

**THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA**

**ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT**

**TELEPHONE (754) 321-4200**

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December 6, 2016

Signature on File

TO: Robert Schneider, Principal  
**Davie 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
<hr/>	
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On December 5, 2016, I conducted an assessment at **Davie 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  
Mark Murray, Supervisor II Custodial  
Sam Bays, Director, Maintenance Operations  
Kurt Wirz, Area Manager Trades









# IAQ Assessment

Davie Elementary

Evaluation Date December 5, 2016

Time of Day 10:00 AM

Outdoor Conditions Temperature 79.4

Relative Humidity 83.8

Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">120</span>	<span style="border: 1px solid black; padding: 2px;">72.9</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">51.2</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">1429</span>	<b>MAX 700 &gt; Ambient</b>	<span style="border: 1px solid black; padding: 2px;">21</span>
Noticeable Odor		<span style="border: 1px solid black; padding: 2px;">No</span>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<span style="border: 1px solid black; padding: 2px;">2' X 4' Lay in</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">1 Sq Ft</span>
Walls	<span style="border: 1px solid black; padding: 2px;">Tack Board</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>
Ceiling Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	HVAC Supply Grills Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>	HVAC Return Grills Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>
Walls Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Supply Duct Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Return Duct Clean		<span style="border: 1px solid black; padding: 2px;">No</span>
Flooring Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Ceiling at Supply Grills Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>			
Room Surfaces Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>						
Trash Removed	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Exhaust Fans Working		<span style="border: 1px solid black; padding: 2px;">N/A</span>	Unapproved Chemicals / Cleaners in Room		<span style="border: 1px solid black; padding: 2px;">No</span>
Signs of Pests	<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Air Fresheners in Room		<span style="border: 1px solid black; padding: 2px;">No</span>
Room Cluttered	<span style="border: 1px solid black; padding: 2px;">No</span>	Food if Stored in Room is in Sealed Containers		<span style="border: 1px solid black; padding: 2px;">N/A</span>			
Mechanical Equipment Location	<span style="border: 1px solid black; padding: 2px;">FISH 104</span>					Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Filters Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of HVAC Unit Clean		<span style="border: 1px solid black; padding: 2px;">No</span>
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Cooling Coil Clean		<span style="border: 1px solid black; padding: 2px;">No</span>			
Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Roof top</span> ▼					Fresh Air Intake Free of Obstruction	<span style="border: 1px solid black; padding: 2px;">Yes</span>
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">None</span> ▼						

**Observations**

**3 stained ceiling tiles back left corner by Emergency Exit - Ceiling tiles with holes and others not installed properly (allows dust and debris from above ceiling into occupied spaces) - Inside of return Duct dirty (heavy dust).**

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

Remove and replace stained ceiling tile	▼
If stains return, contact COMPASS for work order	▼
Replace damaged ceiling tile throughout school	▼
Ensure all ceiling tiles installed properly	▼
Throughout facility	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Clean entire HVAC system - unit and drops	▼
Evaluate and repair cause of stained ceiling tile	▼
Repair HVAC to reduce CO2	▼
	▼
	▼
	▼
	▼

