



University of Medicine and Dentistry of New Jersey

Indoor Air Quality Program

Policy and Administration

April 17, 2008

Complies with Public Employees Occupational Safety and Health (PEOSH) Program,
Indoor Air Quality (IAQ) Standard (N.J.A.C. 12:100-13)(2007), May 21, 2007

<http://www2.umdnj.edu/eohssweb/publications/iaq.pdf>

Introduction

UMDNJ recognizes that good indoor air quality is essential to employees' health and productivity. In accordance with the Public Employees Occupational Safety and Health (PEOSH) Program, Indoor Air Quality (IAQ) Standard (N.J.A.C. 12:100-13)(2007), which was proposed on December 18, 2006 and adopted on May 21, 2007, the University has established this Indoor Air Quality Program (the "Program") to promote good indoor air quality for employees in UMDNJ buildings. This program follows the requirements established by the PEOSH IAQ Standard as it applies to our workplace. This Program applies to all UMDNJ facilities.

UMDNJ will endeavor to hold landlords responsible for ensuring that appropriate air quality measures are taken in leased spaces that house UMDNJ employees. UMDNJ will request that all lease agreements contain language that requires the property owner or manager to be responsive to IAQ complaints and to make available required recordkeeping documents (i.e. recordkeeping, maintenance log).

The lease requestor will be the liaison with owners for leased spaces.

Designated Person

The PEOSH Indoor Air Quality Standard uses the term "designated person" to persons who are trained and assigned the responsibilities listed below:

- Ensuring that routine visual inspections are conducted,
- Overseeing the preventive maintenance program,
- Maintaining required records in order to ensure compliance with the PEOSH IAQ Standard,
- Receiving initial employee concerns/complaints about indoor air quality,
- Coordinating investigations, and
- Facilitating repairs or further investigation as necessary.

Michael Manchello, Director of Physical Plant, has overall responsibility to ensure compliance with the Indoor Air Quality standard for all UMDNJ facilities. In addition, each campus will have its own Designated Person as follows:

Campus	Designated Person	Phone Number
Newark/Scotch Plains	Jim Campoli	973-972-7770
Piscataway/New Brunswick/Somerset	Mike D'Aquila	732-235-4800
Stratford/Camden	Mike Manchello	856-566-6032

Preventive Maintenance Schedule

Preventive maintenance schedules that follow manufacturers' specifications are in place for heating, ventilation and air conditioning systems (HVAC) systems in this workplace.

Damaged and inoperable components will be repaired or replaced as appropriate and a work order to show actions taken will be completed.

Recordkeeping

Documentation of preventive maintenance and repairs to the heating ventilation and air conditioning (HVAC) system are retained for at least 3 years and include the following information:

- Date that preventive maintenance or repair was performed
- Person or company performing the work
- Documentation of:
 - Checking and/or changing air filters
 - Checking and/or changing belts
 - Lubrication of equipment parts
 - Checking the functioning of motors
 - Confirming that equipment is in operating order
 - Checking for microbial growth in condensate pans or standing water

Documentation of preventive maintenance and work orders for repairs are maintained by the Designated Person.

Indoor Air Quality Compliance Documents

UMDNJ Physical Plant will make reasonable efforts to obtain and maintain copies of IAQ compliance documents. Available IAQ compliance documents will be maintained by the Designated Person and will be available to PEOSH during inspections. These documents include:

1. As-built construction documents (if available)
2. HVAC system commissioning reports (if available)
3. HVAC systems testing, adjusting, and balancing reports (if available)
4. Operations and maintenance manuals (if available)
5. Water treatment logs
6. Operator training materials
7. Environmental and Occupational Health and Safety Services (EOHSS) HVAC inspection reports and corrective responses by Physical Plant
8. EOHSS indoor air quality investigation reports

Investigating Complaints

If employees begin to experience health symptoms that they believe are related to poor indoor air quality, their campus EOHSS and/or Physical Plant office should be notified so that such concerns can be investigated.

