

## **SECTION 01811 - Indoor Air Quality Management - LEED for Schools CONSTRUCTION MANAGER EDITION**

### **PART 1 – GENERAL**

#### 1.1 Summary:

- A. Construction activities shall be controlled to avoid causing detectable odor, visible and/or respirable dust, and other air pollutants at levels known to present a risk of illness in occupied school areas; or in areas that will be occupied after construction is complete.
- B. Throughout duration of this project, contractor shall perform the Work required by contract documents without negatively affecting Indoor Air Quality (IAQ) in occupied areas. Work shall be performed with special care, planning, and quality control to avoid disruption or interference with normal facility and educational operations; and to protect health and safety of students, MCPS staff, and general public.
- C. Contractor's LEED Coordinator will be responsible for developing/implementing LEED-compliant IAQ plans during construction and prior to occupancy. Said individual will supply necessary documentation for Construction Indoor Air Quality (IAQ) Management as required by LEED® Green Building Rating System™ for Schools 2007 (LEED-S) or latest edition.

#### 1.2 References:

- A. Sheet Metal and Air Conditioning-Construction Managers National Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, Chapter 3 "Control Measures."
- B. Sheet Metal and Air Conditioning-Construction Managers National Association (SMACNA) Duct Cleanliness for New Construction Guidelines.
- C. ASHRAE Standard 52.2-1992: "Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size."
- D. South Coast Air Quality Management District (SCAQMD) Rule #1168: "Adhesive and Sealant Applications," including most recent amendments
- E. Green Seal (GS) Standard for Commercial Adhesives GS-36
- F. Green Seal (GS) Standard GS-11 "Paints"
- G. Green Seal Standard GC-03, "Anti-Corrosive Paints"
- H. South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings
- I. Carpet and Rug Institute (CRI) "Green Label Plus" IAQ Testing Program for Carpet and Carpet Cushion
- J. US Green Building Council LEED for Schools Reference Guide, 2007 edition or later, especially IEQ Credits 3.1 and 3.2 " Construction IAQ Management Plan" and IEQ credit 4 "Low Emitting Materials"

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

- K. California Department of Health Services 2004 “Standard Practice for the Testing of Volatile Organic Emissions from various sources using Small-Scale Environmental Chambers”

1.3 Submittals:

A. IAQ Control Plan:

1. Within 60 days prior to scheduled building enclosure, submit for approval eight (8) copies of Detailed Construction Indoor Air Quality Management Plan, During Construction, in accordance with requirements of LEED IEQ Credit 3.1 and as outlined in this Section.
  - a. Meet or exceed control measures of Sheet Metal and Air Conditioning Contractor’s National Association Indoor Air Quality Guidelines and as described within this Section.
  - b. Detailed products and procedures for compliance with execution requirements outlined in Parts 2 and 3 of this Section.
2. Incorporate into construction project schedule adequate time to completely flush out building in accordance with LEED IEQ c 3.2, and allowing adequate time for move-in of furniture after initial flush of 3500 cu.ft. of outside air per sq ft of floor area to the space.
3. Develop Construction Indoor Air Quality Management Plan, prior to occupancy, in accordance with requirements of LEED IEQ Credit 3.2 and as outlined in this Section. As directed by Owner, comply with MCPS preferred compliance path indicated in Part 3.
4. Construction Indoor Air Quality Management Plans and implementation shall be discussed at Work initiation and all progress meetings.

1.4 Product Data Submittals:

- A. Manufacturer product data indicating MERV rating of temporary and permanent filtration media with statement of where and when each filter was installed.
- B. Manufacturer product data indicating chemical content and Green Seal certification of cleaning products.
- C. Photographs demonstrating compliance with IEQ Credit 3.1. Provide at the following recommended construction milestones: 50%, 75%, 95%.
- D. Low-Emitting Materials: For each low-emitting product submitted, provide the following product data:
  1. Adhesives, sealants, paints and coatings: VOC content as measured in grams per Liter (g/L)
  2. Carpet: Proof of Green Label Plus certification
  3. Carpet Cushion: Proof of Green Label certification

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

4. Composite wood and agrifiber products: Manufacturer declaration that product contains no added urea-formaldehyde
5. Laminating Glues: Manufacturer declaration that product contains no added urea-formaldehyde
6. Ceiling and Wall Systems (gypsum board, insulation, acoustical ceiling systems and wall coverings): Proof of compliance with the California Department of Health Services Standard Practice for The Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.