# IAQ Assessment

Davie Elementary

Evaluation Date December 5, 2016

Time of Day 10:00 AM

Outdoor Conditions    Temperature 79.4    Relative Humidity 83.8    Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
122	72.4	72 - 78	51.9	30% - 60%	1366	MAX 700 > Ambient	26
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="checkbox"/> Yes		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input style="width: 100%;" type="text" value="6 Sq Inches"/>	
Ceiling	<input style="width: 100%;" type="text" value="2' X 4' Lay in"/>		<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>	
Walls	<input style="width: 100%;" type="text" value="Tack Board"/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>	
Floor	<input 12"="" style="width: 100%;" type="text" value="12" vinyl"="" x=""/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>	
Ceiling Clean	<input type="checkbox"/> Yes	HVAC Supply Grills Clean	<input type="checkbox"/> Yes	HVAC Return Grills Clean	<input type="checkbox"/> Yes		
Walls Clean	<input type="checkbox"/> Yes	Inside of Supply Duct Clean	<input type="checkbox"/> Yes	Inside of Return Duct Clean	<input type="checkbox"/> No		
Flooring Clean	<input type="checkbox"/> Yes	Ceiling at Supply Grills Clean	<input type="checkbox"/> Yes				
Room Surfaces Clean	<input type="checkbox"/> Yes						
Trash Removed	<input type="checkbox"/> Yes	Exhaust Fans Working	<input type="checkbox"/> N/A	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/> No		
Signs of Pests	<input type="checkbox"/> No	Drain Traps Wet	<input type="checkbox"/> Yes	Air Fresheners in Room	<input type="checkbox"/> No		
Room Cluttered	<input type="checkbox"/> No	Food if Stored in Room is in Sealed Containers	<input type="checkbox"/> N/A				
Mechanical Equipment Location	<input style="width: 100%;" type="text" value="FISH 149"/>				Mechanical Room Clean	<input type="checkbox"/> Yes	
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> Yes	Inside of HVAC Unit Clean	<input type="checkbox"/> No		
Condensate Pan Clean	<input type="checkbox"/> No	Cooling Coil Clean	<input type="checkbox"/> No				
Fresh Air Intake Location	<input style="width: 100%;" type="text" value="Roof top"/>				Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes	
Pollutant Sources Near Air Intake	<input style="width: 100%;" type="text" value="None"/>						

**Observations**

Bad odor in room from half empty aquarium with stagnant water, water full of slime - 1 stained ceiling tile back right corner of room (by emergency exit) - Inside of return Duct dirty (heavy dust) - CO2 Slightly elevated.

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

Remove aquarium from room	▼
Remove and replace stained ceiling tile	▼
If stains return, contact COMPASS for work order	▼
	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Clean entire HVAC system - unit and drops	▼
Evaluate and repair cause of stained ceiling tile	▼
Remove and replace stained ceiling tiles	▼
Repair HVAC to reduce CO2	▼
	▼
	▼
	▼
	▼





# IAQ Assessment

Davie Elementary

Evaluation Date December 5, 2016

Time of Day 10:00 AM

Outdoor Conditions    Temperature 79.4    Relative Humidity 83.8    Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">127</span>	<span style="border: 1px solid black; padding: 2px;">72.2</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">51.2</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">1358</span>	<b>MAX 700 &gt; Ambient</b>	<span style="border: 1px solid black; padding: 2px;">22</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">4 Square Feet</span>	
Ceiling	<span style="border: 1px solid black; padding: 2px;">2' X 4' Lay in</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>	
Walls	<span style="border: 1px solid black; padding: 2px;">Tack Board</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>	
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>	
Ceiling Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	HVAC Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Return Grills Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>		
Walls Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Supply Duct Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Return Duct Clean	<span style="border: 1px solid black; padding: 2px;">No</span>		
Flooring Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Ceiling at Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>				
Room Surfaces Clean	<span style="border: 1px solid black; padding: 2px;">No</span>						
Trash Removed	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Exhaust Fans Working	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Unapproved Chemicals / Cleaners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>		
Signs of Pests	<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Air Fresheners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>		
Room Cluttered	<span style="border: 1px solid black; padding: 2px;">No</span>	Food if Stored in Room is in Sealed Containers	<span style="border: 1px solid black; padding: 2px;">N/A</span>				
Mechanical Equipment Location	<span style="border: 1px solid black; padding: 2px;">FISH 149</span>			Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>		
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Filters Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of HVAC Unit Clean	<span style="border: 1px solid black; padding: 2px;">No</span>		
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">No</span>				
Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Roof top</span> ▼			Fresh Air Intake Free of Obstruction	<span style="border: 1px solid black; padding: 2px;">Yes</span>		
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">None</span> ▼						

**Observations**

**7 stained ceiling tiles (5 over teachers desk 2 @ Speaker in center of room) - Dust and debris on flooring - Dust on surfaces - HVAC Supply grills dirty - Ceilings at HVAC supply grills dirty - Inside of return Duct dirty (heavy dust) - CO2 Slightly elevated.**

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

Remove and replace stained ceiling tile	▼
If stains return, contact COMPASS for work order	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean ALL surfaces	▼
Clean Supply Grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Clean entire HVAC system - unit and drops	▼
Evaluate and repair cause of stained ceiling tile	▼
Remove and replace stained ceiling tiles	▼
Replace ceiling tiles @ HVAC Supply grills (cuts)	▼
Repair HVAC to reduce CO2	▼
	▼
	▼









