THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

TELEPHONE (754) 321-4200 **FACSIMILE: (754) 321-4285**

June 30, 2016 Signature on File

For Custodial Supervisor Use Only

☐ Custodial Issues Addressed

☐ Custodial Issues Not Addressed

TO: Melinda Cunningham, Principal
Hawks Bluff Elementary

FROM: Robert Krickovich, Coordinator, LEA
Environmental Health & Safety Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

On June 27, 2016, I conducted an assessment at **Hawks Bluff 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 754-321-4200.

RK:smn
Enc.

cc: Shelley Meloni, Director, Pre-Construction
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
Broward Teachers Union
Federation of Public Employees
Gerald Devio, Supervisor II Custodial
Benjamin Osborne, Supervisor II Custodial
Rich Volpi, Supervisor II Custodial
Mark Murray, Supervisor II Custodial
Sam Bays, Director, Maintenance Operations
Kurt Wirz, Area Manager Trades

IAQ Assessment

Hawks Bluff Elementary School | Evaluation Date: June 27, 2016 | Time of Day: 12:30

Outdoor Conditions Temperature: 81.4 | Relative Humidity: 91.1 | Ambient CO2: 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
512	73.6	72 - 78	63.3	30% - 60%	471	MAX 700 > Ambient	2

Noticeable Odor: No

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

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

Trash Removed	Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	Above Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None		

Observations

Flooring dirty - room surfaces dusty - HVAC Return grill dirty - HVAC Filters dirty - Humidity slightly elevated (could be due to dirty HVAC filters)

Corrective Actions to be Completed by Site Based Staff

- Thoroughly clean ALL surfaces
- Thoroughly clean and sanitize flooring
- Clean HVAC Return Grill with Wexcide
- Remove and replace A/C Filters

Corrective Actions to be Completed by PPO

- Repair HVAC to Reduce Humidity Levels
- May be due to filters not being changed

IAQ Assessment

Hawks Bluff Elementary School | Evaluation Date: June 27, 2016 | Time of Day: 12:30

Outdoor Conditions Temperature: 81.4 | Relative Humidity: 91.1 | Ambient CO2: 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
QP460C	76.6	72 - 78	52.1	30% - 60%	1785	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	8 Ceiling tiles
Walls	Tack Board	No	No	
Floor	12" x 12" Vinyl	No	No	

Ceiling Clean	Yes	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	No	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	Wall Mounted Unit			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	No	Inside of HVAC Unit Clean	No
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

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

Observations

Musty odor in room - 8 stained ceiling tiles with microbial growth (school should be calling in work orders anytime water intrusion is found)(school should be replacing stained ceiling tiles when ever present) - A/C unit dirty / dusty inside - filter extremely dirty (school staff should be changing filters on a monthly basis and cleaning grills and inside of A/C cover) - CO2 Slightly elevated (both units set for recirculate air - changed to fresh air at time of assessment) - Flooring dirty - surfaces dusty - IAQ Protocol NOT Completed

Corrective Actions to be Completed by Site Based Staff	Corrective Actions to be Completed by PPO
Remove and replace stained ceiling tile	Evaluate and repair cause of stained ceiling tile
If stains return, contact COMPASS for work order	
Thoroughly clean ALL surfaces	
Thoroughly clean and sanitize flooring	
Clean Supply Grills with Wexcide	
Clean HVAC Return Grill with Wexcide	
Remove and replace A/C Filters	

IAQ Assessment

Hawks Bluff Elementary School | Evaluation Date: June 27, 2016 | Time of Day: 12:30

Outdoor Conditions Temperature: 81.4 | Relative Humidity: 91.1 | Ambient CO2: 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
QP1043	71.9	72 - 78	46.6	30% - 60%	435	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	2 ceiling tiles
Walls	Tack Board	No	No	
Floor	12" x 12" Vinyl	Yes	No	Entire floor wet

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

Trash Removed	Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	Yes	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	3 Wall Mounted Units			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	No
Condensate Pan Clean	Yes	Cooling Coil Clean	Yes		

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

Observations

Musty odor in room - 2 stained ceiling tiles with microbial growth (school should be calling in work orders anytime water intrusion is found)(school should be replacing stained ceiling tiles when ever present) - A/C unit dirty / dusty inside - (School staff should be cleaning grills and inside of A/C cover) - Flooring dirty - surfaces dusty - Condensation inside of light fixtures - Microbial growth inside light fixture lenses - Cob webs on walls - insect debris in window sills - (IAQ Protocol NOT Completed) - Wood floor wet - tiles popping up from plywood due to moisture