1.5 Close-out Submittals:

- A. General: At completion of construction and prior to contract close-out, submit the following for information purposes in electronic format.
- B. Final Construction Indoor Air Quality Management, During Construction, Package for IEQ Credit 3.1: At completion of construction and prior to contract close-out, submit:
  1. Approved Construction Indoor Air Quality Management Plan
  2. Construction Photographs: Six taken at 3 separate times for a total of eighteen (18) digital photographs of required construction indoor air quality management measures
    - a. HVAC protection
    - b. Source control
    - c. Pathway interruption
    - d. Housekeeping
    - e. Scheduling
    - f. Protection of absorptive or dry sink materials, including but not limited to carpet, gypsum board, acoustical ceiling tiles, and insulation
    - g. Temporary filtration media, if HVAC is operated during construction
  3. Product data of filtration media used during construction and installed immediately prior to occupancy including MERV values, manufacturer's name and model number
  4. Meeting minutes, checklists, worksheets, notifications and deficiency or resolution logs related to the project IAQ issues
  5. Final LEED IEQ Credit 3.1 Online Template indicating compliance with credit requirements
- C. Final Construction Indoor Air Quality Management Plan, Prior to Occupancy, Package for IEQ Credit 3.2: At completion of construction and prior to contract close-out, submit:
  1. Compliance Path Option 1: Approved Building Flush-out Schedule including a statement that space was not occupied until after delivery of minimum outside air requirements were met or, if IAQ testing was determined by MCPS to be the compliance path

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

2. Compliance Path Option 2: Baseline Indoor Air Quality Testing reports showing results and location of each test indicating that the maximum chemical contaminate concentration requirements are not exceeded, a summary of HVAC operating conditions, and if needed a listing of discrepancies and recommendations for corrective actions
    - a. Include certification of test equipment calibration with each test report.
  3. Final LEED IEQ Credit 3.2 Online Template indicating compliance with credit requirements.
- D. Complete LEED online Template and associated required documentation uploaded to LEED online for IEQ Credits 3.1, 3.2, 4.1, 4.2, 4.3, 4.4, 4.6.

**PART 2 – PRODUCTS**

2.1 Low-Emitting Materials:

- A. Comply with at least four of the following product category specifications for Low-Emitting Materials (LEED IEQ Credit 4) as required by LEED® Green Building Rating System™ for Schools 2007 (LEED-S) or latest edition
  1. All adhesives and sealants
  2. Paints and coatings
  3. Flooring systems
  4. Composite wood and agrifiber products
  5. Ceiling and wall systems
- B. Product documentation should be reviewed by General Contractor, Architect and LEED Administrator for compliance with IEQ c4 and MR credits 4-7 before acceptance.
- C. Adhesives applied within the building waterproofing envelope shall comply with VOC Content limits, as expressed in grams per liter, less water and exempt compounds, of South Coast Air Quality Management District (SCAQMD) Rule 1168 “Adhesive and Sealant Applications,” amended January 7, 2005, or more stringent levels, as follows:
  1. Indoor Carpet & Pad Adhesives: 50
  2. Wood Flooring Adhesive: 100
  3. Rubber Floor Adhesives: 60
  4. Subfloor Adhesives: 50
  5. Ceramic Tile Adhesives: 65
  6. VCT and Asphalt Tile (& Linoleum) Adhesives: 50
  7. Dry Wall and Panel Adhesives: 50
  8. Cove Base Adhesives: 50

