**SECTION 01573 - INDOOR ENVIRONMENTAL CONTROL**

# PART 1 - GENERAL

## 1.1 SECTION INCLUDES

A. Microbial and fungal contamination control.

B. Indoor air quality and pollution control.

C. Heating, ventilating, and air conditioning.

## 1.2 RELATED SECTIONS

A. Section 01445 - Testing for IAQ, Baseline IAQ & Materials.

B. Section 01574 - Construction IAQ Management Plan.

## 1.3 MICROBIAL AND FUNGAL CONTAMINATION CONTROL

A. Perform, schedule, and sequence Work as required to limit conditions supporting formations of microbes, molds, and fungi.
   1. Control water penetration, dampness, and humidity to prevent products not treated for exterior use from becoming soaked or damp.
   2. Enclose building prior to installing interior materials and finishes.
   3. Do not install interior products subject to moisture absorption until building is enclosed and wet work generating moisture and humidity is complete.

B. When visible formations are observed and when formations cannot be completely removed by non-abrasive surface cleaning:
   1. Remove and replace materials identified as food sources for microbes, molds, and fungi.
   2. Correct conditions supporting microbial, mold, and fungal growth.

C. Remove interior products and finishes, identified as food sources, that have absorbed sufficient moisture to become damp whether or not microbial, mold, or fungal growth is observed. Include:
   1. Gypsum board cores.
   2. Organic materials composed of cellulose fiber or paper.
   3. Materials containing sucrose or other binders identified as supporting microbial growth.

D. Remove fibrous insulation materials subject to retaining moisture such as duct liner, insulation, and other materials that are made wet or damp and cannot immediately be made dry.

E. Repair or replace ductwork, pans, and other conditions subject to moisture condensation, water penetration, or other water source not drained and made dry.
   1. Remove conditions that have become an environment for microbes, molds, or fungi.
   2. Do not permit conditions leading to standing water.

F. Install wet work and allow time needed to dry and cure prior to installing materials such as carpet, acoustical material, textiles, and other material of type that may attract and retain moisture.

1.4 INDOOR AIR QUALITY AND POLLUTION CONTROL

A. Product Emission Rate Standards: Test to ASTM D5116 for Maximum Indoor Air Concentration Levels.
   1. Formaldehyde:
      a. 0.03 parts per million where no other requirements are specified.
      b. 0.005 parts per million where products are specified as formaldehyde free.
   2. Total VOC Emissions for Carpet Tile, Adhesives, and Sealers: 0.05 $mg/m^2$ per hour.
   3. 4 Phenyl Cyclohexene (4-PC) Particulate Emissions for Carpet: One (1) part per billion.
   4. Total Particulate Emission Rate Levels: 50 $ug/m^3$.
   5. Primary and Secondary Regulated Pollutants: Conform to USEPA, Code of Federal Regulations, Title 40, Part 50 National Air Ambient Air Quality Standard. Refer to EPA Web Site http://www.epa.gov/epahome/rules.html#codified.
   6. Other Pollutants not Listed: Not greater than 1/10 of Threshold Limit Value - Time Weighted Average (TLV-TWA) industrial workplace standard.

B. Architectural Coatings - Volatile Organic Compound (VOC) Content Limits: Conform to US Environmental Protection Agency (EPA) Federal Register 48886/Vol. 63, No.176 Friday, September 11, 1998/ Rules and Regulations. Refer to EPA Web Site: http://www.epa.gov/.

C. Do not use products in combination with or in contact with other products that can be identified as combining to form toxic fumes or sustained odors.

D. Do not use solvents within interior areas that may penetrate and be retained in absorptive materials such as concrete, gypsum board, wood, cellulose products, fibrous material, and textiles.

E. Protect construction materials from contamination and pollution from contact with construction dust, debris, fumes, solvents, and other environmentally polluting materials.

F. Allow furnishings and materials such as carpet, floor tile, acoustical tile, textiles, office furniture, and casework, to air out in clean environment prior to installation.

## 1.5 HEATING, VENTILATING, AND AIR CONDITIONING

A. Do not run HVAC system during course of construction. Seal ductwork intake and exhaust vents.

B. Heat, dehumidify, and ventilate building during course of Work as necessary to maintain environmental conditions suitable for drying and curing materials and for prevention of conditions suitable for mold and mildew growth.
   1. Ventilate building removing moisture, dust, fumes, and odors.
   2. Temper and dehumidify air as needed to remove excess moisture.
   3. Do not use propane heaters and other moisture generating heating systems.

C. Flush out Building prior to Commissioning by Owner.
   1. Install new filters and flush using 100 percent outside air for two (2) week period for 24 hours per day or until five (5) complete air exchanges of building have been achieved.
   2. Maintain indoor temperatures at minimum 60 degrees during this period.
   3. Install new filters following flush out period.

D. Inspect ductwork for refuse, contaminants, moisture and other foreign contamination prior to Commissioning by Owner. Notify Owner of satisfactory inspection prior to beginning of Commissioning.

E. Clean underfloor plenum at access flooring, acting as supply air duct, prior to occupancy.

## 1.6 REMEDIAL ACTION

A. Promptly take action as necessary to inspect and remediate conditions suspected of supporting microbial fungal or mold conditions and where contaminated by indoor air pollution.

B. Notify and consult with Architect prior to beginning remedial action where contamination by hazardous chemicals, microbes, and fungi is suspected.

# PART 2 - PRODUCTS

Not Used

# PART 3 - EXECUTION

Not Used

END OF SECTION