If employees begin to experience health symptoms that they feel are related to temperature, humidity, and/or insufficient or stagnant air, they should notify Physical Plant.

EOHSS and Physical Plant will both respond to indoor air quality complaints involving odors or possible contaminants such as mold or chemicals.

Employee complaint investigations will include the following actions, as appropriate:

- Detailed interviews with affected employees.
- A thorough inspection of the HVAC system that handles the complaint area.
- An inspection of the building or building area for known irritants and allergens including chemicals/pesticides, mold, pollen producing plants, and rodent, bird, or insect infestation.
- Encouragement to employees who are experiencing symptoms to complete a UMDNJ Risk and Claims incident report.

Campus specific phone numbers for EOHSS and Physical Plant are shown below:

Campus	EOHSS	Physical Plant
Newark/Scotch Plains	973-972-4812	973-972-5400
Piscataway/Somerset	732-235-4058	732-235-4663
New Brunswick	732-235-4058	732-235-6210
Stratford/Camden	856-566-6189	856-566-6182

Potential **emergency** indoor air quality situations should be reported to UMDNJ Public Safety, during both normal and after hour situations.

Campus	Public Safety Emergency Number
Newark/	973-972-4490
Scotch Plains	908-889-2486
Piscataway/New Brunswick	732-235-4000
Stratford/Camden	856-757-7777

Responding to Signed Employee Complaints to PEOSH

When UMDNJ receives a written notification from PEOSH that a signed employee complaint has been filed with PEOSH, both Physical Plant and EOHSS will conduct an inquiry into the allegations. The findings of the initial inquiry and any planned actions will be provided in a written response to PEOSH by EOHSS within fifteen (15) working days of receipt. Copies of all responses to PEOSH will be maintained by Physical Plant and EOHSS. A copy will be sent to the UMDNJ Office of Ethics and Compliance.

Notification of Employees

Physical Plant will notify EOHSS, the campus occupational/employee health service, affected personnel, and their school/unit administrations at least 24 hours in advance (or promptly in emergency situations), of work to be performed on a building that may introduce air contaminants into the employees' work area. This notification will be posted in writing in prominent locations in the building, such as the front door, elevators, etc., and will identify details of the planned project, the start date and expected duration, as well as who to call for questions; the notice will also be posted on appropriate UMDNJ websites, including the My.UMDNJ Portal and the Physical Plant website. The notification will also include information on how to access Material Safety Data Sheets (MSDS) or other hazard information. (These can be posted on the EOHSS website upon request). The Designated Person will maintain records of this notification for compliance recordkeeping purposes.

Controlling Microbial Contamination

Uncontrolled water intrusion into buildings (e.g., roof leaks, flooding, pipe condensation, plumbing leaks, sewer backups, or similar mechanisms) has the potential to support microbial growth. All employees should routinely observe their workplace for evidence of water intrusion, such as noted above. Employees should notify Physical Plant immediately if they observe evidence of water intrusion so that corrective action can be taken. Physical Plant will respond immediately in order to:

1. Identify and correct the water intrusion problem
2. Remove water from the affected area
3. The process of drying wet materials using dehumidification and fans will be started with 24 hours from discovery.

All mold-contaminated materials should be removed according to the protocols outlined in the PEOSH mold remediation guidelines: *Mold in the Workplace Prevention and Control*, found at <http://www.nj.gov/health/eoh/peoshweb/moldib.pdf>.

EOHSS will decide when "clearance" sampling is required to confirm the efficacy of the remediation and allow re-occupancy into the abated space.

Ceiling tiles, carpet, and wall boards not dried within 48 hours must be discarded as directed by the Designated Person.

Controlling Air Contaminants

Outside air

The Designated Person will identify the location of outside air intakes and identify potential contamination sources nearby, such as loading docks or other areas where vehicles idle, nearby exhaust stacks, or vegetation. Periodic inspections will be

conducted to ensure that the intakes are open and remain clear of potential contaminants. If contamination of the outside air occurs, the Designated Person will take reasonable steps to eliminate the contaminant source or direct it away from the intakes.

