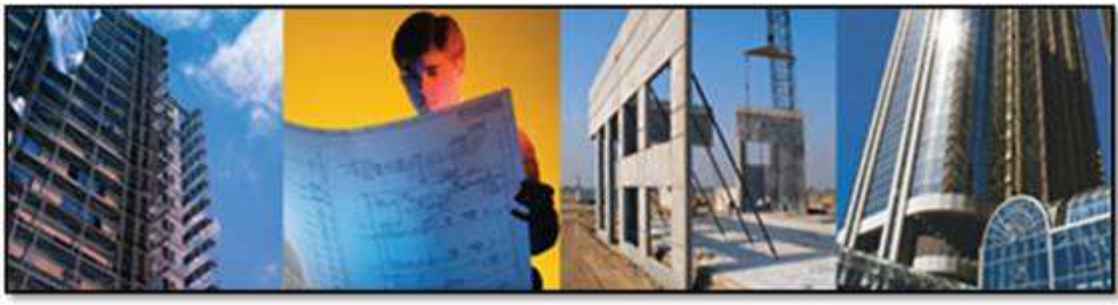
PARTNER



Indoor Air Quality Program
Green Hill Elementary School IAQ Plan

69 Mackerley Road
Greendell, New Jersey 07839

Partner Project No. 22-388241.1

Plan Reviewed: 2022-2023 School Year

Reviewed by:

Dan Bracey, CSP, CHMM
Project Manager
Industrial Hygiene and Health & Safety Services

TABLE OF CONTENTS

1.0 POLICY AND ADMINSTRATION

This written Indoor Air Quality Program is to inform employees that our agency complies 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.

We recognize that good indoor air quality is essential to employee's health and productivity. We have established the following policies to promote good indoor air quality for employees in our buildings. These policies follow the requirements established by the PEOSH IAQ Standard as it applies to our workplace. **Appendix A** presents a list of definitions that may be utilized with this program. This Written Indoor Air Quality Program applies to the following building:

Building: Green Hill Elementary School

Address: 69 Mackerley Road Greendell, New Jersey

2.0 DESIGNATED PERSON

As required by the New Jersey PEOSH Indoor Air Quality Standard, a person has been designated as the person responsible for compliance with the IAQ standard for Green Township School District. This Designated Person is:

Name: Drew J. Vanderzee – Director of Buildings & Grounds
Address: 69 Mackerley Road, Greendell, NJ **Phone:** (973) 300-5705 ext. 216

The designated person is the person who has been trained and given the responsibility by the Green Township School District to make routine visual inspections (see **Appendix B** criteria for Building System Evaluations), oversee preventive maintenance programs and maintain required records in order to ensure compliance with the IAQ Standard. The designated person or his designee is also assigned to receive employee concerns/complaints about indoor air quality, conduct investigations, facilitate repairs as necessary, maintain required records, and update the written program annually.

The following individuals are responsible for the noted portions of the plan:

- IAQ concerns /complaints receipt and follow-up:
  Name: Drew Vanderzee **Phone:** (973) 300-5705 ext. 216
- IAQ Work orders and documents:
  Name: Drew Vanderzee **Phone:** (973) 300-5705 ext. 216
- Preventive Maintenance and Documentation:
  Name: Drew Vanderzee **Phone:** (973) 300-5705 ext. 216

3.0 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. A copy of the preventive maintenance schedule is attached (**Appendix C**). Damaged and inoperable components will be repaired or replaced as required; a work order to show actions taken will be completed and attached to the "Indoor Air Quality Issue Resolution & Deferred Maintenance Table (**Appendix F**).

4.0 RECORDKEEPING

Documentation of preventive maintenance and repairs to the ventilation 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
    - NJ Right – to Know Central File (SDS Location)

Documentation of preventive maintenance and work orders will be maintained by Drew Vanderzee at 69 Mackerley Road, Greendell, New Jersey.

A copy of all documentation of preventative maintenance and work orders performed by the building maintenance staff will be maintained by Drew Vanderzee at 69 Mackerley Road, Greendell, New Jersey.

4.1 Indoor Air Quality Compliance Documents

Green Township School District 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 an inspection. These documents may include:

The compliance documents are located at:

As-built construction documents	Maintenance Office
HVAC system commissioning reports	Maintenance Office
HVAC systems testing, adjusting, and balancing reports	Maintenance Office
Operations and maintenance manual	Maintenance Office
Water treatment logs	Maintenance Office
Operator training materials	Maintenance Office

4.2 Investigating Complaints

If employees begin to experience health symptoms that they believe are related to poor indoor air quality, they should notify Drew Vanderzee at (973) 300-5705 ext. 216to obtain an IAQ Concern Form (**Appendix D)** or Indoor Air Questionnaire **(Appendix E)**. The IAQ Concern form is to be completed if the concern relates to temperature and the Indoor Air Questionnaire is to be completed for all other IAQ concerns. The questionnaire needs to be completed over 5 business days and forwarded to the IAQ Designated Person (Drew Vanderzee) at Green Hill Elementary for review and investigation

The Designated Person and his/her designees have been trained and given the authority to conduct basic indoor air quality complaint investigations. In many cases IAQ complaints can be resolved by the designated person. If necessary, the Designated Person may contact an environmental consultant, health and safety specialist or HVAC contractor to help identify and correct the IAQ issue. Based upon the nature of the issues, one or more of the following forms may be utilized: Appendix D Indoor Air Quality Concern Form, Appendix E Indoor Air Questionnaire, Appendix F Indoor Air Quality Issue Resolution and Deferred Maintenance Tables and Appendix G Pollutant and Source Inventory.

4.3 Responding to Signed Employee Complaints to PEOSH

If Green Township School District receives a written notification from PEOSH that a signed employee complaint has been filed with PEOSH, we will conduct an inquiry into the allegations (**Appendix E)**. The findings of the initial inquiry and any planned actions will be provided in a written response to PEOSH within fifteen (15) working days of receipt. Documentation of all complaints and responses will be maintained by Drew Vanderzee at 69 Mackerley Road, Greendell, NJ.

4.4 Notification of Employees

The Designated Person, will notify employees 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 their work area **(Appendix H)**. This notification will be in writing and will identify the planned project, start and expected end date. Copies of the IAQ Notice and Safety Data Sheets will be 48 hours in advance or immediately in emergency situations. The IAQ Notice will also include information on how to access Safety Data Sheets (SDS/) or other hazard information from the Designated Person. The Designated Person will maintain records of this notification for compliance recordkeeping purposes.

