

PATERSON PUBLIC SCHOOLS

INDOOR AIR QUALITY PROGRAM
IN ACCORDANCE WITH
N.J.A.C. 12:100-10.1

REVISION 7

December 7, 2016

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I. INDOOR AIR QUALITY POLICY

The Paterson Public School District (the "District") has established this written Indoor Air Quality Program in order to comply 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 adopted on May 21, 2007.

It shall be the policy of the District to establish a proactive role in the management of all issues affecting the quality of our indoor environment. A healthy, comfortable environment is essential to the well-being and productivity of all students and staff.

The District is committed to maintaining the highest level of comfort possible in all facilities that it owns, leases, or occupies, and occupants are encouraged to voice any complaints or concerns, so that they may be properly addressed. A list of buildings and the IAQ team covered by this Program is included as APPENDIX J.

As required by the IAQ Standard, the District has a program coordinator, designated person (administrator) and facility IAQ team responsible for compliance with the standard. This group shall be the Indoor Air Quality Team, referred to as the IAQT.

Finally, there is a strict NO SMOKING policy enforced on all property within the district.



II. INTRODUCTION**A. Background:**

Indoor air quality contaminants may be present at levels well below industrial or occupational exposure limits, yet they still may have an effect on the comfort of building occupants. Therefore, occupational exposure limits may not be applicable to a school environment.

Sources of these contaminants may be furnishings, building materials, printing and copying devices, food services, smoking, molds, bacteria, allergens, as well as the building occupants themselves.

While these issues rarely rise to the point where they become a serious health threat, they may reduce the comfort and well-being of building occupants.

B. Regulatory History:

The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) has established guidelines for the design, construction, and operation of building heating, ventilation, and air conditioning systems. These recommendations specify conditions in which 80% of the occupants will find the overall environment thermally acceptable, and 90% of the occupants will be satisfied with each individual parameter. Relevant parameters include air temperature, humidity, air speed, and thermal radiation. Personal factors including level of activity and clothing also affect heat transfer. The standard acknowledges that because of occupants' individual differences, it is "impossible to specify a thermal environment that will satisfy everyone."

The United States Environmental Protection Agency publishes guidance documents that include recommendations for indoor air quality parameters. EPA's focus is on education and technical guidance. In August 2000, EPA published the "Indoor Air Quality Tools for Schools" Guide, which urged schools to institute their own IAQ management programs. The Paterson Public Schools has implemented this initiative.

The Occupational Safety and Health Administration (OSHA), is the office of the Federal Government that regulates health and safety in the workplace. In 1994, OSHA proposed a rule on IAQ, which applied to all indoor, non-industrial workplaces. The rule would have required certain parameters (humidity, carbon monoxide, and carbon dioxide) to be monitored and maintained within certain levels. A written IAQ Management plan would have had to be established, and an individual would have been designated to ensure that the plan was properly enforced. All HVAC equipment operations and maintenance, as well as any complaints would need to be documented.

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The New Jersey Public Employees Occupational Safety and Health Program (PEOSH) first adopted an IAQ Standard on January 21, 1989. That standard was deleted in 1995 when the PEOSH Act was amended. A new standard was adopted on March 3, 1997 (N.J.A.C. 12:100-13). became effective. This standard requires employers to conduct the activities described above, with the exception that a written management plan was not required.

