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May 20, 2013

Signature on File

TO: Sonja Smith Braziel, Principal
Pompano Beach Middle School

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

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 May 1, 2013, I conducted an assessment at **Pompano Beach 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 754-321-1907.

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, Task Assigned Director, Risk Management
Sonja Coley, Senior Project Manager, Facilities Design and Construction
Broward Teachers Union
Federation of Public Employees

RK/tc
Enc.

IAQ Assessment

Pompano Beach Middle

Evaluation Date

Time of Day

Outdoor Conditions Temperature

Relative Humidity

Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
<input type="text" value="169"/>	<input type="text" value="72.8"/>	<input type="text" value="72 - 78"/>	<input type="text" value="68.6"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="832"/>	<input type="text" value="MAX 700 > Ambient"/>	<input type="text" value="7"/>
Noticeable Odor		<input type="text" value="Yes"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="text" value="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="2 tiles"/>
Walls	<input type="text" value="Tack Board / Carpet"/>		<input type="text" value="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="Various Areas"/>
Floor	<input type="text" value="Painted Concrete"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>

Ceiling Clean	<input type="text" value="Yes"/>	HVAC Supply Grills Clean	<input type="text" value="No"/>	HVAC Return Grills Clean	<input type="text" value="No"/>
Walls Clean	<input type="text" value="Yes"/>	Inside of Supply Duct Clean	<input type="text" value="No"/>	Inside of Return Duct Clean	<input type="text" value="No"/>
Flooring Clean	<input type="text" value="Yes"/>	Ceiling at Supply Grills Clean	<input type="text" value="N/a"/>		
Room Surfaces Clean	<input type="text" value="Yes"/>				

Trash Removed	<input type="text" value="Yes"/>	Exhaust Fans Working	<input type="text" value="N/A"/>	Unapproved Chemicals / Cleaners in Room	<input type="text" value="No"/>
Signs of Pests	<input type="text" value="No"/>	Drain Traps Wet	<input type="text" value="N/A"/>	Air Fresheners in Room	<input type="text" value="No"/>
Room Cluttered	<input type="text" value="No"/>	Food if Stored in Room is in Sealed Containers	<input type="text" value="N/A"/>		

Mechanical Equipment Location	<input type="text" value="FISH 169M"/>		Mechanical Room Clean	<input type="text" value="Yes"/>	
Filters Installed Properly	<input type="text" value="No"/>	Filters Clean	<input type="text" value="No"/>	Inside of HVAC Unit Clean	<input type="text" value="No"/>
Condensate Pan Clean	<input type="text" value="No"/>	Cooling Coil Clean	<input type="text" value="No"/>		

Fresh Air Intake Location	<input type="text" value="Outside of Room"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="None"/>		

Observations

TV Studio - Musty Odor - Ceiling tiles set above bottom of bar joists (open to plenum above) - Microbial growth on bottom of stage curtains and carpeted walls -	
FISH 169M - Filters dirty - Coils dirty - Inside of unit dirty	

Corrective Actions to be Completed by Site Based Staff

	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Clean Entire HVAC System - Unit and Drops	▼
Remove and replace wall material as necessary	▼
Have curtains cleaned	▼
Seal openings in ceiling	▼
Evaluate and repair roof leaks	▼
Remove and replace ceiling tiles	▼
	▼

IAQ Assessment

Pompano Beach Middle

Evaluation Date May 1, 2013

Time of Day 10:30

Outdoor Conditions Temperature 83.8

Relative Humidity 77.1

Ambient CO2 556

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
169C	72.5	72 - 78	74.9	30% - 60%	816	MAX 700 > Ambient	4	
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		Yes		Yes		2 tiles	
Walls	Tack Board / Carpet		Yes		No		6 sq ft	
Floor	Carpet		Yes		No		6 Sq ft	
Ceiling Clean		No	HVAC Supply Grills Clean		No	HVAC Return Grills Clean		Yes
Walls Clean		Yes	Inside of Supply Duct Clean		No	Inside of Return Duct Clean		No
Flooring Clean		Yes	Ceiling at Supply Grills Clean		No			
Room Surfaces Clean		Yes						
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		No	Food if Stored in Room is in Sealed Containers		N/A			
Mechanical Equipment Location			FISH 169M			Mechanical Room Clean		Yes
Filters Installed Properly		No	Filters Clean		No	Inside of HVAC Unit Clean		No
Condensate Pan Clean		No	Cooling Coil Clean		No			
Fresh Air Intake Location			Outside of Room ▼			Fresh Air Intake Free of Obstruction		Yes
Pollutant Sources Near Air Intake			None ▼					

Observations

Musty odor in room - Two stained ceiling tiles with microbial growth - walls and floor stained under stained ceiling tiles - Ceilings very dusty - Ceiling tiles are cloth covered fiberglass (may not be able to be cleaned - if not call in work order to replace ceiling tiles) - Inside of ducts dirty.