5.0 CONTROLLING MICROBIAL CONTAMINATION

Uncontrolled water intrusion into buildings (roof leaks, flooding, pipe condensation, plumbing leaks, sewer backups, etc.) has the potential to support microbial growth. All employees should routinely observe their workplace for evidence of water intrusion. Employees should notify the Designated Person immediately if they observe evidence of water intrusion so that corrective action can be taken. Ceiling tiles, carpet, and wall boards not dried within 48 hours may be removed as directed by the Designated Person/or designee.

6.0 CONTROLLING AIR CONTAMINANTS

6.1 Outside Air

The Property Services Manager will identify the location of outside air intakes and identify potential contamination sources nearby, such as; loading docks, other areas where vehicles idle, nearby exhaust stacks, vegetation, smoking areas, waste storage, and high traffic areas. Periodic inspections will be conducted to ensure that the intakes remain clear of potential contaminants. If contamination occurs, the Designated Person will eliminate the contaminant source or make arrangements to relocate the intake.

6.2 Prime Source Contaminants

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

6.3 Response to Temperature and Carbon Dioxide

6.3.1 Temperature

Where a mechanical ventilation system capable of regulating temperature is present, facilities personnel will strive to maintain office building temperatures within the range of 68 to 79 degrees Fahrenheit. If outside this range, the Designated Person should be contacted. The Designated Person will ascertain whether the HVAC system is operating properly. If not, the system must be repaired. The IAQ Standard does not require the installation of new HVAC equipment to achieve this temperature range, windows that operate and fans may be utilized when necessary.

6.3.2 Carbon Dioxide

If the room is equipped with non-mechanical ventilation systems such as operable windows, stacks, louvers, etc. the Designated Person should ensure that these areas are clear and operable to allow the flow of air. If carbon dioxide (CO_2) 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.

7.0 MAINTAINING INDOOR AIR QUALITY DURING RENOVATION AND CONSTRUCTION PROJECTS

Renovation work and/or new construction projects including painting that have the potential to result in the diffusion of dust, stone and other small particles, toxic gases and/or other potentially harmful substances into occupied areas in quantities hazardous to health will be controlled in order to minimize employee exposure. The Designated Person, will utilize the following protocol to assure that employees' exposure to potentially harmful substances is minimized:

- Obtain SDS 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 technically and economically feasible.
- Consider performing the renovation/construction project when building is the least occupied.
- Consider temporarily relocating employees to an alternate worksite.
- Notify potentially affected employees, in writing, a minimum of 24 hours prior to commencement of chemical use or dust generation.
- Isolate the work area from occupied areas utilizing separation and critical barriers
- Use temporary mechanical ventilation to maintain a negative pressure gradient between the work area and occupied areas if possible. If local ventilation must be used, the system should be cleaned before the area is re-occupied.

7.1 Planning for Air Quality During Renovation and Construction Projects

Before selection and use of paints, adhesives, sealants, solvents or installation of insulation, particle board, plywood, floor coverings, carpet backing, textiles, or other materials in the course of renovation or construction, the Designated Person or his/her designee will check product labels or seek and obtain information from the manufacturer of those products on whether or not they contain volatile organic compounds such as solvents, formaldehyde or isocyanates that could be emitted during regular use. This information should be used to select the least volatile/hazardous products and to determine if additional necessary measures need to be taken to comply with the objectives of this section. The designated person will maintain records of this evaluation for compliance recordkeeping purposes.

Green Township School District, Designated Person and/or his/her designee should consider the feasibility of conducting renovation/construction work using appropriate barriers, during periods when the building is unoccupied, 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.

Mechanical ventilation (i.e. fans, portable blowers, or existing HVAC equipment) should be used to maintain a negative pressure gradient between the work area and occupied areas to ensure the safety of employees. Renovation areas in occupied buildings will be isolated and dust and debris shall be confined to the renovation or construction area.

If work is being performed by an outside contractor, the Designated Person or his designee should maintain communication with contractor personnel to ensure they comply with the requirements of the PEOSH IAQ standard.

Employees who have special concerns about potential exposures during or after renovation/construction/repair work should consult with Designated Person.

8.0 MAINTAINING NATURAL VENTILATION IN BUILDING 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.

9.0 EMPLOYEE RESPONSIBILITIES

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 (i.e. excessive personal fragrances, air fresheners, cleaning solvents, ozone generating air cleaners) into the workplace. In addition, if employees observe situations which may lead to poor indoor air quality (i.e. inoperable windows, water leaks, and visible mold) they should notify Drew Vanderzee at (973) 300-5705 ext. 216so it may 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 (i.e. thermostat,) of the ventilation system may result in disruption of the ventilation system in the immediate area or other occupied areas of the building.

APPENDIX A - Definitions

Definitions

ACGIH — American Conference of Governmental Industrial Hygienists.

ASHRAE — American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

ASTM — American Society for Testing and Materials.

Air Cleaning — An IAQ control strategy to remove various airborne particulates and/or gases from the air. The three types of air cleaning most commonly used are particulate filtration, electrostatic precipitation, and gas sorption.

Air Exchange Rate — Used in two ways:
1) the number of times that the outdoor air replaces the volume of air in a building per unit time, typically expressed as air changes per hour;
2) the number of times that the ventilation system replaces the air within a room or area within the building.

Antimicrobial — Agent that kills microbial growth. See "disinfectant," "sanitizer", and "sterilizer."

BRI — See "Building-Related Illness."

Biological Contaminants — Agents derived from or that are living organisms
(e.g., viruses, bacteria, fungi, and mammal and bird antigens) that can be inhaled and can cause many types of health effects including allergic reactions, respiratory disorders, hypersensitivity diseases, and infectious diseases. Also referred to as "microbiologicals" or "microbials."

Breathing Zone — Area of a room in which occupants breathe as they stand, sit, or lie down.

Building Envelope — Elements of the building, including all external building materials, windows, and walls, that enclose the internal space.

Building-Related Illness — Diagnosable illness whose symptoms can be identified and whose cause can be directly attributed to airborne building pollutants (e.g., Legionnaire's disease, hypersensitivity pneumonitis).
CFM — Cubic feet per minute.

CO — Carbon monoxide.

CO2 — Carbon dioxide.

Ceiling Plenum — Space below the flooring and above the suspended ceiling that accommodates the mechanical and electrical equipment and that is used as part of the air distribution system. The space is kept under negative pressure.

Commissioning — Start-up of a building that includes testing and adjusting HVAC, electrical, plumbing, and other systems to assure proper functioning and adherence to design criteria. Commissioning also includes the instruction of building representatives in the use of the building systems.