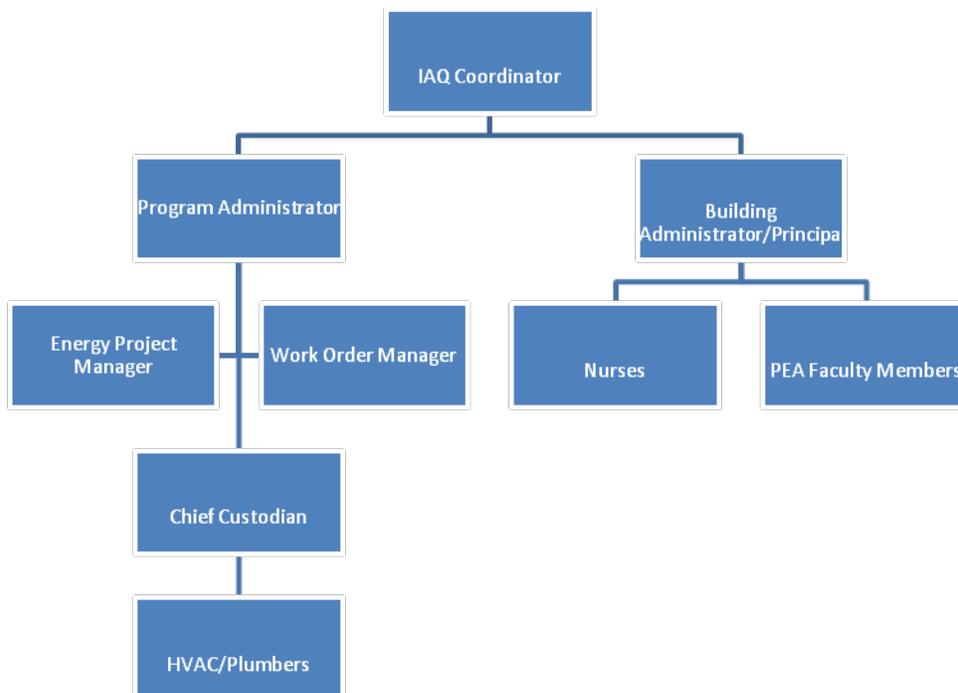
In December 2001, Federal OSHA withdrew its proposed rule and terminated the rulemaking proceedings. OSHA currently only offers guidance on IAQ issues and has stated “Office temperature and humidity conditions are generally a matter of human comfort rather than hazards that could cause death or serious harm.”

In December, 2005, the PEOSH Advisory Board recommended revisions to the standard, and the current IAQ Standard, (N.J.A.C. 12:100-13) (2007) was adopted on May 21, 2007.

III. ELEMENTS OF THE PLAN

A. IAQ Designated Team:

As required by the New Jersey PEOSH Indoor Air Quality Standard, an IAQ designated person has been designated as the person responsible for the District’s compliance with the standard. Since the Paterson School district consists of 54 schools and additional support building, the Designated person (administrator) shall have an IAQ team to assist in compliance and to establish a communication system. Appendix J lists the facilities and the IAQ Team assigned to these duties during the current calendar year.



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The designated person or his/her designee are those who have been trained and given the responsibility by the District to make routine visual inspections, oversee preventive maintenance programs, and maintain required records in order to ensure compliance with the IAQ Standard. The designated person (administrator) and the School Dude Work Order Manager is also assigned to receive employee concerns/complaints about indoor air quality, conduct investigations, facilitate repairs or further investigation as necessary. The program coordinator will maintain required records, in conjunction with the building administrators/principals and the chief custodians, and updates the written program annually. Each school shall have a minimum of two designated persons. They will work in tandem to ensure all elements of the standard are followed. Appendix B will be used to inspect the HVAC units. Any designated team member may file a completed checklist with the administrator, chief custodian or the program administrator designee.

B. 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. The School Dude program is used for the preventative maintenance schedule, PM. Appendix D shall be used to document HVAC problems and occupant concerns. Appendix E will be used to document a summary of the log for work orders preventative maintenance or repairs made to the univents. Appendix B will be used as the summary. Logs will be filled out completely. An electronic copy will be stored on the Chief Custodians computer in the IAQ folder. An electronic copy shall be maintained in drop box by the chief custodian and he/she shall share said folder with the district's Designated IAQ coordinator/EOHS Officer. The maintenance manager shall oversee the maintenance and repair of all roof top units, RTUs.

C. 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

Documentation of preventive maintenance and work orders for repairs are maintained at each school/building and in the office of Facilities Management. These records are maintained electronically whenever feasible. Sector Supervisors shall enforce record keeping procedure for all PPS Chief Custodians and Vendor's Acting Chief Custodians. Maintenance staff shall provide a completed Appendix B to the Chief Custodian upon service to the roof top units. Filter sizes will be maintained in Appendix A. MERV 8 filters or filters recommended by the manufacturer will be used and the Chief

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Custodian and/or HVAC Department will provide the filters according to the preventative maintenance schedule programmed in the SchoolDude CMMS. These filters will be delivered to each facility one week prior to the PM change out schedule. The preventative maintenance program will be documented using Appendices C, D and E and SchoolDude records.

