

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

TELEPHONE (754) 321-4200

FACSIMILE: (754) 321-4285

March 23, 2017

Signature on File

TO: Dr. Keietta Givens, Principal
Bair Middle

FROM: Daniel Meyer, Project Manger
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/>	
<hr/>	

On May 22 2017, I conducted an assessment at **Bair 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.

DM: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

Bair Middle

Evaluation Date May 22, 2017

Time of Day 1030

Outdoor Conditions Temperature 83.0

Relative Humidity 73.4

Ambient CO2 494

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
128	70.5	72 - 78	67.2	30% - 60%	765	MAX 700 > Ambient	0
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> No		<input type="text"/>	
Ceiling	<input style="width: 100%;" type="text" value="2' X 4' Lay in"/>		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="text"/>		
Walls	<input style="width: 100%;" type="text" value="Plaster"/>		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="text"/>		
Floor	<input 12"="" style="width: 100%;" type="text" value="12" vinyl"="" x=""/>		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="text"/>		

Ceiling Clean	<input type="checkbox"/> Yes	HVAC Supply Grills Clean	<input type="checkbox"/> No	HVAC Return Grills Clean	<input type="checkbox"/> No
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"/> N/A	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 125"/>	Mechanical Room Clean	<input type="checkbox"/> Yes
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> No
Condensate Pan Clean	<input type="checkbox"/> Yes	Cooling Coil Clean	<input type="checkbox"/> Yes
		Inside of HVAC Unit Clean	<input type="checkbox"/> Yes

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="No"/>		

Observations

Noticeable odor when entering, likely related to wood cabinets and remaining items (cardboard boxes, papers, books). Return duct and back side of grill dusty. Supply grills dusty. One (1) set of laminate cabinets near door. Two (2) book shelves.

- Corrective Actions to be Completed by Site Based Staff**
- | | |
|--|---|
| Remove supply grill and vacuum | ▼ |
| Clean Supply Grills with Wexcide | ▼ |
| Remove and replace A/C Filters | ▼ |
| Remove cardboard boxes, old papers & books | ▼ |
| Remove wood cabinets as needed | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |

- Corrective Actions to be Completed by PPO**
- | | |
|---|---|
| Clean HVAC return grills and drops | ▼ |
| Evaluate and repair HVAC system as needed | ▼ |
| Set Temperature to 72 - 78 degrees | ▼ |
| Repair HVAC to Reduce Humidity Levels | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |

IAQ Assessment

Bair Middle

Evaluation Date May 22, 2017

Time of Day 1030

Outdoor Conditions Temperature 83.0

Relative Humidity 73.4

Ambient CO2 494

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
146	73.7	72 - 78	63.6	30% - 60%	1330	MAX 700 > Ambient	1
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		3 stained, painted over
Walls	Plaster/Tack Board		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	No
Flooring Clean	Yes	Ceiling at Supply Grills Clean	No		
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	N/A	Air Fresheners in Room	No
Room Cluttered	Yes	Food if Stored in Room is in Sealed Containers	No		

Mechanical Equipment Location	FISH 155A			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	No	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	N/A
Pollutant Sources Near Air Intake	Not readily accessible ▼		

Observations

Teacher identified she has an odor near desk in the morning. Odor was observed and likely associated with wood shelves in room and dust build up. One of the three supply grills appeared to be 90-95% closed. Room temperature okay, but felt stuffy or little air movement/circulation. Room is 1 of furthest from HVAC room. Return duct into mechanical room very dusty.

- Corrective Actions to be Completed by Site Based Staff**
- | | |
|--|---|
| Remove return grill and vacuum | ▼ |
| Clean HVAC Return & Supply Grill with Wexcide | ▼ |
| Thoroughly clean elevated/horizontal surfaces | ▼ |
| Remove and replace stained ceiling tile | ▼ |
| If stains return, contact COMPASS for work order | ▼ |
| Clean dust from ceiling tiles or replace | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |

- Corrective Actions to be Completed by PPO**
- | | |
|---|---|
| Repair HVAC to Reduce CO2 Levels | ▼ |
| Repair HVAC to Reduce Humidity Levels | ▼ |
| Evaluate/Repair HVAC dampers & exhaust interlocks | ▼ |
| Vacuum/clean return duct into Mech Room | ▼ |
| | ▼ |
| | ▼ |
| | ▼ |

IAQ Assessment

Bair Middle

Evaluation Date

May 22, 2017

Time of Day

1030

Outdoor Conditions

Temperature

83.0

Relative Humidity

73.4

Ambient CO2

494

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
193	70.2	72 - 78	62.5	30% - 60%	703	MAX 700 > Ambient	0
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Ceiling		Ceiling		Ceiling	
2' X 4' Lay in		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			
Flooring Clean		Ceiling at Supply Grills Clean					
Yes		No					
Room Surfaces Clean							
Yes							
Trash Removed		Exhaust Fans Working		Unapproved Chemicals / Cleaners in Room			
Yes		N/A		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 Installed Properly		Filters Clean		Mechanical Room Clean	
FISH 192		Yes		Yes		Yes	
Condensate Pan Clean		Cooling Coil Clean				Inside of HVAC Unit Clean	
Yes		Yes				Yes	
Fresh Air Intake Location		Pollutant Sources Near Air Intake		Fresh Air Intake Free of Obstruction			
Roof top		No		Yes			

Observations

Need to clean floor where dishwasher(s) was/were recently removed. Interior of return duct needs cleaning. Ceiling tiles around supply grills are dusty/stained, need replacement/cuts. Temperature on low side, no students/teacher occupying space and lights off. Monitor for complaints regarding temperature and relative humidity and adjust as needed. Majority of corrective actions previously identified (April 2017) have been addressed. Still need to clean return ductwork. Hallway outside 190/193 --> FISH 115 HVAC closet, return grill dusty.

Corrective Actions to be Completed by Site Based Staff

Run water in sinks and floor drains monthly	▼
Thoroughly clean and sanitize flooring at locations where dishwashers were removed	▼
Clean HVAC Return Grill with Wexcide (FISH 115)	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Remove and replace stained ceiling tiles	▼
Install new ceiling tile upon repair, cuts needed	▼
Evaluate and repair HVAC system as needed	▼
Set Temperature to 72 - 78 degrees	▼
Repair HVAC to Reduce Humidity Levels	▼
Vacuum/Clean HVAC return grills and drops	▼
	▼
	▼