

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

TELEPHONE (754) 321-4200

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September 28, 2016

Signature on File

TO: Dr. Angel Almanzar, Principal
Boyd Anderson High

FROM: Daniel Meyer, Project Manger
Environmental Health & Safety Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

For Custodial Supervisor Use Only

Custodial Issues Addressed

Custodial Issues Not Addressed

On September 26, 2016, I conducted an assessment at **Boyd Anderson 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.

DM: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

Anderson, Boyd H. High

Evaluation Date September 26, 2016

Time of Day 10:00 AM

Outdoor Conditions Temperature 84.4 Relative Humidity 88.6 Ambient CO2 473

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
606	73.4	72 - 78	65.9	30% - 60%	668	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		Yes		Entire room
Walls	Plaster / Drywall		No		Yes		Various locations
Floor	12" x 12" Vinyl		No		No		

Ceiling Clean	No	HVAC Supply Grills Clean	Yes	HVAC Return Grills Clean	No
Walls Clean	Yes	Inside of Supply Duct Clean	Yes	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	No	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH #619			Mechanical Room Clean	No
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	Ducted to roof-top ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	No ▼		

Observations

Mold abatement needed in this classroom - Classroom closed until clean up completed

Corrective Actions to be Completed by Site Based Staff

	▼
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	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Anderson, Boyd H. High

Evaluation Date September 26, 2016

Time of Day 10:00 AM

Outdoor Conditions Temperature 84.4 Relative Humidity 88.6 Ambient CO2 473

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
607	73.7	72 - 78	70	30% - 60%	876	MAX 700 > Ambient	22
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Plaster / Drywall		12" x 12" Vinyl			
No		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	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	No	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH #619	Mechanical Room Clean	No
Filters Installed Properly	Yes	Filters Clean	Yes
Condensate Pan Clean	Yes	Cooling Coil Clean	Yes
		Inside of HVAC Unit Clean	No

Fresh Air Intake Location	Ducted to roof-top ▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	No ▼		

Observations

High Humidity levels. Sink traps dry. Return grills need to be cleaned. See corrective actions.

Corrective Actions to be Completed by Site Based Staff

Vacuum/wipe return grill	▼
Pour water down drains when not in use	▼
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Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Anderson, Boyd H. High

Evaluation Date September 26, 2016

Time of Day 10:00 AM

Outdoor Conditions Temperature 84.4 Relative Humidity 88.6 Ambient CO2 473

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
614	73.7	72 - 78	70	30% - 60%	876	MAX 700 > Ambient	2

Noticeable Odor	No	Visible water damage / staining?	No	Visible microbial growth?	No	Amount of material affected	
Ceiling	2' X 4' Lay in		No		No		
Walls	Plaster / 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	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	No	Air Fresheners in Room	No
Room Cluttered	No	Food if Stored in Room is in Sealed Containers	N/A		

Mechanical Equipment Location	FISH #619	Mechanical Room Clean	No
Filters Installed Properly	Yes	Filters Clean	Yes
Condensate Pan Clean	Yes	Cooling Coil Clean	Yes
		Inside of HVAC Unit Clean	No

Fresh Air Intake Location	Ducted to roof-top	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	No		

Observations

Spotty growth near hood system - back draft damper need to be checked

Corrective Actions to be Completed by Site Based Staff

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Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Anderson, Boyd H. High

Evaluation Date September 26, 2016

Time of Day 10:00 AM

Outdoor Conditions Temperature 84.4 Relative Humidity 88.6 Ambient CO2 473

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
615	74.3	72 - 78	73.1	30% - 60%	750	MAX 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		No		Yes		8 tiles	
2' X 4' Lay in		No		No			
Plaster / Drywall		No		No			
12" x 12" Vinyl		No		No			

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

Trash Removed	<input checked="" type="checkbox"/>	Exhaust Fans Working	<input type="checkbox"/>	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/>
Signs of Pests	<input type="checkbox"/>	Drain Traps Wet	<input type="checkbox"/>	Air Fresheners in Room	<input type="checkbox"/>
Room Cluttered	<input type="checkbox"/>	Food if Stored in Room is in Sealed Containers	<input type="checkbox"/>		

Mechanical Equipment Location	FISH #619	Mechanical Room Clean	<input type="checkbox"/>
Filters Installed Properly	<input checked="" type="checkbox"/>	Filters Clean	<input checked="" type="checkbox"/>
Condensate Pan Clean	<input checked="" type="checkbox"/>	Cooling Coil Clean	<input checked="" type="checkbox"/>
		Inside of HVAC Unit Clean	<input type="checkbox"/>

