

Aston A. Henry, Director

# managing risk with responsibility

754 321-1900

Telephone:

Risk Management Department		Fax: 754 321-1917
July 30, 2013	Signature on File	For Custodial Supervisor Use Only
TO:	Susan Sasse, Principal Pines Lakes Elementary School	Custodial Issues Addressed  Custodial Issues Not Addressed
FROM:	Richard Rosa, Project Manager Risk Management Department	
SUBJECT:	Indoor Air Quality (IAQ) Assessment	

On July 18, 2013, I conducted an assessment at **Pines 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, 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

RR/tc Enc.

Pines Lakes Elementary Eva	valuation Date				
Outdoor Conditions Temperature 76.1	Relative Humidity 90.4 Ambient CO2 448				
Fish         Temperature         Range         Relative Hu           101C         73.2         72 - 78         40.2					
Noticeable Odor No Visible water of staining					
Ceiling 2' x 4' No	No No				
Walls Wood Paneling Yes	No < 2 sq ft				
Floor Carpet No	No				
Ceiling Clean Yes HVAC S Grills C Walls Clean No	Clean Grills Clean N/a				
Flooring Clean No Duct Cl	of Supply  Clean  Yes  Inside of Return  Duct Clean  N/A				
Room Surfaces Yes Ceiling Clean Grills C	g at Supply Clean				
Trash Removed Yes Exhaust Fans	Cleaners in Room No				
	Traps Wet N/A Air Fresheners No				
Room Cluttered No Food if Stored in Sealed Conta	III ROOIII				
Mechanical Equipment Location FISH 105	Mechanical Room Clean Yes				
Filters Installed Properly Yes Filter	Iters Clean Yes Inside of HVAC Unit Clean Yes				
Condensate Pan Clean Yes Cooling C	Coil Clean Yes				
Fresh Air Intake Location Roof top	▼ Fresh Air Intake Free of Obstruction Yes				
Pollutant Sources Near Air Intake	▼				
Observations					
framing is rotted but there is no sign of an active lea	ow and paint is peeling and a portion of the interior wood window ak per moisture meter There have been numerous days of constant ated. There is no HVAC return grill in the room. Custodial staff				
Corrective Actions to be Completed by Site Based S	Staff Corrective Actions to be Completed by PPO				
▼ Evaluate and repair cause of water damage ▼					
▼   Remove and replace wall material as necessary   ▼     Install appropriate filter spacer in HVAC					
	▼ ▼				
	▼				

▼

Pines Lakes	Elementary Evaluation Dat	te July 18, 2013	Time of Day 10	0:45
Outdoor Conditions Tempera	ature 76.1 Relative	e Humidity 90.4	Ambient CO2 44	48
		Range CO <sup>2</sup> 457	Range # Oc MAX 700 > Ambient	ccupants
Noticeable Odor Yes	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4'	Yes	No	< 1 sq ft	
Walls Drywall	No	No		
Floor 12" x 12" Vinyl	No	No		
Ceiling Clean No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
Walls Clean Yes Flooring Clean No	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	No
Room Surfaces No Clean	Ceiling at Supply Grills Clean	No		
Trash Removed Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests Yes  Room Cluttered Yes	Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location	Bard like HVAC system in class	ssroom	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 wal	II ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	No	▼	Of Obstruction	
Observations				
HVAC circuit breaker was turned restroom exhaust fan was not fu if South Area maintenance is wo	inctional - possibly due to the h	HVAC system being sec		
		-		

# **Corrective Actions to be Completed by Site Based Staff**

constant frame to ac completed by the Luceu	<b>-</b>
Clean ceilings around HVAC supply grills	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean all surfaces	▼
Generate a work order for pest control	•
Replace damaged ceiling tiles	•
	•
	▼
	▼

#### **Corrective Actions to be Completed by PPO**

	composition to be comple
eiling tiles ▼	Evaluate and repair cause of stained
ees ▼	Set temperature to 72 - 78 deg
level ▼	Repair HVAC to reduce humidit
▼	
h Area ▼	Coordinate HVAC repair with Sou
▼	
▼	
▼	