Conditioned Air — Air that has been heated, cooled, humidified, or dehumidified to maintain an interior space within the "comfort zone." (Sometimes referred to as "tempered" air.)

Constant Air Volume Systems — Air handling system that provides a constant air flow while varying the temperature to meet heating and cooling needs.

Dampers — Controls that vary airflow through an air outlet, inlet, or duct. A damper position may be immovable, manually adjustable, or part of an automated control system.

Diffusers and Grilles — Components of the ventilation system that distribute and diffuse air to promote air circulation in the occupied space. Diffusers supply air and grilles return air.

Disinfectants — One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an antimicrobial to be a disinfectant when it destroys or irreversibly inactivates infectious or other undesirable organisms, but not necessarily their spores. EPA registers three types of disinfectant products based upon

submitted efficacy data: limited, general or broad spectrum, and hospital disinfectant.

EPA — United States Environmental Protection Agency.

ETS — Environmental tobacco smoke.

Environmental Agents — Conditions other than indoor air contaminants that cause stress, comfort, and/or health problems (e.g., humidity extremes, drafts, lack of air circulation, noise, and overcrowding).

Ergonomics — Applied science that investigates the impact of people's physical environment on their health and comfort (e.g., determining the proper chair height for computer operators).

Exhaust Ventilation — Mechanical removal of air from a portion of a building (e.g., piece of equipment, room, or general area).

Gas Sorption — Devices used to reduce levels of airborne gaseous compounds by passing the air through materials that extract the gases. The performance of solid sorbents is dependent on the airflow rate, concentration of the pollutants, presence of other gases or vapors, and other factors.

HEPA — High efficiency particulate arrestance (filters).

HVAC — Heating, ventilation, and air conditioning system.

Hypersensitivity Diseases — Diseases characterized by allergic responses to animal antigens. The hypersensitivity diseases most clearly associated with indoor air quality are asthma, rhinitis, and hypersensitivity pneumonitis. Hypersensitivity pneumonitis is a rare but serious disease that involves progressive lung damage as long as there is exposure to the causative agent.

IAQ — Indoor air quality.

IPM — Integrated pest management.

Indicator Compounds — Chemical compounds, such as carbon dioxide, whose presence at certain concentrations may be used to estimate certain building conditions (e.g., airflow, presence of sources).

MCS — See "Multiple Chemical Sensitivity."

Make-up Air — Air brought into a building from the outdoors through the ventilation system that has not been previously circulated through the system.

Microbiologicals — See "Biological Contaminants."

Multiple Chemical Sensitivity — A term used by some people to refer to a condition in which a person is considered to be sensitive to a number of chemicals at very low concentrations. There are a number of views about the existence, potential causes, and possible remedial actions regarding this phenomenon.

NIOSH — National Institute for Occupational Safety and Health.

NTIS — National Technical Information Service.

Negative Pressure — Condition that exists when less air is supplied to a space than is exhausted from the space, so the air pressure within that space is less than that in surrounding areas.

OSHA — Occupational Safety and Health Administration.

PELs — Permissible Exposure Limits (standards set by OSHA).

PM — Preventive Maintenance.

Plenum — Air compartment connected to a duct or ducts.

Positive Pressure — Condition that exists when more air is supplied to a space than is exhausted, so the air pressure within that space is greater than that in surrounding areas.

Psychosocial Factors — Psychological, organizational, and personal stressors that could produce symptoms similar to poor indoor air quality.

RELs — Recommended Exposure Limits (recommendations made by NIOSH).

Radiant Heat Transfer — Radiant heat transfer occurs when there is a large difference between the temperatures of two surfaces that are exposed to each other, but are not touching.

Re-entrainment —Situation that occurs when the air is being exhausted from a building is immediately brought back into the system through the air intake and other openings in the building envelope.

SBS — See "Sick Building Syndrome."

SDS —Safety Data Sheet.

Sanitizer — One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an antimicrobial to be a sanitizer when it reduces but does not necessarily eliminate all the microorganisms on a treated surface. To be a registered sanitizer, the test results for a product must show a reduction of at least 99.9% in the number of each test microorganism over the parallel control.

Short-circuiting — Situation that occurs when the supply air flows to exhaust registers before entering the breathing zone. To avoid short-circuiting, the supply air must be delivered at a temperature and velocity that results in mixing throughout the space.

Sick Building Syndrome — Term sometimes used to describe situations in which building occupants experience acute health and/or comfort effects that appear to be linked to time spent in a particular building, but where no specific illness or cause can be identified. The complaints may be localized in a particular room or zone, or may be spread throughout the building.

Soil Gases — Gases that enter a building from the surrounding ground (e.g., radon, volatile organics, pesticides).

Stack Effect —Pressure-driven airflow produced by convection as heated air rises, creating a positive pressure area at the top of a building and a negative pressure area at the bottom of a building. The stack effect can overpower the mechanical system and disrupt ventilation and circulation in a building.

Static Pressure — Condition that exists when an equal amount of air is supplied to and exhausted from a space. At static pressure, equilibrium has been reached.

Sterilizer — One of three groups of antimicrobials registered by EPA for public health uses. EPA considers an antimicrobial to be a sterilizer when it destroys or eliminates all forms of bacteria, fungi, viruses, and their spores. Because spores are considered the most difficult form of a microorganism to destroy, EPA considers the term sporicide to be synonymous with "sterilizer."

TLVs — Threshold Limit Values (guidelines recommended by ACGIH).

TVOCs — Total volatile organic compounds.

Tracer Gases — Compounds, such a sulfur hexafluoride, which are used to identify suspected pollutant pathways and to quantify ventilation rates. Tracer gases may be detected qualitatively by their odor or quantitatively by air monitoring equipment.

VAV — Variable air volume system.

VOCs — See "Volatile Organic Compounds."

Variable Air Volume System — Air handling system that conditions the air to a constant temperature and varies the outside airflow to ensure thermal comfort.

Ventilation Air — Defined as the total air, which is a combination of the air brought into the system from the outdoors and the air that is being recirculated within the building. Sometimes, however, used in reference only to the air brought into the system from the outdoors.

Volatile Organic Compounds (VOCs) —
Compounds that evaporate from the many housekeeping, maintenance, and building products made with organic chemicals.

These compounds are released from products that are being used and that are in storage. In sufficient quantities, VOCs can cause eye, nose, and throat irritations, headaches, dizziness, visual disorders, memory impairment; some are known to cause cancer in animals; some are suspected of causing, or are known to cause, cancer in humans. At present, not much is known about what health effects occur at the levels of VOCs typically found in public and commercial buildings.

