

INDOOR AIR QUALITY COMPLIANCE PROGRAM

Prepared For

Watchung Hills Regional High School
108 Stirling Road
Warren, NJ 07059

Prepared By

Garden State Environmental, Inc.
555 South Broad Street, Suite K
Glen Rock, New Jersey 07452

Plan Updated On:

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I. Policy and Administration

This written Indoor Air Quality Program is to inform employees that the Watchung Hills Regional High School (hereinafter “School”) complies with the New Jersey Public Employees Occupational Safety and Health (PEOSH) Program, Indoor Air Quality (IAQ) Standard (N.J.A.C. 12:100-13)(2007), (hereinafter “Standard”) which was proposed on December 18, 2006 and adopted on May 21, 2007.

We recognize that good indoor air quality is essential to employees’ comfort, health and productivity. We have established the following policies to promote good indoor air quality for employees and other occupants in our buildings. These policies follow the requirements established by the PEOSH IAQ Standard as it applies to our workplace.

This Written Indoor Air Quality Program applies to Watchung Hills Regional High School, located at 108 Stirling Road in Warren, New Jersey.

The building-specific information for the High School listed above is included in **Appendix I**.

II. Designated Person

As required by the Standard, a District representative has been designated as the person responsible for compliance with the IAQ standard for the School. This Designated Person (**DP**) is:

Name: Kris Byk, Supervisor of Buildings & Grounds

Address: Watchung Hills Regional High School
108 Stirling Road
Warren, New Jersey 07059

Phone: Office: (908) 647-4800 ext. 4810

Email: kbyk@whrhs.org

The Designated Person has been trained and assigned the responsibility by Watchung Hills Regional High School board of Education to make routine visual inspections (see **Appendix II** criteria for Building System Evaluations), oversee preventive maintenance programs and maintain required records in order to ensure compliance with the IAQ Standard. The DP or his designee is also assigned to receive employee or building occupant concerns/complaints about indoor air quality, conduct investigations, facilitate repairs as necessary, maintain required records, and update the written program annually.

At this time, the DP, Kris Byk (Office: (908) 647-4800 ext. 4810) is fully responsible for receipt of all IAQ related information, complaints, and work orders and related documents.

III. 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 III**). 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 Tables (**Appendix IV**). NOTE: All maintenance documentation for Watchung Hills Regional High School is compiled electronically via an in-house program. Contact the DP to review this information.

IV. Recordkeeping

NOTE: N.J.A.C. 12:100-13.6 requires that maintenance logs be maintained on site by the employer's Designated Person for 3 years and must be made available to NJ-PEOSH, employees, and employee representatives upon request.

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

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

In addition to the preventative maintenance records, documentation of work orders and repairs by outside contractors shall be maintained by the Designated Person or his/her designee within the in-house electronic maintenance management program.

*Note: A sample HVAC inspection checklist is included in **Appendix V**. This represents the minimum requirements for routine HVAC inspections by in-house staff.*

Indoor Air Quality Compliance Documents

Watchung Hills Regional High School 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 NJ-PEOSH during an inspection. These documents and their locations are listed in the table below:

As-built construction documents	Buildings & Grounds Office
HVAC system commissioning reports	Buildings & Grounds Office
HVAC systems testing, adjusting, and balancing reports	Buildings & Grounds Office
Operations and maintenance manual	Buildings & Grounds Office
Operator training materials	Buildings & Grounds Office

V. Investigating IAQ Complaints

If employees report experiencing health symptoms that they believe are related to poor indoor air quality, they should notify Kris Byk to obtain an IAQ Complaint Form (**Appendix VI**) or Indoor Air Quality Questionnaire (**Appendix VII**). The IAQ Complaint 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 within 5 business days and forwarded to the DP or his designee for review and investigation.

In response, the DP will conduct a basic indoor air quality complaint investigation. In many cases IAQ complaints can be resolved internally. If necessary, the DP may contact an Industrial Hygienist, 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 VI** Indoor Air Quality Complaint Form, **Appendix VII** Indoor Air Quality Questionnaire, and **Appendix IV** Indoor Air Quality Issue Resolution and Deferred Maintenance Tables.

Watchung Hills Regional High School's current Indoor Air Quality Consultant is:

Garden State Environmental, Inc.
555 S. Broad Street
Glen Rock, New Jersey
201-652-1119

Responding to Signed Employee Complaints to NJ-PEOSH

If the School receives a written notification from NJ-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. Documentation of all complaints and responses will be maintained by the DP.

