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INDOOR ENVIRONMENTAL QUALITY (IEQ)

CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN-BEFORE OCCUPANCY

IEQ CREDIT 3.2

(NC - 1 point, SCHOOLS - 1 point)

Intent

To reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants.

Requirements NC &

SCHOOLS

Develop an (IAQ)management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy.

OPTION 1. Flush-Out*

PATH 1

After construction ends, prior to occupancy and with all interior finishes installed, install new filtration media and perform a building flush-out by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60Å° F and relative humidity no higher than 60%.

OR

PATH 2

If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,500 cubic feet of outdoor air per square foot of floor area. Once the space is occupied, it must be ventilated at a minimum rate of 0.30 cubic feet per minute (cfm) per square foot of outside air or the design minimum outside air rate determined in IEQ Prerequisite 1: Minimum Indoor Air Quality Performance, whichever is greater. During each day of the flush-out period, ventilation must begin a minimum of 3 hours prior to occupancy and continue during occupancy. These conditions must be maintained until a total of 14,000 cubic feet per square foot of outside air has been delivered to the space.

OR

OPTION 2. Air Testing

Conduct baseline IAQ testing, after construction ends and prior to occupancy, using testing protocols consistent with the EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air and as additionally detailed in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition.

1. All finishes must be installed prior to flush-out.

Demonstrate that the contaminant maximum concentrations listed below are not exceeded.

Contaminant	Max Concentration
Formaldehyde	27ppb
Particulate	50micro g/cm3
Total VOC	500micro g/cm3
4-phenylcyclohexane	6.5micro g/cm3
Carbon Monoxide	9ppm or <2ppm above outdoor

*This test is required only if carpets and fabrics with styrene butadiene rubber (SBR) latex backing are installed as part of the base building systems.

For each sampling point where the maximum concentration limits are exceeded, conduct an additional flush-out with outside air and retest the noncompliant concentrations. Repeat until all requirements are met. When retesting noncompliant building areas, take samples from the same locations as in the first test, although it is not required. Conduct the air sample testing as follows:

All measurements must be conducted prior to occupancy, but during normal occupied hours with the building ventilation system started at the normal daily start time and operated at the minimum outside air flow rate for the occupied mode throughout the test.

All interior finishes must be installed, including but not limited to millwork, doors, paint, carpet and acoustic tiles. Movable furnishings such as workstations and partitions should be in place for the testing, although it is not required.

The number of sampling locations will depend on the size of the building and number of ventilation systems. For each portion of the building served by a separate ventilation system, the number of sampling points must not be less than 1 per 25,000 square feet or for each(TVOCs)uous floor area, whichever is larger. Include areas with the least ventilation and greatest presumed source(CO)length.

Air samples must be collected between 3 and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum 4-hour period.

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