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

9. Multipurpose Construction Adhesives: 70
  10. Structural Glazing Adhesives: 100
  11. PVC Welding: 510
  12. CPVC Welding: 490
  13. ABS Welding: 325
  14. Plastic Cement Welding: 250
  15. Adhesive Primer for Plastic: 550
  16. Contact Adhesive: 80
  17. Special Purpose Contact Adhesive: 250
  18. Structural Wood Member Adhesive: 140
  19. Metal to metal substrates: 30
  20. Plastic foam substrate: 50
  21. Porous substrate except wood: 50
  22. Wood substrate: 30
  23. Fiberglass substrate: 80
  24. All Other Welding & Installation Adhesives: 250
- D. Aerosol Adhesives applied within building waterproofing envelope shall comply with the VOC Content limits, as expressed in percentage of VOCs by weight, of Green Seal (GS) Standard GS-36 "Commercial Adhesives," October 19, 2000 as follows:
1. General Purpose Mist Spray: 65% VOCs by weight
  2. General Purpose Web Spray: 55% VOCs by weight
  3. Special Purpose Aerosol Adhesives (all types): 70% VOCs by weight
- E. Sealants applied within building waterproofing envelope shall comply with VOC Content limits, as expressed in grams per liter, less water and exempt compounds, of SCAQMD Rule 1168 "Adhesive and Sealant Applications," amended January 7, 2005, as follows:
1. Architectural Sealants: 250
  2. Non-membrane Roof: 300
  3. Single-Ply Roof Membrane: 450
  4. Other: 420
- F. Sealant primers applied within building waterproofing envelope shall comply with VOC Content limits, as expressed in grams per liter, less water and exempt compounds, of

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

SCAQMD Rule 1168 “Adhesive and Sealant Applications”, amended January 7, 2005, as follows:

1. Architectural, Nonporous: 250
  2. Architectural, Porous: 775
  3. Other: 750
- G. Paints and coatings applied within building waterproofing envelope shall comply with the following VOC Content limits as expressed in grams per liter, less water and exempt compounds, of Standard GS-11 “Paints”. First Edition, May 20, 1993; Standard GC-03 “Anti-Corrosive Paints”, Second Edition, January 7, 1997; and SCAQMD Rule #1113 “Architectural Coatings”, January 1, 2004 as follows:
1. Flat: 50
  2. Non-flat: 150
  3. Anti-corrosive & anti-rust: 250
  4. Clear Wood Finishes, Varnish: 350
  5. Clear Wood Finishes, Lacquer: 550
  6. Floor Coatings: 100
  7. Shellac, Clear: 730
  8. Shellac, Pigmented: 550
  9. Waterproofing Sealer: 250
  10. Sanding Sealer: 275
  11. Sealers, Other: 200
  12. Stains: 250
  13. Graphic Arts Coatings: 500
- H. Carpets shall meet testing and product requirements of the Carpet & Rug Institute Green Label Plus program.
- I. Carpet cushion shall meet testing and product requirements of the Carpet & Rug Institute Green Label program.
- J. Permanently installed composite wood and agrifiber products shall contain no added urea-formaldehyde.
- K. Laminating adhesives used in composite wood and agrifiber product assemblies, shop-applied and applied on-site, shall contain no added urea-formaldehyde.
- L. Ceiling and Wall Systems (gypsum board, insulation, acoustical ceiling systems and wall coverings) shall comply with the California Department of Health Services Standard Practice for The Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.

2.2 Air Filtration Media:

- A. Minimum Efficiency Reporting Value (MERV) as determined by ASHRAE 52.2-1999:
  - 1. MERV-8 for filtration media used at each return air grill if used during construction
  - 2. MERV-8 or better, dependent upon equipment and designed static pressure limitations for filtration media installed at the end of construction

2.3 Cleaning Products and Equipment:

- A. Least toxic and lowest-emitting practical spot removers and cleaning agents shall be used for each given application. Chemical products to be used shall already have been approved prior to use in occupied school facilities. Refer to MCPS High Performance Cleaning Plan.
- B. High Efficiency Particulate Air (HEPA) – filter equipped vacuum cleaners shall be used for final cleaning.

