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September 28, 2005

Signature on File

TO: Mr. Phillip Patton, Principal
Lauderhill Middle School

FROM: Aston A. Henry, Jr., Supervisor
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 103, 150, 159, 160 and HVAC units

On September 27, 2005 the IAQ Assessment Team conducted an assessment of FISH 103, 150, 159, 160 and the HVAC units at **Lauderhill Middle School**. The evaluation consisted of a walkthrough of the identified areas to assess the current condition of the location with regard to indoor air quality. This assessment included observations of the carpet, floor tile, ceiling tile, interior walls, false ceiling plenum, and accessible ventilation equipment.

Attached are the findings of this assessment along with recommendations for further assessment, remediation, or corrective actions, if needed.

Generally, the IAQ Assessment did not identify any existing conditions significantly impacting IAQ and thereby presenting immediate health and safety concerns 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.

Should any questions arise, or if the current concerns continue after the attached recommendations have been addressed, please feel free to contact me at 754-321-3200.

cc: Dr. Harry LaCava, Area Superintendent
Fran Bolden, Area Director
Jeffrey S. Moquin, Director, Risk Management
Israel Rodriguez-Soto, Project Manager II, Facilities and Construction Management
Dane Ramson, Broward Teachers Union
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division
Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

AAH/tc
Enc.

IAQ Assessment

Location Number 1391
 Evaluation Requested September 26, 2005
 Evaluation Date September 27, 2005

Lauderhill Middle School

Time of Day 12:20 pm

Outdoor Conditions Temperature 88.4 Relative Humidity 69.1 Ambient CO2 357

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
103	65.8	72 - 78	58	30% - 60%	850	Max 700 > Ambient	4
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		Yes		Various	
Wall Type		No		No		None	
Flooring		No		No		None	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Clean as appropriate
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Visible microbial growth on ceiling (Southeast corner)
- Visible microbial growth on wood furniture
- Temperature was low at the time of assessment

Recommendations:

Site Based Maintenance:

- Clean ceiling (Southeast corner) with Wexcide disinfectant to remove microbial growth
- Clean wood furniture with Wexcide disinfectant to remove microbial growth
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations Division:

- Evaluate and repair HVAC system for proper operation

IAQ Assessment

Location Number 1391
 Evaluation Requested September 26, 2005
 Evaluation Date September 27, 2005

Lauderhill Middle School

Time of Day 12:45 pm

Outdoor Conditions Temperature 88.4 Relative Humidity 69.1 Ambient CO2 357

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
150	70.1	72 - 78	52.1	30% - 60%	738	Max 700 > Ambient	5
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	Concrete		No	Yes	Various		
Wall Type	Drywall		No	Yes	Various		
Flooring	Tile		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Clean as appropriate
Walls	No	Yes	Yes	Clean as appropriate
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:
 - Visible microbial growth on ceiling and some areas on walls
 - Dust and debris on HVAC return grills

Recommendations:

Site Based Maintenance:
 - Clean HVAC return grills with Wexcide disinfectant solution
 - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations Division:
 - Clean ceilings and walls as appropriate to remove microbial growth
 - Paint ceilings

NOTE - Work order J09158 to repaint ceiling was open 9/20/04

IAQ Assessment

Lauderhill Middle School

Location Number
 Evaluation Requested
 Evaluation Date

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="159"/>	<input type="text"/>	<input type="text" value="72 - 78"/>	<input type="text"/>	<input type="text" value="30% - 60%"/>	<input type="text"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>	
Ceiling Type	<input type="text"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Wall Type	<input type="text"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Flooring	<input type="text"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Walls	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Return Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Ceiling at Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Surfaces in Room	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>

Observations

Findings: Mechanical Room
 - Insulated chilled water lines are leaking

Recommendations:

Site Based Maintenance:
 - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations Division:
 - Evaluate and repair chilled water lines as appropriate and evaluate fresh air dampers

IAQ Assessment

Lauderhill Middle School

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
160		72 - 78		30% - 60%		Max 700 > Ambient	
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	Concrete		No	Yes	Various		
Wall Type	Drywall		No	No	None		
Flooring	Tile		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Clean as appropriate
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:
 - Visible microbial growth on ceiling

Recommendations:

Site Based Maintenance:
 - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations Division:
 - Clean ceilings as appropriate to remove microbial growth and paint ceilings

IAQ Assessment

Lauderhill Middle School

Location Number 1391
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Time of Day 12:20 pm

Outdoor Conditions Temperature 88.4 Relative Humidity 69.1 Ambient CO2 357

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
Site	<input style="width: 80%;" type="text"/>	72 - 78	<input style="width: 80%;" type="text"/>	30% - 60%	<input style="width: 80%;" type="text"/>	Max 700 > Ambient	<input style="width: 80%;" type="text"/>
Noticeable Odor		<input style="width: 80%;" type="text"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input style="width: 80%;" type="text"/>		<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>		<input style="width: 80%;" type="text"/>
Wall Type	<input style="width: 80%;" type="text"/>		<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>		<input style="width: 80%;" type="text"/>
Flooring	<input style="width: 80%;" type="text"/>		<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>	<input style="width: 80%;" type="text"/>		<input style="width: 80%;" type="text"/>

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
Walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
Flooring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
HVAC Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
Ceiling at Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>
Surfaces in Room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input style="width: 90%;" type="text"/>

Observations

Recommendations:

Site Based Maintenance:

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

Physical Plant Operations Division:

- Evaluate HVAC ductwork throughout the entire school and clean as appropriate
- Evaluate HVAC coils and drain pans throughout the entire school and clean as appropriate