RISK MANAGEMENT…

managing risk with responsibility

Aston A. Henry, Supervisor
Risk Management Department

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February 21, 2013

Signature on File

For Custodial Supervisor Use Only

☐ Custodial Issues Addressed

☐ Custodial Issues Not Addressed

TO: Estella Eckhardt, Principal
Hallandale High School

FROM: Richard Rosa, Project Manager
Facilities Design and Construction

SUBJECT: Indoor Air Quality (IAQ) Assessment

On February 7, 2013, I conducted an assessment at **Hallandale 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: Directors, School Performance & Accountability
Shelley Meloni, Executive Director, Facilities Design and Construction
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division
Aston Henry, Supervisor, Risk Management
Sonja Coley, Senior Project Manager, Facilities Design and Construction
Broward Teachers Union
Federation of Public Employees

RR/tc
Enc.

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 1:00

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
600	70.8	72 - 78	65.6	30% - 60%	823	MAX 700 > Ambient	

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	No			
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid

Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 1:30

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
603	73.2	72 - 78	59.8	30% - 60%	1012	MAX 700 > Ambient	

Noticeable Odor: No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid

Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 1:45

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
606	72.3	72 - 78	60.1	30% - 60%	1059	MAX 700 > Ambient	

Noticeable Odor: No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' x 4'	Yes	No	< 1 sq ft
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean HVAC Return Grill with Wexcide
- Clean dust from perimeter ceiling grid
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- Replace stained ceiling tiles after roof project
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Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops
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IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 2:00

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
608	72.3	72 - 78	61.9	30% - 60%	894	MAX 700 > Ambient	

Noticeable Odor: No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid

Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 2:15

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
609	72.3	72 - 78	62.3	30% - 60%	883	MAX 700 > Ambient	

Noticeable Odor: No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid

Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 2:30

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
610	71.8	72 - 78	62.1	30% - 60%	928	MAX 700 > Ambient	

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	No			
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid

Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 2:45

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
611	71.4	72 - 78	62.3	30% - 60%	905	MAX 700 > Ambient	

	Noticeable Odor	Visible water damage / staining?	Visible microbial growth?	Amount of material affected
	No			
Ceiling	2' x 4'	Yes	No	< 1 sq ft
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid
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- Replace stained ceiling tiles after roof project
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Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops
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IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 3:00

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
612	71.2	72 - 78	64.3	30% - 60%	865	MAX 700 > Ambient	

Noticeable Odor No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

Corrective Actions to be Completed by Site Based Staff

- Clean dust from ceiling tiles or replace
- Thoroughly clean horizontal surfaces
- Clean HVAC supply and return grills with Wexcide
- Clean dust from perimeter ceiling grid

Corrective Actions to be Completed by PPO

- Repair HVAC to reduce humidity level
- Install appropriate filter spacer in HVAC
- Clean HVAC supply drops

IAQ Assessment

Hallandale High | **Evaluation Date** February 7, 2013 | **Time of Day** 3:15

Outdoor Conditions | **Temperature** 79.8 | **Relative Humidity** 60.2 | **Ambient CO2** 426

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
613	72.1	72 - 78	63.7	30% - 60%	832	MAX 700 > Ambient	

Noticeable Odor: No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' x 4'	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	No	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
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	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 604			Mechanical Room Clean	Yes
Filters Installed Properly	Yes	Filters Clean	Yes	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	Yes
Pollutant Sources Near Air Intake	Ongoing roofing project		

Observations

The filter spacer in the HVAC system is not the proper size. There is a 1" gap allowing unfiltered air to bypass the filter system. Above the drop ceiling is the HVAC return air plenum.

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