Choose Safe Places for Early Care and Education

Planning. Guidance. Protection.

Protecting Your Indoor Air

When looking at indoor air quality, there are several things to think about. Among these is whether your contaminants from nearby businesses such as nail salons or dry cleaners are being drawn into your facility. Consider:

- the building's ventilation system,
- businesses within the same building that may produce contaminants, and
- nearby businesses that may produce contaminants.

Contaminants from other businesses using harmful chemicals in the same building or nearby buildings can be harmful to staff and children in a child care setting. Businesses such as print shops, beauty or nail salons and dry cleaners use chemicals that can be harmful if breathed.

The heating and cooling system for a building includes all heating, cooling, and ventilation equipment serving the building. Parts of heating and cooling systems include: furnaces or boilers, chillers, cooling towers, air handling units, exhaust fans, ductwork, filters, steam (or heating water) piping.

A properly designed and operating heating and cooling system can separate and remove contaminants through pressure control, filtration, and exhaust fans.

Contaminated air can be pulled in from an adjacent room in the same building or from a neighboring building. Check the outdoor air intakes to see whether they are located near contaminant sources such as exhaust outlets, loading docks, or other locations where vehicles idle.

Controlling the pressure relationship in a building can keep contaminants away from other areas in the building.

- If more air is put into to a room than is given off, the extra air leaks out of the space. The room is said to be under positive pressure.
- If less air is put into the room than is given off, air is pulled into the space. The room is said to be under negative pressure.

It is important to make sure that areas of a building that might have contaminants are properly isolated. These include attached parking garages and loading docks. Air should be exhausted to the outdoors and not recirculated from locations which produce high concentrations of contaminants.

An improperly designed local exhaust can draw other contaminants through the occupied space and make the problem worse.

Relocate elements of the ventilation system that contribute to entry of outdoor air contaminants.

- Separate outdoor air intakes from sources of odors and contaminants.
- Separate exhaust fan outlets from operable windows, doors, and air intakes.
- Build rooftop exhaust outlets taller than intakes.

Air exhaust from a drycleaner with harmful chemicals next to air intake at a child care facility.

If you share space with other tenants in a strip mall, it is best to not share duct work of their heating and cooling system. Have your own if possible.

Consult an indoor air professional if you have concerns about contaminants from a neighboring business being in your indoor air. They may use chemical smoke to evaluate heating and air conditioning systems. The smoke can track potential contaminant movement. Chemical smoke is sensitive to air currents and moves from areas of higher pressure to areas of lower pressure. Investigators can learn about airflow patterns by observing the direction and speed of smoke movement.

More information about building air quality can be found at this webpage: https://www.epa.gov/indoor-air-quality-iaq/building-air-quality-guide-guide-building-owners-and-facility-managers