THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

TELEPHONE (754) 321-4200

FACSIMILE: (754) 321-4285

July 28, 2016	Signature on File	For Custodial Supervisor Use Only
TO:	Joanne Schlissel, Principal Miramar Elementary	Custodial Issues Addressed
FROM:	Robert Krickovich, Coordinator, LEA Environmental Health & Safety Department	Custodial Issues Not Addressed
SUBJECT:	Indoor Air Quality (IAQ) Assessment	

On July 26, 2016, I conducted an assessment at **Miramar 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.

RK:smn Enc.

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 Volpi, Supervisor II Custodial Mark Murray, Supervisor II Custodial Sam Bays, Director, Maintenance Operations Kurt Wirz, Area Manager Trades

	IAQ Assessi	ment		
Miramar Elemen	tary School Evaluation Dat	July 26, 2016	Time of Day 11:	00 AM
Outdoor Conditions Tempera	ture 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
		Range Co % - 60% 64		ccupants 2
Noticeable Odor	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling2' X 4' Lay inWallsPlasterFloorCarpet	No No	No No		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	Yes	HVAC Return Grills Clean Inside of Return Duct Clean	Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	Yes		
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	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 Location Filters Installed Properly Yes Condensate Pan Clean No	FISH 120	Yes	Mechanical Room Clean Inside of HVAC Unit Clean	Yes No
Fresh Air Intake Location Pollutant Sources Near Air Intake	Outside of Room None	▼ ▼	Fresh Air Intake Free of Obstruction	Yes
Observations Temperature low - Humidity Elev	vated - Inside of HVAC unit dus	ty - Coil looks to be i	n poor condition.	

▼
▼
▼
▼
▼
▼
▼
▼

▼
▼
▼
▼
▼
▼
▼
▼

	IAQ Assessi	ment		
Miramar Elemen	tary School Evaluation Dat	e July 26, 2016	Time of Day 11:0	MA 00
Outdoor Conditions Tempera	ture 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
		Range CO ² % - 60% 786		cupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling2' X 4' Lay inWallsPlasterFloorCarpet	No No	No No		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	Yes	HVAC Return Grills Clean Inside of Return Duct Clean	Yes Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	Yes		
Trash Removed Yes Signs of Pests No	Exhaust Fans Working Drain Traps Wet	N/A	Unapproved Chemicals / Cleaners in Room	No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location	FISH 120		Mechanical Room Clean	Yes
Filters Installed Properly Yes Condensate Pan Clean No	7	Yes No	Inside of HVAC Unit Clean	No
Fresh Air Intake Location Pollutant Sources Near Air Intake	Outside of Room None	▼ ▼	Fresh Air Intake Free of Obstruction	Yes
Observations Temperature low - Humidity Elev	ated - Inside of HVAC unit dus	ty - Coil looks to be in	poor condition.	

▼
▼
▼
▼
▼
▼
▼
▼

Confective Actions to be completed by 110	
Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Clean HVAC coil and inside of unit	▼
Coil may be to corroded to clean	▼
	▼
	▼
	▼
	▼

	IAQ Assessi	ment		
Miramar Elemer	ntary School Evaluation Dat	e July 26, 2016	Time of Day 11:0	00 AM
Outdoor Conditions Tempera	ature 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
		Range CO ² % - 60% 646		ccupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling Plaster	No	Νο		
Walls Plaster / Tile	No	No		
Floor Ceramic Tile	No	No		
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean	N/a	HVAC Return Grills Clean	N/a
Flooring Clean Yes	Inside of Supply Duct Clean	N/A	Inside of Return Duct Clean	N/A
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	N/a		
Trash Removed Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	N/A	Air Fresheners	No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	in Room	
Mechanical Equipment Location	FISH 120		Mechanical Room Clean	Yes
Filters Installed Properly Yes	5 Filters Clean	Yes	Inside of HVAC Unit Clean	No
Condensate Pan Clean No	Cooling Coil Clean	Νο		
Fresh Air Intake Location	Outside of Room	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	None	▼	of Obstruction	
Observations				
Restroom - Spotty growth on pla	aster walls and Ceiling -			

Clean dust from wall surfaces	▼
Clean dust and debris from ceilings	▼
	▼
	•
	▼
	▼
	▼
	▼