D. Indoor Air Quality Compliance Documents:

Available IAQ compliance documents will be maintained by the IAQ Coordinator and will be available to PEOSH during an inspection. These documents may include:

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
6. Operator training materials

E. Investigating Complaints:

If employees begin to experience health symptoms that they believe are related to poor indoor air quality, they should notify a member of the IAQ Team so that their concerns can be investigated.

The Administrator and IAQ Coordinator 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 Facility Department. The Facility Department must be contacted and given the opportunity to resolve any IAQ complaint prior to a formal complaint filed with PEOSH. It should be noted that employees still retain the right to file complaints with PEOSH.

F. Responding to Signed Employee Complaints to PEOSH:

If we receive a written notification from PEOSH that a signed employee complaint has been filed with PEOSH, we 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 within fifteen (15) working days of receipt. Copies of all responses to PEOSH will be maintained by the IAQ Coordinator.

G. Notification of Employees:

The IAQ administrator or his/her designee 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. This notification will be in writing and will identify the planned project and the start date. The notification will also include information on how to access Safety Data Sheets (SDS) or other hazard information. The IAQ coordinator will maintain records of this notification for compliance recordkeeping purpose in the office of Facilities Management. Appendices G and H shall be document such activity.

H. Controlling Microbial Contamination:

Uncontrolled water intrusion into buildings (roof leaks, flooding, pipe condensation, plumbing leaks, or sewer backups) has the potential to support microbial growth. All employees should routinely observe their workplace for evidence of water intrusion (i.e. roof leaks, pipe leaks). Employees should notify the Chief custodian or IAQ administrator 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 IAQ administrator.

I. Controlling Air Contaminants:**1. Outside air**

The Building IAQ team 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 remain clear of potential contaminants. If contamination occurs, the Chief Custodian will eliminate the contaminant source or make arrangements to relocate the intake. The district has adopted a NO Idling Pledge, signed December 17, 2008, and has been filed with the New Jersey Department of Environmental Protection. NO IDLING signs are posted throughout the campus in both English and Spanish.

2. Point Source Contaminants

The IAQ administrator 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 inspected during the weekly roof inspection by the custodial staff to ensure that they are functioning properly and exhausting to areas located away from outside air intakes. If a unit is in need of repair, a work order will be issued. A summary log will be maintained to document the work orders, Appendix E. These records will be maintained electronically at the facility and an electronic copy will be filed with the IAQ coordinator.

J. Response to Temperature and Carbon Dioxide:**1. Temperature**

Where a mechanical ventilation system capable of regulating temperature is present, facilities personnel strive to maintain office building temperatures within the range of 68 to 79 degrees Fahrenheit. The Chief Custodian shall record temperature readings in Appendix N, Temperature Report. If outside this range, the IAQ administrator should be contacted. The IAQ administrator will ascertain whether the HVAC system is operating properly. The IAQ Standard does not require the installation of new HVAC equipment to achieve this temperature range.

2. Carbon Dioxide

If the room is equipped with non-mechanical ventilation systems such as operable windows, stacks, louvers, a member of the building IAQ team should ensure that these areas are clear and operable to allow the flow of fresh outside air. If carbon dioxide (CO₂) concentrations exceed 1,000 parts per million (ppm), and the room is not equipped with operable windows, the Chief Custodian will conduct an inspection to ensure that the mechanical HVAC system is operating properly. Use of a velometer is recommended.

K. Maintaining Indoor Air Quality During Renovation and Construction Projects:

Renovation work and/or new construction projects that have the potential to result in the diffusion of dust, stone and other small particles, toxic gases or other potentially harmful substances into occupied areas in quantities hazardous to health will be controlled in order to minimize employee exposure. The IAQ Coordinator and Project Manager will utilize the following protocol to ensure that employees' exposure to potentially harmful substances are 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 least occupied.
- Consider temporarily relocating employees to an alternate worksite.
- Notify potentially affected employees, in writing, at least 24 hours prior to commencement of chemical use or dust generation.
- 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.

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 Project Manager, Sector Supervisor and Supervisor of Trades as well as the IAQ administrator will check product labels periodically to ensure Low VOC products are used whenever possible. The IAQ administrator may also 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 IAQ administrator will complete records of this evaluation and forward this information to the IAQ coordinator for compliance recordkeeping purposes.

Management and the IAQ Administrator will 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.

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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) will 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. Air scrubbers will be utilized as needed.

