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

#### **TELEPHONE (754) 321-4200**

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September 6,	2016 Signature on File	For Custodial Supervisor Use Only
TO:	Delicia Decembert, Principal Hollywood Central Elementary	Custodial Issues Addressed Custodial Issues Not Addressed
FROM:	Robert Krickovich, Coordinator, LEA Environmental Health & Safety Department	
SUBJECT:	Indoor Air Quality (IAQ) Assessment	

On September 1, 2016, I conducted an assessment at **Hollywood Central 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 Assess	nent	
Hollywood Cent	ral Elementary Evaluation Dat	e September 1, 2016	Time of Day 10:30 AM
Outdoor Conditions Temp	erature 88.1 Relative	Humidity 93.1	Ambient CO2 484
FishTemperature14976.8		Range         CO <sup>2</sup> % - 60%         744	Range# OccupantsMAX 700 >4Ambient4
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling2' X 2' Lay inWallsTack BoardFloor12" x 12" Vinyl	No No	No No	
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes Room Surfaces Yes Clean	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	Yes Yes	HVAC Return Grills Clean No Inside of Return Duct Clean Yes
Trash RemovedYesSigns of PestsNoRoom ClutteredNo	Exhaust Fans Working Drain Traps Wet Food if Stored in Room is in Sealed Containers	Yes Yes N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners No in Room
	on FISH 148 Yes Filters Clean Yes Cooling Coil Clean	Yes Ir Yes	Mechanical Room Clean Yes
Fresh Air Intake Location Pollutant Sources Near Air Intake	Outside of Room None	<ul><li>▼</li></ul>	Fresh Air Intake Free Yes Yes
Observations Dirty / dusty HVAC Return gri	II - no other issues identified.		

Clean HVAC Return Grill with Wexcide	▼
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	IAQ	Assessment			
Hollywood Cer	ntral Elementary Eval	uation Date Septem	ber 1, 2016 <b>Time</b>	e of Day 10:3	0 AM
Outdoor Conditions Tem	perature 88.1	Relative Humidity	93.1 Aml	bient CO2 48	4
FishTemperature20575.0	RangeRelative Hum72 - 7877.2	hidity Range 30% - 60%	533 M	Range # Occ AX 700 >	20
Noticeable Odor No	Visible water da staining?	-		Amount of aterial affected	
Ceiling 2' X 2' Lay in Walls Plaster	No			Entire East wall	
Floor Carpet	Yes	N	o	100 Square Feet	
Ceiling Clean Yes Walls Clean Yes	HVAC Su Grills Cle Inside of	Supply Ves	G	VAC Return irills Clean iside of Return	No
Flooring Clean Yes Room Surfaces No Clean	Duct Clea Ceiling at Grills Cle	t Supply	D	uct Clean	Yes
Trash Removed Yes Signs of Pests No	Exhaust Fans V	Working N/A		ved Chemicals / in Room	No
Room Cluttered No	Food if Stored in in Sealed Contain	Room is	Air Fre in Roo	sheners m	No
Mechanical Equipment Locat	ion FISH 213		Mechani	cal Room Clean	Yes
		s Clean Yes	Inside of H	VAC Unit Clean	No
Condensate Pan Clean	No Cooling Co	il Clean No			
Fresh Air Intake Location Pollutant Sources Near Air Intake	Roof top None			Air Intake Free struction	Yes
Observations					
Media center - roof leaks along east wall - 2 ceiling tiles removed due to roof leaks - water damaged carpet (two 2 square foot areas under missing ceiling tiles) - water damaged books (still not moved from under leaks) - Wall water stained from roof leaks - 100 Square foot of carpet water damaged under aquarium - dust on books and shelves - 17 stuffed animals.					
Open Sewer Pipe "T" in mec	hanical room 213 next to	water heater - PPO C	ap open sewer pipe.		
Corrective Actions to be Co	mpleted by Site Based Sta	aff Corre	ctive Actions to be C	ompleted by PP	D
Clean Dust from Bo		▼ Evaluat	e and repair HVAC s	stem as needed	
Pomovo stuffod an	imals from room	l♥I Donoi	ir HVAC to Poduco H	umidity Lovale	

