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November 20, 2012

Signature on File

TO: James Griffin, Principal  
**Lauderdale Lakes Middle School**

FROM: Robert Krickovich, Coordinator I, LEA  
Facilities and Construction Management

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
_____	
_____	

On November 14, 2012, I conducted an assessment at **Lauderdale Lakes Middle School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions, if 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 754-321-1907.

cc: Directors, School Performance & Accountability  
Shelley Meloni, Executive Director, Facilities and Construction Management  
Mark Dorsett, Acting Director, Physical Plant Operations Division, Maintenance  
Sonja Coley, Project Manager III, Facilities and Construction Management  
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division  
Aston Henry, Supervisor, Risk Management  
Broward Teachers Union  
Federation of Public Employees

RK/tc  
Enc.

# IAQ Assessment

Lauderdale Lakes Middle

Evaluation Date November 14, 2012

Time of Day 1:45

Outdoor Conditions    Temperature 82.9    Relative Humidity 54.8    Ambient CO2 496

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">226A</span>	<span style="border: 1px solid black; padding: 2px;">70.1</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">68.9</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">527</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">2</span>
Noticeable Odor		<input type="checkbox"/> Yes	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</span>		<input type="checkbox"/> No		<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>
Walls	<span style="border: 1px solid black; padding: 2px;">Plaster</span>		<input type="checkbox"/> No		<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<input type="checkbox"/> No		<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>

Ceiling Clean	<input type="checkbox"/> No	HVAC Supply Grills Clean	<input type="checkbox"/> No	HVAC Return Grills Clean	<input type="checkbox"/> N/a
Walls Clean	<input type="checkbox"/> Yes	Inside of Supply Duct Clean	<input type="checkbox"/> Yes	Inside of Return Duct Clean	<input type="checkbox"/> N/A
Flooring Clean	<input type="checkbox"/> Yes	Ceiling at Supply Grills Clean	<input type="checkbox"/> No		
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	<span style="border: 1px solid black; padding: 2px;">FISH 232</span>		Mechanical Room Clean	<input type="checkbox"/> No	
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> Yes	Inside of HVAC Unit Clean	<input type="checkbox"/> Yes
Condensate Pan Clean	<input type="checkbox"/> Yes	Cooling Coil Clean	<input type="checkbox"/> Yes		

Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Outside of Room</span> ▼	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">Parking Lot</span> ▼		

**Observations**

231A written on paper on door - Musty odor in room - Air return through door to hallway - Ceiling tiles dirty / bowed (PPO to replace all tiles) - Humidity in room elevated

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

Clean HVAC supply grills with Wexcide	▼
	▼
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	▼
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	▼
	▼

**Corrective Actions to be Completed by PPO**

Repair HVAC to reduce humidity level	▼
Remove and replace ALL ceiling tiles	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
	▼
	▼

# IAQ Assessment

Lauderdale Lakes Middle

Evaluation Date November 14, 2012

Time of Day 1:45

Outdoor Conditions    Temperature 82.9

Relative Humidity 54.8

Ambient CO2 496

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
228	71.4	72 - 78	65.4	30% - 60%	511	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> Yes		<input type="checkbox"/> Several with possible microbial	
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input type="text"/>	
Walls	<input type="text" value="Plaster"/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input type="text"/>	
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input type="text"/>	

Ceiling Clean	<input type="checkbox"/> No	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"/> No	Inside of Return Duct Clean	<input type="checkbox"/> No
Flooring Clean	<input type="checkbox"/> Yes	Ceiling at Supply Grills Clean	<input type="checkbox"/> No		
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 type="text" value="FISH 232"/>	Mechanical Room Clean	<input type="checkbox"/> No
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> Yes
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 type="text" value="Outside of Room"/>	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	<input type="text" value="Parking Lot"/>		

**Observations**

Musty odor in room - Ceiling tiles dirty / bowed - Ceiling tile at supply grill has visible microbial growth - other tiles may have microbial growth (PPO to replace 8 Tiles) - Humidity in room elevated