Check exhaust fan d
Paint walls and ceiling

	IAQ Assessi	ment		
Miramar Elementa	ary School Evaluation Dat	e July 26, 2016	Time of Day 11:0	00 AM
Outdoor Conditions Temperate	ure 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
Fish Temperature Ran 117 72.6 72 -		Range CO ² % - 60% 670		cupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling Plaster	Νο	No		
Walls Plaster / Tile Floor Ceramic Tile	No	No		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	N/a N/A	HVAC Return Grills Clean Inside of Return Duct Clean	N/a
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	N/a	Duct clean	
Trash Removed Yes Signs of Pests No	Exhaust Fans Working Drain Traps Wet	N/A N/A	Unapproved Chemicals / Cleaners in Room	No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location	FISH 120		Mechanical Room Clean	Yes
Filters Installed Properly Yes Condensate Pan Clean No	Filters Clean Cooling Coil Clean	Yes	Inside of HVAC Unit Clean	No
Bollutant Sources Near Air	Outside of Room None	▼	Fresh Air Intake Free of Obstruction	Yes
Observations				
Restroom - Spotty growth on plas	ter walls and Ceiling -			

Clean dust from wall surfaces	▼
Clean dust and debris from ceilings	▼
	▼
	•
	▼
	▼
	▼
	▼

	_
Check exhaust fan operation and interlocks	▼
Paint walls and ceiling with Anti-Microbial Paint	▼
	▼
	▼
	▼
	▼
	▼

	IAQ Assessi	ment		
Miramar Elemer	tary School Evaluation Dat	e July 26, 2016	Time of Day 11:	00 AM
Outdoor Conditions Tempera	ature 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
		Range CO ² % - 60% 668	Range # Oo MAX 700 > Ambient	2
Noticeable Odor Yes Ceiling 2' X 4' Lay in	Visible water damage / staining? No	Visible microbial growth?	Amount of material affected	
Walls Plaster Floor Carpet	No No	No		
Ceiling CleanYesWalls CleanYesFlooring CleanYesRoom SurfacesYesCleanYes	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	Yes Yes Yes	HVAC Return Grills Clean Inside of Return Duct Clean	Yes Yes
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	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 Location Filters Installed Properly Yes Condensate Pan Clean No	-	Yes No	Mechanical Room Clean Inside of HVAC Unit Clean	Yes No
Fresh Air Intake Location Pollutant Sources Near Air Intake	Outside of Room None	▼	Fresh Air Intake Free of Obstruction	Yes
Observations Musty Odor in room - Spotty mid Elevated - Inside of HVAC unit d			om - Temperature low - H	Humidity

Clean backs of pictures with Wexcide	▼
if growth returns dispose of pictures	▼
	▼
	▼
	▼
	▼
	▼
	▼

Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Clean HVAC coil and inside of unit	▼
Coil may be to corroded to clean	▼
	▼
	▼
	▼
	▼

	IAQ Assess	ment		
Miramar Element	ary School Evaluation Dat	te July 26, 2016	Time of Day 11:	00 AM
Outdoor Conditions Temperat	ure 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
Fish Temperature Rar 119 71.5 72 -		Range CO % - 60% 629		ccupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling2' X 4' Lay inWallsPlaster / TileFloorCeramic Tile	No No	No No No		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	Yes	HVAC Return Grills Clean Inside of Return Duct Clean	Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	Yes		
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	N/A N/A N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location Filters Installed Properly Yes Condensate Pan Clean No	FISH 120 Filters Clean Cooling Coil Clean	Yes	Mechanical Room Clean Inside of HVAC Unit Clean	Yes No
Pollutant Sources Near Air	Outside of Room None	▼ ▼	Fresh Air Intake Free of Obstruction	Yes
Observations				

▼
▼
▼
▼
▼
▼
▼
▼

confective Actions to be completed by 11 O	
Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Clean HVAC coil and inside of unit	▼
Coil may be to corroded to clean	▼
	▼
	▼
	▼
	▼

	IAQ Assess	nent		
Miramar Elemen	tary School Evaluation Dat	e July 26, 2016	Time of Day 11:	00 AM
Outdoor Conditions Tempera	ture 86.7 Relative	Humidity 89.7	Ambient CO2 4	64
		Range CO ² % - 60% 663		ccupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling Plaster	No	No		
Walls Plaster / Tile	No	No		
Floor Ceramic Tile	No	No		
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean	N/a	HVAC Return Grills Clean	N/a
Flooring Clean Yes	Inside of Supply Duct Clean	N/A	Inside of Return Duct Clean	N/A
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	N/a		
Trash Removed Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	N/A	Air Fresheners	No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	in Room	
Mechanical Equipment Location	FISH 120		Mechanical Room Clean	Yes
Filters Installed Properly Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	No
Condensate Pan Clean No	Cooling Coil Clean	No		
Fresh Air Intake Location	Outside of Room	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	None	▼	of Obstruction	
Observations				
Restroom - Spotty growth on pla	ster walls and Ceiling -			

Clean dust from wall surfaces	
Clean dust and debris from ceilings	▼
	▼
	▼
	▼
	▼
	▼
	▼

· · · · · · · · · · · · · · · · · · ·	
Check exhaust fan operation and interlocks	▼
Paint walls and ceiling with Anti-Microbial Paint	▼
	▼
	▼
	▼
	▼
	▼
	▼