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Risk Management Department

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November 17, 2014

Signature on File

TO: Eliot Tillinger, Principal
Everglades 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

On November 4, 2014, I conducted an assessment at **Everglades 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

Everglades Elementary

Evaluation Date November 4, 2014

Time of Day 9:45

Outdoor Conditions Temperature 73.4

Relative Humidity 45.0

Ambient CO2 416

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
P-1380C	73.7	72 - 78	48.0	30% - 60%	460	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	Drywall/wall paper		No		No		
Floor	12" x 12" Vinyl		Yes		No		< 1 sq ft

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

Trash Removed	Yes	Exhaust Fans Working	No	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	Bard like HVAC system in classroom			Mechanical Room Clean	N/A
Filters Installed Properly	N/A	Filters Clean	N/A	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Behind Bard unit/Exterior wall ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Grass and landscape ▼		

Observations

Custodial staff advised portables haven't been used for classrooms until this year.

Windows open at time of assessment, HVAC was secured at the time of assessment.

There is floor damage adjacent to two walk in closets. The exhaust fan is intermittently working in the restroom.

Corrective Actions to be Completed by Site Based Staff

Ensure doors and windows remain closed	▼
Clean cobwebs from elevated corners	▼
Vacuum/wipe return grill	▼
Remove and replace A/C filters	▼
Clean inside HVAC unit return	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate cleaning the HVAC coil	▼
Evaluate and repair flooring	▼
Evaluate for normal function of exhaust fan	▼
	▼
	▼
See observations for additional information	▼
	▼
	▼

IAQ Assessment

Everglades Elementary

Evaluation Date November 4, 2014

Time of Day 10:45

Outdoor Conditions Temperature 73.4

Relative Humidity 45.0

Ambient CO2 416

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
P-1382C	71.0	72 - 78	50.8	30% - 60%	448	MAX 700 > Ambient	
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		Yes		1 stain < 1 sq ft
Walls	Drywall/wall paper		No		No		
Floor	12" x 12" Vinyl		No		No		

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

Trash Removed	Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	Yes	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	Bard like HVAC system in classroom		Mechanical Room Clean	N/A	
Filters Installed Properly	N/A	Filters Clean	N/A	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Behind Bard unit/Exterior wall ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Grass and landscape ▼		

Observations

Custodial staff advised portables haven't been used for classrooms until this year.

Windows open at time of assessment, HVAC was secured at the time of assessment.

The ceiling stain is located in the restroom and was dry per meter.

Insect traps were identified in the restroom and on window sills. Check HVAC for normal operation due to humidity levels inside classroom were higher than outside level.

- Corrective Actions to be Completed by Site Based Staff**
- Replace ceiling tile w/ microbial growth in restroom ▼
 - Monitor insects by windows and treat if necessary ▼
 - Vacuum/wipe return grill ▼
 - Remove and replace A/C filters ▼
 - Clean inside HVAC unit return ▼
 - Ensure doors and windows remain closed ▼
 - Shampoo the throw rug and thoroughly dry ▼

- Corrective Actions to be Completed by PPO**
- Evaluate cleaning the HVAC coil ▼
 - Evaluate and repair cause of stained ceiling tiles ▼
 - Repair HVAC to reduce humidity level ▼
 - ▼
 - ▼
 - ▼
 - ▼
 - ▼

IAQ Assessment

Everglades Elementary

Evaluation Date November 4, 2014

Time of Day 11:15

Outdoor Conditions Temperature 73.4

Relative Humidity 45.0

Ambient CO2 416

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
P-1383C	69.4	72 - 78	50.2	30% - 60%	433	MAX 700 > Ambient	
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		5 stains < 3 sq ft
Walls	Drywall		No		No		
Floor	Carpet		No		No		

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

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	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	Bard like HVAC system in classroom		Mechanical Room Clean	N/A	
Filters Installed Properly	N/A	Filters Clean	N/A	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Behind Bard unit/Exterior wall ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Grass and landscape ▼		

Observations

Custodial staff advised portables haven't been used for classrooms until this year.

HVAC was secured at the time of assessment.

The numerous ceiling stains were dry per meter.

Check HVAC for normal operation due to humidity levels inside classroom were higher than outside level.

- Corrective Actions to be Completed by Site Based Staff**
- | | |
|---|---|
| Replace stained ceiling tiles after repairs | ▼ |
| Clean exhaust fan grill | ▼ |
| Vacuum/wipe return grill | ▼ |
| Remove and replace A/C filters | ▼ |
| Clean inside HVAC unit return | ▼ |
| | ▼ |
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| | ▼ |

- Corrective Actions to be Completed by PPO**
- | | |
|--|---|
| Evaluate cleaning the HVAC coil | ▼ |
| Evaluate and repair cause of stained ceiling tiles | ▼ |
| Repair HVAC to reduce humidity level | ▼ |
| Ceiling cut needed for restroom exhaust fan | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |

IAQ Assessment

Everglades Elementary

Evaluation Date November 4, 2014

Time of Day 12:30

Outdoor Conditions Temperature 73.4

Relative Humidity 45.0

Ambient CO2 416

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
P-1401C	69.6	72 - 78	55.0	30% - 60%	433	MAX 700 > Ambient	
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Drywall/wall paper		No		No		
Floor	12" x 12" Vinyl		Yes		No		3" hole

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

Trash Removed	Yes	Exhaust Fans Working	No	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	Bard like HVAC system in classroom			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Behind Bard unit/Exterior wall ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Grass and landscape ▼		

Observations

Custodial staff advised portables haven't been used for classrooms until this year.
 HVAC was secured at the time of assessment. Repair flooring in the back of the room by HVAC return, tea cup size hole in the floor. Check HVAC for normal operation due to humidity levels inside classroom were higher than outside level. Exhaust fan runs 24/7 continuously.

Corrective Actions to be Completed by Site Based Staff

Clean exhaust fan grill in restroom	▼
Thoroughly clean and sanitize flooring	▼
Vacuum/wipe return grill	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate cleaning the HVAC coil	▼
Repair flooring	▼
Repair HVAC to reduce humidity level	▼
Check restroom exhaust fan for normal operation	▼
	▼
	▼
	▼
	▼