Point Source Contaminants

The Designated Person will identify point sources of contaminants and arrange to capture and exhaust these sources from the building using local exhaust ventilation, when possible. Exhaust fans will be periodically inspected to ensure that they are functioning properly and exhausting to areas located away from outside air intakes.

Response to Temperature and Carbon Dioxide

Temperature

Where a mechanical ventilation system capable of regulating temperature is present, Physical Plant personnel strive to maintain office building temperatures within the range of 68 to 79 degrees Fahrenheit. If the temperature falls outside this range, the Designated Person should be contacted. The Designated Person will ascertain whether the HVAC system is operating properly. If it is operating properly, the IAQ Standard does not require the installation of new HVAC equipment to achieve this temperature range.

If the HVAC system is not working properly, it must be repaired so that it complies with the original design specifications. If the occupancy or use of the space has changed so that the design specifications are no longer adequate, the school/unit must resolve the issue, working with Physical Plant and Facilities Planning & Construction (FP&C), as necessary. If temperatures reach extremes of heat or cold, so that staff must be relocated, the department/school/unit will activate relevant portions of its Department-specific Disaster Plan(s), School-/Unit- specific Emergency Operations Plan, and/or Continuity of Operations Plan.

Carbon Dioxide

If the room is equipped with non-mechanical ventilation systems such as operable windows, and/or louvers, the Designated Person will ensure that these are clear and operable to allow for the flow of air. If carbon dioxide (CO₂) concentrations exceed 1,000 parts per million (ppm), and the room is not equipped with operable windows, the Designated Person will conduct an inspection to ensure that the mechanical HVAC system is operating properly, and will notify EOHSS.

Maintaining Indoor Air Quality during Renovation and Construction Projects

Physical Plant and/or FP&C is/are responsible for ensuring that appropriate measures are taken during renovation and/or new construction projects to prevent the diffusion of dust,

other airborne particulates, toxic gases, vapors, fumes, mold, and/or other potentially harmful substances in quantities hazardous to health into occupied areas

A summary of procedures which will be taken during Renovation and Construction Projects to maintain acceptable indoor air quality is listed below.

- FP&C or Physical Plant will notify EOHSS, affected personnel, and their school/unit administrations at least 24 hours in advance (or promptly in emergency situations), of work to be performed on a building that may disable the HVAC system or introduce any dust or air contaminants into the employees' work area. This notification will be posted in writing in prominent locations in the building, such as the front door, elevators, etc., and will identify details of the planned project, the start date and expected duration, as well as who to call for questions; the notice will also be posted on appropriate UMDNJ websites, including the My.UMDNJ Portal.
- Obtain MSDS for all products to be utilized on the project and maintain on-site throughout the duration of the project.
- Choose the least toxic product that is efficacious, as well as technically and economically feasible.
- Consider performing the renovation/construction project when building is least occupied.
- Consider temporarily relocating employees to an alternate worksite.
- Isolate the work area from occupied areas.
- Use mechanical ventilation and local exhaust ventilation to maintain a negative pressure gradient between the work area and occupied areas, as applicable.

The use of less hazardous materials and products that minimize volatile organic compound off-gassing and comply with GS-11 Environmental Standard for Paints and Coatings or for LEED certified projects must be considered. If practical and cost effective, policy shall dictate that the least hazardous materials, products, and processes are used. The Designated Person will maintain records, obtained from the Project Manager, for this evaluation for compliance recordkeeping purposes.

Systems will be put into place, and the work area will be isolated, to confine dust and debris to the renovation or construction area. The School/Unit and the Designated Person will consider the feasibility of conducting renovation/construction work during periods when the construction site and adjacent areas are unoccupied, and/or temporarily relocating potentially affected employees to areas of the building that will not be impacted by the project. Temporary barriers will be utilized to provide a physical isolation between the construction area and occupied areas of the building. In addition, mechanical ventilation (e.g., fans, portable blowers, and/or existing HVAC equipment) will be used to maintain a negative pressure gradient between the work area and occupied areas to ensure the safety of employees.

