

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

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November 2, 2015

Signature on File

TO: Susan Sasse, Principal
Pines Lakes Elementary

FROM: Robert Krickovich, Coordinator, LEA
Environmental Health & Safety 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
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On October 28, 2015, 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 754-321-4200.

- cc: Shelley Meloni, Director, Pre-Construction
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
Broward Teachers Union
Federation of Public Employees
Gerald Devio, Supervisor II Custodial
Benjamin Osborne, Supervisor II Custodial
Rich Volipi, Supervisor II Custodial
Mark Murray, Supervisor II Custodial
Sam Bays, Director, Maintenance Operations
Kurt Wirz, Area Manager Trades

RK/je
Enc.

IAQ Assessment

Pines Lakes Elementary School

Evaluation Date October 28, 2015

Time of Day 12:00 PM

Outdoor Conditions Temperature 82.2 Relative Humidity 84.2 Ambient CO2 460

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
855	71.3	72 - 78	53.8	30% - 60%	440	MAX 700 > Ambient	3
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		one tile
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 Yes
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 - Outside Back of room			Mechanical Room Clean N/A	
Filters Installed Properly		Yes	Filters Clean		Yes		Inside of HVAC Unit Clean Yes
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			Road ▼				

Observations

One stained ceiling tile 14' out from bathroom door left side of room - Minor microbial inside of upper doors of wood cabinets - Paint peeling from caulk joint exterior rear of building - Roofing needs to be evaluated -

Corrective Actions to be Completed by Site Based Staff

Clean inside of upper cabinet doors	▼
Thoroughly clean horizontal surfaces	▼
Clean Supply Grills with Wexcide	▼
Clean HVAC Return Grill with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean and sanitize flooring	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate / Repair roofing as needed	▼
Evaluate / Repair caulk on building exterior	▼
Evaluate and repair cause of stained ceiling tile	▼
Remove and replace stained ceiling tiles	▼
Set Temperature to 72 - 78 degrees	▼
	▼
	▼
	▼

IAQ Assessment

Pines Lakes Elementary School

Evaluation Date October 28, 2015

Time of Day 12:00 PM

Outdoor Conditions Temperature 82.2 Relative Humidity 84.2 Ambient CO2 460

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
854	78.3	72 - 78	84.7	30% - 60%	996	MAX 700 > Ambient	25
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		Yes		No		2 Tiles back wall	
2' X 4' Lay in		Yes		No		4 sq ft	
Drywall		Yes		No			
12" x 12" Vinyl		No		No			
Ceiling Clean		Walls Clean		Flooring Clean		Room Surfaces Clean	
Yes		Yes		No		No	
		HVAC Supply Grills Clean		HVAC Return Grills Clean			
		No		No			
		Inside of Supply Duct Clean		Inside of Return Duct Clean			
		Yes		Yes			
		Ceiling at Supply Grills Clean					
		No					
Trash Removed		Signs of Pests		Room Cluttered		Exhaust Fans Working	
Yes		Yes		No		Yes	
						Drain Traps Wet	
						Yes	
						Food if Stored in Room is in Sealed Containers	
						N/A	
						Unapproved Chemicals / Cleaners in Room	
						No	
						Air Fresheners in Room	
						No	
Mechanical Equipment Location		Filters Installed Properly		Condensate Pan Clean		Mechanical Room Clean	
Bard - Outside Back of room		Yes		N/A		N/A	
		Filters Clean		Cooling Coil Clean		Inside of HVAC Unit Clean	
		Yes		N/A		Yes	
Fresh Air Intake Location		Pollutant Sources Near Air Intake				Fresh Air Intake Free of Obstruction	
Outside of Unit		Road				Yes	

Observations

Water damaged wall material under back window - two stained ceiling tiles at back wall - Minor microbial inside and outside of upper doors of wood cabinets - Paint peeling from caulk joint exterior rear of building - Roofing needs to be evaluated - Sign of pests on ceiling tiles both ends center of room.

Corrective Actions to be Completed by Site Based Staff

- Clean inside and outside of upper cabinet doors ▼
- Thoroughly clean horizontal surfaces ▼
- Clean Supply Grills with Wexcide ▼
- Clean HVAC Return Grill with Wexcide ▼
- Clean ceilings around HVAC supply grills ▼
- Thoroughly clean and sanitize flooring ▼
- ▼
- ▼

Corrective Actions to be Completed by PPO

- Evaluate / Repair roofing as needed ▼
- Evaluate / Repair caulk on building exterior ▼
- Repair HVAC to Reduce Humidity Levels ▼
- Provide for insect / pest treatment above ceiling ▼
- Evaluate and repair cause of stained ceiling tile ▼
- Evaluate and repair cause of water damaged wall material ▼
- Replace water damaged wall material ▼

IAQ Assessment

Pines Lakes Elementary School

Evaluation Date October 28, 2015

Time of Day 12:00 PM

Outdoor Conditions Temperature 82.2 Relative Humidity 84.2 Ambient CO2 460

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
853	74.7	72 - 78	91.9	30% - 60%	1024	MAX 700 > Ambient	24	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		No		No			
Walls	Drywall		Yes		No		2 sq ft	
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		Yes
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 - Outside Back of room			Mechanical Room Clean		N/A
Filters Installed Properly		Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
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			Road ▼					

Observations

Water damaged wall material under back window - Minor microbial inside of upper doors of wood cabinets - Paint peeling from caulk joint exterior rear of building - Roofing needs to be evaluated.

