

RISK MANAGEMENT...

managing risk with responsibility

Aston A. Henry, Director
Risk Management Department

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August 20, 2013

Signature on File

TO: Davida Shacter, Principal
North Andrews Gardens Elementary School

FROM: Robert Krickovich, Coordinator I, LEA
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 August 12, 2013, I conducted an assessment at **North Andrews Gardens Elementary School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions needed. On August 15, 2013 a follow up assessment was conducted and the corrective actions were in progress on that date.

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, Task Assigned Chief Facilities & Construction Officer, 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

RK/tc
Enc.

IAQ Assessment

North Andrews Gardens Elementary

Evaluation Date August 12, 2013

Time of Day 9:00

Outdoor Conditions Temperature 88.1

Relative Humidity 68.1

Ambient CO2 511

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
503	76.2	72 - 78	62.2	30% - 60%	655	MAX 700 > Ambient	1
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Drywall/Tackboard		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		No
Flooring Clean	Yes	Ceiling at Supply Grills Clean		No			
Room Surfaces Clean	No						
Trash Removed	Yes	Exhaust Fans Working		No	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	FISH 506				Mechanical Room Clean	Yes	
Filters Installed Properly	Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
Condensate Pan Clean	Yes	Cooling Coil Clean		Yes			
Fresh Air Intake Location	Outside of Room ▼				Fresh Air Intake Free of Obstruction		Yes
Pollutant Sources Near Air Intake	Mango trees and palm trees ▼						

Observations

Microbial growth on edges and inside of student desks - supply and return grills dirty - inside of return dirty - surfaces in room dirty

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean all surfaces	▼
Clean ceilings around HVAC supply grills	▼
Clean HVAC supply and return grills with Wexcide	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Repair exhaust fan in room 503A	▼
Clean inside of return ducts	▼
	▼
	▼
	▼
	▼

IAQ Assessment

North Andrews Gardens Elementary

Evaluation Date August 12, 2013

Time of Day 9:00

Outdoor Conditions Temperature 88.1 Relative Humidity 68.1 Ambient CO2 511

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
509	74.4	72 - 78	60.5	30% - 60%	473	MAX 700 > Ambient	1	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		No		No			
Walls	Drywall/Tackboard		No		No			
Floor	12" x 12" Vinyl		No		No			
Ceiling Clean		Yes	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean		No
Walls Clean		No	Inside of Supply Duct Clean		Yes	Inside of Return Duct Clean		No
Flooring Clean		Yes	Ceiling at Supply Grills Clean		No			
Room Surfaces Clean		No						
Trash Removed		Yes	Exhaust Fans Working		No	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			FISH 506			Mechanical Room Clean		Yes
Filters Installed Properly		Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
Condensate Pan Clean		Yes	Cooling Coil Clean		Yes			
Fresh Air Intake Location			Outside of Room ▼			Fresh Air Intake Free of Obstruction		Yes
Pollutant Sources Near Air Intake			Mango trees and palm trees ▼					

Observations

Spotty microbial growth on edges and inside of student desks - microbial growth on teachers stool - dust on surfaces in room - dust on walls in front of supply grills -

509A - Exhaust fan not working - 2 stained ceiling tiles

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean all surfaces	▼
Clean ceilings around HVAC supply grills	▼
Clean HVAC return grills with Wexcide	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Clean inside of return ducts	▼
Repair HVAC to reduce humidity level	▼
Repair exhaust fan in 509A	▼
Repair cause of stained ceiling tiles in 509A	▼
Replace stained ceiling tiles	▼
	▼
	▼
	▼

IAQ Assessment

North Andrews Gardens 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="510"/>	<input type="text" value="72.5"/>	<input type="text" value="72 - 78"/>	<input type="text" value="62.8"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="472"/>	<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/Tackboard"/>		<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="No"/>	Inside of Supply Duct Clean	<input type="text" value="Yes"/>	Inside of Return Duct Clean	<input type="text" value="No"/>
Flooring Clean	<input type="text" value="Yes"/>	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="No"/>	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="FISH 506"/>			Mechanical Room Clean	<input type="text" value="Yes"/>
Filters Installed Properly	<input type="text" value="Yes"/>	Filters Clean	<input type="text" value="Yes"/>	Inside of HVAC Unit Clean	<input type="text" value="Yes"/>
Condensate Pan Clean	<input type="text" value="Yes"/>	Cooling Coil Clean	<input type="text" value="Yes"/>		

Fresh Air Intake Location	<input type="text" value="Outside of Room"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="Mango trees and palm trees"/>		

Observations

microbial growth on edges and inside of student desks, in all wood cubbies, and underside of teacher desk - dust on wall surfaces - microbial growth on plastic student chairs - supply grills dirty - ceilings at supply grills dirty - Return duct flex connector does not appear to be connected properly.

