

THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT

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September 9, 2016

Signature on File

TO: Jermaine Fleming, Principal
Nova Middle

FROM: Robert Krickovich, Coordinator, LEA
Environmental Health & Safety 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
<hr/>	
<hr/>	

On September 7, 2016, I conducted an assessment at **Nova Middle 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

Nova Middle

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="243"/>	<input type="text" value="77.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="86.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="576"/>	<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="No"/>		<input type="text"/>
Walls	<input type="text" value="Plaster"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Floor	<input type="text" value="Ceramic Tile"/>		<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="No"/>	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="No"/>	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="Yes"/>	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 244"/>		Mechanical Room Clean	<input type="text" value="Yes"/>	
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="No"/>		

Fresh Air Intake Location	<input type="text" value="Roof top"/>	Fresh Air Intake Free of Obstruction	<input type="text" value="Yes"/>
Pollutant Sources Near Air Intake	<input type="text" value="None"/>		

Observations

Girls Locker Room - Ceiling tiles at HVAC supply grills dirty - inside of supply drops dirty - HVAC return grill dirty - inside of return box dirty - Inside of HVAC unit dirty - coils dirty - Humidity elevated

Corrective Actions to be Completed by Site Based Staff

Replace ceilings tiles around HVAC supply grills	▼
Clean HVAC Return Grill with Wexcide	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Replace ceiling tiles around supply grills (cuts)	▼
Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean entire HVAC system - unit and drops	▼
	▼
	▼
	▼
	▼

IAQ Assessment

Nova Middle

Evaluation Date September 7, 2016

Time of Day 10:30 AM

Outdoor Conditions Temperature 83.0

Relative Humidity 89.9

Ambient CO2 446

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
710	71.8	72 - 78	82.3	30% - 60%	492	MAX 700 > Ambient	3
Noticeable Odor		<input type="checkbox"/> Yes	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		<input type="checkbox"/> No		<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>
Walls	Drywall		<input type="checkbox"/> No		<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>
Floor	12" x 12" Vinyl		<input type="checkbox"/> No		<input type="checkbox"/> No		<input style="width: 100%;" type="text"/>

Ceiling Clean	<input type="checkbox"/> Yes	HVAC Supply Grills Clean	<input type="checkbox"/> No	HVAC Return Grills Clean	<input type="checkbox"/> Yes
Walls Clean	<input type="checkbox"/> Yes	Inside of Supply Duct Clean	<input type="checkbox"/> Yes	Inside of Return Duct Clean	<input type="checkbox"/> Yes
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"/> Yes	Unapproved Chemicals / Cleaners in Room	<input type="checkbox"/> No
Signs of Pests	<input type="checkbox"/> No	Drain Traps Wet	<input type="checkbox"/> Yes	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	Ceiling Mounted Unit		Mechanical Room Clean	<input type="checkbox"/> N/A	
Filters Installed Properly	<input type="checkbox"/> N/A	Filters Clean	<input type="checkbox"/> N/A	Inside of HVAC Unit Clean	<input type="checkbox"/> N/A
Condensate Pan Clean	<input type="checkbox"/> N/A	Cooling Coil Clean	<input type="checkbox"/> N/A		

Fresh Air Intake Location	Unknown ▼	Fresh Air Intake Free of Obstruction	<input type="checkbox"/>
Pollutant Sources Near Air Intake	<input style="width: 100%;" type="text"/> ▼		

Observations

Musty odor in room - Science Lab - 10 sinks - 1 sink trap and floor drain trap for shower dry - Rust and spotty microbial growth on exterior of Ceiling mounted HVAC Fan coil unit.

Corrective Actions to be Completed by Site Based Staff

Replace ceilings tiles around HVAC supply grills	▼
Clean exterior of ceiling mounted A/C unit with Wexcide	▼
Clean Supply Grills with Wexcide	▼
Run water in sinks and floor drains monthly	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Replace ceiling tiles around supply grills (cuts)	▼
Evaluate and repair HVAC system as needed	▼
Repair HVAC to Reduce Humidity Levels	▼
Clean entire HVAC system - unit and drops	▼
	▼
	▼
	▼

IAQ Assessment

Nova Middle

Evaluation Date September 7, 2016

Time of Day 10:30 AM

Outdoor Conditions Temperature 83.0

Relative Humidity 89.9

Ambient CO2 446

Fish	Temperature	Range	Relative Humidity	Range	CO ²	Range	# Occupants
816C	67.7	72 - 78	45.3	30% - 60%	441	MAX 700 > Ambient	2
Noticeable Odor		No	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	2' X 4' Lay in		Yes		Yes		17 stained - 2 microbial growth
Walls	Homasote		No		No		
Floor	12" x 12" Vinyl		Yes		No		several areas

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 816C - Only one A/C unit running at time of assessment - Several roof leaks - 17 stained ceiling tiles - insulation above ceiling wet - condensation in all light fixtures - water damaged floor (tiles lifting from floor) - floor rust stained from fixture condensation dripping on floor

Corrective Actions to be Completed by Site Based Staff

Set Temperature to 72 - 78 degrees	▼
Clean condensation from light fixtures	▼
After roof repairs	▼
	▼
	▼
	▼
	▼
	▼
	▼

Corrective Actions to be Completed by PPO

Evaluate and repair cause of stained ceiling tile	▼
Evaluate and repair / replace roofing	▼
Remove and replace wet insulation above ceiling	▼
Remove and replace stained ceiling tiles	▼
Repair water damaged light fixtures	▼
Repair water damaged flooring	▼
	▼
	▼

