

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

**ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT**

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December 22, 2017

Signature on File

TO: Frank Zagari, Principal  
**Indian Ridge 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 December 21, 2017, I conducted an assessment at **Indian Ridge 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

# Multiple Room IAQ Assessment

Indian Ridge Middle School

Evaluation Date December 21, 2017

Time of Day 1:20

Outdoor Conditions    Temperature 85.1

Relative Humidity 57.1

Ambient CO2 571

## Fish # of rooms assessed

FISH 501, 502, 503, 504, 505, 510, 511, 512, 513

Temperature Range in the Rooms Assessed was Between	<span style="border: 1px solid black; padding: 2px;">73.1</span>	And	<span style="border: 1px solid black; padding: 2px;">76.3</span>	Acceptable Range	72 - 78
Relative Humidity Range in the Rooms Assessed was Between	<span style="border: 1px solid black; padding: 2px;">39.1</span>	And	<span style="border: 1px solid black; padding: 2px;">62.4</span>	Acceptable Range	30% - 60%
Co <sup>2</sup> Range in the Rooms Assessed was between	<span style="border: 1px solid black; padding: 2px;">592</span>	And	<span style="border: 1px solid black; padding: 2px;">2594</span>	Acceptable Range	MAX 700 > Ambient

Noticeable Odor	Visible water damage / staining?	Visible microbial growth?	Amount of material affected
<span style="border: 1px solid black; padding: 2px;">No</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>	FISH 502 (4 CT)
Walls <span style="border: 1px solid black; padding: 2px;">Drywall</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</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>	

FISH 503/511: Small areas of peeling paint on upper portion of window frame area. Drywall needs repair.

FISH 502: Three cut tiles and one full tile stained near window @ SW. Existing WO H010237 for roof leak. Make sure repaired. Replace ceiling tiles upon initial observation of stains.

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;">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;">Yes</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;">N/A</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>		

All rooms have light layer of dust on elevated and horizontal surfaces including projector/DVD/computer carts. Interiors of all laptop computer carts are dusty. Dust is present on ceiling tiles around ceiling supply grills; clean or replace. Cardboard boxes and excess papers present in some classrooms. Floors have large concentration of sand under desks and excess dust/debris in corners near cabinets. Hallway floors also sandy and have debris.

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## HVAC System

Mechanical Equipment Location BARD in each Room

Mechanical Room Clean N/A

Filters Installed Properly Yes

Filters Clean No

Inside of HVAC Unit Clean Yes

Condensate Pan Clean Yes

Cooling Coil Clean No

N/A in this section = Not Accessible

Fresh Air Intake Location   ▼

Fresh Air Intake Free of Obstruction

Pollutant Sources Near Air Intake   ▼

FISH 505 has existing work order JW32368 for AC not cooling. This was the warmest and most humid room of all the rooms in the building. In addition, the hallway was warm; it did not appear that the exterior unit (assumed for the hallway) was working.

## Observations

All observed AC filters were dirty and needed to be changed except FISH 510, which is currently only being utilized for testing. Outside metal cabinet and return grill at unit dusty in most rooms. The condensate drain for most HVAC units is directed so that the condensate collects in the vanes of the fresh air intake cover. Also, the stucco at the bottom portion of the fresh air intake is cracked.

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

Clean dust from ceiling tiles or replace	▼
Remove and replace stained ceiling tile	▼
If stains return, contact COMPASS for work order	▼
Ensure ceiling tiles are installed properly	▼
Thoroughly dust/clean elevated/elevated surfaces	▼
Thoroughly dust/clean interior of laptop carts	▼
Floor needs sweep/vacuum in tight spots	▼
Remove and replace A/C Filters	▼
Clean Hvac Cabinet & Return Grill With Wexcide	▼
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	▼
(include FISH 505 and hallway)	▼
Repair HVAC to Reduce CO2 Levels	▼
Evaluate fresh air damper at HVAC	▼
Evaluate and repair cause of stained ceiling tile	▼
Install new ceiling tile upon repair, cuts needed	▼
Repair stucco at exterior fresh air intake cover	▼
Redirect condensate drain to outside	▼
Evaluate And Repair Cause Of Water Damaged	▼
Wall Material	▼
Remove And Replace Wall Material As Needed	▼
	▼
	▼