

Aston A. Henry, Supervisor
Risk Management Department

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July 10, 2012

Signature on File

TO: Chris Carney, Principal
Bennett Elementary School

FROM: Robert Krickovich, Coordinator I, LEA
Facilities and Construction Management

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

On July 6, 2012, I conducted an assessment at **Bennett 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: Directors, School Performance & Accountability
Shelley Meloni, Executive Director, Facilities and Construction Management
Mark Dorsett, Acting Director, Physical Plant Operations Division, Maintenance
Sonja Coley, Project Manager III, Facilities and Construction Management
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division
Aston Henry, Supervisor, Risk Management
Broward Teachers Union
Federation of Public Employees

RK/tc
Enc.

IAQ Assessment

Bennett Elementary

Evaluation Date July 6, 2012

Time of Day 11:15

Outdoor Conditions Temperature 91.7

Relative Humidity 53.6

Ambient CO2 440

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
208	66.9	72 - 78	69.8	30% - 60%	431	MAX 700 > Ambient	2	
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected		
<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> Yes		<input type="checkbox"/> Entire Ceiling		
Ceiling	<input type="checkbox"/> 2' X 4' Lay in		<input type="checkbox"/> No		<input type="checkbox"/> Yes		<input type="checkbox"/> Spotty on Walls	
Walls	<input type="checkbox"/> Plaster		<input type="checkbox"/> No		<input type="checkbox"/> Yes			
Floor	<input type="checkbox"/> 12" x 12" Vinyl		<input type="checkbox"/> No		<input type="checkbox"/> No			
Ceiling Clean	<input type="checkbox"/> No	HVAC Supply Grills Clean	<input type="checkbox"/> Yes	HVAC Return Grills Clean	<input type="checkbox"/> N/a			
Walls Clean	<input type="checkbox"/> No	Inside of Supply Duct Clean	<input type="checkbox"/> N/A	Inside of Return Duct Clean	<input type="checkbox"/> N/A			
Flooring Clean	<input type="checkbox"/> No	Ceiling at Supply Grills Clean	<input type="checkbox"/> N/a					
Room Surfaces Clean	<input type="checkbox"/> No							
Trash Removed	<input type="checkbox"/> Yes	Exhaust Fans Working	<input type="checkbox"/> N/A	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/> No			
Signs of Pests	<input type="checkbox"/> No	Drain Traps Wet	<input type="checkbox"/> N/A	Air Fresheners in Room	<input type="checkbox"/> No			
Room Cluttered	<input type="checkbox"/> No	Food if Stored in Room is in Sealed Containers	<input type="checkbox"/> N/A					
Mechanical Equipment Location	<input type="checkbox"/> Floor Mount Fan Coil Unit				Mechanical Room Clean	<input type="checkbox"/> N/A		
Filters Installed Properly	<input type="checkbox"/> No	Filters Clean	<input type="checkbox"/> No	Inside of HVAC Unit Clean	<input type="checkbox"/> No			
Condensate Pan Clean	<input type="checkbox"/> N/A	Cooling Coil Clean	<input type="checkbox"/> N/A					
Fresh Air Intake Location	<input type="checkbox"/> Outside of Unit				Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes		
Pollutant Sources Near Air Intake	<input type="checkbox"/> None							

Observations

Filters do not stay in unit - (Taped to unit) - visible microbial growth on all ceiling tiles - Spotty growth on plaster walls - Temperature low - humidity elevated.

Visible growth will be cleaned from walls and ceiling tiles will be removed by Facilities Environmental Division - PPO to begin repairs after tiles have been removed and clearance received from Environmental Division.