**PART 3 – EXECUTION**

3.1 HVAC Protection:

- A. If permanent HVAC is used during construction, filtration media with a MERV of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1999, and HVAC systems, equipment and pathways shall be dust and particulate free at time of substantial completion of that phase of construction in accordance with SMACNA “IAQ Guidelines for Occupied Buildings Under Construction.”
- B. Replace filters during construction as necessary to protect equipment and indoor air quality. Inspection of filters shall be conducted and/or replaced based on loading of filter.
- C. HVAC supply and return ductwork, registers and equipment shall be kept clean, free of dust, debris, moisture, gaseous and microbial contamination during storage, handling installation and punch-out.
  - 1. Cover and protect (taped plastic or similar method) all exposed air inlet and outlet openings, grilles, ducts, plenums, to prevent water, moisture, dust and other contaminate intrusion.
  - 2. Apply protection immediately after installation of equipment and ducting.
  - 3. Ducting runs that require more than a single day to install shall be protected at end of each day's Work.
  - 4. Leaks in return ducts and air handlers shall be checked and repaired. Do not use mechanical rooms for construction storage.
  - 5. Inspect filtration monthly and replace as needed with new media throughout the HVAC system. Filtration media shall be minimum MERV 8.
  - 6. After final phase of construction, install new filtration media throughout the HVAC system. Filtration media shall be minimum MERV 8.

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

7. Cleaning of ductwork is not part of this contract; however Contractor shall bear cost of cleaning required by Owner due to failure of Contractor to protect ducts and equipment from construction pollutants as specified.
- D. After each phase of construction, install new filtration media throughout the HVAC system. Filtration media shall have a MERV of 8 or better, dependent upon equipment and designed static pressure limitations, as determined by ASHRAE 52.2-1999.

3.2 Source Control:

- A. Comply with the USGBC LEED for Schools specifications for Low-Emitting Materials (LEED IEQ Credit 4) in specific Product Specifications.
- B. All adhesives applied onsite shall comply with current VOC Content limits, as expressed in grams per liter, of SCAQMD Rule 1168 "Adhesive and Sealant Applications," and Green Seal Standard GS 36 as listed above in Part 2.
- C. Prohibit smoking on MCPS property and near doors, windows and intakes.
- D. Provide direct exhaust to exterior during installation of strong emitting materials, including touch-up activities if applicable. Keep exhaust away from intakes and occupied spaces.
- E. Protect "absorptive" materials (which are woven, fibrous or porous in nature, such as carpet, ceiling tiles, insulation, and fabrics) from exposure to dust, debris and moisture contamination during product delivery, storage and handling from construction, demolition and punch-out activities.
- F. "Bake-out" or "super-heating" of spaces to accelerate the release of gaseous emissions is not permitted.
- G. Provide adequate ventilation of packaged dry products prior to installations. Remove from package and place in a secure, dry, well-ventilated space, free from contaminant sources and residues. Provide a temperature range of 60 degrees F minimum to 90 degree maximum continuously during ventilation period. Do not ventilate within limits of Work unless otherwise approved by Architect.

3.3 Control Measures:

- A. Conduct construction activities with potential odor or dust impacts on occupied areas behind barriers or after hours. Other IAQ control measures available include use of low emitting products, equipment, or procedures, isolation of work (barriers, proper pressurization, or scheduling), and housekeeping.
- B. Work adjacent to occupied school areas shall be separated by barriers which prevent penetration of dust and odors. Vertical barriers shall extend from floor to metal deck sealing penetrations. Once spaces within building become occupied, work areas must remain under negative pressure. Emergency exit doors shall be self-closing and weather-stripped. Construction shall include 2 in. x 4 in. wood stud fames and 5/8 in. sheetrock (joints sealed). Floor-to-floor penetrations shall also be sealed.
- C. Work activities in occupied buildings presenting a potential health hazard shall be conducted after normal school hours. Roofing, indoor cutting of steel, concrete, or masonry, vehicles powered by internal combustion engines which are operated inside the building, removal of asbestos-containing material, welding, and other activities producing significant dust, odors or fumes shall be conducted after hours unless contractor can demonstrate that controls will maintain acceptable IAQ in occupied areas.

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

- D. Construction areas shall be maintained under negative pressure in relation to occupied areas where practical. This may be accomplished by supplying outside air to occupied side or exhausting air from construction side. Exhaust air at a rate at least 10 percent greater than the rate of supply. Do not exhaust air where it can be drawn back into occupied spaces.
- E. Temporarily seal the building, including air intakes and exhaust vents, and any other building openings, when dust-generating or strong-emitting construction products or procedures are used on exterior of the building.
- F. Openings created to outside of building shall be enclosed after each work shift to protect building interior from moisture.
- G. Construction-related noise shall not cause noise levels to exceed 65 dBA in occupied school areas.
- H. Corridors through occupied areas shall not be used for project storage or for transportation of materials, equipment, trash, or debris.
- I. Contractors shall prevent workers from entering occupied school areas.
- J. Clean work area daily to prevent the accumulation of dust or debris.
- K. Store waste in enclosed waste containers as needed to prevent release of dust and odor.
- L. Transport trash, debris, carts, equipment, materials or supplies to and work areas without entering occupied school areas.
- M. Take immediate measures to dry any area where flooding, water leakage, or condensation occurs.
- N. Mold growth must be remediated following procedures approved by MCPS.
- O. Contractor shall be responsible for providing adequate manpower, equipment, and materials at appropriate times (including nights and weekends) to meet the requirements of this section and project schedule milestone dates.
- P. If MCPS or its designated representative determines that Contractor is violating this IAQ specification or endangering school occupants, Contractor must cease operations until corrective actions are taken.

