

Aston A. Henry, Director
Risk Management Department

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October 7, 2014

Signature on File

TO: Sandra Shipman, Principal
Pembroke Lakes Elementary School

FROM: Richard Rosa, Project Manager
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

<u>For Custodial Supervisor Use Only</u>	
<input type="checkbox"/>	Custodial Issues Addressed
<input type="checkbox"/>	Custodial Issues Not Addressed
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On October 1, 2014, I conducted an assessment at **Pembroke Lakes Elementary School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions needed.

The IAQ assessment did identify one or more existing conditions impacting IAQ and has generated appropriate work orders to correct deficiencies in systems and maintenance that could contribute to decreased indoor air quality. At the time of the assessment, these concerns were not an immediate health or safety concern to building occupants. However, due to individual sensitivities and predisposing health factors, it is possible that some building occupants may elicit a health response to agents and / or conditions identified during the evaluation. Therefore, to further improve IAQ, prevent development of future IAQ-related problems, and to reduce the potential for IAQ-related complaints by building occupants, the IAQ Assessment Team recommends appropriate follow up of each item identified and listed in the attached evaluation.

Please ensure that your Head Facilities Serviceperson receives a copy of this correspondence so that the recommendations requiring their attention can be addressed. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all site based custodial issues have been appropriately addressed.

Should any questions arise, or if the current concerns continue after the attached recommendations have been addressed, please feel free to contact us at 754-321-1907.

cc: Shelley Meloni, Executive Director, Facilities & Construction
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division
Aston Henry, Director, Risk Management
Sonja Coley, Senior Project Manager, Facilities & Construction
Broward Teachers Union
Federation of Public Employees

RR/tc
Enc.

IAQ Assessment

Pembroke Lakes Elementary

Evaluation Date October 1, 2014

Time of Day 2:00

Outdoor Conditions Temperature 91.2 Relative Humidity 58.2 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
185	70.5	72 - 78	62.2	30% - 60%	783	MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Tack Board		No		No		
Floor	12" x 12" Vinyl		No		No		

Ceiling Clean	No	HVAC Supply Grills Clean	Yes	HVAC Return Grills Clean	Yes
Walls Clean	Yes	Inside of Supply Duct Clean	No	Inside of Return Duct Clean	Yes
Flooring Clean	Yes	Ceiling at Supply Grills Clean	No		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	N/A	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 188		Mechanical Room Clean	Yes	
Filters Installed Properly	No	Filters Clean	Yes	Inside of HVAC Unit Clean	Yes
Condensate Pan Clean	Yes	Cooling Coil Clean	Yes		

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	No ▼		

Observations

Corrective Actions to be Completed by Site Based Staff

Clean ceilings around HVAC supply grills	▼
Clean HVAC supply grills with Wexcide	▼
Coordinate a schedule between HFSP and classroom Instructor to clean properly due to clutter	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Clean the supply drops	▼
Install appropriate filter spacer in HVAC	▼
Set temperature to 72 - 78 degrees	▼
Repair HVAC to reduce humidity level	▼
	▼
	▼
	▼

IAQ Assessment

Pembroke Lakes Elementary

Evaluation Date October 1, 2014

Time of Day 2:30

Outdoor Conditions Temperature 91.2 Relative Humidity 58.2 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
186	71.4	72 - 78	65.6	30% - 60%	736	MAX 700 > Ambient		
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		Yes		No		16 ceiling tile stains < 2 sq ft	
Walls	Tack Board		No		No			
Floor	12" x 12" Vinyl		No		No			
Ceiling Clean		No	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean		Yes
Walls Clean		Yes	Inside of Supply Duct Clean		No	Inside of Return Duct Clean		Yes
Flooring Clean		Yes	Ceiling at Supply Grills Clean		No			
Room Surfaces Clean		No						
Trash Removed		Yes	Exhaust Fans Working		Yes	Unapproved Chemicals / Cleaners in Room		No
Signs of Pests		No	Drain Traps Wet		N/A	Air Fresheners in Room		No
Room Cluttered		Yes	Food if Stored in Room is in Sealed Containers		N/A			
Mechanical Equipment Location			FISH 188			Mechanical Room Clean		Yes
Filters Installed Properly		No	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
Condensate Pan Clean		Yes	Cooling Coil Clean		Yes			
Fresh Air Intake Location			Roof top ▼			Fresh Air Intake Free of Obstruction		Yes
Pollutant Sources Near Air Intake			No ▼					