WHO — World Health Organization.

APPENDIX B - Criteria for Building Systems Evaluations

Criteria for Building Systems Evaluations

In order to efficiently evaluate all aspects of the building's systems, to identify possible causes for complaints or malfunctions, the following is used to aid in a complete understanding of the conditions at any point in time.

The building systems evaluation includes checking the heating, ventilation, and air conditioning system for:

- obstructions at air intakes;
- pollutant sources by air intake;
- fresh air intakes work properly;
- air filters inspected for proper installation and cleanliness;
- condensate drain pans empty and clean;
- heating and cooling coils clean;
- air handling and duct work clean;
- mechanical rooms free of trash, debris, and stored chemicals;
- control systems operating properly;
- proper direction of air flow;
- air distribution;
- all exhaust fans operating and effectively removing pollutants; and
- outdoor air volume meets design specifications.

The building systems evaluation includes checking rooms for:

- overall cleanliness of rooms and occupied spaces;
- inspect plumbing for dry drain traps and possible leaks;
- condensation;
- functional local exhaust;
- proper air flow into room; and
- proper use and storage of chemical supplies.

The building systems evaluation includes checking maintenance operations for:

- proper use of chemicals;
- the availability of the Safety Data Sheets (SDS);
- proper labeling of chemical containers, including cleaning supplies;
- presence and cleanliness of floor mats (may need mats for slip hazard);
- proper dusting;
- effective floor maintenance procedures;
- absence of carpeting near water sources;
- drain traps;
- water leaks;
- condensation;
- proximity of pollutant sources to the heating ventilation and air conditioning (HVAC) systems; and
- proper exhausting of combustion devices.

APPENDIX C - Preventive Maintenance Schedule

Example of Preventive Maintenance Schedule

	Every 3 Months	Every 6 Months	Annually	Every 2 Years	As Needed
HVAC System					
Filters Replaced/Fitted Properly					xx/xx/xx
Fan / Air Flow Direction	xx/xx/xx				
Belt Tension			xx/xx/xx		
Drain Pans Empty/Clean	xx/xx/xx				
Overall Cleanliness of Ducts and Unit			xx/xx/xx		
15-20 percent of Air Delivered is Fresh				xx/xx/xx	
Calibration of System				xx/xx/xx	
Thermostats Functional	xx/xx/xx				
CLEANING SCHEDULE					
Cleaning of Heating Coils			xx/xx/xx		
Cleaning of Cooling Coils		xx/xx/xx			
Cleaning of Drainage Areas		xx/xx/xx			
Cleaning of Ductwork					xx/xx/xx
AIR INTAKE					
No Obstruction	xx/xx/xx				
Air Flows into duct	xx/xx/xx				
No Pollutant Sources Nearby	X				
(garbage, idling vehicles, exhaust)					
Dampers Operational	xx/xx/xx				
Motors Operational	xx/xx/xx				
LOCAL EXHAUST SYSTEMS					
Proper Exhaust Volume			xx/xx/x		
Air Direction Correct			xx/xx/x		
Fan Functional			xx/xx/x		
Outdoor Vent Checked / Cleaned			xx/xx/x		
OTHER					
Sewage Traps Filled with Water Weekly	xx/xx/xx				
Hazardous Chemicals Storage		xx/xx/x			
Walk-off Mat Cleanliness	xx/xx/xx				
Carpet Cleanliness	xx/xx/xx				
Leaks, Stains, Moisture Inspection	xx/xx/xx				
Clean All Tables, Diffusers, Shelves	xx/xx/xx				xx/xx/xx
Deep Clean Carpets, Strip and Wax Floors		xx/xx/xx			xx/xx/xx

BUILDING:_____ **DATE:**_____

Preventive Maintenance Schedule

Building:	Every 3 Months	Every 6 Months	Annually	Every 2 Years	As Needed
HVAC System					
Filters Replaced/Fitted Properly					X
Fan / Air Flow Direction	X				
Belt Tension			X		
Drain Pans Empty/Clean	X				
Overall Cleanliness of Ducts and Unit			X		
15-20 percent of Air Delivered is Fresh				X	
Calibration of System				X	
Thermostats Functional	X				
CLEANING SCHEDULE					
Cleaning of Heating Coils			X		
Cleaning of Cooling Coils		X			
Cleaning of Drainage Areas		X			
Cleaning of Ductwork					X
AIR INTAKE					
No Obstruction	X				
Air Flows into duct	X				
No Pollutant Sources Nearby	X				
(garbage, idling vehicles, exhaust)					
Dampers Operational	X				
Motors Operational	X				
LOCAL EXHAUST SYSTEMS					
Proper Exhaust Volume			X		
Air Direction Correct			X		
Fan Functional			X		
Outdoor Vent Checked / Cleaned			X		
OTHER					
Sewage Traps Filled with Water Weekly	X				
Hazardous Chemicals Storage		X			
Walk-off Mat Cleanliness	X				
Carpet Cleanliness	X				
Leaks, Stains, Moisture Inspection	X				
Clean All Tables, Diffusers, Shelves	X				X
Deep Clean Carpets, Strip and Wax Floors		X			X

BUILDING:_____ **DATE:**_____

APPENDIX D - Indoor Air Quality Concern Form

Indoor Air Quality Concern Form

OFFICE USE ONLY
File Number: Received By: Date Received:

This form should be filled out by the building occupant or by a member of the building staff.

Occupant Name: _____Date: _____

Building/Address:_____

Department/Location in Building: _____Phone: _____

Completed by: _____Title: _____Phone: _____

This form should be used if your indoor air quality concern is related to temperature control and ventilation. Your observations can help to resolve the problem as quickly as possible. Please use the space below to describe the nature of the complaint and any potential causes.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

WHEN COMPLETED PLEASE FORWARD TO:

Drew J. Vanderzee
Director of Buildings & Grounds
(973) 300-5705 ext. 216

APPENDIX E - Indoor Air Questionnaire

Indoor Air Quality Questionnaire

OFFICE USE ONLY
File Number: Received By: Date Received:

This form should be used if your indoor air quality concerns are related to ventilation and air pollutants, your observations can help to resolve the problem as quickly as possible. Please complete the questions below to assist in identifying the potential cause for your concern. *This form should be filled out by the building occupant*:

Anonymous filings will not be addressed as it complicates the investigation and its resolution. It will be necessary to interview the concerned party to assist in the IAQ investigation to resolve the concern as quickly as possible.

