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Risk Management Department

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June 13, 2012

Signature on File

TO: Tonya Frost, Principal
Country Isles 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 June 12, 2012, I conducted an assessment at **Country Isles 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: Area Superintendent
Area Directors
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

Country Isles Elementary

Evaluation Date

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
<input type="text" value="850"/>	<input type="text" value="75.0"/>	<input type="text" value="72 - 78"/>	<input type="text" value="50.1"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="398"/>	<input type="text" value="MAX 700 > Ambient"/>	<input type="text" value="1"/>
Noticeable Odor		<input type="text" value="No"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Walls	<input type="text" value="Drywall"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>

Ceiling Clean	<input type="text" value="Yes"/>	HVAC Supply Grills Clean	<input type="text" value="No"/>	HVAC Return Grills Clean	<input type="text" value="No"/>
Walls Clean	<input type="text" value="Yes"/>	Inside of Supply Duct Clean	<input type="text" value="Yes"/>	Inside of Return Duct Clean	<input type="text" value="N/A"/>
Flooring Clean	<input type="text" value="No"/>	Ceiling at Supply Grills Clean	<input type="text" value="No"/>		
Room Surfaces Clean	<input type="text" value="No"/>				

Trash Removed	<input type="text" value="Yes"/>	Exhaust Fans Working	<input type="text" value="Yes"/>	Unapproved Chemicals / Cleaners in Room	<input type="text" value="No"/>
Signs of Pests	<input type="text" value="No"/>	Drain Traps Wet	<input type="text" value="Yes"/>	Air Fresheners in Room	<input type="text" value="No"/>
Room Cluttered	<input type="text" value="No"/>	Food if Stored in Room is in Sealed Containers	<input type="text" value="N/A"/>		

Mechanical Equipment Location	<input type="text" value="Bard Unit in Classroom"/>			Mechanical Room Clean	<input type="text" value="N/A"/>
Filters Installed Properly	<input type="text" value="Yes"/>	Filters Clean	<input type="text" value="No"/>	Inside of HVAC Unit Clean	<input type="text" value="N/A"/>
Condensate Pan Clean	<input type="text" value="N/A"/>	Cooling Coil Clean	<input type="text" value="N/A"/>		

Fresh Air Intake Location	<input type="text" value="Outside of classroom"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="Lawn"/>		

Observations

Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Air filters dirty
 Thermostat display indicates to "change filters"

Fans/lights in bathrooms were left on.

Cracks in exterior walls around the entire building

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Evaluate and repair exterior of building (cracks)	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Country Isles Elementary

Evaluation Date

Time of Day

Outdoor Conditions Temperature

Relative Humidity

Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
<input type="text" value="851"/>	<input type="text" value="73.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="50.8"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="397"/>	<input type="text" value="MAX 700 > Ambient"/>	<input type="text" value="1"/>
Noticeable Odor		<input type="text" value="No"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Walls	<input type="text" value="Drywall"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Ceiling Clean	<input type="text" value="Yes"/>	HVAC Supply Grills Clean		<input type="text" value="No"/>	HVAC Return Grills Clean		<input type="text" value="No"/>
Walls Clean	<input type="text" value="Yes"/>	Inside of Supply Duct Clean		<input type="text" value="Yes"/>	Inside of Return Duct Clean		<input type="text" value="N/A"/>
Flooring Clean	<input type="text" value="No"/>	Ceiling at Supply Grills Clean		<input type="text" value="No"/>			
Room Surfaces Clean	<input type="text" value="No"/>						
Trash Removed	<input type="text" value="Yes"/>	Exhaust Fans Working		<input type="text" value="Yes"/>	Unapproved Chemicals / Cleaners in Room		<input type="text" value="No"/>
Signs of Pests	<input type="text" value="No"/>	Drain Traps Wet		<input type="text" value="Yes"/>	Air Fresheners in Room		<input type="text" value="No"/>
Room Cluttered	<input type="text" value="No"/>	Food if Stored in Room is in Sealed Containers		<input type="text" value="N/A"/>			
Mechanical Equipment Location	<input type="text" value="Bard Unit in Classroom"/>					Mechanical Room Clean	<input type="text" value="N/A"/>
Filters Installed Properly	<input type="text" value="Yes"/>	Filters Clean		<input type="text" value="No"/>	Inside of HVAC Unit Clean		<input type="text" value="N/A"/>
Condensate Pan Clean	<input type="text" value="N/A"/>	Cooling Coil Clean		<input type="text" value="N/A"/>			
Fresh Air Intake Location	<input type="text" value="Outside of classroom"/>					Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="Lawn"/>						

Observations

Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Air filters dirty	
Thermostat display indicates to "change filters" - Plants growing from sink drain	
Fans/lights in bathrooms were left on.	

