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Risk Management Department

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February 12, 2014

Signature on File

TO: Michael Breslaw, Principal  
**Tradewinds Elementary School**

FROM: Robert Krickovich, Coordinator I, LEA  
Risk Management 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
_____	
_____	

On January 31, 2014, I conducted an assessment at **Tradewinds Elementary 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 754-321-1907.

cc: Shelley Meloni, Task Assigned Chief Facilities & Construction Officer, Facilities & Construction  
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division  
Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division  
Aston Henry, Director, Risk Management  
Sonja Coley, Senior Project Manager, Facilities & Construction  
Broward Teachers Union  
Federation of Public Employees

RK/tc  
Enc.

# IAQ Assessment

Tradewinds Elementary

Evaluation Date January 31, 2014

Time of Day 12:00

Outdoor Conditions    Temperature 85.4

Relative Humidity 73.4

Ambient CO2 483

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">1492P</span>	<span style="border: 1px solid black; padding: 2px;">69.4</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">68.5</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">495</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">4</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</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;">3 tiles</span>
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;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">All walls spotty</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;">Yes</span>	HVAC Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Return Grills Clean	<span style="border: 1px solid black; padding: 2px;">Yes</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;">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;">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;">Wall Mounted Unit</span>			Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Filters Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Inside of HVAC Unit Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>		

Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Outside of Unit</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;">None</span> ▼		

**Observations**

3 stained ceiling tiles with microbial growth - microbial growth spotty on walls -  
 Thermostat fan set to ON position - when compressor shut off humidity in room climbed to 73.4%

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

	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair cause of stained ceiling tiles	▼
Remove and replace stained ceiling tiles	▼
Repair HVAC to reduce humidity level	▼
Clean and paint all walls with anti-microbial paint	▼
	▼
	▼
Check HVAC in all modular units	▼
Fans continue to run when compressors shut off	▼

# IAQ Assessment

Tradewinds Elementary

Evaluation Date January 31, 2014

Time of Day 12:00

Outdoor Conditions    Temperature 85.4    Relative Humidity 73.4    Ambient CO2 483

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">1497P</span>	<span style="border: 1px solid black; padding: 2px;">75.0</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">67.2</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">531</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">5</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"/> Yes		<input type="checkbox"/> Yes		<span style="border: 1px solid black; padding: 2px;">10 tiles at supply grills</span>
Walls	<span style="border: 1px solid black; padding: 2px;">Drywall</span>		<input type="checkbox"/> No		<input type="checkbox"/> Yes		<span style="border: 1px solid black; padding: 2px;">Spotty South wall</span>
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<input type="checkbox"/> No		<input type="checkbox"/> No		<span style="border: 1px solid black; padding: 2px;"></span>

Ceiling Clean	<input type="checkbox"/> Yes	HVAC Supply Grills Clean	<input type="checkbox"/> Yes	HVAC Return Grills Clean	<input type="checkbox"/> Yes
Walls Clean	<input type="checkbox"/> Yes	Inside of Supply Duct Clean	<input type="checkbox"/> Yes	Inside of Return Duct Clean	<input type="checkbox"/> Yes
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"/> Yes	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	<span style="border: 1px solid black; padding: 2px;">Wall Mounted Unit</span>			Mechanical Room Clean	<input type="checkbox"/> N/A
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> N/A	Inside of HVAC Unit Clean	<input type="checkbox"/> N/A
Condensate Pan Clean	<input type="checkbox"/> N/A	Cooling Coil Clean	<input type="checkbox"/> N/A		

Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Outside of Unit</span> ▼	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">None</span> ▼		

**Observations**

Musty odor - microbial growth on restroom door - microbial growth on ceiling tiles at supply grills - microbial growth spotty on walls - microbial growth on upholstered chair - microbial growth on binders - Stained ceiling tile over white board with microbial growth.

Thermostat fan set to ON position - when compressor shut off humidity in room climbed to 73.4%

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

Relocate occupant to different classroom	▼
until repairs are completed	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair cause of stained ceiling tiles	▼
Remove and replace stained ceiling tiles	▼
Replace restroom door	▼
Repair HVAC to reduce humidity level	▼
Clean and paint all walls with anti-microbial paint	▼
	▼
Check HVAC in all modular units	▼
Fans continue to run when compressors shut off	▼