If work is being performed by an outside contractor, the IAQ administrator will maintain communication with contractor personnel to ensure they comply with the requirements of the PEOSH IAQ standard. The IAQ administrator or Facilities Project Engineer and/or Sector Supervisor will complete the renovation/construction project checklist, Appendix F. One week prior to renovation/construction, the Renovation/Construction Project Employee Notification, Appendix G or H, will be posted in the main office. Appendix G is used for the PPS maintenance department and Appendix H is used for private companies and or vendors. Once the renovation/construction has been completed, the notice will be sent to the EOHS office and kept on file for three years.

Employees who have special concerns about potential exposures during or after renovation/construction/repair work should consult with their supervisor. If despite these preventive actions, employees are exposed to air contaminants resulting in health effects, employees will be instructed to report any work-related health symptoms to the nurse, who is a member of the IAQ team, so that they can be accurately assessed and investigated when indicated. All exposures should also be reported to their supervisor and the IAQ administrator.

L. 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)

M. Maintaining Natural Ventilation in Buildings without Mechanical Ventilation:

In buildings not equipped with mechanical ventilation, the Chief Custodian, shall 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. If necessary work orders will be issued to resolve the problem.

N. Employee Responsibilities

Employees have a role in maintaining good indoor air quality within their workplace. Employees may not introduce unauthorized chemicals (i.e. fragrances, air fresheners, cleaning solvents, ozone generators) into the workplace as written in the Hazard Communication Program approved by the PPS BOE. In addition, if employees observe situations which may lead to poor indoor air quality (i.e. inoperable windows, water leaks, visible mold) they should notify the Chief Custodian.

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Employees/faculty 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. The Chief Custodian, Plumbers and HVAC team members have the sole authorization to manipulate

Unit ventilator switches and thermostats: Faculty and other staff members are prohibited from tampering with the HVAC system. Classrooms and any other space occupied must be kept neat and clutter free. Plastic containers should be used for storage. Faculty is required to periodically reassess the need for curriculum and/or personal materials no longer used. These items shall be removed or discarded according to all local state, federal regulations, if applicable. Appendix M shall be used as a guideline for all staff and visitors in maintaining the unit ventilators. Unit Ventilators will not be used as storage or shelving.

O. Periodic Review and Update

This Indoor Air Quality Program will be updated at least annually to reflect changes in policies, procedures, responsibilities, and contact information. Appendix K shall document annual review and revisions made to the document.

Certification: The Paterson Board of Education shall approve the Indoor Air Quality Program through a Paterson Public School Board Action. A record of the approval shall be maintained in the Board of Education minutes and a copy shall be maintained in the Facilities Management office.

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APPENDIX A

Filter Sizes

On file at the Department of Facilities

**PATERSON PUBLIC SCHOOLS
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APPENDIX B**

HVAC Inspection Checklist

Employer Name: PATERSON PUBLIC SCHOOLS

Facility Name: _____

Air Handling Unit: _____

Area Served: _____

Item Inspected	OK	Needs Attn.	Comment
Fresh Air Intake:			
Area near intake free of contaminant sources (leaves, vehicle exhaust, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
Bird screen in place and unobstructed	<input type="checkbox"/>	<input type="checkbox"/>	
Outside Air damper setting appropriate	<input type="checkbox"/>	<input type="checkbox"/>	
Fans:			
Motor operating	<input type="checkbox"/>	<input type="checkbox"/>	
Belts in good condition and adjusted	<input type="checkbox"/>	<input type="checkbox"/>	
Coils:			
Coil free of significant corrosion or leaks	<input type="checkbox"/>	<input type="checkbox"/>	
Clean and free of accumulated dust or debris	<input type="checkbox"/>	<input type="checkbox"/>	
Filter:			
Date written on filter	<input type="checkbox"/>	<input type="checkbox"/>	
Correct size filter used	<input type="checkbox"/>	<input type="checkbox"/>	
Filter in place	<input type="checkbox"/>	<input type="checkbox"/>	
Free of accumulated contaminants	<input type="checkbox"/>	<input type="checkbox"/>	
Condensate Drain Pan:			
Free of significant corrosion	<input type="checkbox"/>	<input type="checkbox"/>	
Draining properly	<input type="checkbox"/>	<input type="checkbox"/>	
Free of visible biofilm	<input type="checkbox"/>	<input type="checkbox"/>	
Wash and dry pan	<input type="checkbox"/>	<input type="checkbox"/>	
Vents/Ducting:			
Visually clean and free of accumulated dust	<input type="checkbox"/>	<input type="checkbox"/>	
Insulation/lining intact	<input type="checkbox"/>	<input type="checkbox"/>	
Free of obstructions	<input type="checkbox"/>	<input type="checkbox"/>	
Other:			
Use of chemicals require SDS, submitted	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
Inspection Performed by:			
Name: _____ Date: _____			

