



CONSTRUCTION ENVIRONMENTAL HEALTH & SAFETY EXHIBIT

AIR QUALITY

I. General Requirements

- A. All Contractors and Subcontractors performing work on projects conducted at or on behalf of the University shall comply with all applicable federal environmental regulations (EPA, OSHA, etc.), state environmental regulations (MassDEP, Department of Public Health, Massachusetts Water Resources Authority, etc.), and local environmental regulations and ordinances (as appropriate) as well as the University-specific guidelines outlined in the following Sub-Sections.
- B. The requirements included in the following Sub-Sections have been developed to aid Contractors and Subcontractors in navigating through relevant environmental regulations and potential environmental issues that may arise over the course of construction, therefore helping to minimize the overall impacts to the environment and to students, faculty, staff, and the general public. Where codes/regulations/requirements conflict, the more stringent guidelines shall apply.

II. Indoor Air Quality

- A. The General Contractor is responsible for protecting occupied areas of buildings from hazardous materials or contaminant emissions arising from demolition activities, construction materials, and/or construction equipment. Potential contaminants include, but are not limited to, particulates (dusts or fibers), volatile organic compounds (VOCs), combustion products, and/or biological materials. All Contractors shall comply with all federal, state and local laws, regulations, ordinances or orders pertaining to air pollution and dust control with regard to both internal and external emissions. The General Contractor's responsibilities related to indoor air quality include, but are not limited to:
 1. Where airborne contaminants will potentially be released as part of the scope of work (e.g. demolition, welding/cutting fumes, chemical fumes/odors, etc.), the General Contractor shall submit an Indoor Air Quality (IAQ) Plan as part of their Project-Specific Health and Safety Plan. The IAQ plan shall identify those activities during the project that are likely to impact occupied areas and specify control measures to be used to limit those impacts. All possible control measures, or combinations thereof, shall be considered including: isolation of or protection of the HVAC system; use of lower emitting products (e.g., paints with lower VOC content); modification of equipment for lower emissions; local exhaust or duct air cleaning; covering, controlling or sealing emission sources; pressurizing occupied spaces; erecting barriers; relocating sources; temporary sealing of outside sources; dust suppression; increased cleaning frequency or efficiency; and, creating unoccupied buffer zones around work sites. Additional measures such as working off-hours or temporarily relocating adjacent staff shall be coordinated with the HUPM and shall only be done with written permission of the HUPM.
 2. Where an Employee is potentially exposed to contaminants by inhalation, ingestion, absorption, or injection during the project, the Employer shall prove through either an initial or negative exposure assessment that over-exposure has not taken or will not take place. The exposure assessment shall be documented, and the exposure assessment records shall be retained in the project files. The following shall be documented, at a minimum:
 - a. Contaminant(s) of concern and their associated permissible exposure limits;
 - b. Date of exposure assessment;
 - c. Description of the operation for which the contaminant is assessed;



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- d. Engineering controls in place during the assessment period;
- e. Administrative controls in place during the assessment period;
- f. Personal protective equipment worn or used by the employees;
- g. Biological monitoring results (pre and post-assessment);
- h. Environmental conditions during the assessment period;
- i. Collection method(s) (i.e. sampling method or test method);
- j. Analysis method(s);
- k. Analysis result(s);
- l. Comparison of contaminant analysis to the protection factor(s) for the personal protective equipment used;
- m. Employee notification method(s).

III. Ambient Air Quality

- A. Any temporary emission source (e.g., power generators, temporary boilers, etc.) brought on-site must be reviewed with HUEHS prior to locating the unit.
- B. Permanent units (e.g., boilers, emergency generators, new sources of VOCs) that are part of the project must be permitted by HUEHS as part of the campus air permit. The Contractor shall provide all necessary information to support the permitting effort, including detailed equipment specifications and operating criteria. In certain circumstances, additional time for permitting may be required based on the size or complexity of the project.

IV. Dust Control

- A. Contractors shall prevent airborne transmission of dust, mists, and vapors at all times, including nonworking hours, weekends, and holidays. The Contractor shall use wet suppression or other means to control dust and vapors in accordance with the applicable specifications and drawings that are included in the contract documents.
- B. Each Contractor or Subcontractor who generates dust or particulates during construction or demolition activities (e.g. cutting concrete, demolition, CMU/brick cutting, sweeping, etc.) shall comply with OSHA's Respirable Crystalline Silica Standard for Construction. Regardless of which exposure control method is used, all construction employers must comply with the following.
 1. Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
 2. Designate a competent person to implement the written exposure control plan.
 3. Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
 4. Offer medical exams-including chest X-rays and lung function tests-every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.



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5. Train workers on work operations that result in silica exposure and ways to limit exposure.
6. Keep records of exposure measurements, objective data, and medical exams.
7. The General Contractor will have copies of all sub-contractor's silica plans available for review

V. Noise Control

- A. Contractors shall prevent excessive ambient noise to be generated at all times, including nonworking hours, weekends, and holidays. The Contractor shall use appropriate means to control noise in accordance with the applicable Federal, State or local regulatory standards applicable to the project.
- B. The General Contractor is responsible for monitoring the ambient levels of noise in accordance with generally acceptable practices specific to the regulatory program(s) applicable to the project to document compliance with the standard. This data will be kept on file and shared with HUPM and HUEHS upon request.
- C. Any public complaints of noise received by the General Contractor, Contractor or Subcontractor or their representatives will be mitigated and will be communicated to the HUPM and HUEHS immediately upon receipt of the complaint.

VI. Reference

1926.55, Gases, Vapors, Fumes, Dusts, and Mists
1926.1153, Respirable Crystalline Silica
1926.103, Respiratory Protection
1926.52, Occupational Noise Exposure