510A - 1 stained ceiling tile - exhaust fan not working

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean all surfaces	▼
Clean ceilings around HVAC supply grills	▼
Clean HVAC supply and return grills with Wexcide	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Clean inside of return ducts	▼
Repair HVAC to reduce humidity level	▼
Repair exhaust fan in 510A	▼
Repair cause of stained ceiling tile in 510A	▼
Replace stained ceiling tile	▼
Evaluate flex connector on return air box	▼
	▼
	▼

IAQ Assessment

North Andrews Gardens Elementary

Evaluation Date August 12, 2013

Time of Day 9:00

Outdoor Conditions Temperature 88.1

Relative Humidity 68.1

Ambient CO2 511

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
512	72.3	72 - 78	64.5	30% - 60%	462	MAX 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Drywall/Tackboard		12" x 12" Vinyl			
No		No		No			

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

Trash Removed	Yes	Exhaust Fans Working	No	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	FISH 506	Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes
Condensate Pan Clean	Yes	Cooling Coil Clean	Yes
		Inside of HVAC Unit Clean	Yes

Fresh Air Intake Location	Outside of Room	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Mango trees and palm trees		

Observations

Microbial growth on edges and inside of student desks - dust on walls in front of supply grills -

Door to restroom 512A swollen will not close - exhaust fan not working

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean all surfaces	▼
Clean ceilings around HVAC supply grills	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Repair door to 512A	▼
Repair exhaust fan in 512A	▼
Clean inside of return ducts	▼
	▼
	▼
	▼
	▼

IAQ Assessment

North Andrews Gardens Elementary

Evaluation Date August 12, 2013

Time of Day 9:00

Outdoor Conditions Temperature 88.1

Relative Humidity 68.1

Ambient CO2 511

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
513	73.5	72 - 78	62.1	30% - 60%	467	MAX 700 > Ambient	4
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Drywall/Tackboard		12" x 12" Vinyl			
Yes		No		No			
Yes		No		No			
Yes		No		No			
No		No		No			

Ceiling Clean	<input checked="" type="checkbox"/>	HVAC Supply Grills Clean	<input checked="" type="checkbox"/>	HVAC Return Grills Clean	<input checked="" type="checkbox"/>
Walls Clean	<input checked="" type="checkbox"/>	Inside of Supply Duct Clean	<input checked="" type="checkbox"/>	Inside of Return Duct Clean	<input type="checkbox"/>
Flooring Clean	<input checked="" type="checkbox"/>	Ceiling at Supply Grills Clean	<input type="checkbox"/>		
Room Surfaces Clean	<input type="checkbox"/>				

Trash Removed	<input checked="" type="checkbox"/>	Exhaust Fans Working	<input type="checkbox"/>	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/>
Signs of Pests	<input type="checkbox"/>	Drain Traps Wet	<input checked="" type="checkbox"/>	Air Fresheners in Room	<input type="checkbox"/>
Room Cluttered	<input type="checkbox"/>	Food if Stored in Room is in Sealed Containers	<input type="checkbox"/>		

Mechanical Equipment Location	FISH 506	Mechanical Room Clean	<input checked="" type="checkbox"/>
Filters Installed Properly	<input checked="" type="checkbox"/>	Filters Clean	<input checked="" type="checkbox"/>
Condensate Pan Clean	<input checked="" type="checkbox"/>	Cooling Coil Clean	<input checked="" type="checkbox"/>
		Inside of HVAC Unit Clean	<input checked="" type="checkbox"/>

Fresh Air Intake Location	Outside of Room	Fresh Air Intake Free of Obstruction	<input checked="" type="checkbox"/>
Pollutant Sources Near Air Intake	Mango trees and palm trees		

Observations

Slight musty odor - microbial growth on edges and inside of student desks, and other wood materials - microbial growth underside of sink cabinet inside cabinets

513A - 1 stained ceiling tile - exhaust fan not working

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean all surfaces	▼
Clean ceilings around HVAC supply grills	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Repair exhaust fan in room 513A	▼
Repair cause of stained ceiling tile in 513A	▼
Clean inside of return ducts	▼
	▼
	▼
	▼
	▼