Occupant Name: _____**Date:** _____
Building/Address:_____
Department_____ _____ _____ **Title:** _____
Location in Building: _____**Phone:** _____

---

1. Area or room where you spend the most time in the building: _____

2. Do any of your work activities produce dust or odor? Yes ☐ No ☐

   If Yes, please describe: _____

3. Gender: Male ☐ Female ☐

   Age Under 25 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and over ☐

4. Do you:

Smoke?	Yes ☐	No ☐
Have hay fever or pollen allergies?	Yes ☐	No ☐
Have skin allergies or dermatitis?	Yes ☐	No ☐
Have a cold or the flu?	Yes ☐	No ☐
Have sinus problems?	Yes ☐	No ☐
Have other allergies?	Yes ☐	No ☐
Wear contact lenses?	Yes ☐	No ☐
Operate video display terminals?	Yes ☐	No ☐
Operate photocopiers 10% or more of the time?	Yes ☐	No ☐
Use other special office machines?	Yes ☐	No ☐

If yes, specify:_____

Currently taking any medications? Yes ☐ No ☐

If yes, specify:_____

5. Office Characteristics:

_____ Number of persons sharing the same room/work area

_____ Number of windows in the room/work area

Do the windows open? Yes ☐ No ☐

Please rate the adequacy of work space per person:

Poor		Average		Excellent
1	2	3	4	5

Please rate the room temperature:

Poor		Average		Excellent
1	2	3	4	5

6. How long have you worked: _____ in this room/area? _____ in this building?

7. Symptoms: On the form below, please record each occasion when you experience a symptom of ill-health or discomfort that you think may be linked to an environmental condition in this building. It is important that you record the time and date and your location within the building as accurately as possible, because that will help to identify conditions (e.g., equipment operation) that may be associated with your problem.

Also, please try to describe the severity of your symptoms (e.g., mild, severe) and their duration (the length of time that they persist). Any other observations that you think may help in identifying the cause of the problem should be noted. Feel free to attach additional pages or use more than one line for each event if you need more room to record your observations.

SYMPTOM	TIME/DATE	LOCATION	SEVERITY/DURATION	NOT RELATED TO BUILDING	APPEARED AFTER ARRIVAL	INCREASED AFTER ARRIVAL

8. Have you seen a doctor for any of these symptoms? Yes ☐ No ☐

9. When do you experience relief from the symptoms:

_____

10. Indicate which parts of the day, which days of the week, and the month and season during which your reported symptom(s) occur.

TIME OF DAY	MORNINGS			AFTERNOONS			EVENINGS			
DAY OF WEEK	Sun	Mon	Tues	Wed	Thurs	Fri	Sat			
MONTH	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
SEASON	Spring			Summer			Fall		Winter			

11. Do symptoms disappear? Yes ☐ No ☐

12. In your opinion, what is the cause of the perceived problems?

_____

_____

_____

13. Comments: Please take this opportunity to comment on any factors you consider to be important concerning the quality of your work environment:

_____

_____

_____

_____

_____

_____

WHEN COMPLETED PLEASE FORWARD TO:

Drew J. Vanderzee
Director of Buildings & Grounds
(973) 300-5705 ext. 216

APPENDIX F - Indoor Air Quality Issue Resolution and Deferred Maintenance Tables

IAQ ISSUE RESOLUTION TABLE

DATE NOTIFIED	IAQ PROBLEM/ISSUE	CORRECTIVE ACTION TAKEN	DATE CLOSED
	Example: **[*water damaged ceiling tile*]**	**[*Ceiling tile replaced; roof will be repaired (see deferred maintenance schedule); Developed a microbial and moisture intrusion policy (see IAQ Management Plan)*]**	

Deferred Maintenance Table (in order of priority)

IAQ Issue	Why deferred?	Proposed Timeline	Internal	Contractor	Comments
Example: *[roof leaks water damage]*	*[Need approval of funding]*	*[Completion8/ 2008]*	*[None]*	*[No-Leaks Roofs, Inc.]*	*Water leaking in rooms 1, 2 and 4*

PARTNER

APPENDIX G - Pollutant and Source Inventory

Pollutant and Source Inventory

Building Name:_____

Address:_____

Completed by: _____ Date: _____ File Number: _____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments
SOURCES OUTSIDE BUILDING				
Contaminated Ambient Air				
Pollen, dust				
Industrial contaminants				
General vehicular contaminants				
Emissions from Nearby Sources				
Vehicle exhaust (parking areas, loading docks, roads)				
Dumpsters				
Re-entrained exhaust				
Contaminants near outside air intake				
Soil Gas				
Radon				
Leaking underground tanks				
Sewage smells				
Pesticides				

Pollutant and Source Inventory

Building Name: _____

Address: _____

Completed by: _____Date: _____ File Number:_____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments
Moisture or Standing Water				
Rooftop				
Crawlspace				
Basement				
Office #				
Room #				
Equipment				
HVAC System Equipment				
Combustion gases				
Dust, dirt, or microbial growth in ducts				
Microbial growth in drip pans, chillers, humidifiers				
Leaks of treated boiler water				
Non HVAC System Equipment				
Office equipment				
Supplies for equipment				
Laboratory equipment				

Pollutant and Source Inventory

Building Name: _____

Address: _____

Completed by: _____Date: _____ File Number:_____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments
HUMAN ACTIVITIES				
Personal Activities				
Smoking				
Cosmetics (odors)				
Poor Hygiene (odors)				
Housekeeping Activities				
Cleaning materials				
Cleaning procedures (e.g., dust from sweeping, vacuuming)				
Stored supplies				
Stored refuse				
Maintenance Activities				
Use of materials with volatile compounds (e.g., paint, caulk, adhesives)				
Stored supplies with volatile compounds				
Use of pesticides				

Pollutant and Source Inventory

Building Name: _____

Address: _____

Completed by: _____Date: _____ File Number:_____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments
BUILDING COMPONENTS/FURNISHINGS				
Locations Associated with Dust or Fibers				
Dust-catching area (e.g., open shelving and electronics)				
Deteriorated furnishings				
Asbestos-containing materials				
Out of reach areas(light bars, top shelves, top of lockers)				
Unsanitary Conditions/Water Damage				
Microbial growth in or on soiled or water-damaged furnishings, ceiling tiles, under sinks, behind toilets and urinals				
Standing water				

PARTNER

Pollutant and Source Inventory

Building Name: _____

Address: _____

Completed by: _____Date: _____ File Number:_____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments
Chemicals Released From Building Components or Furnishings				
Volatile compounds				
OTHER SOURCES				
Accidental Events				
Spills (e.g., water, chemicals, beverages)				
Water leaks or flooding				
Fire damage				

PARTNER

Pollutant and Source Inventory

Building Name: _____

Address: _____

Completed by: _____Date: _____ File Number:_____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments
Special Use/Mixed Use Areas				
Designated Smoking areas				
Food preparation areas				
Underground or attached parking garages				
Laboratories				
Print shops, art rooms				
Exercise rooms				
Beauty salons				
Redecorating/Repair/Remodeling				
Emissions from new furnishings				
Dust, fibers from demolition				
Odors, volatile compounds				

PARTNER

Pollutant and Source Inventory

Building Name: _____

Address: _____

Completed by: _____Date: _____ File Number:_____

Using the list of potential source categories below, record any indications of contamination or suspected pollutants that may require further investigation or treatment. Sources of contamination may be constant or intermittent or may be linked to single, unrepeated events. For intermittent sources, try to indicate the time of peak activity or contaminant production, including correlations with weather (e.g., wind direction).

