM_{2.5}) / IP-1 (TVOC) / IP-3 (CO₂ and CO) / IP-6 (Formaldehyde), TO-1 and TO-17 (TVOC), TO-11 (Formaldehyde)
 - ISO: 7708 (PM_{2.5}) / 16000-6 (TVOC) / 4224 (CO) / 16000-3 (Formaldehyde) - ASTM D5197 or NIOSH 2016: (Formaldehyde).

5. Improvement Protocol

A protocol to improve the air quality will be implemented if the recommended limits for air quality metrics are not met.