

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

TELEPHONE (754) 321-4200

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September 22, 2016

Signature on File

TO: Steven Williams, Principal
Driftwood Middle

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 September 21, 2016, I conducted an assessment at **Driftwood Middle 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 Assessment

Driftwood Middle

Evaluation Date September 21, 2016

Time of Day 10:30 AM

Outdoor Conditions Temperature 87.4 Relative Humidity 80.4 Ambient CO2 422

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
303	67.7	72 - 78	63.2	30% - 60%	579	MAX 700 > Ambient	2
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Plaster		No		No		
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean	Yes	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean		Yes
Walls Clean	Yes	Inside of Supply Duct Clean		Yes	Inside of Return Duct Clean		No
Flooring Clean	Yes	Ceiling at Supply Grills Clean		Yes			
Room Surfaces Clean	Yes						
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	FISH 312					Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
Condensate Pan Clean	Yes	Cooling Coil Clean		Yes			
Fresh Air Intake Location	Roof top ▼					Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼						

Observations

Science Classroom - 5 sinks - 2 floor drains -- Floor drain traps at eyewash full of flooring debris from stripping floors (could cause traps to remain dry and cause odors) - Wood cabinets shelving throughout room (odor from old wood present inside cabinets) - Cardboard and old papers stored in rooms and cabinets hold moisture and odors - temperature to cold - Humidity slightly elevated.

Corrective Actions to be Completed by Site Based Staff

Run water in sinks and floor drains monthly	▼
Clean debris from floor drains	▼
Encourage occupant to reduce clutter	▼
Remove cardboard boxes use plastic bins instead	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean HVAC return grills and drops	▼
Set Temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Driftwood Middle

Evaluation Date September 21, 2016

Time of Day 10:30 AM

Outdoor Conditions Temperature 87.4 Relative Humidity 80.4 Ambient CO2 422

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
304	66.1	72 - 78	66.9	30% - 60%	523	MAX 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Plaster		12" x 12" Vinyl			
No		No		No			

Ceiling Clean	Yes	HVAC Supply Grills Clean	Yes	HVAC Return Grills Clean	Yes
Walls Clean	Yes	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	No
Flooring Clean	Yes	Ceiling at Supply Grills Clean	Yes		
Room Surfaces Clean	Yes				

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	FISH 312			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	Yes
Condensate Pan Clean	Yes	Cooling Coil Clean	Yes		

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼		

Observations

Science Classroom - 10 sinks - 2 floor drains -- Floor drain traps at eyewash full of flooring debris from stripping floors (could cause traps to remain dry and cause odors) - Wood cabinets shelving throughout room (odor from old wood present inside cabinets) - Cardboard and old papers stored in rooms and cabinets hold moisture and odors - temperature to cold - Humidity slightly elevated.

Corrective Actions to be Completed by Site Based Staff

Run water in sinks and floor drains monthly	▼
Clean debris from floor drains	▼
Encourage occupant to reduce clutter	▼
Remove cardboard boxes use plastic bins instead	▼
	▼
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Corrective Actions to be Completed by PPO

Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean HVAC return grills and drops	▼
Set Temperature to 72 - 78 degrees	▼
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IAQ Assessment

Driftwood Middle

Evaluation Date September 21, 2016

Time of Day 10:30 AM

Outdoor Conditions Temperature 87.4 Relative Humidity 80.4 Ambient CO2 422

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
313	69.5	72 - 78	71.4	30% - 60%	738	MAX 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Plaster		12" x 12" Vinyl			
No		No		No			
No		No		No			
No		No		No			

Ceiling Clean	<input checked="" type="checkbox"/>	HVAC Supply Grills Clean	<input checked="" type="checkbox"/>	HVAC Return Grills Clean	<input checked="" type="checkbox"/>
Walls Clean	<input checked="" type="checkbox"/>	Inside of Supply Duct Clean	<input checked="" type="checkbox"/>	Inside of Return Duct Clean	<input type="checkbox"/>
Flooring Clean	<input checked="" type="checkbox"/>	Ceiling at Supply Grills Clean	<input checked="" type="checkbox"/>		
Room Surfaces Clean	<input checked="" type="checkbox"/>				