Clean Dust from Books and Shelves	▼
Remove stuffed animals from room	▼
Remove aquarium from facility	▼
Remove books from location of water intrusion	▼
Clean Supply Grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Clean HVAC Return Grill with Wexcide	▼
	▼

	Evaluate and repair HVAC system as needed
-	Repair HVAC to Reduce Humidity Levels
	Clean entire HVAC system - unit and drops
•	Repair roof leaks
	Repair / Replace / Paint water stained wall
	Repair / replace water damaged carpet
•	
	Cap open sewer pipe in 213

	IAQ Assessi	ment		
Hollywood Central E	lementary Evaluation Dat	e September 1, 2016	<b>Time of Day</b> 10:	30 AM
Outdoor Conditions Temperat	ure 88.1 Relative	Humidity 93.1	Ambient CO2 4	84
Fish         Temperature         Ran           206         74.4         72 -		Range CO % - 60% 487		ccupants 2
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 2' Lay in	Yes	Yes	1 tile removed 3 stained	orange
Walls Plaster	No	No		
Floor Carpet	Yes	No	4 Sq Ft Under remove	d tile
Ceiling Clean Yes	HVAC Supply Grills Clean	Yes	HVAC Return Grills Clean	Yes
Flooring Clean Yes	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	No		
Trash Removed Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	Yes		
Room Cluttered No	Food if Stored in Room is in Sealed Containers	Yes	Air Fresheners in Room	No
Mechanical Equipment Location	FISH 213		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	Roof top	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	None	▼	of Obstruction	
Observations				
Media Work Room - One ceiling ti with orange microbial growth due leaks.				

Open Sewer Pipe "T" in mechanical room 213 next to water heater - PPO Cap open sewer pipe.

Corrective Actions to be Completed by Site Based Staff

Clean ceilings around HVAC supply grills	▼
Remove and replace stained ceiling tile	▼
If stains return, contact COMPASS for work order	▼
	▼
	▼
	▼
	▼
	▼

Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean entire HVAC system - unit and drops	▼
Replace water damaged light fixture	▼
Repair roof leaks	▼
Repair / replace water damaged carpet	▼
	▼
Cap open sewer pipe in 213	▼

IAQ Assessment	
Hollywood Central Elementary Evaluation Date Sep	tember 1, 2016 Time of Day 10:30 AM
Outdoor Conditions Temperature 88.1 Relative Humid	ity 93.1 Ambient CO2 484
FishTemperatureRangeRelative HumidityRange20773.172 - 7877.230% - 60%	CO2Range# Occupants507MAX 700 >1Ambient1
Noticeable Odor     No     Visible Water damage / staining?       Ceiling     2' X 4' Lay in     No	ble microbial Amount of growth? material affected
Walls  Plaster  No    Floor  Carpet  No	No
Ceiling CleanYesHVAC Supply Grills CleanNoWalls CleanYesInside of Supply Duct CleanYes	
Room SurfacesNoCeiling at Supply Grills CleanNo	]
Trash RemovedYesExhaust Fans WorkingN/ASigns of PestsNoDrain Traps WetN/ARoom ClutteredYesFood if Stored in Room is in Sealed ContainersN/A	Cleaners in Room No
Mechanical Equipment Location       FISH 213         Filters Installed Properly       Yes       Filters Clean       Yes         Condensate Pan Clean       No       Cooling Coil Clean       No	Mechanical Room Clean Yes Inside of HVAC Unit Clean No
Fresh Air Intake Location     Roof top       Pollutant Sources Near Air     None       Intake     None	▼     Fresh Air Intake Free of Obstruction     Yes
Observations Boxes stored in room - two bags of stuffed animals - Dust on surfaces properly. Open Sewer Pipe "T" in mechanical room 213 next to water heater - PP	- -