VI. 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 using the Employee Notification Form found in **Appendix X**. This notification will identify the planned project as well as the start and expected end dates. Copies of the IAQ Notice and Safety Data Sheets will be accessible to building occupants 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 DP will maintain records of this notification for compliance recordkeeping purposes.

VII. 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, water stained interior building materials). Employees should notify the Designated Person/Buildings and Grounds Department immediately if they observe possible evidence of water intrusion so that corrective action can be taken.

Porous materials and any other material highly susceptible to microbial growth such as ceiling tiles, carpet, and gypsum wall boards that were not fully dried within 48 hours may be removed at the discretion of, and as directed by the DP, using appropriate environmental controls to prevent possible cross contamination to non-impacted areas.

Should visual evidence of suspected microbial growth be observed on interior building materials, the area is to be left undisturbed pending investigation by the DP or if deemed necessary, Watchung Hills Regional High School's Indoor Air Quality Consultant.

VIII. Controlling Air Contaminants

Outside Air

The DP will identify the location of outside air intakes into the heating and cooling systems 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 DP will take all necessary steps to eliminate the contaminant source or make arrangements to relocate the intake.

Point Source Contaminants

The DP 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.

Response to *Temperature and Carbon Dioxide*

Temperature

Where a mechanical ventilation system capable of regulating temperature is present, Facilities personnel will strive to maintain administrative area temperatures within the range of 68 to 79 degrees Fahrenheit. If outside this range, the DP should be contacted to ascertain whether the HVAC system is operating properly. If not, the system must be repaired or adjusted. 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 as indicated. However, it is inherent in the regulation that the District must do everything possible to maintain temperatures in administrative areas within this range.

Carbon Dioxide

If the room is equipped with non-mechanical ventilation systems such as operable windows, stacks, louvers, etc. the DP must ensure that these areas are clear and operable to allow the flow of air. If carbon dioxide (CO₂) concentrations exceed 1,000 parts per million (ppm), and the room is not equipped with operable windows, the DP will conduct an inspection and take all necessary steps to ensure that the mechanical HVAC system is operating properly to provide sufficient fresh air.

IX. 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 or other small particles, toxic gases, noxious odors, and/or other potentially harmful substances into occupied areas in quantities potentially 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:

- a. Obtain SDSs for all products to be utilized on the project and maintain on-site throughout the duration of the project.
- b. Choose the least toxic product that is technically and economically feasible.
- c. Consider performing the renovation/construction project when building is the least or not occupied.
- d. Consider temporarily relocating employees to an alternate worksite.
- e. Notify potentially affected employees, in writing, a minimum of 24 hours prior to commencement of chemical use or dust generation.
- f. Isolate the work area from occupied areas utilizing separation and critical barriers.
- g. 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.

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 DP 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 DP will maintain records of this evaluation for compliance recordkeeping purposes.

The DP will consider the feasibility of conducting renovation/construction work using appropriate isolation barriers, during periods when the building is unoccupied, or temporarily relocating potentially affected employees to areas of the building that will 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 must maintain communication with contractor personnel to ensure they comply with the requirements of the PEOSH IAQ standard, this IAQ Plan and all applicable OSHA standards.

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

Maintaining Natural Ventilation in Buildings without Mechanical Ventilation

In buildings not equipped with mechanical ventilation, the DP 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.

X. 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 or other 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 are responsible for notifying the Designated Person so 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. Unauthorized intentional 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.

XI. Annual Review and Update

The Written Indoor Air Quality Program will be updated at least annually to reflect changes in policies, procedures, responsibilities, and contact information. This plan will be reviewed prior to November 4, 2021.

XII. CERTIFICATIONS AND ADOPTION:

Reviewed and Approved:



Kris Byk, Designated Person
Supervisor of Buildings & Grounds
Watchung Hills Regional High School

9/27/2022
Date



Jennifer Zervopoulos
Secretary to Kris Byk
Watchung Hills Regional High School

9/27/2022
Date



Tara Ekiert
Lead Industrial Hygienist
Garden State Environmental, Inc.