Trash Removed	<input checked="" type="checkbox"/>	Exhaust Fans Working	<input checked="" type="checkbox"/>	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/>
Signs of Pests	<input type="checkbox"/>	Drain Traps Wet	<input checked="" type="checkbox"/>	Air Fresheners in Room	<input type="checkbox"/>
Room Cluttered	<input type="checkbox"/>	Food if Stored in Room is in Sealed Containers	<input type="checkbox"/>		

Mechanical Equipment Location	FISH 312	Mechanical Room Clean	<input checked="" type="checkbox"/>
Filters Installed Properly	<input checked="" type="checkbox"/>	Filters Clean	<input checked="" type="checkbox"/>
Condensate Pan Clean	<input checked="" type="checkbox"/>	Cooling Coil Clean	<input checked="" type="checkbox"/>
		Inside of HVAC Unit Clean	<input checked="" type="checkbox"/>

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	<input checked="" type="checkbox"/>
Pollutant Sources Near Air Intake	None		

Observations

Science Classroom - 10 sinks - 2 floor drains -- Floor drain traps at eyewash full of flooring debris from stripping floors (could cause traps to remain dry and cause odors) - Wood cabinets shelving throughout room (odor from old wood present inside cabinets) - Cardboard and old papers stored in rooms and cabinets hold moisture and odors - temperature to cold - Humidity slightly elevated.

- Corrective Actions to be Completed by Site Based Staff**
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- Corrective Actions to be Completed by PPO**
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IAQ Assessment

Driftwood Middle

Evaluation Date September 21, 2016

Time of Day 10:30 AM

Outdoor Conditions Temperature 87.4 Relative Humidity 80.4 Ambient CO2 422

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
314	68.0	72 - 78	67.1	30% - 60%	957	MAX 700 > Ambient	22
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Ceiling		Ceiling		Ceiling	
No		No		No			
Walls		Walls		Walls		Walls	
Plaster		No		No			
Floor		Floor		Floor		Floor	
12" x 12" Vinyl		No		No			
Ceiling Clean		HVAC Supply Grills Clean		HVAC Return Grills Clean			
Yes		Yes		Yes			
Walls Clean		Inside of Supply Duct Clean		Inside of Return Duct Clean			
Yes		Yes		No			
Room Surfaces Clean		Ceiling at Supply Grills Clean					
Yes		Yes					
Trash Removed		Exhaust Fans Working		Unapproved Chemicals / Cleaners in Room			
Yes		Yes		No			
Signs of Pests		Drain Traps Wet		Air Fresheners in Room			
No		Yes		No			
Room Cluttered		Food if Stored in Room is in Sealed Containers					
No		N/A					
Mechanical Equipment Location		Filters Clean		Mechanical Room Clean			
FISH 312		Yes		Yes			
Filters Installed Properly		Cooling Coil Clean		Inside of HVAC Unit Clean			
Yes		Yes		Yes			
Condensate Pan Clean							
Yes							
Fresh Air Intake Location				Fresh Air Intake Free of Obstruction			
Roof top				Yes			
Pollutant Sources Near Air Intake							
None							

Observations

Science Classroom - 10 sinks - 2 floor drains -- Floor drain traps at eyewash full of flooring debris from stripping floors (could cause traps to remain dry and cause odors) - Wood cabinets shelving throughout room (odor from old wood present inside cabinets) - Cardboard and old papers stored in rooms and cabinets hold moisture and odors - temperature to cold - Humidity slightly elevated.

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Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
315	69.1	72 - 78	66.7	30% - 60%	1103	MAX 700 > Ambient	29
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Plaster		No		No		
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean	Yes	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean		Yes
Walls Clean	Yes	Inside of Supply Duct Clean		Yes	Inside of Return Duct Clean		No
Flooring Clean	Yes	Ceiling at Supply Grills Clean		Yes			
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Filters Installed Properly	Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
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Fresh Air Intake Location	Roof top ▼					Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼						

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