

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

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February 23, 2017

Signature on File

TO: Steven Williams, Principal
Driftwood Middle

FROM: Alison Witoshynsky, Project Manager
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 February 22, 2017, 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.

AW: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

Driftwood Middle

Evaluation Date February 22, 2017

Time of Day 1:45

Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
303/A	68.6	72 - 78	86.2	30% - 60%	588	MAX 700 > Ambient	0
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	No
Walls Clean	Yes	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	Yes
Flooring Clean	No	Ceiling at Supply Grills Clean	Yes		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 312			Mechanical Room Clean	No
Filters Installed Properly	Yes	Filters Clean	No	Inside of HVAC Unit Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	No		

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Not readily accessible ▼		

Observations

HVAC filters changed Nov. 2016.

Room contains multiple cardboard boxes, equipment, supplies. Back of door has black spots.

FISH 303A (adjacent closet for server) had historical water damage on floor and wall. The supply grill is missing.

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean dust from horizontal/elevated surfaces	▼
Remove storage from room/intended use only.	▼
Wipe door stain w/Wexcide and monitor	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
Vacuum and clean return vents	▼
Replace missing supply grill	▼
	▼
	▼

IAQ Assessment

Driftwood Middle

Evaluation Date February 22, 2017

Time of Day 1:45

Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
307	68.5	72 - 78	64.9	30% - 60%	837	MAX 700 > Ambient	0
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	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	Yes		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 312	Mechanical Room Clean	No
Filters Installed Properly	Yes	Filters Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	No
		Inside of HVAC Unit Clean	No

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Not readily accessible ▼		

Observations

HVAC filters changed Nov. 2016.

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean dust from horizontal/elevated surfaces	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
Vacuum and clean supply and return vents	▼
	▼
	▼
	▼

IAQ Assessment

Driftwood Middle

Evaluation Date February 22, 2017

Time of Day 1:45

Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
308	68.4	72 - 78	67.9	30% - 60%	1115	MAX 700 > Ambient	0
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No			
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	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	Yes		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 312	Mechanical Room Clean	No
Filters Installed Properly	Yes	Filters Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	No
		Inside of HVAC Unit Clean	No

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Not readily accessible ▼		

Observations

HVAC filters changed Nov. 2016.

Rear of room has stored or old items including cardboard boxes, books, and papers/posters. File cabinet is rusty.

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean dust from horizontal/elevated surfaces	▼
Encourage occupant to reduce clutter	▼
Store items in plastic containers with lids	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
Vacuum and clean supply and return vents	▼
Replace missing supply/return vents	▼
	▼
	▼
	▼

IAQ Assessment

Driftwood Middle

Evaluation Date February 22, 2017

Time of Day 1:45

Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
309	68.9	72 - 78	67.1	30% - 60%	1095	MAX 700 > Ambient	21
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	No	HVAC Return Grills Clean	Yes
Walls Clean	Yes	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	Yes
Flooring Clean	No	Ceiling at Supply Grills Clean	Yes		
Room Surfaces Clean	Yes				

Trash Removed	Yes	Exhaust Fans Working	N/A	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	No
Filters Installed Properly	Yes	Filters Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	No
		Inside of HVAC Unit Clean	No

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Not readily accessible		

Observations

HVAC filters changed Nov. 2016.

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean Supply Grills with Wexcide	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Driftwood Middle

Evaluation Date February 22, 2017

Time of Day 1:45

Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
310, A/B	71.3	72 - 78	77.7	30% - 60%	664	MAX 700 > Ambient	0
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		4 ceiling panels, 2(310A)
Walls	Plaster		No		No		
Floor	12" x 12" Vinyl		No		No		

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

Trash Removed	No	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 312		Mechanical Room Clean	No	
Filters Installed Properly	Yes	Filters Clean	No	Inside of HVAC Unit Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	No		

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Not readily accessible ▼		

Observations

HVAC filters changed Nov. 2016.