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**APPENDIX C
PREVENTATIVE MAINTENANCE SCHEDULE**

SCHOOL DUDE WILL BE USED TO TRACK THE PREVENTATIVE MAINTENANCE SCHEDULE. RECORDS CAN BE OBTAINED FROM THE SCHOOL DUDE MANAGER AND A HARD COPY WILL BE AVAILABLE FOR REVIEW IN THE OFFICE OF FACILITIES MANAGEMENT.

PATERSON PUBLIC SCHOOL FACILITY STAFF WILL COMPLETE THE PREVENTATIVE MAINTENANCE FOR ALL ROOF TOP AND CEILING UNITS.

THE CHIEF CUSTODIAN WILL COMPLETE THE PREVENTATIVE MAINTENANCE FOR ALL CLASSROOM FLOOR UNIVENTILATORS UNDER THE SUPERVISION OF THE SECTOR SUPERVISORS AND/OR HVAC SUPERVISOR.

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APPENDIX E

WORK ORDER SUMMARY FOR REPAIRS & PM

SCHOOL:

Contact Person:

	Room #	Date and Work Order #	Date Resolved	Notes
Priority #1 Areas WITHOUT windows. RELY ON MECHANICAL				
Priority # 2 Areas WITH windows and a ducted ventilation system or unit ventilator				
Priority # 3 All rooms WITH window air conditioners.				

APPENDIX F

**PATERSON PUBLIC SCHOOLS
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Renovation/Construction Project
IAQ Compliance Checklist**

Employer Name: PATERSON PUBLIC SCHOOLS
 Facility Name: _____
 Project Name: _____
 Estimated Time Period: _____
 Area(s) Affected: _____
 General Contractor Name/Phone #: _____

Pre-Construction/Planning Phase:	Complete	N/A
Notified the Designated Person of the project.	<input type="checkbox"/>	<input type="checkbox"/>
Considered performing work during periods of minimal or non-occupancy and included requirements in bid specification (if applicable).	<input type="checkbox"/>	<input type="checkbox"/>
Reviewed hazard information (labels, MSDS) with contractor(s) and approved selected products.*	<input type="checkbox"/>	<input type="checkbox"/>
In buildings constructed prior to 1981: Reviewed Asbestos Survey. Ensured that all Asbestos-containing materials (ACM)/and Presumed Asbestos-containing materials (PACM) are labeled, Employees and Contractors notified of presence of ACM/PACM.	<input type="checkbox"/>	<input type="checkbox"/>
Notified affected 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.*	<input type="checkbox"/>	<input type="checkbox"/>
Reviewed hazard information (labels, MSDS) to determine necessary measures to be taken.*	<input type="checkbox"/>	<input type="checkbox"/>
Reviewed product labels and MSDS sheets to determine whether the use of paints, adhesives, sealants, solvents or installation of insulation, particle board, plywood, floor coverings, carpet backing, textiles or other materials contain volatile organic compounds that could be emitted during regular use.*	<input type="checkbox"/>	<input type="checkbox"/>
Construction Phase:		
Local ventilation or other protective devices used to safeguard employees and students from dust, stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health are in place.	<input type="checkbox"/>	<input type="checkbox"/>
Renovation/Construction areas in occupied buildings are isolated so that air contaminants, dust, and debris are confined to the renovation or construction area by use of measures such as physical barriers and pressure differentials.	<input type="checkbox"/>	<input type="checkbox"/>
Re-occupancy Phase:		
Inspected that the work areas are cleaned and aired out as necessary prior to re-occupancy.*	<input type="checkbox"/>	<input type="checkbox"/>
Re-occupancy authorized by: (Name/Title) Name: _____ Title: _____ Signature: _____ Date: _____		

APPENDIX G - FACILITIES

NOTICE

Dear Employee:

In accordance with the requirement of the NJ Indoor Air Quality Standard (N.J.A.C. 12:100-13) (2007), you are hereby notified that a construction/renovation project will take place at _____ from _____ through _____.