3.4 Housekeeping:

- A. Suppress dust during construction and/or demolition activities with wetting agents or sweeping compounds.
- B. Broom clean and vacuum floors to keep dust from accumulating during construction and/or demolition.
- C. Prior to use of return air ductwork without intake filters clean up and remove dust and debris generated by construction activities.
  - 1. Inspect duct intakes, return air grilles, and terminal units for dust. Clean plenum spaces, including top sides of lay-in ceilings, outside of ducts, tops of pipes and conduit, and return plenums of air handling units.
  - 2. Clean tops of doors and frames.

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

3. Clean mechanical and electrical rooms, including tops of pipes, ducts, and conduit, equipment, and supports.
4. Remove intake filters last, after cleaning is complete.

- D. Ensure that food and food packaging are not left on jobsite.
- E. Give preference to low-toxic pest control chemicals, if needed.
- F. Final cleaning shall be detailed and shall use a HEPA-filter vacuum throughout.
- G. Remove spills or excess application of solvent-containing products as soon as possible. Use low-emitting cleaning agents described under “Cleaning Products and Equipment” Article 2.2.
- H. Keep work areas as dry as possible. Replace any absorptive material that is exposed to moisture longer than four hours.

3.5 Scheduling:

- A. If protection measures as described above cannot be ensured for “absorptive” materials during storage, do not store these material on-site.
- B. Sequence construction activities so as to minimize the impact on indoor air quality.
- C. Plan adequate time in project schedule to permit full flush-out procedures (14,000 cu.ft of outdoor air per sq ft of floor area) to take place prior to occupancy.

3.6 Indoor Air Quality Management, Prior to Occupancy

- A. Comply with the following procedure as directed by Owner. If modified flushout is not practical, due to weather or other extraordinary circumstances, contractor must obtain MCPS permission to consider alternative Indoor Air Quality testing. All projects will be flushed, regardless of whether the LEED flushing requirements are followed.
  1. LEED for Schools Building Flushout: After construction ends and prior to occupancy with all interior finishes installed, install new filtration media. Supply a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of at least 60F and, where mechanical cooling is operated, relative humidity no higher than 60%.
    - a. Space may be occupied following delivery of a minimum of 3,500 cu.ft. of outside air per sq.ft. of floor area to space, and provided the space is ventilated at minimum rate of 0.30 cfm/cu.ft. of outside air or the design minimum outside air rate, whichever is greater, a minimum of three hours prior to the occupancy and during occupancy, until the total of 14,000 cu.ft./sq.ft. of outside air has been delivered to the space.
    - b. Do not start flush-out in any area until:
      - 1) All construction is complete
      - 2) HVAC systems have been tested, adjusted, and balanced for proper operation

Montgomery County Public Schools Facilities  
DIVISION 1 – GENERAL REQUIREMENTS

- 3) Inspection of inside of return air ducts and terminal units confirms that cleaning is not necessary
  - 4) New HVAC filtration media have been installed
  - 5) Punch list items have been addressed
  - 6) Final cleaning has been performed
2. If Air Quality testing is approved for the project by MCSP, follow testing protocols of US Environmental Protection Agency's Compendium of Methods for the Determination of Air Pollutants in Indoor Air and procedures as additionally detailed in the LEED for Schools reference guide.