Source Category	Checked	Needs Attention	Location	Comments

PARTNER

APPENDIX H – PEOSH Indoor Air Quality Standard (N.J.A.C. 12:100-13)(2007)

TITLE 12. DEPARTMENT OF LABOR
CHAPTER 100. SAFETY AND HEALTH STANDARDS FOR PUBLIC EMPLOYEES
SUBCHAPTER 13. INDOOR AIR QUALITY STANDARD

***N.J.A.C. 12:100-13.1* (2007)**

§ 12:100-13.1 Scope

This subchapter shall apply to matters relating to indoor air quality in buildings occupied by public employees during regular work hours.

§ 12:100-13.2 Definitions

The following words and terms, when used in this subchapter, have the following meaning unless the context clearly indicates otherwise.

"Air contaminants" refers to substances contained in the vapors from paint, cleaning chemicals, pesticides, solvents, particulates, outdoor air pollutants and other airborne substances which together may cause material impairment to employees working within the enclosed workplace.

"Building-related illness" describes specific medical conditions of known etiology which can be documented by physical signs and laboratory findings. Such illnesses include sensory irritation when caused by known agents, respiratory allergies, asthma, nosocomial infections, humidifier fever, Legionnaires' disease, and the signs and symptoms characteristic of exposure to chemical or biologic substances such as carbon monoxide, formaldehyde, pesticides, endotoxins, or mycotoxins.

"Building systems" includes the heating, ventilation and air-conditioning (HVAC) system, the energy management system and all other systems in a facility which may impact indoor air quality.

"Department" means the Department of Health and Senior Services.

"Designated person" means a person who has been given the responsibility by the employer to take necessary measures to assure compliance with this subchapter.

"Employee" means the term as defined at *N.J.A. C. 12:100-2.1*.

"Employer" means the term as defined at *N.J.A. C. 12:100-2.1*.

"HVAC system" means the collective components of the heating, ventilation and air-conditioning system including, but not limited to, filters and frames, cooling coil condensate drip pans and drainage piping, outside air dampers and actuators, humidifiers, air distribution ductwork, automatic temperature controls, and cooling towers.

"HVAC System Commissioning Report" means a document normally prepared by an architect

or engineer that provides verification that the HVAC system is operating in conformity with the design intent.

"Office building" means a building in which administrative, clerical or educational activities are conducted. Examples of facilities and/or operations, which are not office buildings, include repair shops, garages, print shops and warehouses.

"Renovation and remodeling" means building modification involving activities that include but are not limited to: removal or replacement of walls, roofing, ceilings, floors, carpet, and components such as moldings, cabinets, doors, and windows; painting; decorating; demolition; surface refinishing; and removal or cleaning of ventilation ducts.

"Sick Building Syndrome" describes a situation in which a workplace is characterized by a substantial number of building occupants experiencing health and comfort problems that can be related to working indoors. Additionally the reported symptoms do not fit the pattern of any particular illness, are difficult to trace to any specific source and relief from these symptoms occurs upon leaving the building. It is important to distinguish Sick Building Syndrome from problems of building-related illness. The latter term is reserved for situations in which signs and symptoms of diagnosable illness are identified and can be attributed directly to specific airborne contaminants.

§ 12:100-13.3 Compliance program

(a) The employer shall identify a designated person who is given the responsibility to assure compliance with this section. The employer shall assure that the designated person is familiar with the requirements of this subchapter. The designated person shall assure that at least the following actions are implemented and documented:

1. Establishing and following a preventive maintenance schedule in accordance with the manufacturer's recommendations or with accepted practice for the HVAC system. Scheduled maintenance of the HVAC system shall include checking and/or changing air filters, checking and/or changing belts, lubrication of equipment parts, checking the functioning of motors and confirming that all equipment is in operating order. Damaged or inoperable components shall be replaced or repaired as appropriate. Additionally, any parts of this system with standing water shall be checked visually for microbial growth;

2. Implementing the use of general or local exhaust ventilation where housekeeping and maintenance activities involve use of equipment or products that could reasonably be expected to result in hazardous chemical or particulate exposures, above the applicable Permissible Exposure Limit (PEL), as adopted by reference under *N.J.A.C. 12:100-4.2*, to employees working in other areas of the building or facility;

3. When the carbon dioxide level exceeds 1,000 parts per million (ppm), the employer shall check to make sure the HVAC system is operating as it should. If it is not, the employer shall take necessary steps as outlined in (a)1 above;

4. When temperatures in office buildings are outside of the range of 68 to 79 degrees Fahrenheit, the employer shall check to make sure the HVAC system is in proper operating order. If it is not, the employer shall take necessary steps as outlined in (a)1 above;

5. If contamination of the make-up air supply is identified and documented, then the make-up inlets and/or exhaust air outlets shall be relocated or the source of the contamination eliminated. Sources of make-up air contamination may include contaminants from sources such as, but not limited to, cooling towers, vents, and vehicle exhaust;

6. Assuring that building without mechanical ventilation are maintained so that windows, doors, vents, stacks and other portals designed or used for natural ventilation are in operable condition;

7. Promptly investigating all employee complaints of signs or symptoms that may be associated with building-related illness or sick building syndrome;

8. The employer shall have a written plan describing how it will achieve compliance with this subchapter, which plan shall list the identity and responsibilities of the designated person referred to in (a) above and which shall include procedures which, at a minimum, address the following issues:

i. Following of a preventive maintenance schedule;

ii. Keeping of required records;

iii. Locating of Indoor Air Quality compliance documents;

iv. Investigating of employee complaints;

v. Responding to signed employee complaints that have been submitted to the State alleging violation of the Public Employees' Occupational Safety and Health Act, *N.J. S.A. 34:6A-25* et seq.;

vi. Notifying employees of work that may introduce air contaminants;

vii. Controlling microbial contamination;

viii. Controlling air contaminants;

ix. Responding to temperature and/or carbon dioxide exceedences;

x. Maintaining air quality during renovations and remodeling;

xi. Obtaining permits and performing work as required by the New Jersey Uniform Construction Code, *N.J.A. C. 5:23*; and

xii. Maintaining natural ventilation in buildings without mechanical ventilation; and

9. The employer shall review and update the written compliance plan referred to in (a)8 above at least annually, and whenever necessary to reflect new or modified tasks and procedures and to reflect new or revised employee positions.