Pines L	akes Eleme	entary Evaluation Da	July 18, 2013	Time of Day 1	1:15
Outdoor Conditions Ten	nperature	76.1 Relative	e Humidity 90.4	Ambient CO2 4	48
Fish Temperature 855 77.0	Range 72 - 78	Relative Humidity 89.3 30	Range Co		ccupants
Noticeable Odor Yes		Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' x 4'		No	No_		
Walls Drywall		Yes	Yes	< 50 sq ft	
Floor 12" x 12" Vinyl		No	No		
Ceiling Clean  Walls Clean  No  Flooring Clean  No		HVAC Supply Grills Clean Inside of Supply Duct Clean	No Yes	HVAC Return Grills Clean Inside of Return Duct Clean	No No
Room Surfaces No Clean		Ceiling at Supply Grills Clean	No	buot olean	
Trash Removed Yes  Signs of Pests Yes  Room Cluttered Yes		Exhaust Fans Working  Drain Traps Wet  Food if Stored in Room is in Sealed Containers	N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Loca	ition Bard	I like HVAC system in cla	ssroom	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	Behi	nd Bard unit/Exterior wa	II ▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	No		▼	of Obstruction	
Observations					

HVAC circuit breaker was locked and tagged out. Visible signs of insects on the classroom floor. The restroom exhaust fan was not functional possibly due to the HVAC system being secured. Check work orders to see if South Area maintenance is working on the HVAC system prior to responding. There is visible microbial growth in the restroom on wall surfaces, the wall is wet per moisture meter. There is also a section of wet wall in the classroom to the left of the restroom door.

#### Corrective Actions to be Completed by Site Based Staff

Controller of the Bo Completion by Cite Buccu	<u> </u>
Wipe restroom door staining with wexcide	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean all surfaces	▼
Generate a work order for pest control	•
	•
	▼
	▼
	▼

#### Corrective Actions to be Completed by PPO

Contestive Actions to be completed by 11 c	
Evaluate and repair cause of water damage	▼
Remove and replace wall material as necessary	▼
Set temperature to 72 - 78 degrees	▼
Repair HVAC to reduce humidity level	▼
	▼
Coordinate HVAC repair with South Area	▼
	▼
	▼