Fresh Air Intake Location	Ducted to roof-top	Fresh Air Intake Free of Obstruction	<input checked="" type="checkbox"/>
Pollutant Sources Near Air Intake	No		

Observations

See corrective actions

Corrective Actions to be Completed by Site Based Staff

Replace ceiling tiles	▼
Vacuum/wipe return grill	▼
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Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
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IAQ Assessment

Anderson, Boyd H. High

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Outdoor Conditions Temperature 84.4 Relative Humidity 88.6 Ambient CO2 473

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
616	74	72 - 78	73.1	30% - 60%	765	MAX 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in		Plaster / Drywall		12" x 12" Vinyl		Entire room	
Yes		No		Yes		Various locations	
No		No		No			

Ceiling Clean	<input type="checkbox"/> No	HVAC Supply Grills Clean	<input type="checkbox"/> Yes	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"/> No	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 #619	Mechanical Room Clean	<input type="checkbox"/> No
Filters Installed Properly	<input type="checkbox"/> Yes	Filters Clean	<input type="checkbox"/> Yes
Condensate Pan Clean	<input type="checkbox"/> Yes	Cooling Coil Clean	<input type="checkbox"/> Yes
		Inside of HVAC Unit Clean	<input type="checkbox"/> No

Fresh Air Intake Location	Ducted to roof-top ▼	Fresh Air Intake Free of Obstruction	<input type="checkbox"/> Yes
Pollutant Sources Near Air Intake	No ▼		

Observations

Mold abatement needed in this classroom - Classroom closed until clean up completed

Corrective Actions to be Completed by Site Based Staff

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Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Anderson, Boyd H. High

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="617"/>	<input type="text" value="74.3"/>	<input type="text" value="72 - 78"/>	<input type="text" value="73.1"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="750"/>	<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="No"/>		<input type="text" value="Yes"/>		<input type="text" value="8 tiles"/>
Walls	<input type="text" value="Plaster / 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="No"/>
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="No"/>
Flooring Clean	<input type="text" value="Yes"/>	Ceiling at Supply Grills Clean	<input type="text" value="No"/>		
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="No"/>	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 #619"/>		Mechanical Room Clean	<input type="text" value="No"/>	
Filters Installed Properly	<input type="text" value="Yes"/>	Filters Clean	<input type="text" value="Yes"/>	Inside of HVAC Unit Clean	<input type="text" value="No"/>
Condensate Pan Clean	<input type="text" value="Yes"/>	Cooling Coil Clean	<input type="text" value="Yes"/>		

Fresh Air Intake Location	<input type="text" value="Ducted to roof-top"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="No"/>		

Observations

See corrective actions

Corrective Actions to be Completed by Site Based Staff

Replace ceiling tiles	▼
Vacuum/wipe return grill	▼
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	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Anderson, Boyd H. High

Evaluation Date September 26, 2016

Time of Day 10:00 AM

Outdoor Conditions Temperature 84.4 Relative Humidity 88.6 Ambient CO2 473

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
618	72.4	72 - 78	71.4	30% - 60%	762	MAX 700 > Ambient	25
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
No		No		Yes		8 tiles	
2' X 4' Lay in		No		No			
Plaster / Drywall		No		No			
12" x 12" Vinyl		No		No			

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

Trash Removed	<input checked="" type="checkbox"/>	Exhaust Fans Working	<input type="checkbox"/>	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/>
Signs of Pests	<input type="checkbox"/>	Drain Traps Wet	<input type="checkbox"/>	Air Fresheners in Room	<input type="checkbox"/>
Room Cluttered	<input type="checkbox"/>	Food if Stored in Room is in Sealed Containers	<input type="checkbox"/>		

Mechanical Equipment Location	FISH #619	Mechanical Room Clean	<input type="checkbox"/>
Filters Installed Properly	<input checked="" type="checkbox"/>	Filters Clean	<input checked="" type="checkbox"/>
Condensate Pan Clean	<input checked="" type="checkbox"/>	Cooling Coil Clean	<input checked="" type="checkbox"/>
		Inside of HVAC Unit Clean	<input type="checkbox"/>

Fresh Air Intake Location	Ducted to roof-top	Fresh Air Intake Free of Obstruction	<input checked="" type="checkbox"/>
Pollutant Sources Near Air Intake	No		

Observations

See corrective actions

Corrective Actions to be Completed by Site Based Staff

Replace ceiling tiles	▼
Vacuum/wipe return grill	▼
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	▼
	▼
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	▼
	▼

Corrective Actions to be Completed by PPO

Repair HVAC to Reduce Humidity Levels	▼
Clean microbial growth from inside unit	▼
Evaluate fresh air dampers	▼
Evaluate back draft dampers - (Hoods)	▼
	▼
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