

Jeffrey S. Moquin, Director
Risk Management Department

Telephone: 754-321-3200
Facsimile: 754-321-3290

June 7, 2005

TO: Ms. Aimee Zekofsky, Principal
Apollo Middle School

FROM: Robert J. Krickovich, Coordinator, LEA
Facilities and Construction Management, Environmental Division

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 201F, 201G and 201R

On April 27, 2005 the IAQ Assessment Team conducted an assessment of FISH 201F, 201G and 201R at **Apollo 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 754-321-1638.

cc: Sam Gregg, Area Superintendent
Tina Butler, Area Director
Jeffrey S. Moquin, Director, Risk Management
David DeWald, Project Manager II, Facilities and Construction Management
Ralph Eckhardt, Broward Teachers Union
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

RK/tc
Enc.

IAQ Assessment

Apollo Middle School

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="201F"/>	<input type="text" value="72.9"/>	<input type="text" value="72 - 78"/>	<input type="text" value="65.8"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="524"/>	<input 1,000="" ppm)"="" type="text" value("<=""/>	<input type="text" value="2"/>
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" value="None"/>	
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Plaster"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		

	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:
- None

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

IAQ Assessment

Apollo Middle School

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Evaluation Date

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="201G"/>	<input type="text" value="73.9"/>	<input type="text" value="72 - 78"/>	<input type="text" value="59.8"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="524"/>	<input 1,000="" ppm)"="" type="text" value("<=""/>	<input type="text" value="0"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>	
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Plaster"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Vinyl"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		

	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" value="New floor tile recently installed"/>
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:
 - Odor is from new tile/glue recently installed in vault

Recommendations:

Site Based Maintenance:
 - Air out the room to eliminate odor from tile/glue
 - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

IAQ Assessment

Apollo Middle School

Evaluation Requested

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Evaluation Date

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input style="width: 50px;" type="text" value="201R"/>	<input style="width: 50px;" type="text" value="73.2"/>	<input style="width: 50px;" type="text" value="72 - 78"/>	<input style="width: 50px;" type="text" value="65.2"/>	<input style="width: 50px;" type="text" value="30% - 60%"/>	<input style="width: 50px;" type="text" value="535"/>	<input 1,000="" ppm)"="" style="width: 50px;" type="text" value("<=""/>	<input style="width: 50px;" type="text" value="2"/>
Noticeable Odor		<input style="width: 50px;" type="text" value="No"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input style="width: 100px;" type="text" value="2 x 4 Lay In"/>		<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text" value="None"/>		
Wall Type	<input style="width: 100px;" type="text" value="Plaster"/>		<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text" value="None"/>		
Flooring	<input style="width: 100px;" type="text" value="Vinyl"/>		<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text" value="None"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>
Walls	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>
Flooring	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>
HVAC Supply Grills	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>
HVAC Return Grills	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>
Ceiling at Supply Grills	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>
Surfaces in Room	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text"/>

Observations

Findings:

- Broken HVAC duct work above FISH 201 (between 201R and 201U)
- Rodent droppings above ceiling in FISH 201
- Stained ceiling tiles in FISH 201 (at 201J)
- Ceiling is hanging low
- Ceiling in FISH 201N is partially missing
- HVAC air handler drain pan for Administrative area has standing water, slime and debris (condensate drain is propped up causing the water not to drain)

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 broken duct work
- Investigate for rodents
- Replace stained ceiling tiles
- Evaluate and repair ceilings throughout second floor as appropriate
- Evaluate, repair and clean air handler unit, condensate drain and drain pan as appropriate