Corrective Actions to be Completed by Site Based Staff

- Remove and replace stained ceiling tile
- If stains return, contact COMPASS for work order
- Thoroughly clean ALL surfaces
- Clean dust from wall surfaces
- Clean Supply Grills with Wexcide
- Clean HVAC Return Grill with Wexcide
- Clean inside of light fixture lenses

Corrective Actions to be Completed by PPO

- Evaluate flooring for replacement
- Evaluate and repair cause of Condensation
- inside of light fixtures
- Treat to eliminate insects

IAQ Assessment

Hawks Bluff Elementary School | **Evaluation Date** June 27, 2016 | **Time of Day** 12:30

Outdoor Conditions **Temperature** 81.4 **Relative Humidity** 91.1 **Ambient CO2** 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
137	71.6	72 - 78	63.7	30% - 60%	440	MAX 700 > Ambient	2

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	Yes			
Ceiling	2' X 4' Lay in	No	No	
Walls	Drywall	No	No	
Floor	12" x 12" Vinyl	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	No	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	Above Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None		

Observations

Musty odor in room (boxes stored in room trap moisture and odors) - Flooring dirty - Room surfaces dirty - HVAC Supply grills dirty - Ceilings at supply grills dirty - HVAC return grills dirty - HVAC Filters dirty - IAQ Protocol NOT Completed - Humidity level slightly elevated (could be due to dirty HVAC filters)

Corrective Actions to be Completed by Site Based Staff

- Thoroughly clean ALL surfaces
- Thoroughly clean and sanitize flooring
- Clean ceilings around HVAC supply grills
- Clean Supply Grills with Wexcide
- Clean HVAC Return Grill with Wexcide
- Remove and replace A/C Filters

Corrective Actions to be Completed by PPO

- Repair HVAC to Reduce Humidity Levels
- May be due to filters not being changed

IAQ Assessment

Hawks Bluff Elementary School | Evaluation Date: June 27, 2016 | Time of Day: 12:30

Outdoor Conditions Temperature: 81.4 | Relative Humidity: 91.1 | Ambient CO2: 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
146	75.4	72 - 78	58.9	30% - 60%	445	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	Drywall	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	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	Above Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None		

Observations

Musty odor in room (boxes stored in room trap moisture and odors) - Room surfaces dirty - Ceilings at Supply grills dirty - HVAC Filters dirty

Corrective Actions to be Completed by Site Based Staff	Corrective Actions to be Completed by PPO
Thoroughly clean ALL surfaces	
Clean ceilings around HVAC supply grills	
Remove and replace A/C Filters	

IAQ Assessment

Hawks Bluff Elementary School | Evaluation Date: June 27, 2016 | Time of Day: 12:30

Outdoor Conditions Temperature: 81.4 | Relative Humidity: 91.1 | Ambient CO2: 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
407	73.6	72 - 78	58.1	30% - 60%	417	MAX 700 > Ambient	2

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	No			
Ceiling	2' X 4' Lay in	No	No	
Walls	Drywall	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	No	Ceiling at Supply Grills Clean	Yes		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	Above Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None		

Observations

Flooring dirty - room surfaces dusty

Corrective Actions to be Completed by Site Based Staff	Corrective Actions to be Completed by PPO
Thoroughly clean ALL surfaces	
Thoroughly clean and sanitize flooring	

IAQ Assessment

Hawks Bluff Elementary School | Evaluation Date: June 27, 2016 | Time of Day: 12:30

Outdoor Conditions Temperature: 81.4 | Relative Humidity: 91.1 | Ambient CO2: 433

Fish	Temperature	Range	Relative Humidity	Range	CO^2	Range	# Occupants
501	73.9	72 - 78	54.9	30% - 60%	497	MAX 700 > Ambient	2

Noticeable Odor: No

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling	2' X 4' Lay in	No	No	
Walls	Drywall	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	No	Ceiling at Supply Grills Clean	Yes		
Room Surfaces Clean	No				

Trash Removed	Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests	No	Drain Traps Wet	Yes	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	Above Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clean	N/A		

Fresh Air Intake Location	Roof top	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None		

Observations

Flooring dirty - room surfaces dusty

Corrective Actions to be Completed by Site Based Staff	Corrective Actions to be Completed by PPO
Thoroughly clean ALL surfaces	
Thoroughly clean and sanitize flooring	