FISH 169M - Filters dirty - Coils dirty - Inside of unit dirty

Corrective Actions to be Completed by Site Based Staff

Clean dust and debris from ceilings	▼
Thoroughly clean stained carpet	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Clean Entire HVAC System - Unit and Drops	▼
Evaluate and repair roof leaks	▼
Remove and replace wall material as necessary	▼
Remove and replace ceiling tiles	▼
	▼
	▼
	▼

IAQ Assessment

Pompano Beach Middle

Evaluation Date

Time of Day

Outdoor Conditions Temperature

Relative Humidity

Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
<input type="text" value="169D"/>	<input type="text"/>	<input type="text" value="72 - 78"/>	<input type="text"/>	<input type="text" value="30% - 60%"/>	<input type="text"/>	<input type="text" value="MAX 700 > Ambient"/>	<input type="text"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	<input type="text" value="2' X 4' Lay in"/>	<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="1 tile"/>	
Walls	<input type="text" value="Tack Board / Carpet"/>	<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="2 Sq ft"/>	
Floor	<input type="text" value="Carpet"/>	<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>	

Ceiling Clean	<input type="text" value="Yes"/>	HVAC Supply Grills Clean	<input type="text" value="Yes"/>	HVAC Return Grills Clean	<input type="text" value="Yes"/>
Walls Clean	<input type="text" value="Yes"/>	Inside of Supply Duct Clean	<input type="text" value="Yes"/>	Inside of Return Duct Clean	<input type="text" value="Yes"/>
Flooring Clean	<input type="text" value="Yes"/>	Ceiling at Supply Grills Clean	<input type="text" value="Yes"/>		
Room Surfaces Clean	<input type="text" value="Yes"/>				

Trash Removed	<input type="text" value="Yes"/>	Exhaust Fans Working	<input type="text" value="N/A"/>	Unapproved Chemicals / Cleaners in Room	<input type="text" value="No"/>
Signs of Pests	<input type="text" value="No"/>	Drain Traps Wet	<input type="text" value="N/A"/>	Air Fresheners in Room	<input type="text" value="No"/>
Room Cluttered	<input type="text" value="No"/>	Food if Stored in Room is in Sealed Containers	<input type="text" value="N/A"/>		

Mechanical Equipment Location	<input type="text" value="FISH 169M"/>	Mechanical Room Clean	<input type="text" value="Yes"/>
Filters Installed Properly	<input type="text" value="No"/>	Filters Clean	<input type="text" value="No"/>
Condensate Pan Clean	<input type="text" value="No"/>	Cooling Coil Clean	<input type="text" value="No"/>
		Inside of HVAC Unit Clean	<input type="text" value="No"/>

Fresh Air Intake Location	<input type="text" value="Outside of Room"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="None"/>		

Observations

Vestibule in front of 169C - stained ceiling tile and stains on wall material under stained ceiling tile

Corrective Actions to be Completed by Site Based Staff

	▼
	▼
	▼
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	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate and repair roof leaks	▼
Remove and replace wall material as necessary	▼
Remove and replace ceiling tiles	▼
Repair HVAC to reduce humidity level	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Pompano Beach Middle

Evaluation Date

Time of Day

Outdoor Conditions Temperature

Relative Humidity

Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
<input type="text" value="169E"/>	<input type="text" value="72.3"/>	<input type="text" value="72 - 78"/>	<input type="text" value="70.0"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="793"/>	<input type="text" value="MAX 700 > Ambient"/>	<input type="text" value="2"/>
Noticeable Odor		<input type="text" value="No"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<input type="text" value="2' X 4' Lay in"/>		<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="3 tiles"/>
Walls	<input type="text" value="Drywall"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Floor	<input 12"="" type="text" value="12" vinyl"="" x=""/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>

Ceiling Clean	<input type="text" value="Yes"/>	HVAC Supply Grills Clean	<input type="text" value="Yes"/>	HVAC Return Grills Clean	<input type="text" value="Yes"/>
Walls Clean	<input type="text" value="Yes"/>	Inside of Supply Duct Clean	<input type="text" value="Yes"/>	Inside of Return Duct Clean	<input type="text" value="Yes"/>
Flooring Clean	<input type="text" value="Yes"/>	Ceiling at Supply Grills Clean	<input type="text" value="Yes"/>		
Room Surfaces Clean	<input type="text" value="Yes"/>				

Trash Removed	<input type="text" value="Yes"/>	Exhaust Fans Working	<input type="text" value="N/A"/>	Unapproved Chemicals / Cleaners in Room	<input type="text" value="No"/>
Signs of Pests	<input type="text" value="No"/>	Drain Traps Wet	<input type="text" value="N/A"/>	Air Fresheners in Room	<input type="text" value="No"/>
Room Cluttered	<input type="text" value="No"/>	Food if Stored in Room is in Sealed Containers	<input type="text" value="N/A"/>		

