

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

TELEPHONE (754) 321-4200

FACSIMILE: (754) 321-4285

September 22, 2016

Signature on File

TO: Scott Neely, Principal
Cypress Bay High

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

SUBJECT: Indoor Air Quality (IAQ) Assessment

For Custodial Supervisor Use Only

Custodial Issues Addressed

Custodial Issues Not Addressed

On September 20, 2016, I conducted an assessment at **Cypress Bay 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 754-321-4200.

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

Cypress Bay High

Evaluation Date September 20, 2016

Time of Day 12:00

Outdoor Conditions Temperature 91.2 Relative Humidity 88.6 Ambient CO2 456

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants	
507C	73.4	72 - 78	47.3	30% - 60%	3065	MAX 700 > Ambient	27	
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling	2' X 4' Lay in		Yes		No		10 Stained Tiles	
Walls	Homasote		Yes		No		All Walls Entire Unit	
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			Wall Mounted Unit			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			Outside of Unit ▼			Fresh Air Intake Free of Obstruction		Yes
Pollutant Sources Near Air Intake			None ▼					

Observations

Portable - CO2 Elevated, both A/C units set to recirculate air (changed to fresh air by Assessor) - All interior walls wet, bubbling, blistering - Exterior siding water damaged, has been repaired but repairs are leaking - caulk missing - exterior wood siding pulling from walls - Stained ceiling tiles possible roof leaks.

Corrective Actions to be Completed by Site Based Staff

Set all portable A/C units for fresh air	▼
When water damage or staining is visible call in work orders to repair the cause of the water intrusion	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair / replace exterior siding	▼
Remove and replace interior walls	▼
Remove and replace wall insulation	▼
Repair / Replace roofing	▼
Replace wet ceiling insulation	▼
Replace water damaged ceiling tiles	▼
	▼
	▼

IAQ Assessment

Cypress Bay High

Evaluation Date September 20, 2016

Time of Day 12:00

Outdoor Conditions Temperature 91.2

Relative Humidity 88.6

Ambient CO2 456

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
966C	80.4	72 - 78	37.9	30% - 60%	2870	MAX 700 > Ambient	25
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		No		5 Stained Ceiling Tiles
Walls	Homasote		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	Wall Mounted Unit			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	Outside of Unit	▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None	▼		

Observations

Portable - Wall water damaged and under A/C Unit near white board - CO2 Elevated, both A/C units set to recirculate air (changed to fresh air by Assessor) - Stained ceiling tiles possible roof leaks.

Corrective Actions to be Completed by Site Based Staff

Set all portable A/C units for fresh air	▼
When water damage or staining is visible call in work orders to repair the cause of the water intrusion	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair / Replace roofing	▼
Replace wet ceiling insulation	▼
Replace water damaged ceiling tiles	▼
Remove and replace wall under A/C Unit	▼
Repair cause of water damage under A/C	▼
	▼
	▼
	▼

IAQ Assessment

Cypress Bay High

Evaluation Date September 20, 2016

Time of Day 12:00

Outdoor Conditions Temperature 91.2

Relative Humidity 88.6

Ambient CO2 456

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
QP 307	77.7	72 - 78	41.1	30% - 60%	543	MAX 700 > Ambient	3
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	Homasote		Yes		Yes		50 Sq Ft Water - 9 Sq Ft Micro
Walls	Wood Paneling		Yes		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	Wall Mounted Unit			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	Outside of Unit ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	None ▼		

Observations

Portable - Walls under both A/C units wet - Wood bookcase under A/C unit wet - 50 Square feet of ceiling material water damaged - 9 square feet of spotty microbial growth on ceiling

Corrective Actions to be Completed by Site Based Staff

When water damage or staining is visible	▼
call in work orders to repair the cause of the water intrusion	▼
Clean microbial growth from ceiling with Wexcide	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair / Replace roofing	▼
Replace wet ceiling insulation	▼
Replace water damaged ceiling material	▼
Remove and replace wall under A/C Units	▼
Repair cause of water damage under A/C	▼
Replace water damaged book case	▼
	▼
	▼

IAQ Assessment

Cypress Bay High

Evaluation Date September 20, 2016

Time of Day 12:00

Outdoor Conditions Temperature 91.2 Relative Humidity 88.6 Ambient CO2 456

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
C002	74.4	72 - 78	61.1	30% - 60%	795	MAX 700 > Ambient	3
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		Yes		Entire ceiling
Walls	Plaster		Yes		Yes		Spotty on walls
Floor	12" x 12" Vinyl		Yes		No		
Ceiling Clean		No	HVAC Supply Grills Clean		Yes		HVAC Return Grills Clean Yes
Walls Clean		No	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			Second floor behind dining room			Mechanical Room Clean Yes	
Filters Installed Properly		Yes	Filters Clean		Yes		Inside of HVAC Unit Clean No
Condensate Pan Clean		No	Cooling Coil Clean		No		
Fresh Air Intake Location			Roof top ▼			Fresh Air Intake Free of Obstruction Yes	
Pollutant Sources Near Air Intake			None ▼				