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Clean sink drain / trap	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Country Isles Elementary

 Evaluation Date June 12, 2012

 Time of Day 1:00

 Outdoor Conditions Temperature 93.9

 Relative Humidity 39.4

 Ambient CO2 421

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
852	72.8	72 - 78	54.4	30% - 60%	428	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		Yes		No		1 tile	
2' X 4' Lay in		Yes		No		10 square feet	
Drywall		Yes		No		10 square feet	
12" x 12" Vinyl		No		No			
Ceiling Clean		Walls Clean		Flooring Clean		Room Surfaces Clean	
Yes		Yes		No		No	
		HVAC Supply Grills Clean		Inside of Supply Duct Clean		HVAC Return Grills Clean	
		No		Yes		No	
		Ceiling at Supply Grills Clean				Inside of Return Duct Clean	
		No				N/A	
Trash Removed		Signs of Pests		Room Cluttered		Exhaust Fans Working	
Yes		No		No		Yes	
				Food if Stored in Room is in Sealed Containers		Drain Traps Wet	
				N/A		Yes	
						Air Fresheners in Room	
						No	
						No	
Mechanical Equipment Location		Filters Installed Properly		Condensate Pan Clean		Mechanical Room Clean	
Bard Unit in Classroom		Yes		N/A		N/A	
		Filters Clean		Cooling Coil Clean		Inside of HVAC Unit Clean	
		No		N/A		N/A	
Fresh Air Intake Location		Pollutant Sources Near Air Intake				Fresh Air Intake Free of Obstruction	
Outside of classroom		Lawn				Yes	

Observations

Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Throw rug stained and covered with food debris - Air filters dirty - Thermostat display indicates to "change filters" - Stained ceiling tile right of Bard unit - Water damaged wall material right of Bard unit - Water damaged wall at mop sink in FISH 856

Fans/lights in bathrooms were left on.

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean stained carpet	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Evaluate and repair cause of stained ceiling tiles	▼
Evaluate and repair cause of water damaged wall material in FISH 852 and 856 (at mop sink)	▼
Remove and replace wall material as necessary	▼
	▼
	▼

IAQ Assessment

Country Isles Elementary

 Evaluation Date June 12, 2012

 Time of Day 1:00

 Outdoor Conditions Temperature 93.9

 Relative Humidity 39.4

 Ambient CO2 421

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
853	71.9	72 - 78	56.6	30% - 60%	403	MAX 700 > Ambient	1
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		2 tiles
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean		Yes	HVAC Supply Grills Clean		No		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		No		
Room Surfaces Clean		No					
Trash Removed		Yes	Exhaust Fans Working		Yes		Unapproved Chemicals / Cleaners in Room No
Signs of Pests		Yes	Drain Traps Wet		Yes		Air Fresheners in Room No
Room Cluttered		No	Food if Stored in Room is in Sealed Containers		N/A		
Mechanical Equipment Location		Bard Unit in Classroom				Mechanical Room Clean N/A	
Filters Installed Properly		Yes	Filters Clean		No		Inside of HVAC Unit Clean N/A
Condensate Pan Clean		N/A	Cooling Coil Clean		N/A		
Fresh Air Intake Location		Outside of classroom ▼				Fresh Air Intake Free of Obstruction Yes	
Pollutant Sources Near Air Intake		Lawn ▼					

Observations

Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Air filters dirty

Thermostat display indicates to "change filters" - Two stained ceiling tiles above and left of Bard unit - Ants in room

Fans/lights in bathrooms were left on.

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Evaluate and repair cause of stained ceiling tiles	▼
Generate work order for pest control - Ants	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Country Isles Elementary

Evaluation Date June 12, 2012

Time of Day 1:00

Outdoor Conditions Temperature 93.9

Relative Humidity 39.4

Ambient CO2 421

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
859	70.1	72 - 78	56.4	30% - 60%	421	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Drywall		12" x 12" Vinyl			
No		Yes		No		1 tile	
Yes		Yes		No		10 Sq ft	
No		No		No			

Ceiling Clean	Yes	HVAC Supply Grills Clean	No	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	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	Yes	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	Bard Unit in Classroom	Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	No
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A
		Inside of HVAC Unit Clean	N/A

Fresh Air Intake Location	Outside of classroom ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Lawn ▼		

Observations

Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Air filters dirty
 Thermostat display indicates to "change filters" - Water damaged wall right side of Bard unit - Water damaged ceiling tile right of Bard unit - Throw rug stained - Stained ceiling tile with visible microbial growth in corridor outside of room.
 Fans/lights in bathrooms were left on.

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean stained carpet	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Evaluate and repair cause of stained ceiling tiles	▼
Evaluate and repair cause of water damaged wall	▼
Remove and replace wall material as necessary	▼
	▼
	▼
	▼