§ 12:100-13.4 Controls of specific contaminant sources

(a) Regarding other indoor air contaminants, when general ventilation is inadequate to control air contaminants emitted from point sources within work spaces to below the applicable PEL, as adopted by reference under *N.J.A. C. 12:100-4.2*, the employer shall implement other control measures such as local source capture exhaust ventilation or substitution.

(b) The employer shall control microbial contamination in the building by promptly repairing water intrusion that can promote growth of biologic agents.

(c) The employer shall remediate damp or wet materials by drying, replacing, removing or cleaning same within 48 hours of discovery and shall continue such remediation until the water intrusion is eliminated.

(d) The employer shall take measures to remove visible microbial contamination in areas such as ductwork, humidifiers, dehumidifiers, condensate drip pans, heat exchange components, other HVAC and building system components, or on building surfaces, such as carpeting and ceiling tiles, when found during regular or emergency maintenance activities or during visual inspection.

§ 12:100-13.5 Air quality during renovation and remodeling

(a) Renovation work and/or new construction that results in the diffusion of dust, stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health shall be safeguarded by means of local ventilation or other protective devices to ensure the safety of employees. Renovation and/or new construction work in occupied buildings shall be isolated and air contaminants, dust and debris shall be confined to the renovation or construction area by use of measures such as, but not limited to, physical barriers, pressure differentials, and/or performing the work during periods of minimal occupancy.

1. Before re-occupancy, work areas shall be cleaned and aired out as necessary.

2. Hazard information shall be used to select products and to determine necessary measures to be taken to comply with (a) above.

(b) Before selection and use of paints, adhesives, sealants, solvents, or installation of insulation, particle board, plywood, floor coverings, carpet, textiles, or other materials in the course of renovation or construction, the employer shall check product labels and Material Safety Data Sheets or seek and obtain information from the manufacturers of those products on whether or not they contain volatile organic compounds such as solvents, formaldehyde or isocyanates that could be emitted during regular use.

(c) The employer shall notify employees at least 24 hours in advance, or promptly in emergency situations, of work to be performed on the building that may introduce air contaminants into their work area.

§ 12:100-13.6 Recordkeeping

a) The maintenance schedule shall be updated to show all maintenance performed on the building systems. The schedule shall include the date that such maintenance was performed and the name of the person or company performing the work.

(b) The records required to be maintained by this section shall be retained for at least three years.

(c) The records required to be maintained by this section shall be available on request to Department representatives for examination and copying.

(d) The records required to be maintained by this section shall be made available to employees and employee representatives for examination and copying upon written request as soon as possible after receipt by the employer of the written request, but no later than 10 working days from the date upon which the employer has received the request.

§ 12:100-13.7 Employer's response to a signed PEOSH complaint

(a) Within 15 working days of receipt by the employer of notification from the Department that a complaint has been filed against the employer under the Public Employees' Occupational Safety and Health Act, *N.J. S.A. 34:6A-25* et seq., the employer shall respond in writing to the Department. The response may include any combination of the following:

1. A statement that the complaint is unfounded;

2. A description of any remedial action already taken;

3. An outline of any remedial measures planned but not yet taken with a timetable for completion; and/or

4. A statement that a study of the problem, with a timetable for completion of the study, has been initiated.

(b) Where remedial measures are planned or a study initiated, they shall be completed as soon as feasible. The employer shall submit, to the Department, a written report describing the remedial measures implemented and/or a copy of a study's report within 15 working days of completion.

(c) Permits for remedial work shall be obtained as required by *N.J.A. C. 5:23* (the New Jersey Uniform Construction Code). All work requiring a permit shall be performed in compliance with *N.J.A. C. 5:23*.

§ 12:100-13.8 Indoor air quality (IAQ) compliance documents

(a) In response to an employee complaint to the Department, the employer shall provide any of the following documents, if available, and requested by the Department:

1. As-built construction documents;
2. HVAC system commissioning reports;
3. HVAC systems testing, adjusting and balancing reports;
4. Operations and maintenance manuals;
5. Water treatment logs; and
6. Operator training materials.

Appendix B

Summary of Revisions to 1997 PEOSH Indoor Air Quality Standard

Summary of 2007 Revisions to the 1997 PEOSH Indoor Air Quality Standard

In January 2005, the PEOSH Advisory Board was presented with a proposal to amend portions of the Indoor Air Quality (IAQ) Standard (N.J.A.C. 12:100-13)(1997). To that end, the PEOSH Advisory Board established an IAQ Subcommittee, comprised of experts and interested parties, to evaluate the existing standard. The subcommittee met nine times between January and October 2005 to review and discuss all sections of the PEOSH IAQ Standard. It was the consensus of the IAQ Subcommittee that the suggested changes to the PEOSH IAQ Standard would not result in any increased costs to employers.

On December 1, 2005, the PEOSH Advisory Board received the recommendations for revisions to the IAQ Standard as proposed by the IAQ Subcommittee. These recommendations were presented by the PEOSH Advisory Board to the NJDHSS and NJDLWD for consideration.

A summary of the proposed revisions to N.J.A.C. 12:100-13, Indoor Air Quality Standard, is as follows:

N.J.A. C. 12:100-13.1 This section was modified to provide clarification by the removal of the term "existing" to describe buildings included in the standard. The term "existing" was determined to be redundant and unnecessary in defining the scope of the standard.

N.J.A. C. 12:100-13.2 "Designated Smoking Area" This term was removed from the definition section. The term was referred to in section 13.4(a) of the standard. Section 13.4(a) was removed because it is pre-empted by the recently enacted New Jersey Smoke-Free Air Act (P.L. 2005, c. 383, N.J.A.C. 8:6).