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Remove boxes use plastic tubs if necessary	▼
Remove stuffed animals from room	▼
Can be source of dust allergens	▼
Clean Supply Grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Clean HVAC Return Grill with Wexcide	▼
Encourage occupant to reduce clutter	▼

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Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean entire HVAC system - unit and drops	▼
	▼
Cap open sewer pipe in 213	▼
	▼
	▼
	▼

	IAQ Assess	nent		
Hollywood Central	Elementary Evaluation Dat	e September 1, 2016	Time of Day 10:30	0 AM
Outdoor Conditions Temper	ature 88.1 Relative	Humidity 93.1	Ambient CO2 484	4
		Range         CO <sup>2</sup> % - 60%         1073		24
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Walls   Plaster     Floor   12" x 12" Vinyl	No           No			
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean Inside of Supply	Yes	HVAC Return Grills Clean Inside of Return	No
Flooring Clean No Room Surfaces No Clean	Duct Clean Ceiling at Supply Grills Clean	Yes	Duct Clean	Yes
Trash Removed Yes Signs of Pests No	Exhaust Fans Working Drain Traps Wet	Yes	Unapproved Chemicals / Cleaners in Room	No
Room Cluttered Yes	Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location	FISH 406		Mechanical Room Clean	Yes
Filters Installed Properly Yes Condensate Pan Clean Yes		Yes	Inside of HVAC Unit Clean	Yes
Fresh Air Intake Location Pollutant Sources Near Air Intake	Outside of Room	<ul><li>▼</li></ul>	Fresh Air Intake Free of Obstruction	Yes
Observations				
Science Room - All sink traps d properly - Dirty / dusty HVAC Re			- Room to cluttered to clea	an

Concentre Addenis to be completed by one Bused e	lan
Run water in sinks and floor drains monthly	▼
Ensure doors and windows remain closed	▼
Encourage occupant to reduce clutter	▼
Thoroughly clean horizontal surfaces	▼
Clean debris from floor	▼
Clean HVAC Return Grill with Wexcide	▼
	▼

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els	Repair HVAC to Reduce Humidity Levels
	Repair HVAC return grill

	IA	Q Assessment			
Hollywood Cer	ntral Elementary E	valuation Date Septe	mber 1, 2016	Time of Day 10:	30 AM
Outdoor Conditions Tem	perature 88.1	Relative Humidity	y 93.1	Ambient CO2 4	84
FishTemperature51274.4	Range         Relative H           72 - 78         63.0		<b>CO</b> <sup>2</sup> 680	Range # Oc MAX 700 > Ambient	cupants 2
Noticeable Odor No	Visible water stainin	uamage/	e microbial owth?	Amount of material affected	
Ceiling2' X 2' Lay inWallsTack BoardFloor12" x 12" Vinyl	No No No	] [ ] [ ] [	No C		
Ceiling CleanYesWalls CleanYesFlooring CleanYesRoom SurfacesYesCleanYes	Grills Inside Duct C	of Supply Clean Yes		HVAC Return Grills Clean Inside of Return Duct Clean	Yes
Trash RemovedYesSigns of PestsNoRoom ClutteredYes	Exhaust Far Drair Food if Storec in Sealed Con	Traps Wet Yes	Cle	approved Chemicals / eaners in Room Air Fresheners n Room	No No
Mechanical Equipment Locat Filters Installed Properly Condensate Pan Clean	Yes Fi	Iters Clean Yes Coil Clean Yes		chanical Room Clean le of HVAC Unit Clean	Yes Yes
Fresh Air Intake Location Pollutant Sources Near Air Intake	Outside of Room			Fresh Air Intake Free of Obstruction	Yes
Observations					
Return grill falling from ceili	ng - Humidity Slightly E	levated			

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Repair HVAC to Reduce Humidity Levels	▼
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Repair HVAC return grill	▼
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