Please check # 1 or # 2 below:

_____ 1. Materials may be utilized which contain ingredients that may be potentially offensive or harmful. Efforts will be made to minimize employee exposure to these chemicals and other construction-related dusts and odors.

_____ 2. No Materials or chemicals which may be harmful to staff or students will be used. Efforts will be made to minimize employee exposure to construction-related dusts and odors.

The Safety Data Sheets for these materials are in the Hazard Communication Central File at Sheridan Ave. If you have any questions please contact the Project Manager _____ at _____ or your Sector Supervisor.

APPENDIX H- PRIVATE COMPANY/VENDOR

NOTICE

Dear Employee:

In accordance with the requirement of the NJ Indoor Air Quality Standard (N.J.A.C. 12:100-13) (2007), you are hereby notified that a construction/renovation project will take place at _____ from _____ through _____.

Please check # 1 or # 2 below please check # 1 or # 2 below:

_____ **1. Materials *MAY* be utilized which contain ingredients that may be potentially offensive or harmful. Efforts will be made to minimize employee exposure to these chemicals and other construction-related dusts and odors.**

_____ **2. No Materials or chemicals which may be harmful to staff or students will be used. Efforts will be made to minimize employee exposure to construction-related dusts and odors.**

The Safety Data Sheets for these materials are attached. If you have any questions please contact _____ at _____.

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APPENDIX I

**PEOSH Indoor Air Quality Standard
Inspection Checklist**

Location: _____

Inspection #: _____

Inspector: _____ **Date:** _____

COMPLIANCE PROGRAM - GENERAL REQUIREMENTS		Y	N	N/A
N.J.A.C. 12:100- 13.3(a)	Has a designated person been identified to handle the implementation and documentation of the New Jersey indoor air quality standard? Name/Title/Phone #: _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)	Has the employer ensured that the designated person is familiar with all the requirements of the standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)1	Is there an established, operating and documented preventive maintenance schedule for the heating, ventilation and air conditioning (HVAC) system in accordance with the manufacturer's recommendations or accepted practice for the HVAC system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)1	Does the HVAC preventive maintenance schedule 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)1	Are damaged or inoperable components of the HVAC system replaced or repaired as appropriate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)1	Are parts of the HVAC system with standing water checked visually for microbial growth?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)2	Is general or local exhaust ventilation used where housekeeping and maintenance activities could reasonably be expected to result in exposure to hazardous substances above applicable exposure limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)3	When the carbon dioxide level exceeds 1,000 parts per million, is the HVAC system checked and repaired as necessary to ensure the system is operating properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)4	In office buildings/schools, when the temperature is outside of the range of 68 to 79 degrees Fahrenheit, is the HVAC system checked and repaired as necessary to ensure the system is operating properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)5	When a contaminant is identified in the make-up air supply, is the source of the contaminant eliminated or the make-up inlets and/or exhaust air outlets relocated to avoid entry of the contaminant into the air system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)6	If buildings do not have mechanical ventilation, are windows, doors, vents, stacks, and other portals used for natural ventilation operating properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)7	Are complaints promptly investigated that involve signs or symptoms that may be associated with Building-Related Illness or Sick Building Syndrome?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)8	Does the employer have a written plan that meets the requirements of the subchapter?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.3(a)9	Is the written compliance plan reviewed and updated annually to reflect new or updated procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**PEOSH Indoor Air Quality Standard
Inspection Checklist (cont.)**