- Corrective Actions to be Completed by Site Based Staff**
- | | |
|--|---|
| Clean inside of upper cabinet doors | ▼ |
| Thoroughly clean horizontal surfaces | ▼ |
| Clean Supply Grills with Wexcide | ▼ |
| Clean HVAC Return Grill with Wexcide | ▼ |
| Clean ceilings around HVAC supply grills | ▼ |
| Thoroughly clean and sanitize flooring | ▼ |
| | ▼ |
| | ▼ |

- Corrective Actions to be Completed by PPO**
- | | |
|--|---|
| Evaluate / Repair roofing as needed | ▼ |
| Evaluate / Repair caulk on building exterior | ▼ |
| Evaluate and repair cause of water damaged wall material | ▼ |
| Replace water damaged wall material | ▼ |
| Repair HVAC to Reduce Humidity Levels | ▼ |
| | ▼ |
| | ▼ |

IAQ Assessment

Pines Lakes Elementary School

Evaluation Date October 28, 2015

Time of Day 12:00 PM

Outdoor Conditions Temperature 82.2 Relative Humidity 84.2 Ambient CO2 460

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
852	67.2	72 - 78	57.0	30% - 60%	571	MAX 700 > Ambient	3	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		Yes		No		8 tiles	
Walls	Drywall		Yes		No		10 sq ft	
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		Yes
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 - Outside Back of room			Mechanical Room Clean		N/A
Filters Installed Properly		Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
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			Road ▼					

Observations

Roof leak down center of modular - can see light between metal "I" beams above ceiling - Wall material right side of back door wet at ceiling from roof leak - sign on HVAC thermostat to "leave fan on (bad relay)" -Minor microbial inside of upper doors of wood cabinets - Paint peeling from caulk joint exterior rear of building - Roofing needs to be evaluated.

Corrective Actions to be Completed by Site Based Staff

Clean inside of upper cabinet doors	▼
Thoroughly clean horizontal surfaces	▼
Clean Supply Grills with Wexcide	▼
Clean HVAC Return Grill with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean and sanitize flooring	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate / Repair roofing as needed	▼
Evaluate / Repair caulk on building exterior	▼
Set Temperature to 72 - 78 degrees	▼
Replace stained ceiling tiles	▼
Replace "bad relay" in HVAC	▼
Evaluate and repair cause of water damaged wall material	▼
Replace water damaged wall material	▼

IAQ Assessment

Pines Lakes Elementary School

Evaluation Date October 28, 2015

Time of Day 12:00 PM

Outdoor Conditions Temperature 82.2 Relative Humidity 84.2 Ambient CO2 460

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
851	72.0	72 - 78	69.4	30% - 60%	1104	MAX 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		2' X 4' Lay in		Drywall		12" x 12" Vinyl	
No		No		No		No	
No		Yes		No		4 sq ft	
No		No		No		No	
Ceiling Clean		Walls Clean		Flooring Clean		Room Surfaces Clean	
Yes		Yes		No		No	
		HVAC Supply Grills Clean		Inside of Supply Duct Clean		Ceiling at Supply Grills Clean	
		No		Yes		No	
		HVAC Return Grills Clean		Inside of Return Duct Clean			
		No		Yes		Yes	
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	
						Unapproved Chemicals / Cleaners in Room	
						No	
						Air Fresheners in Room	
						No	
Mechanical Equipment Location		Bard - Outside Back of room				Mechanical Room Clean	
N/A						N/A	
Filters Installed Properly		Condensate Pan Clean		Filters Clean		Cooling Coil Clean	
Yes		N/A		Yes		N/A	
Fresh Air Intake Location		Outside of Unit				Fresh Air Intake Free of Obstruction	
Yes						Yes	
Pollutant Sources Near Air Intake		Road					
Yes							

Observations

Water damaged walls at both windows and doors - Minor microbial inside of upper doors of wood cabinets - Paint peeling from caulk joint exterior rear of building - Roofing needs to be evaluated.

Corrective Actions to be Completed by Site Based Staff

Clean inside of upper cabinet doors	▼
Thoroughly clean horizontal surfaces	▼
Clean Supply Grills with Wexcide	▼
Clean HVAC Return Grill with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean and sanitize flooring	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate / Repair roofing as needed	▼
Evaluate / Repair caulk on building exterior	▼
Evaluate and repair cause of water damaged wall material	▼
Replace water damaged wall material	▼
Repair HVAC to reduce CO2	▼
Repair HVAC to Reduce Humidity Levels	▼
	▼

IAQ Assessment

Pines Lakes Elementary School

Evaluation Date October 28, 2015

Time of Day 12:00 PM

Outdoor Conditions Temperature 82.2 Relative Humidity 84.2 Ambient CO2 460

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
850	72.3	72 - 78	55.4	30% - 60%	485	MAX 700 > Ambient	3	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		No		No			
Walls	Drywall		Yes		No		2 sq ft	
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		Yes
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 - Outside Back of room			Mechanical Room Clean		N/A
Filters Installed Properly		Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
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			Road ▼					

Observations

Water damaged wall under front window - Minor microbial inside of upper doors of wood cabinets - Paint peeling from caulk joint exterior rear of building - Roofing needs to be evaluated.

Corrective Actions to be Completed by Site Based Staff

Clean inside of upper cabinet doors	▼
Thoroughly clean horizontal surfaces	▼
Clean Supply Grills with Wexcide	▼
Clean HVAC Return Grill with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean and sanitize flooring	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate / Repair roofing as needed	▼
Evaluate / Repair caulk on building exterior	▼
Evaluate and repair cause of water damaged wall material	▼
Replace water damaged wall material	▼
	▼
	▼
	▼