Language will be included in contracts with outside contractors performing repairs and renovation, or construction on UMDNJ facilities to ensure that the work they provide

complies with the UMDNJ Indoor Air Quality Program. If work is being performed by an outside contractor, the Designated Person will maintain communication with the Project Manager to ensure they comply with the requirements of the PEOSH IAQ standard.

Employees who have medical conditions (e.g., they are pregnant, asthmatic, immunocompromised, etc.) and special concerns about potential exposures during or after renovation/construction/repair work should alert their supervisor and request to be relocated while the work is being conducted. The supervisor is expected to make appropriate accommodations. However, if the employee prefers that the medical condition be kept confidential from their supervisor, he or she should notify the campus occupational/employee health service. If the campus occupational/employee health service is notified directly, they will recommend appropriate accommodations to the supervisor. The supervisor and/or campus occupational/employee health service will notify the Designated Person to check with them (employee's supervisor and/or campus occupational/employee health service) before starting work that could cause dispersion of air contaminants.

Employees will be instructed that, if they are inadvertently exposed to air contaminants during maintenance, repairs, renovations, or construction, resulting in health symptoms, they should notify their supervisor. The employee and/or the supervisor shall immediately notify the Designated Person and EOHSS, as well as the campus occupational/employee health service so that the situation can be accurately investigated and addressed. All exposures should also be reported to the employee's supervisor and the Designated Person.

Obtaining Permits and Performing Work in Accordance with the New Jersey Uniform Construction Code (N.J.A.C. 5:23)

Permits for renovation and construction-related work will be obtained as required by the New Jersey Uniform Construction Code (NJUCC), (N.J.A.C. 5:23). All work requiring a permit will be performed in compliance with N.J.A.C. 5:23. Additional information concerning the NJUCC can be obtained from the NJ Department of Community Affairs, Division of Codes and Standards (www.state.nj.us/dca/codes, 609-984-7609).

Maintaining Natural Ventilation in Buildings without Mechanical Ventilation

In buildings not equipped with mechanical ventilation, the Designated Person will identify the location of non-mechanical ventilation systems, such as stacks and operable windows. Periodic inspections will be conducted to ensure that these systems are operable and the surrounding areas remain clear of obstructions and potential contaminants.

Employee Responsibilities

Employees have a role in maintaining good indoor air quality within their workplace. Employees should ensure that they do not introduce unauthorized chemicals (e.g.,

fragrances, air fresheners, cleaning solvents, ozone generators, etc.) into the workplace. All painting, reconstruction, and/or renovation activities must be authorized by Physical Plant. In addition, if employees observe situations which may lead to poor indoor air quality (e.g., inoperable windows, water leaks, visible mold, etc.), they should notify Physical Plant of the situation so that it can be addressed promptly.

Employees are responsible for maintaining mechanical and passive ventilation systems by ensuring that louvers and diffusers remain clear to allow the free flow of air. Intentionally blocking, diverting, or otherwise manipulating components (e.g., thermostats, air supply vents) of the ventilation system may result in disruption of the ventilation system in the immediate area or other occupied areas of the building.

Employees are also responsible to ensure that fan coil units (e.g., Nesbitt, etc.) are not used as a storage shelves for books, papers, and plants. All units should be provided with the free flow of air.

Periodic Review and Update


The Written Indoor Air Quality Program will be reviewed and updated at least annually by the Designated Person to to ensure continued compliance with applicable regulations, policies, procedures, and responsibilities, and to make any necessary changes to personnel and contact information.

Certifications:

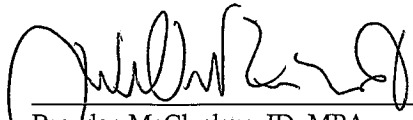
Reviewed and Approved:


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4/17/08
 Date


 David Schulz, AIA
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4-17-08
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17-April-2008
 Date