CONTROLS OF SPECIFIC CONTAMINANTS		Y	N	N/A
13.4(a)	When point sources generate airborne levels of contaminants above applicable limits, is local exhaust ventilation or substitution used to reduce the exposure levels to below the limits?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.4(b)	Does the employer control microbial contamination by promptly repairing water intrusion that can promote growth of biologic agents?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.4(c)	Does the employer remediate damp or wet materials by drying, replacing, removing, or cleaning same within 48 hours of discovery and continue remediation until water intrusion is eliminated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.4(d)	Are visible microbial contaminants removed from ductwork, humidifiers, dehumidifiers, condensate drip pans, heat exchange components, and 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RENOVATION/REMODELING		Y	N	N/A
13.5(a)	During renovation work and/or new construction, are local ventilation or other protective devices used to safeguard employees and students from dust, stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.5(a)	Are renovation areas in occupied buildings isolated so that air contaminants, dust, and debris are confined to the renovation or construction area by use of measures such as physical barriers, pressure differentials, and/or performing work during periods of minimal occupancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.5(a)(1)	Are work areas cleaned and aired out as necessary prior to re-occupancy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.5(a)(2)	Is hazard information used to select products and to determine necessary measures to be taken?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.5(b)	Before selection and use, are product labels and MSDS sheets checked or is information obtained on whether the use of paints, adhesives, sealants, solvents or installation of insulation, particle board, plywood, floor coverings, carpet backing, textiles or other materials contain volatile organic compounds such as solvents, formaldehyde, or Isocyanates that could be emitted during regular use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.5(c)	Are employees notified 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**PEOSH Indoor Air Quality Standard
Inspection Checklist (cont.)**

RECORDKEEPING		Y	N	N/A
13.6(a)	Is the maintenance schedule updated to show all maintenance performed on the building systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.6(a)	Does the maintenance schedule include the dates that the building systems maintenance was performed and the names of the persons or companies performing the work?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.6(b)	Are maintenance schedules with the information required by the indoor air quality standard retained for at least three years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.6(c)	Are the records required to be maintained by this section available for inspection by PEOSH?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.6(d)	Are the records required to be maintained by this section available for inspection by employees and employee representatives for examination and copying within 10 working days of request?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EMPLOYER'S RESPONSE TO A SIGNED COMPLAINT		Y	N	N/A
13.7(a)	If the employer receives a complaint notification from the PEOSH Program about an indoor air quality problem, is a written response sent back to PEOSH within 15 working days?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.7(a)	Do the employer's written responses to complaint notifications received from the PEOSH Program about an indoor air quality problem 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.7(b)	If the employer plans remedial measures or a study initiated in response to a complaint notification received from the PEOSH Program, is a written report describing the remedial measures implemented and/or a copy of a study's report submitted to the PEOSH Program within 15 working days of completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.7(c)	If remedial work is initiated in response to a complaint notification from the PEOSH Program, are permits obtained and work performed as required by N.J.A.C. 5:23 (the New Jersey Uniform Construction Code)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.8(a)	If available, are the following documents provided to the PEOSH Program when requested in response to an employee complaint: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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APPENDIX J

Paterson Public Schools IAQ Representatives

IAQ Coordinator Steven Morlino, CEFM, Master HVACR License #205	200 Sheridan Avenue 973-321-2262
DESIGNATED PERSON (Program Administrator) Nickolas Moretta, CEFM	200 Sheridan Avenue 973-321-0593
SECTOR SUPERVISORS OSCAR RIVERA JOE SOTO Liaison to Sector Supervisor Mike Cimmino	200 Sheridan Avenue 973-321-0939 973-32-10937
Maintenance Manager	200 Sheridan Ave. 973-321-0143
HVAC TEAM Alejandro Torres, Supervisor of Trades Thomas DiPasquale Omar Lee Stephen Graham	200 Sheridan Avenue 973-321-0961
Director of Energy and Project Control Rodney Williams	200 Sheridan Avenue 973-321-0143

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**APPENDIX K
REVIEW AND REVISION LOG**

DATE	REVISION	AUTHORIZED BY
June 1, 2009	Added site specific information and appendices to document PM, repairs etc.	Brenda Zemo
April 10,2012	Updated Appendix I and J, p 22-29, revised appendix B, added filter date, correct size, deleted appendix E work order summary, revised appendix D which combines appendix D and E, Appendix F becomes Appendix E and Appendix F is a copy of Appendix G but for private companies and vendors.	Brenda A. Zemo
April 1, 2013	Revised appendix D and added appendix E to reflect user friendly changes. Appendix E becomes F etc... through Appendix N to O. The explanation of these renamed appendices are reflected on pages 5,6,7,8,10 and 11. Oscar Rivera contributions added to appendix O-citations. Updated appendix J & K to reflect current PPS staff. Appendix J and K revision reflect change in personnel, pages 15-27	Brenda A. Zemo
May 25, 2014	<p>Appendix J and K revisions reflect change in personnel pages 22-28. P 6</p> <p>section B Preventative Maintenance- strike last sentence and replace with: An electronic copy shall be maintained in drop box by the chief custodian and he/she shall share said folder with the district's Designated IAQ coordinator/EOHS Officer. The maintenance manager shall oversee the maintenance and repair of all roof top units, RTUs.</p> <p>P6 Recordkeeping. Strike paragraph 1 and replace with: Documentation of preventive maintenance and work orders for repairs are maintained at each school/building and in the office of Facilities Management. These records are maintained electronically whenever feasible. Sector Supervisors shall enforce record keeping procedure for all PPS Chief Custodians and Vendor's Acting Chief Custodians. Maintenance staff shall provide a completed Appendix B to the Chief Custodian upon service to the roof top units. Filter sizes will be maintained in Appendix A.</p>	Brenda A. Zemo