- Corrective Actions to be Completed by Site Based Staff**
- |  |   |
|--|---|
| Clean HVAC supply and return grills with Wexcide | ▼ |
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- Corrective Actions to be Completed by PPO**
- |  |   |
|--|---|
| Repair HVAC to reduce humidity level   | ▼ |
| Remove and replace dirty ceiling tiles | ▼ |
| Clean inside of supply & return drops  | ▼ |
| Set temperature to 72 - 78 degrees     | ▼ |
|  | ▼ |
|  | ▼ |
|  | ▼ |
|  | ▼ |

# IAQ Assessment

Lauderdale Lakes Middle

Evaluation Date November 14, 2012

Time of Day 1:45

Outdoor Conditions    Temperature 82.9

Relative Humidity 54.8

Ambient CO2 496

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
230	70.3	72 - 78	68.7	30% - 60%	523	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="checkbox"/> Yes		<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="text" value="1 stained tile - all dirty"/>	
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="text"/>	
Walls	<input type="text" value="Plaster"/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input type="text"/>	
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="checkbox"/> No	<input type="checkbox"/> No		<input type="text"/>	

Ceiling Clean	<input type="checkbox"/> No	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"/> No	Inside of Return Duct Clean	<input type="checkbox"/> No
Flooring Clean	<input type="checkbox"/> Yes	Ceiling at Supply Grills Clean	<input type="checkbox"/> No		
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"/> Yes	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 type="text" value="FISH 232"/>	Mechanical Room Clean	<input type="checkbox"/> No
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> Yes
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 type="text" value="Outside of Room"/>	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	<input type="text" value="Parking Lot"/>		

**Observations**

Musty odor in room - Ceiling tiles dirty / bowed - one tile has visible water damage (PPO to replace 16 Tiles) - Humidity in room elevated -

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

Clean HVAC supply and return grills with Wexcide	▼
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	▼
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	▼
	▼

**Corrective Actions to be Completed by PPO**

Repair HVAC to reduce humidity level	▼
Remove and replace dirty ceiling tiles	▼
Clean inside of supply & return drops	▼
Evaluate and repair cause of stained ceiling tiles	▼
Remove and replace ceiling tiles	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼

# IAQ Assessment

Lauderdale Lakes Middle

Evaluation Date November 14, 2012

Time of Day 1:45

Outdoor Conditions    Temperature 82.9    Relative Humidity 54.8    Ambient CO2 496

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
231	71.7	72 - 78	64.8	30% - 60%	501	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> Yes		<input type="checkbox"/> Several with possible microbial	
Ceiling	2' X 4' Lay in		<input type="checkbox"/> No	<input type="checkbox"/> No			
Walls	Plaster		<input type="checkbox"/> No	<input type="checkbox"/> No			
Floor	12" x 12" Vinyl		<input type="checkbox"/> No	<input type="checkbox"/> No			

Ceiling Clean	<input type="checkbox"/> No	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"/> No	Inside of Return Duct Clean	<input type="checkbox"/> No
Flooring Clean	<input type="checkbox"/> Yes	Ceiling at Supply Grills Clean	<input type="checkbox"/> No		
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	FISH 232	Mechanical Room Clean	<input type="checkbox"/> No
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> Yes
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	Outside of Room	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	Parking Lot		

**Observations**

Musty odor in room - Ceiling tiles dirty / bowed / May have microbial growth (PPO to replace 32 Tiles) - Humidity in room elevated - Tackboard on wall by door has visible microbial growth.

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

Clean HVAC supply and return grills with Wexcide	▼
	▼
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	▼
	▼

**Corrective Actions to be Completed by PPO**

Repair HVAC to reduce humidity level	▼
Remove and replace dirty ceiling tiles	▼
Remove and replace Tackboard	▼
Clean inside of supply & return drops	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