**END OF SECTION  
01811**

## SECTION 01811 – INDOOR AIR QUALITY MANAGEMENT - APPENDIX - CONSTRUCTION MANAGER - ADVISER EDITION

### Background Information to Contractors Regarding Indoor Air Quality

#### 1. What pollutants are associated with renovation?

During the course of major building renovation, a wide variety of odors, dusts, and other pollutants can be released. Projects produce an ever-changing mix of emissions as the work progresses. In general, construction sites have three basic sources of air pollutants:

- A. Demolition Dust. This is generated as old building materials are cleared.
- B. Construction Equipment. Emissions may occur from motor vehicles, compressors, welding, cutting, soldering, etc.
- C. Construction Products. Wet products involved with roofing, painting, adhesives, and solvent use may contribute to odors. Some of the more significant sources have involved concrete cutting, roofing, operation of construction vehicles in or near the building, and solvent use.
- D. Construction activity can indirectly impact air quality in several ways:
  1. Disruption of HVAC systems can adversely affect ventilation, comfort, moisture control, and pressurization as well as contributing to airborne dust.
  2. Interference with drain systems could allow sewer gas in the building.
  3. Damage to natural gas or steam piping could release contaminants.
  4. Temporary building openings or drainage modifications may cause water damage during precipitation events leading to mold growth.
  5. Construction demands interfere with normal building cleaning and maintenance.

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#### 2. How can pollutants move through a school?

Construction emissions become problematic only when they migrate into occupied areas. In this regard, understanding and controlling potential pathways of contaminant movement are essential to maintaining indoor or air quality. Critical factors to consider include:

- Return Air Systems. Contaminants may be drawn into air intakes, return grilles or plenums, or mechanical room equipment and then distributed throughout HVAC zones.
- Relative Pressurization. Pollutants tend to move into areas of negative pressure (e.g., drawn toward exhaust fans, higher building elevations). Openings between building areas or between floors must be sealed to prevent such pollutant migration.
- Tracking. Dust and odors may be spread into occupied areas on construction personnel or by equipment.

Although the generation of odor and dust is inevitable at construction sites, exposure of building occupants depends on the following:

- location of emissions in relation to occupied areas
- time of emissions in relation to building occupancy
- effectiveness of source controls
- effectiveness of pathway controls

Through proper planning and control, no odor or dust should be detected in occupied areas.

3. How can construction pollutants affect school occupants?

Excessive exposure to construction site pollutants may be associated with a variety of acute health complaints including mucous membrane irritation, allergic reactions, asphyxiation, and non-specific symptoms such as headache or nausea. Since each of these conditions could be caused by factors other than construction emissions, detailed diagnostic procedures (both medical and environmental) are needed to establish actual causation. In any large population, a small number of hypersensitive individuals may be present who may react to construction pollutants at levels much lower than other occupants. Although potential carcinogens may be present in some construction emissions, exposure is generally very brief and the risk thus negligible. Isolating building occupants from dusts and odors generated by construction is usually the control strategy of choice.

Occupants of buildings under construction may also express concerns regarding discomfort, nuisance conditions, and perceptions of health effects. Construction process may disrupt HVAC operation, resulting in thermal discomfort. Nuisance conditions may also be observed such as odors, stains, and dust, which do not present a direct health threat. Construction process often places building occupants under stress where they may attribute health concerns to IAQ, which may, in fact, be unrelated.

4. What options are available to control construction-related pollutants?

Measures available to maintain IAQ during construction include:

- protect HVAC systems
- substitute lower-emitting products
- modify equipment operation
- change work practices
- add local exhaust
- cover sources of dust or odor
- depressurize work area
- pressurize occupied space
- erect barriers
- seal penetrations
- relocate pollutant sources
- temporarily seal outside air intakes
- enhance housekeeping
- schedule heavy work for after-hours

When implementing site controls, consider the following:

- Barriers should provide complete isolation with no penetrations or gaps and doors remaining closed when building is occupied.
- Seal other potential pathways to occupied areas such as floor-to-floor pipe penetrations and nearby HVAC intakes.
- Conduct activities with heavy dust or odor emissions during occupied periods under negative pressure (portable exhaust fans in work area and/or positive pressure in occupied area).
- Schedule activities which still may have a health impact for non-occupied periods.
- Enhance dust control by limiting dust tracking from both outside and inside areas and ensuring custodial personnel, procedures, and scheduling are sufficient to maintain a clean building.

**END OF SECTION  
APPENDIX**