Equipment stored on shelves and in cabinets, metal cabinets and refrigerator rusty. Paint is peeling next to the stove vent.

Lights not working in the storage rooms (310A/B)

310A - Inorganic Storage, 2 stained ceiling panels, exhaust fan grill dusty. Floors dirty. Salt box crystalized.

310B - Organic Storage, Dusty grills (lower wall and ceiling), ceiling panels missing and stained. Floors dirty

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean dust from horizontal/elevated surfaces	▼
Floor needs sweep/vacuum in tight spots	▼
Clean exhaust fan and return grills	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
Repair Cause of Stained Ceiling Tiles (310&A)	▼
Install new ceiling tile(s) upon repair, cuts needed	▼
Replace missing ceiling tile (310B)	▼
Evaluate for normal function of exhaust fan	▼

IAQ Assessment

Driftwood Middle

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Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
313	70.7	72 - 78	74.4	30% - 60%	804	MAX 700 > Ambient	20
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	No
Walls Clean	Yes	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	Yes
Flooring Clean	No	Ceiling at Supply Grills Clean	Yes		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 312	Mechanical Room Clean	No
Filters Installed Properly	Yes	Filters Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	No
		Inside of HVAC Unit Clean	No

Fresh Air Intake Location	Roof top ▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Not readily accessible ▼		

Observations

HVAC filters changed Nov. 2016.

Rear of room has stored or old items including cardboard boxes, books, and papers/posters. File cabinet is rusty.

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean dust from horizontal/elevated surfaces	▼
Store items in plastic containers with lids	▼
Encourage occupant to reduce clutter	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
Vacuum and clean supply and return vents	▼
Replace missing return vents	▼
	▼
	▼

IAQ Assessment

Driftwood Middle

Evaluation Date February 22, 2017

Time of Day 1:45

Outdoor Conditions Temperature 67.4

Relative Humidity 97.8

Ambient CO2 572

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
314	69.8	72 - 78	70.0	30% - 60%	710	MAX 700 > Ambient	1
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		corrosion on grid
Walls	Plaster		No		No		
Floor	12" x 12" Vinyl		No		No		
Ceiling Clean		Yes	HVAC Supply Grills Clean		No	HVAC Return Grills Clean	
Walls Clean		Yes	Inside of Supply Duct Clean		Yes	Inside of Return Duct Clean	
Flooring Clean		No	Ceiling at Supply Grills Clean		No		
Room Surfaces Clean		No					
Trash Removed		Yes	Exhaust Fans Working		N/A	Unapproved Chemicals / Cleaners in Room	
Signs of Pests		No	Drain Traps Wet		Yes	Air Fresheners in Room	
Room Cluttered		Yes	Food if Stored in Room is in Sealed Containers		N/A		
Mechanical Equipment Location			FISH 312			Mechanical Room Clean	
Filters Installed Properly		Yes	Filters Clean		No	Inside of HVAC Unit Clean	
Condensate Pan Clean		Yes	Cooling Coil Clean		No		
Fresh Air Intake Location			Roof top ▼			Fresh Air Intake Free of Obstruction	
Pollutant Sources Near Air Intake			Not readily accessible ▼			N/A	

Observations

HVAC filters changed Nov. 2016.

Rear of room has stored or old items including cardboard boxes, books, and papers/posters. Mold on back of door.

Corrective Actions to be Completed by Site Based Staff

Replace filters	▼
Visually check filters each month	▼
Sweep floor in the mechanical room	▼
Thoroughly Clean Flooring	▼
Clean dust from horizontal/elevated surfaces	▼
Wipe door stain w/Wexcide and monitor	▼
Clean dust from ceiling tiles or replace	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Set Temperature to 72 - 78 degrees	▼
Vacuum the interior walls of HVAC	▼
Clean the HVAC coil	▼
Vacuum and clean supply and return vents	▼
	▼
	▼
	▼