

RISK MANAGEMENT...

managing risk with responsibility

Aston A. Henry, Director
Risk Management Department

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December 12, 2013

Signature on File

TO: Jon Marlow, Principal
Deerfield Beach High 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
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On December 5, 2013, I conducted an assessment at **Deerfield Beach High 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

Deerfield Beach High

Evaluation Date December 5, 2013

Time of Day 1:30

Outdoor Conditions Temperature 86.7

Relative Humidity 56.2

Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
117	66.9	72 - 78	57.6	30% - 60%	1266	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Yes		No		No			
Ceiling	2' X 4' Lay in		No	No			
Walls	Plaster		No	No			
Floor	12" x 12" Vinyl		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	Yes		
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	Yes
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH 121	Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes
Condensate Pan Clean	No	Cooling Coil Clean	No
		Inside of HVAC Unit Clean	Yes

Fresh Air Intake Location	Unknown ▼	Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Unknown ▼		

Observations

Strong odor from 2 glade plug-ins in room - HVAC coil and pan dirty in FISH 121 - Sewer pipe on back wall not connected properly (held up by concrete blocks) bad angle at joint in sewer pipe at rubber connector (may be cause of intermittent odors)

Corrective Actions to be Completed by Site Based Staff

Remove air fresheners from room	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Clean HVAC coils and pan in FISH 121	▼
Repair sewer pipe in 121	▼
Repair HVAC to reduce CO2 level	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Deerfield Beach High

Evaluation Date December 5, 2013

Time of Day 1:30

Outdoor Conditions Temperature 86.7

Relative Humidity 56.2

Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
118	66.5	72 - 78	56.9	30% - 60%	1272	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		No		No			
2' X 4' Lay in		Plaster		12" x 12" Vinyl			
No		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	Yes				
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 121				Mechanical Room Clean	Yes	
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	Yes		
Condensate Pan Clean	No	Cooling Coil Clean	No				
Fresh Air Intake Location	Unknown ▼				Fresh Air Intake Free of Obstruction	N/A	
Pollutant Sources Near Air Intake	Unknown ▼						

Observations

HVAC coil and pan dirty in FISH 121 - Sewer pipe on back wall not connected properly (held up by concrete blocks) bad angle at joint in sewer pipe at rubber connector (may be cause of intermittent odors)

Corrective Actions to be Completed by Site Based Staff

	▼
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	▼

Corrective Actions to be Completed by PPO

Clean HVAC coils and pan in FISH121	▼
Repair sewer pipe in 121	▼
Repair HVAC to reduce CO2 level	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Deerfield Beach High

Evaluation Date December 5, 2013

Time of Day 1:30

Outdoor Conditions Temperature 86.7

Relative Humidity 56.2

Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
119	68.5	72 - 78	52.4	30% - 60%	1296	MAX 700 > Ambient	1
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		No		No		
Walls	Plaster		No		No		
Floor	12" x 12" Vinyl		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		Yes			
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 121					Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean		Yes	Inside of HVAC Unit Clean		Yes
Condensate Pan Clean	No	Cooling Coil Clean		No			
Fresh Air Intake Location	Unknown ▼					Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Unknown ▼						

Observations

Microbial growth on wood file cabinets - was identified on August 29, 2013 during that assessment and has not been cleaned yet - HVAC coil and pan dirty in FISH 121 - Sewer pipe on back wall not connected properly (held up by concrete blocks) bad angle at joint in sewer pipe at rubber connector (may be cause of intermittent odors)

Corrective Actions to be Completed by Site Based Staff

Clean microbial growth from wood file cabinets	▼
if growth returns discard cabinets	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Clean HVAC coils and pan in FISH 121	▼
Repair sewer pipe in 121	▼
Repair HVAC to reduce CO2 level	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Deerfield Beach High

Evaluation Date December 5, 2013

Time of Day 1:30

Outdoor Conditions Temperature 86.7

Relative Humidity 56.2

Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
123	68.0	72 - 78	55.6	30% - 60%	1264	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		2' X 4' Lay in		Plaster		12" x 12" Vinyl	
No		No		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	Yes		
Flooring Clean	Yes	Ceiling at Supply Grills Clean	Yes				
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	No	Food if Stored in Room is in Sealed Containers	N/A				
Mechanical Equipment Location	FISH 121					Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	Yes		
Condensate Pan Clean	No	Cooling Coil Clean	No				
Fresh Air Intake Location	Unknown ▼					Fresh Air Intake Free of Obstruction	N/A
Pollutant Sources Near Air Intake	Unknown ▼						

Observations

Dust build up on HVAC supply and return grills - minor dust on surfaces - HVAC coil and pan dirty in FISH 121 - Sewer pipe on back wall not connected properly (held up by concrete blocks) bad angle at joint in sewer pipe at rubber connector (may be cause of intermittent odors)

Corrective Actions to be Completed by Site Based Staff

Clean HVAC supply and return grills with Wexcide	▼
Thoroughly clean all surfaces	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Clean HVAC coils and pan in FISH 121	▼
Repair sewer pipe in 121	▼
Repair HVAC to reduce CO2 level	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Deerfield Beach High

Evaluation Date December 5, 2013

Time of Day 1:30

Outdoor Conditions Temperature 86.7

Relative Humidity 56.2

Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
124	68.0	72 - 78	55.9	30% - 60%	1275	MAX 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Ceiling		Ceiling		Ceiling	
No		No		No			
Walls		Walls		Walls		Walls	
No		No		No			
Floor		Floor		Floor		Floor	
No		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		Yes			
Flooring Clean		Ceiling at Supply Grills Clean					
Yes		Yes					
Room Surfaces Clean		Exhaust Fans Working		Unapproved Chemicals / Cleaners in Room			
Yes		N/A		No			
Trash Removed		Drain Traps Wet		Air Fresheners in Room			
Yes		N/A		No			
Signs of Pests		Food if Stored in Room is in Sealed Containers					
No		N/A					
Room Cluttered							
No							
Mechanical Equipment Location		Filters Installed Properly		Filters Clean		Mechanical Room Clean	
FISH 121		Yes		Yes		Yes	
Condensate Pan Clean		Cooling Coil Clean		Inside of HVAC Unit Clean			
No		No		Yes			
Fresh Air Intake Location		Pollutant Sources Near Air Intake		Fresh Air Intake Free of Obstruction			
Unknown		Unknown		N/A			

Observations

HVAC coil and pan dirty in FISH 121 - Sewer pipe on back wall not connected properly (held up by concrete blocks) bad angle at joint in sewer pipe at rubber connector (may be cause of intermittent odors)

Corrective Actions to be Completed by Site Based Staff

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Corrective Actions to be Completed by PPO

Clean HVAC coils and pan in FISH 121	▼
Repair sewer pipe in FISH 121	▼
Repair HVAC to reduce CO2 level	▼
Set temperature to 72 - 78 degrees	▼
	▼
	▼
	▼
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