Corrective Actions to be Completed by Site Based Staff

After cleaning by Facilities Environmental	▼
Division thoroughly clean all surfaces in room and	▼
thoroughly clean and sanitize flooring	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Set temperature to 72 - 78 degrees	▼
Replace ALL ceiling tiles	▼
Repair HVAC for proper filter installation	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Bennett Elementary

Evaluation Date July 6, 2012

Time of Day 11:15

Outdoor Conditions Temperature 91.7

Relative Humidity 53.6

Ambient CO2 440

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
209	70.3	72 - 78	58.4	30% - 60%	430	MAX 700 > Ambient	2
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		Yes		Entire Ceiling
Walls	Plaster		No		Yes		Spotty on Walls
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean	No	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean		N/a
Walls Clean	No	Inside of Supply Duct Clean		N/A	Inside of Return Duct Clean		N/A
Flooring Clean	No	Ceiling at Supply Grills Clean		N/a			
Room Surfaces Clean	No						
Trash Removed	Yes	Exhaust Fans Working		N/A	Unapproved Chemicals / Cleaners in Room		No
Signs of Pests	No	Drain Traps Wet		N/A	Air Fresheners in Room		No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers		N/A			
Mechanical Equipment Location	Floor Mount Fan Coil Unit					Mechanical Room Clean	N/A
Filters Installed Properly	No	Filters Clean		No	Inside of HVAC Unit Clean		No
Condensate Pan Clean	N/A	Cooling Coil Clean		N/A			
Fresh Air Intake Location	Outside of Unit ▼					Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼						

Observations

Filters do not stay in unit - (Taped to unit) - visible microbial growth on all ceiling tiles - Spotty growth on plaster walls - Visible microbial growth on walls and ceiling of 209C - Plaster walls of 210A, 209C, and 209A are wet - may be broken pipe in wall or roof leak above walls - Temperature low - humidity elevated.

Visible growth will be cleaned from walls and ceiling tiles will be removed by Facilities Environmental Division - PPO to begin repairs after tiles have been removed and clearance received from Environmental Division.

Corrective Actions to be Completed by Site Based Staff

After cleaning by Facilities Environmental	▼
Division thoroughly clean all surfaces in room and	▼
thoroughly clean and sanitize flooring	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Set temperature to 72 - 78 degrees	▼
Evaluate and repair cause of wet walls in 209/210	▼
Remove and replace wall material as necessary	▼
Replace ALL ceiling tiles	▼
Repair HVAC for proper filter installation	▼
	▼
	▼

IAQ Assessment

Bennett Elementary

Evaluation Date July 6, 2012

Time of Day 11:15

Outdoor Conditions Temperature 91.7

Relative Humidity 53.6

Ambient CO2 440

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
210	70.1	72 - 78	57.3	30% - 60%	442	MAX 700 > Ambient	2
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		Yes		Entire Ceiling
Walls	Plaster		No		No		
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean	No	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean		N/a
Walls Clean	Yes	Inside of Supply Duct Clean		N/A	Inside of Return Duct Clean		N/A
Flooring Clean	Yes	Ceiling at Supply Grills Clean		N/a			
Room Surfaces Clean	Yes						
Trash Removed	Yes	Exhaust Fans Working		N/A	Unapproved Chemicals / Cleaners in Room		No
Signs of Pests	No	Drain Traps Wet		N/A	Air Fresheners in Room		No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers		N/A			
Mechanical Equipment Location	Floor Mount Fan Coil Unit					Mechanical Room Clean	N/A
Filters Installed Properly	No	Filters Clean		No	Inside of HVAC Unit Clean		No
Condensate Pan Clean	N/A	Cooling Coil Clean		N/A			
Fresh Air Intake Location	Outside of Unit ▼					Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼						

Observations

Filters do not stay in unit - (Taped to unit) - visible microbial growth on all ceiling tiles - Tack board on West wall is wet - Plaster walls of 210A, 209C, and 209A are wet - may be broken pipe in wall or roof leak above walls - Temperature low - humidity elevated.

Ceiling tiles to be removed by Facilities Environmental Division - PPO to begin repairs after tiles have been removed and clearance received from Environmental Division.

Corrective Actions to be Completed by Site Based Staff

After cleaning by Facilities Environmental	▼
Division thoroughly clean all surfaces in room and	▼
thoroughly clean and sanitize flooring	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Set temperature to 72 - 78 degrees	▼
Evaluate and repair cause of wet walls in 209/210	▼
Remove and replace wall material as necessary	▼
Replace ALL ceiling tiles	▼
Repair HVAC for proper filter installation	▼
	▼
	▼