Fish Temperature Range Relative Humidity Range CO Range # Occupants P-271 77.5 72 - 78 80.4 30% - 60% 512 MAX 700 Ambient  Noticeable Odor No Visible water damage / Staining? Visible microbial growth? MAX 700 Ambient  Noticeable Odor No Visible water damage / Staining? Wisible microbial growth? MAX 700 Ambient  Amount of material affected  Floor 12* X 12* Vinyl No No Mo	Pines Lakes	s Elementary Evaluation Da	ate July 18, 2013	Time of Day 12:15
P-271 77.5 72 - 78 80.4 30% - 60% 512 MAX 700 > Ambient  Noticeable Odor No Visible water damage / staining? Visible microbial growth?  Rought Floor 12" x 12" Vinyl No No No No Flooring Clean No Grills Clean No Grills Clean No Grills Clean No Grills Clean No Miscore N	Outdoor Conditions Temper	rature 76.1 Relativ	ve Humidity 90.4	Ambient CO2 448
Noticeable Odor No stainling? growth? material affected stainling? growth? growth? material affected stainling? growth? mo entire ceiling learned. No learned stainling? growth? mo entire ceiling learned. No learned stainling? growth? mo lear			F12	MAX 700 >
Ceiling Homasote Yes No entire ceiling  Walls Tack Board No No No  Floor 12* x 12* Vinyl No No No  Ceiling Clean No Grills Clean No Grills Clean No Inside of Supply Duct Clean No Inside of Supply Duct Clean No Clean Surfaces No Ceiling at Supply Grills Clean No Grills Clean No Grills Clean No Grills Clean No Clean Surfaces No Clean Supply No Grills Clean No Grills Clean No Grills Clean No No Grills Clean No Clean No Grills Cle	Noticeable Odor No			
Walls Tack Board No No No Televitate Supply No No No Televitate Supply No No Televitate Supply No No Televitate Supply No No No Televitate Supply No	Ceiling Homasote	¬	No	entire ceiling
Floor 12" x 12" Vinyl No No No Ceiling Clean No HVAC Supply Grills Clean No Grills Clean No Grills Clean No Inside of Supply Duct Clean No Duct Clean No Duct Clean No Duct Clean No Ceiling at Supply Rorlls Clean No Ceiling at Supply Rorlls Clean No Unapproved Chemicals / Cleaners in Room Signs of Pests Yes Drain Traps Wet N/A Air Fresheners in Room Cluttered Yes Food if Stored in Room is in Sealed Containers No Inside of HVAC Unit Clean N/A Condensate Pan Clean N/A Cooling Coil Clean No Fitters Clean No Inside of HVAC Unit Clean N/A Cooling Coil Clean No Fresh Air Intake Location Window unit ▼ Fresh Air Intake Location Fresh Air Intake Free of Obstruction Free Free of	Walls Tack Board		No	
Walls Clean Yes Inside of Supply Duct Clean No Inside of Return Duct Clean No Clean Supply Clean No Duct Clean No Clean Supply Grills Clean No Clean No Clean No Clean No Clean No Clean No Duct Clean No Clean Signs of Pests Yes Drain Traps Wet N/A Air Fresheners in Room No No Clean No Clean No Inside of HVAC Unit Clean No Condensate Pan Clean N/A Cooling Coil Clean No Inside of HVAC Unit Clean No Condensate Pan Clean N/A Cooling Coil Clean No Fresh Air Intake Location Window unit Traps Wet N/A Cooling Coil Clean No Clean No Clean No Cobservations  The window HVAC units were secured at the time of assessment. Ladvised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Floor 12" x 12" Vinyl	<u> </u>	No	
Flooring Clean No Duct Clean N/A Duct Clean N/A  Room Surfaces No Ceiling at Supply Grills Clean No Unapproved Chemicals / Cleaners in Room  Trash Removed No Exhaust Fans Working N/A Unapproved Chemicals / Cleaners in Room  Signs of Pests Yes Drain Traps Wet N/A Air Fresheners in Room  Room Cluttered Yes Food if Stored in Room is in Sealed Containers N/A in Room  Mechanical Equipment Location Window unit Mechanical Room Clean N/A  Filters Installed Properly No Filters Clean No Inside of HVAC Unit Clean N/A  Condensate Pan Clean N/A Cooling Coil Clean No  Fresh Air Intake Location Window unit Tresh Air Intake Free of Obstruction  Pollutant Sources Near Air Grass and landscape Tesh Air Intake Free of Obstruction  Observations  The window HVAC units were secured at the time of assessment. Ladvised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.		Grills Clean		Grills Clean No
Trash Removed No Exhaust Fans Working N/A Unapproved Chemicals / Cleaners in Room No Signs of Pests Yes Drain Traps Wet N/A Air Fresheners in Room No No Room Cluttered Yes Food if Stored in Room is in Sealed Containers N/A Air Fresheners in Room No In Room In	Flooring Clean No		N/A	I NI/A I I
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 Window unit Mechanical Room Clean N/A  Filters Installed Properly No Filters Clean No Inside of HVAC Unit Clean N/A  Condensate Pan Clean N/A Cooling Coil Clean No  Fresh Air Intake Location Window unit   Fresh Air Intake Location Window unit   Fresh Air Intake Free of Obstruction  Observations  The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.			No	
Signs of Pests Yes Drain Traps Wet N/A  Room Cluttered Yes Food if Stored in Room is in Sealed Containers N/A  Mechanical Equipment Location Window unit Mechanical Room Clean N/A  Filters Installed Properly No Filters Clean No Inside of HVAC Unit Clean N/A  Condensate Pan Clean N/A Cooling Coil Clean No  Fresh Air Intake Location Window unit Fresh Air Intake Free of Obstruction  Follutant Sources Near Air Intake Free of Obstruction  Characteristics of Obstruction  The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Trash Removed No	Exhaust Fans Working	N/A	· · · · · · · · · · · · · · · · · · ·
Room Cluttered Yes Food if Stored in Room is in Sealed Containers N/A in Room  Mechanical Equipment Location Window unit Mechanical Room Clean N/A  Filters Installed Properly No Filters Clean No Inside of HVAC Unit Clean N/A  Condensate Pan Clean N/A Cooling Coil Clean No  Fresh Air Intake Location Window unit Fresh Air Intake Free of Obstruction  Pollutant Sources Near Air Intake Grass and landscape The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Signs of Pests Yes	Drain Traps Wet	N/A	
Filters Installed Properly No Filters Clean No Inside of HVAC Unit Clean N/A  Condensate Pan Clean N/A Cooling Coil Clean No  Fresh Air Intake Location Pollutant Sources Near Air Intake Grass and landscape  Observations  The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Room Cluttered Yes		N/A	
Condensate Pan Clean N/A Cooling Coil Clean No  Fresh Air Intake Location Window unit ▼ Fresh Air Intake Free of Obstruction  Pollutant Sources Near Air Intake Grass and landscape ▼    Observations  The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Mechanical Equipment Location	Window unit		Mechanical Room Clean N/A
Fresh Air Intake Location Pollutant Sources Near Air Intake Grass and landscape  Grass and landscape  Observations The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Filters Installed Properly No.	Filters Clean	No	Inside of HVAC Unit Clean N/A
Pollutant Sources Near Air Intake  Grass and landscape  Observations  The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Condensate Pan Clean N/	A Cooling Coil Clean	No	
Pollutant Sources Near Air Intake  Grass and landscape  Observations  The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Fresh Air Intake Location	Window unit	▼	Voc
The window HVAC units were secured at the time of assessment. I advised the Asst. Principal to remove all valuable contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.		Grass and landscape	▼	or Obstruction
contents due to the water damaged ceiling. The school staff advised me that the portable was supposed to be moved off the campus, please confirm.	Observations			
Corrective Actions to be Completed by Site Board Staff	contents due to the water dama	aged ceiling. The school staff a		
	Corrective Actions to be Comm	Natad by Sita Rasad Staff	Connective Action	no to be Completed by DDO