Mechanical Equipment Location	<input type="text" value="FISH 169M"/>			Mechanical Room Clean	<input type="text" value="Yes"/>
Filters Installed Properly	<input type="text" value="No"/>	Filters Clean	<input type="text" value="No"/>	Inside of HVAC Unit Clean	<input type="text" value="No"/>
Condensate Pan Clean	<input type="text" value="No"/>	Cooling Coil Clean	<input type="text" value="No"/>		

Fresh Air Intake Location	<input type="text" value="Outside of Room"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="None"/>		

Observations

Three stained ceiling tiles

FISH 169M - Filters dirty - Coils dirty - Inside of unit dirty

Corrective Actions to be Completed by Site Based Staff

Remove and replace stained ceiling tiles	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Clean Entire HVAC System - Unit and Drops	▼
Evaluate and repair roof leaks	▼
	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Pompano Beach Middle

Evaluation Date May 1, 2013

Time of Day 10:30

Outdoor Conditions Temperature 83.8

Relative Humidity 77.1

Ambient CO2 556

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
169G	71.6	72 - 78	68.2	30% - 60%	821	MAX 700 > Ambient	2
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Tack Board / Carpet		No		No		
Floor	Carpet		No		No		

Ceiling Clean	Yes	HVAC Supply Grills Clean	Yes	HVAC Return Grills Clean	Yes
Walls Clean	Yes	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	Yes
Flooring Clean	Yes	Ceiling at Supply Grills Clean	No		
Room Surfaces Clean	Yes				

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	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 169M		Mechanical Room Clean	Yes	
Filters Installed Properly	No	Filters Clean	No	Inside of HVAC Unit Clean	No
Condensate Pan Clean	No	Cooling Coil Clean	No		

Fresh Air Intake Location	Outside of Room ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼		

Observations

Musty odor in room

FISH 169M - Filters dirty - Coils dirty - Inside of unit dirty

Corrective Actions to be Completed by Site Based Staff

Clean ceilings around HVAC supply grills	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Clean Entire HVAC System - Unit and Drops	▼
Evaluate and repair roof leaks	▼
	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Pompano Beach Middle

Evaluation Date May 1, 2013

Time of Day 10:30

Outdoor Conditions Temperature 83.8

Relative Humidity 77.1

Ambient CO2 556

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
169J	70.8	72 - 78	79.7	30% - 60%	766	MAX 700 > Ambient	2
Noticeable Odor		<input type="checkbox"/> Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		<input type="checkbox"/> Yes		<input type="checkbox"/> Yes		11 stained / 4 microbial growth
Walls	Drywall		<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"/> 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"/> 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 169M		Mechanical Room Clean	<input type="checkbox"/> Yes	
Filters Installed Properly	<input type="checkbox"/> No	Filters Clean	<input type="checkbox"/> No	Inside of HVAC Unit Clean	<input type="checkbox"/> No
Condensate Pan Clean	<input type="checkbox"/> No	Cooling Coil Clean	<input type="checkbox"/> No		

Fresh Air Intake Location	Outside of Room ▼	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	None ▼		

Observations

Musty odor in room - 11 stained ceiling tiles - four with microbial growth - HVAC supply and return grills dirty - ceilings around supply grills dirty.

FISH 169M - Filters dirty - Coils dirty - Inside of unit dirty

Corrective Actions to be Completed by Site Based Staff

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

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Clean Entire HVAC System - Unit and Drops	▼
Evaluate and repair roof leaks	▼
Remove and replace ceiling tiles	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Pompano Beach Middle

Evaluation Date May 1, 2013

Time of Day 10:30

Outdoor Conditions Temperature 83.8

Relative Humidity 77.1

Ambient CO2 556

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
169L	71.6	72 - 78	81.8	30% - 60%	743	MAX 700 > Ambient	2
Noticeable Odor		Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		Yes		4 stained with microbial growth
Walls	Drywall		No		No		
Floor	12" x 12" Vinyl		No		No		

Ceiling Clean	Yes	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	Yes
Walls Clean	Yes	Inside of Supply Duct Clean	No	Inside of Return Duct Clean	No
Flooring Clean	Yes	Ceiling at Supply Grills Clean	No		
Room Surfaces Clean	Yes				

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	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 169M		Mechanical Room Clean	Yes	
Filters Installed Properly	No	Filters Clean	No	Inside of HVAC Unit Clean	No
Condensate Pan Clean	No	Cooling Coil Clean	No		

Fresh Air Intake Location	Outside of Room ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼		

Observations

Musty odor in room - Four stained ceiling tiles with microbial growth - microbial growth on white melamine shelving - HVAC supply grills dirty - inside of supply and return duct dirty - ceilings at supply grills dirty.

FISH 169M - Filters dirty - Coils dirty - Inside of unit dirty

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Wipe down shelving with Wexcide	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to reduce humidity level	▼
Clean Entire HVAC System - Unit and Drops	▼
Evaluate and repair roof leaks	▼
Remove and replace ceiling tiles	▼
	▼
	▼
	▼
	▼