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	Ninety day filters or filters recommended by the manufacturer will be used and the vendor holding the custodial service contract will provide the filters according to the preventative maintenance schedule. These filters will be delivered to each facility one week prior to the PM change out schedule. The preventative maintenance program will be documented using Appendices C, D and E.	
December 8, 2015	The original Appendix K has been omitted all subsequent Appendices move up with Appendix L becoming K and so forth. Additional members of the IAQ representatives has been revised with the addition of the Energy & maintenance manager, Rodney Lee Williams, HVAC personnel- Torres and Graham are also additions. Office of Environmental, Occupational, Health and Safety has been replaced with Facilities Management.	Brenda A. Zemo
December 7, 2016	Personnel changes have been incorporated and the IAQ Coordinator changed to include a Master HVACR License holder.	Steven Morlino, CEFM

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**APPENDIX L
TITLE 12. DEPARTMENT OF LABOR
CHAPTER 100. SAFETY AND HEALTH STANDARDS FOR PUBLIC EMPLOYEES**

**SUBCHAPTER 13. INDOOR AIR QUALITY STANDARD
N.I.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.

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"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;

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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 exceedances;
- 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.

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- 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.

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

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.

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(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 M

Indoor Air Quality Best Operating Conditions for Classroom # _____

TYPE OF VENILATION SYSTEM (Check ALL that apply)		
Operable Windows <input type="checkbox"/>	Ducted HVAC System <input type="checkbox"/>	Unit Ventilator <input type="checkbox"/>
<input type="checkbox"/> Always keep windows closed <input type="checkbox"/> Always keep several windows slightly open <input type="checkbox"/> Whenever possible, open multiple windows <input type="checkbox"/> If you encounter difficulty opening windows call: CHIEF CUSTODIAN	<input type="checkbox"/> Please do NOT adjust thermostat: To request temperature adjustment, call CHIEF CUSTODIAN <input type="checkbox"/> Maintain thermostat on the following settings: ON AUTO TEMP RANGE: 68-79⁰ FAN <input type="checkbox"/> Keep air ducts open and unobstructed <input type="checkbox"/> Windows should remain closed.	<input type="checkbox"/> Please do NOT adjust unit vent: To request temperature or blower speed adjustment, call CHIEF CUSTODIAN <input type="checkbox"/> Maintain Unit Vent on the following settings: ON AUTO HIGH LOW TEMP RANGE: 68-79⁰F <input type="checkbox"/> Keep air flow and air return grates unobstructed <input type="checkbox"/> Always keep several windows slightly open

ADDITIONAL HEATING OR COOLING SYSTEMS (Check ALL that apply)		
Radiators <input type="checkbox"/>	Baseboard Heat <input type="checkbox"/>	Window Air-Conditioner <input type="checkbox"/>
<input type="checkbox"/> Do NOT place materials on or near radiator	<input type="checkbox"/> Do NOT place materials on or near baseboard unit	<input type="checkbox"/> Use for short periods <input type="checkbox"/> Recommended temp range 68-79⁰F <input type="checkbox"/> When classroom is not in session, open windows to restore fresh air supply

APPENDIX O
Works Cited

Services, N. J. (2007). *State of New Jersey*. Retrieved May 28, 2009, from New Jersey Department of Health and Senior Services: <http://www.state.nj.us/health/eoh/peoshweb/iaq.pdf>

OSCAR RIVERA, PPS SECTOR SUPERVISOR- REVISED APPENDICES D AND E IN 2012