Controlled to 20 Completed by Olio Buccu of	
Remove contents of value from portable	▼
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	▼

Corrective Actions to be completed by 1.1.6	
Evaluate and repair cause of water damage	▼
to ceiling material	▼
Evaluate the replacement of the homasote ceiling	▼
	▼
Advise on removal of portable from site	▼
	▼
	▼
	▼

Pines Lake	s Elementary Ev	aluation Date	July 18,	2013	Time of Day	1:45	
Outdoor Conditions Tempe	rature 76.1	Relative H	lumidity	90.4	Ambient CO2	48	
	Range Relative Hu 22 - 78 88.1	<del>i</del>	ange - 60%	<b>CO</b> <sup>2</sup> 496	Range # O MAX 700 >  Ambient	ccupants	
Noticeable Odor Yes	Visible water o staining		Visible micr growth	0.0.0.	Amount of material affected		
Ceiling 2' x 4'	Yes		Yes	]	> 50 sq ft		
Walls Tack Board	Yes		No	]	various sections of tack	board	
Floor 12" x 12" Vinyl	Yes		No		Entire floor		
Ceiling Clean No Walls Clean No Flooring Clean No Room Surfaces No	Duct C	Clean of Supply	No N/A		HVAC Return Grills Clean Inside of Return Duct Clean	No N/A	
Clean	Grills C		No				
Trash Removed No Signs of Pests Yes	Exhaust Fan	s Working Traps Wet	N/A		Unapproved Chemicals / Cleaners in Room	No	
Room Cluttered Yes	Food if Stored in Sealed Cont	in Room is	N/A		Air Fresheners in Room	No	
Mechanical Equipment Location	Window unit				Mechanical Room Clean	N/A	
Filters Installed Properly  Condensate Pan Clean  N	<del></del>	ers Clean Coil Clean	No No	Ir	nside of HVAC Unit Clean	N/A	
Fresh Air Intake Location	Window unit			▼	Fresh Air Intake Free	Yes	
Pollutant Sources Near Air Intake	Grass and landsca	pe		▼	of Obstruction		
Observations							
I advised the assistant principal the portable is shut down due to safety hazards. The school staff advised me that the portable was supposed to be moved off the campus, please confirm. The entire flooring is wet, floor tile is delaminating, the sub floor is wet due to the numerous roof leaks. There are sections of the drop ceiling that have collapsed due to the roof leaks. Many sections of the tack board are wet per moisture meter.							
Corrective Actions to be Completed by Site Based Staff  Corrective Actions to be Completed by PPO							
Remove contents of value from portable   Recommend evaluation to condemn							
		<del> ▼ </del>				<b>▼</b>	
						▼	
		▼				▼	
		<b>→</b>					