N.J.A.C. 12:100-13.2 "Office Building" This section was modified to include educational facilities and exclude warehouses from the definition of "office building". Considering the similarity of the educational environment to office buildings and the administrative office work that is done in an educational facility, it was decided to specifically include educational facilities in the standard. Due to the open, industrial environment of warehouses, it was determined that warehouses are not structurally or functionally similar to office buildings, therefore, a specific exclusion was made for warehousing operations.

N.J.A. C. 12:100-13.2 The definition for "Sick Building Syndrome" was added to this section for the purpose of including the commonly-used term to a list of employee complaints for which an employer is required to investigate indoor air quality within the building. The inclusion of this term is consistent with U.S. EPA guidance for health professionals on indoor air quality[1]. This term is referred to in section 13.3(a)(7) of the standard.

N.J.A.C. 12:100-13.3(a) This section was modified by adding language requiring employers to ensure that the "Designated Person" has the knowledge necessary to perform the job requirements. A training program is being prepared by the NJDHSS-PEOSH Education and Training Project to assist employers in meeting the additional training requirements of this

1 U.S. EPA, *Indoor Air Pollution: An Introduction for Health Professionals*, U.S. Government Printing Office Publication No. 1994-523-217/81322, 1994:17.

revision. This Education and Training Program will be conducted in a manner consistent with previous training conducted for other standards that require a written program, including the Bloodborne Pathogens Standard, Respiratory Protection Standard, and the Hazard Communication Standard.

N.J.A.C. 12:100-13.3(a)(1) This section was modified to provide clarification by removing the term "reservoir" in the list of components of the HVAC system that shall be inspected as part of the preventive maintenance program. "Reservoir", is included in the overall term "parts of this system", and it was the consensus of the IAQ subcommittee that this term was not needed to convey the intent of this section.

N.J.A.C. 12:100-13.3 (a) (5) This section was modified to provide clarification about contaminants in make-up air. The original list was often misinterpreted by the regulated community as a comprehensive list of sources. The modified language clarifies that the list of types of vents are examples, not a comprehensive list. The specific sources listed in the original standard were omitted and general language was added to include all types of vents.

N.J.A.C. 12:100-13.3(a)(7) This section was modified by adding a category of "Sick Building Syndrome" health effects to reasons for an employer to investigate IAQ concerns. The definition of "Sick Building Syndrome" includes a broad list of non-specific building-related symptoms that was not included in the original standard language. It was determined that buildings that meet this definition should be promptly investigated by employers to determine what action, if any, is necessary.

N.J.A.C. 12:100-13.3(a)(8) This section was added to require the employer to prepare a written plan describing how they will meet their obligations under the standard. The written program will include language that describes how the employer will achieve compliance with the standard. A model written program is being prepared by the NJDHSS-PEOSH Education and Training Project to assist employers in meeting the additional requirements of this revision.

N.J.A. C. 12:100-13.4(a) This section and all references thereunto have been deleted because it is pre-empted by the recently enacted New Jersey Smoke-Free Air Act (P.L. 2005, c. 383, N.J.A.C. 8:6).

N.J.A.C. 12:100-13.4(c) This section was modified in three ways:

To provide clarification, the term "water leak" was replaced with the broader term of "water intrusion including, but not limited to, pipe leaks, condensation, flooding, plumbing backups, roof leaks". It was agreed that the original term was too narrow and failed to include most common types of water intrusion into a building that may lead to microbial growth.

Language was also added to define a time frame for the cleanup of damp or wet materials. It was agreed that the existing language was too vague and did not require remediation within a time period when experts state that microbial growth begins to occur in wet building materials [2].

[2] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, *Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and Major Floods*, Morbidity and Mortality Weekly Report (MMWR), June 9, 2006; 55:3.

To provide clarification, common examples of areas of HVAC systems to be inspected for visible mold as part of HVAC preventive maintenance program were added. The addition of examples helps illustrate the various areas within the HVAC system that require regular inspection.

N.J.A.C. 12:100-13.5(a) This section was modified to reduce exposure to contaminants during construction and renovation activities. The modification includes a description of isolation methods utilized when renovation and remodeling work is being performed in an occupied building. The isolation methods described in the modification provide the employer with examples of options that can be used in combination to control employee exposures, but also does not limit the employer from using alternative means to achieve isolation of

the work area. The modification also requires employers to clean and air-out the work area prior to re-occupancy. The purpose of the modification is to attempt to reduce employee exposure to construction dust and volatile organic compounds from the drying and curing of newly installed materials. This modification was requested by the IAQ Subcommittee because of concern that more should be done to ensure that renovated spaces do not present any health hazards. This requirement is similar to requirements, such as the PEOSH Sanitation Standard (*29 CFR 1910.141 (a) (3) (i) "All places of employment shall be kept clean to the extent that the nature of the work allows."*), which are regularly enforced by PEOSH.

N.J.A. C. 12:100-13.5(b) To provide clarification, this section was modified by rearranging the language. The revised language clarifies that information on the chemical content of potentially hazardous products is to be checked before selection of the product, not just prior to use of the product. The revision also adds the Material Safety Data Sheet (MSDS) to the list of information that the employer is required to evaluate prior to selection of the product. The term "carpet backing" was replaced with the term "carpet".

N.J.A.C. 12:100-13.6(b) This section was modified to establish time frames for which employers are required to must make records available to employees and employee representatives. The revised language also defines a formal process of which employees can request compliance information in writing and employers must provide the requested documents within 10 working days of the request. The purpose of the change is to prevent unreasonable delay in providing information to employees and employee representatives. The process is consistent with similar standards requiring access to medical and exposure data such as 29 CFR 1910.1020 Access to Employee Exposure and Medical Records Standard. The time period was chosen, by consensus of the IAQ Subcommittee, to be reasonable for compliance records which must be maintained and available for inspection as required by the recordkeeping provision of the standard.

N.J.A. C. 12:100-13.7 This section was modified to provide clarification. The revised language specifies that complaints for which an employer must respond to PEOSH is limited to complaints made by employee or employee representatives to PEOSH. (see N.J.S.A. 34:6A-38a).

APPENDIX I - Employee Notification of Renovation Work

N O T I C E

In accordance with the requirements of the New jersey Indoor Air Quality Standard, N.J.A.C. 12:100-13 2007, you are being notified that a construction/ renovation project will take place at _____, beginning on _____through_____.

Material will be utilized that contain ingredients that may be potentially offensive or harmful to sensitive individuals. Efforts will be made to minimize employee exposure to these chemicals and other construction-related dusts and odors.

The Safety Data Sheets (SDS) are available at the Green Hill Elementary Front Office and Facilities.

If you should have any questions please contact Drew Vanderzee at (973) 300-5705 ext. 216

.