

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

**ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT**

**TELEPHONE (754) 321-4200**

**FACSIMILE: (754) 321-4285**

October 25, 2017

Signature on File

TO: Valerie Harris, Principal  
**Olsen 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
<hr/>	
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On October 24, 2017, I conducted an assessment at **Olsen 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: Sam Bays, Director, Maintenance Operations
- Shelley Meloni, Director, Pre-Construction
- Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
- Greg Neiman, Area Supervisor, Zone 1
- Kurt Wirz, Area Manager Trades
- Gerald Devio, Supervisor II Custodial
- Benjamin Osborne, Supervisor II Custodial
- Mark Murray, Supervisor II Custodial
- Broward Teachers Union
- Federation of Public Employees

# IAQ Assessment

Olsen Middle

Evaluation Date October 24, 2017

Time of Day 100

Outdoor Conditions Temperature 77.3

Relative Humidity 99.9

Ambient CO2 484

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants	
<span style="border: 1px solid black; padding: 2px;">202/202E</span>	<span style="border: 1px solid black; padding: 2px;">65.4</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">80.3</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">689</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">0</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/Plaster</span>		<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;"></span>	
Walls	<span style="border: 1px solid black; padding: 2px;">Plaster/Ceramic</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">Yes</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;">No</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;">No</span>
Walls Clean		<span style="border: 1px solid black; padding: 2px;">No</span>	Inside of Supply Duct Clean		<span style="border: 1px solid black; padding: 2px;">N/A</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;">No</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;">Yes</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 203</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;">No</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;">Yes</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;">N/A</span>
Pollutant Sources Near Air Intake			<span style="border: 1px solid black; padding: 2px;">Not readily accessible</span> ▼					

**Observations**

**Kitchen.** Plaster ceilings in Kitchen (FISH 202) have multiple ~ 1' x 1' locations with black spots. Three smaller locations at the corner of the plaster wall and ceiling tile grid on the other side of the kitchen near the exit door. No leak or water staining observed to indicate a roof leak or piping drips. Very cold and high humidity. Supply grills have condensation dripping. Need to confirm HVAC controls are set properly to modulate correct interior temps.

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

Wipe wall/ceiling with wexcide and	▼
evaluate/monitor	▼
Remove and replace A/C Filters	▼
Tape and date HVAC filters	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

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

# IAQ Assessment

Olsen Middle

Evaluation Date October 24, 2017

Time of Day 100

Outdoor Conditions Temperature 77.3

Relative Humidity 99.9

Ambient CO2 484

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">718</span>	<span style="border: 1px solid black; padding: 2px;">63.8</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">63.9</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">1070</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">0</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;">Yes</span>		<span style="border: 1px solid black; padding: 2px;"></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;">Yes</span>		<span style="border: 1px solid black; padding: 2px;"></span>	
Walls	<span style="border: 1px solid black; padding: 2px;">Plaster</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</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;">No</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;">No</span>		
Walls Clean	<span style="border: 1px solid black; padding: 2px;">No</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;">Yes</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;">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;">Yes</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 727B</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;">Yes</span>		
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>				
Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Exterior corridor</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;">No</span> ▼						

**Observations**

**Classroom.** Lots of cardboard boxes on/in upper cabinets. Horizontal/elevated surfaces have dust/debris. Black stand alone electronics console has white growth all around. Walls are dirty where not repainted. Very cold in room & HVAC controls at individual unit does not appear to be working properly for correct interior temperature. Plastic speaker cover and surrounding plastic/fiberglass ceiling tile has spotty growth. CO2 is borderline, nearing the high end of the desired range, especially with no occupants.

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

Clean dust from wall surfaces	▼
Thoroughly clean elevated & horizontal surfaces	▼
Wipe electronics console with wexcide	▼
Wipe wall/ceiling with wexcide and	▼
evaluate/monitor	▼
Encourage occupant to reduce clutter	▼
Remove cardboard boxes	▼
Store items in plastic containers with lids	▼

**Corrective Actions to be Completed by PPO**

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