

MechSE WELLness

A01 Fundamental Air Quality

Intent: Ensure a basic level of indoor air quality that contributes to the health and wellbeing of building users.

Is the quality of the air we breathe that important? Indeed it is! Pollutants such as Volatile Organic Compounds (VOCs), carbon monoxide, and ozone can cause symptoms ranging from headaches, dry throat, ear irritation, and runny nose to asthma attacks, poisoning, and cancer. Exposure to air pollutants such as ozone, particulate matter, carbon monoxide, and others has been shown to increase the risk of respiratory and cardiovascular diseases including asthma, myocardial ischemia, angina, high blood pressure, and heart disease!

Impact: The quality of air people breathe indoors directly impacts their health and wellbeing and constitutes one of the most important aspects of healthy buildings.

Requirements for the Sidney Lu Mechanical Engineering Building:

1. Particulate matter smaller than 2.5 microns (PM2.5) is kept below 15 micrograms per cubic meter.
2. Particulate matter smaller than 10 microns (PM10) is kept below 50 micrograms per cubic meter.
3. Formaldehyde levels are kept less than 27 parts per billion.
4. Total VOCs are kept less than 500 micrograms per cubic meter.
5. Carbon dioxide kept less than 9 parts per million.
6. Ozone kept less than 51 parts per billion.
7. Radon level kept less than 0.15 Bq/L, and ventilation air provided to the basement
8. All pollutants mentioned are monitored at least once per year for 3rd party verification.

 **This is some CLEAN air!**

How do we accomplish these requirements? The design of the facility included vestibules at the entrances, entry mats when you enter, wise choices of paints and furniture, plants, and posting “no idling” signs in our rented parking spaces. Our ongoing efforts include continuously tweaking the HVAC system to push air out when you come in, monitoring MERV 13 and bag air filters, and implementing policies to reduce dust, reduce VOCs entering the building, and choose healthy materials.



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