Observations

There is an unused exhaust duct where once used stoves were placed. The stoves have been removed and sheet metal is placed over exhaust duct in the classroom. The sheet metal is sweating profusely, recommend to cap off the roof penetration to not allow humid air to enter duct work and create an IAQ concern. Recommend carpenters to remove sheet metal and evaluate the cabinet woodwork. Recommend Safety Department to start creating work orders to cap off rooftop stove exhaust duct.

Corrective Actions to be Completed by Site Based Staff

Clean ceilings around HVAC supply grills	▼
Clean HVAC supply grills with Wexcide	▼
Coordinate a schedule between HFSP and classroom Instructor to clean properly due to clutter	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Remove stove roof exhaust fan and cap off	▼
Install appropriate filter spacer in HVAC	▼
Repair HVAC to reduce humidity level	▼
Evaluate and repair cause of stained ceiling tiles	▼
Evaluate water damage around sheet metal	▼
Clean the supply drops	▼
	▼
	▼

IAQ Assessment

Pembroke Lakes Elementary

Evaluation Date October 1, 2014

Time of Day 1:00

Outdoor Conditions Temperature 91.2 Relative Humidity 58.2 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
187	70.5	72 - 78	62.7	30% - 60%	754	MAX 700 > Ambient	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		3 ceiling tile stains < 1 sq ft
Walls	Tack Board		No		No		
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean		No	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean	
Walls Clean		Yes	Inside of Supply Duct Clean		No	Inside of Return Duct Clean	
Flooring Clean		Yes	Ceiling at Supply Grills Clean		No		
Room Surfaces Clean		No					
Trash Removed		Yes	Exhaust Fans Working		Yes	Unapproved Chemicals / Cleaners in Room	
Signs of Pests		No	Drain Traps Wet		N/A	Air Fresheners in Room	
Room Cluttered		Yes	Food if Stored in Room is in Sealed Containers		N/A		
Mechanical Equipment Location			FISH 188			Mechanical Room Clean	
Filters Installed Properly		No	Filters Clean		Yes	Inside of HVAC Unit Clean	
Condensate Pan Clean		Yes	Cooling Coil Clean		Yes		
Fresh Air Intake Location			Roof top ▼			Fresh Air Intake Free of Obstruction	
Pollutant Sources Near Air Intake			No ▼			Yes	

Observations

There is an unused exhaust duct where once used stoves were placed. The stoves have been removed and sheet metal is placed over exhaust duct in the classroom. The sheet metal is sweating profusely, recommend to cap off the roof penetration to not allow humid air to enter duct work and create an IAQ concern. Recommend carpenters to remove sheet metal and evaluate the cabinet woodwork. Recommend Safety Department to start creating work orders to cap off rooftop stove exhaust duct.

Corrective Actions to be Completed by Site Based Staff

Clean ceilings around HVAC supply grills	▼
Clean HVAC supply grills with Wexcide	▼
Coordinate a schedule between HFSP and classroom Instructor to clean properly due to clutter	▼
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	▼
	▼

Corrective Actions to be Completed by PPO

Remove roof stove exhaust fan and cap off	▼
Install appropriate filter spacer in HVAC	▼
Repair HVAC to reduce humidity level	▼
Evaluate and repair cause of stained ceiling tiles	▼
Evaluate water damage around sheet metal	▼
Clean the supply drops	▼
Set temperature to 72 - 78 degrees	▼
	▼