Observations

Cooridor - Ceilings damaged due to humidity - Microbial growth on ceiling tiles - Spotty microbial growth on walls - Complaint of condensation on floors in the mornings - Second floor mechanical room - 99.9% humidity (raining in mechanical room) all duct wet - all units wet and rusty - All duct insulation wet - Walls wet - Floors wet

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean wall surfaces	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC System	Evaluate and repair HVAC ▼
Repair HVAC to Reduce Humidity Levels	▼
Check all controls, dampers, interlocks, etc	▼
Clean entire HVAC system - unit and drops	▼
Replace water damaged duct insulation	▼
Clean unit exteriors, evaluate and repair	▼
Replace all ceiling tiles	▼
Clean walls and paint with anti microbial paint	▼

IAQ Assessment

Cypress Bay High

Evaluation Date September 20, 2016

Time of Day 12:00

Outdoor Conditions Temperature 91.2 Relative Humidity 88.6 Ambient CO2 456

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
C005	72.8	72 - 78	59.8	30% - 60%	517	MAX 700 > Ambient	3
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		Yes		Entire ceiling
Walls	Plaster		Yes		Yes		Spotty on walls
Floor	12" x 12" Vinyl		Yes		No		
Ceiling Clean		No	HVAC Supply Grills Clean		Yes	HVAC Return Grills Clean Yes	
Walls Clean		No	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			Second floor behind dining room			Mechanical Room Clean Yes	
Filters Installed Properly		Yes	Filters Clean		Yes	Inside of HVAC Unit Clean No	
Condensate Pan Clean		No	Cooling Coil Clean		No		
Fresh Air Intake Location			Roof top ▼			Fresh Air Intake Free of Obstruction Yes	
Pollutant Sources Near Air Intake			None ▼				

Observations

Cooridor - Ceilings damaged due to humidity - Microbial growth on ceiling tiles - Spotty microbial growth on walls - Complaint of condensation on floors in the mornings - Drywall ceiling at 164 microbial growth.
 Second floor mechanical room - 99.9% humidity (raining in mechanical room) all duct wet - all units wet and rusty - All duct insulation wet - Walls wet - Floors wet

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean wall surfaces	▼
Clean ceiling at 164	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC System	Evaluate and repair HVAC	▼
Repair HVAC to Reduce Humidity Levels		▼
Check all controls, dampers, interlocks, etc		▼
Clean entire HVAC system - unit and drops		▼
Replace water damaged duct insulation		▼
Clean unit exteriors, evaluate and repair		▼
Replace all ceiling tiles, Paint ceiling at 164		▼
Clean walls and paint with anti microbial paint		▼

IAQ Assessment

Cypress Bay High

Evaluation Date September 20, 2016

Time of Day 12:00

Outdoor Conditions Temperature 91.2 Relative Humidity 88.6 Ambient CO2 456

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
C006	72.5	72 - 78	61.0	30% - 60%	753	MAX 700 > Ambient	3
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		Yes		Entire ceiling
Walls	Plaster		Yes		Yes		Spotty on walls
Floor	12" x 12" Vinyl		Yes		No		
Ceiling Clean		No	HVAC Supply Grills Clean		Yes		HVAC Return Grills Clean Yes
Walls Clean		No	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			Second floor behind dining room			Mechanical Room Clean Yes	
Filters Installed Properly		Yes	Filters Clean		Yes		Inside of HVAC Unit Clean No
Condensate Pan Clean		No	Cooling Coil Clean		No		
Fresh Air Intake Location			Roof top ▼			Fresh Air Intake Free of Obstruction Yes	
Pollutant Sources Near Air Intake			None ▼				

Observations

Cooridor - Ceilings damaged due to humidity - Microbial growth on ceiling tiles - Spotty microbial growth on walls - Complaint of condensation on floors in the mornings - Second floor mechanical room - 99.9% humidity (raining in mechanical room) all duct wet - all units wet and rusty - All duct insulation wet - Walls wet - Floors wet

Corrective Actions to be Completed by Site Based Staff

Thoroughly clean wall surfaces	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC System	Evaluate and repair HVAC ▼
Repair HVAC to Reduce Humidity Levels	▼
Check all controls, dampers, interlocks, etc	▼
Clean entire HVAC system - unit and drops	▼
Replace water damaged duct insulation	▼
Clean unit exteriors, evaluate and repair	▼
Replace all ceiling tiles	▼
Clean walls and paint with anti microbial paint	▼