September 26, 2022

Date

APPENDIX I
Facility Specific Information

Watchung Hills HS Facility Specific Information

FACILITY NAME:	FACILITY CONSTRUCTION:	AS BUILT/ RENOVATION or ADDITION DATES:	HVAC TYPE/OPERATION:	MAINTENANCE SCHEDULE:
<p>Watchung Hills Regional High School</p>	<p>Concrete slab, concrete block and brick walls, metal truss roof with steel and concrete deck.</p>	<p>Built in 1957 with multiple additions and reconstruction in 2020-2021.</p>	<p>Building's classrooms and offices are cooled by automated roof top units (RTUs), univents and ducted forced air units that service 1-4 classrooms. These systems are 1-15 years old. All older RTU's are scheduled to be replaced in the near future.</p>	<p>Filters changed every 3 months.</p> <p>Belts changed every 3 months.</p>
			<p>Building is heated by steam and hot water boilers circulating through univents and RTU's.</p>	<p>HVAC system is inspected biannually.</p>

APPENDIX II
Criteria for Building Systems Evaluation

Criteria for Building Systems Evaluation

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 intake;
- 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 specification.

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 III
Preventative Maintenance Schedule

Preventive Maintenance Schedule

	Every 3 Months	Every 6 Months	Annually	Every 2 Years	As Needed
HVAC SYSTEM		xx/xx/xx			
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 (garbage, idling vehicles, exhaust)	xx/xx/xx				
Dampers Operational		xx/xx/xx			
Motors Operational		xx/xx/xx			
LOCAL EXHAUST SYSTEMS					
Proper Exhaust volume			xx/xx/xx		
Air Direction Correct			xx/xx/xx		
Fan Functional			xx/xx/xx		
Outdoor Vent Checked/Cleaned			xx/xx/xx		
OTHER					
Sewage Traps Filled with Water Weekly	xx/xx/xx				
Hazardous Chemicals Storage		xx/xx/xx			
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 & Wax Floors		xx/xx/xx			xx/xx/xx
Clean Registers					

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 (garbage, idling vehicles, exhaust)		X			
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
Deep Clean Carpets, Strip & Wax Floors			X		
Clean Registers					X

APPENDIX IV
IAQ Issue Resolution & Deferred Maintenance Tables

APPENDIX V
HVAC Inspection Checklist

HVAC Inspection Checklist

Employer Name: Watchung Hills Regional High School

Facility Name: _____

Air Handling Unit: _____

Area Serves: _____

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:			
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"/>	
Biocide used (note requires MSDS sheet)	<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 obstruction	<input type="checkbox"/>	<input type="checkbox"/>	
Other:			
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
Inspection performed by:			
Name: _____ Date: _____			

APPENDIX VI
Indoor Air Quality Complaint Form

INDOOR AIR QUALITY COMPLAINT FORM

This form may be used by any building occupant, teacher, or administrator to assist the Designated Person to more efficiently address indoor air quality related concerns.

Complainant Name: _____ Date: _____

Department/Location in Building: _____

Complainant Contact Info: _____

Indoor air quality problems may include concerns about temperature controls, ventilation, suspected air contaminants or unexplained odors. Please use the space below to describe the nature of the complaint, timing and frequency of observed conditions and any suspected causes:

We may need to contact you to discuss your complaint, what is the best time to reach you: _____

So that we can respond promptly, please return this form to: Kris Byk
Supervisor - Buildings & Grounds
[kbyk @whrhs.org](mailto:kbyk@whrhs.org)

OFFICIAL USE ONLY

Complaint #: _____ Received By: _____
Date: _____

APPENDIX VII
Indoor Air Quality Questionnaire

Indoor Air Quality Questionnaire

OFFICIAL 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 <input type="checkbox"/> | No <input type="checkbox"/> |
| Have hay fever or pollen allergies? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Have skin allergies or dermatitis? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Have a cold or the flu? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Have sinus problems? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Have other allergies? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Wear contact lenses? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Operate video display terminals? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Operate photocopiers 10% or more of the time? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Use other special office machines? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| If yes, specify _____ | | |
| Currently taking any medications? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| If yes, specify _____ | | |

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	Apr	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:

**Kris Byk
 108 Stirling Road
 Warren, NJ 07059**

APPENDIX VIII
Renovation/Construction IAQ Compliance Checklist

Renovation/Construction Project IAQ Compliance Checklist

Employer Name: _____

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	<input type="checkbox"/>	<input type="checkbox"/>

barriers and pressure differentials.		
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 IX
Sample Employee Notification

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 _____. Materials will 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.

The Material Safety Data Sheets for these materials are attached. If you have any questions please contact Kris Byk at 908-647-4800 ext. 4810.

APPENDIX X
NJ PEOSH Indoor Air Quality Standard

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 ware-houses.

"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.