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Maintaining Indoor Air Quality During Construction and Renovation

Construction and renovation projects in office settings can affect building occupants by the release of airborne particulates, biological contaminants, and gases. Careful planning for IAQ and the prevention of exposure during these activities is essential and a requirement of the project.

Prior to construction, a 3rd party hygienist (RPF Environmental) was hired to perform a baseline Indoor Air Quality (IAQ) plan of the building. They will also be testing during construction. In addition to RFP Environmental, the Owner has their own hygienist, Universal Environmental Consultants who is responsible for monitoring, testing and providing clearances for the abatement work.

At the connection between the construction area and occupied area, infection control procedures will need to take place in order to not contaminate the occupied space. This will require the construction of temporary walls to separate the construction area from the occupied area. Utilization of pressure differentials between the construction area and the occupied areas will be needed to prevent contaminated air from entering clean areas. This is done with negative air machines that vent 100% of contaminated air directly to the outside during construction.

In order to maintain dust control, we suppress dust with wetting agents or sweeping compounds. We use an efficient and effective dust collecting method such as a damp cloth, wet mop, or vacuum with particulate filters. Activities which produce high dust levels shall be cleaned up immediately upon completion or at the end each day the activity continues. This is the responsibility of all contractors. We also utilize tacky mats to remove dust from footwear upon exiting the construction areas.

Particulates

Particulate material such as dusts and fibers are likely to be produced during construction and renovation activities. Sources include drywall, plaster, concrete, soil, wood, masonry, flooring, roofing, and ductwork. For all construction and renovation dusts, a plan to minimize exposure is always implemented. Appropriate containment should be in place to prevent disbursement into occupied areas. Certified and licensed contractors are required to conduct renovation.

Volatile Organic Compounds (VOCs)

Some building materials release gases called VOCs. Common VOC sources include:

- Caulks, sealants, and coatings
- Adhesives
- Paints, varnishes and/or stains
- Cleaning agents
- Fuels and combustion products
- Vinyl flooring

If possible, we typically use products that emit fewer VOCs. Similarly, regular air quality checks will help monitor VOC levels, along with carbon monoxide, carbon dioxide and etc. HEPA filters and air purifier are used to maintain any off gassing of these products.