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November 8, 2006

Signature on File

TO: Ms. Sonja Smith Braziel, Principal
Pompano Beach Middle School

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

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 116, 136 and 167

On October 3, 2006 I conducted an assessment of FISH 116, 136 and 167 at **Pompano Beach Middle School**. This evaluation included observations of the flooring system, ceiling tiles, false ceiling plenum, environmental surfaces, interior and exterior walls, and the accessible ventilation equipment. Additionally, environmental parameter measurements were taken to include temperature, relative humidity, and carbon dioxide. The detailed findings, along with the recommended corrective action can be found on the attached IAQ Assessment Worksheets.

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.

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: Dr. Joanne Harrison, Area Superintendent
Jackie Haywood, Area Director
Jeffrey S. Moquin, Director, Risk Management
Robert Bellot, Project Manager, Facilities and Construction Management
Jamie Daniels, 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

Location Number 0021
 Evaluation Requested September 29, 2006
 Evaluation Date October 3, 2006

Pompano Beach Middle School

Time of Day 1:10 pm

Outdoor Conditions Temperature 88.4 Relative Humidity 57.2 Ambient CO2 504

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
116	69.5	72 - 78	57.9	30% - 60%	898	Max 700 > Ambient	3
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		Yes	No	at HVAC supply grills		
Wall Type	Plaster		Yes	No	3' x 14'		
Flooring	12 x 12 Vinyl		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	Yes	No	No	
Walls	No	Yes	Yes	Remove and replace wall material
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	No	Yes	Yes	Remove and replace ceiling tiles
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Elevated moisture content in Northwest wall (corner of room) 3 feet up and 14 feet long. Wall backs up to boys restroom FISH 114.
- Dust and debris on HVAC supply and return grills
- Stained ceiling tiles at HVAC supply grills
- Temperature was low and humidity level was elevated

Recommendations:

Site Based Maintenance:

- Clean HVAC supply and 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:

- Evaluate and repair cause of elevated moisture in Northwest wall (3' x 14'). Wall backs up to boys restroom FISH 114. Remove and replace wall material as appropriate.
- Remove and replace ceiling tiles at HVAC supply grills
- Evaluate and repair HVAC system to increase temperature and lower humidity level. Investigate complaint of elevated humidity and need for dehumidifiers. Possibly exhaust fans are not tied into the HVAC controls or there are issues with the dampers.

IAQ Assessment

Pompano Beach 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="136"/>	<input type="text" value="70.6"/>	<input type="text" value="72 - 78"/>	<input type="text" value="55.3"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="863"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="3"/>
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="Drywall"/>		<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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="20' x 14'"/>		

	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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Replace damaged carpet"/>
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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>

Observations

Findings:

- Carpet in Northeast corner of the room is stained and wet
- Dust build up on tops of books and bookshelves
- Temperature was low and humidity level was elevated

Recommendations:

Site Based Maintenance:

- Clean tops of books and bookshelves to remove dust
- 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:

- Remove and replace damaged section of carpet (Northeast corner). School has a work order in place to replace all carpet).
- Evaluate and repair HVAC system to increase temperature and lower humidity level. Investigate complaint of elevated humidity and need for dehumidifiers. Possibly exhaust fans are not tied into the HVAC controls or there are issues with the dampers.

IAQ Assessment

Location Number 0021
 Evaluation Requested September 29, 2006
 Evaluation Date October 3, 2006

Pompano Beach Middle School

Time of Day 1:10 pm

Outdoor Conditions Temperature 88.4 Relative Humidity 57.2 Ambient CO2 504

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
167	75.7	72 - 78	63.7	30% - 60%	834	Max 700 > Ambient	24
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Plaster		Yes	No	At West exterior door		
Flooring	12 x 12 Vinyl		No	No	None		

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

Observations

Findings:

- West exterior door was propped open at the time of the assessment
- West exterior door and wall at door are severely water damaged
- Humidity level was elevated
- **FISH 167E** - Southeast wall and 1 ceiling tile are water stained

Recommendations:

Site Based Maintenance:

- Keep exterior doors closed as not to allow humid untreated air into occupied areas.
- 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:

- Evaluate and repair cause of water damage to West exterior door and wall at door. School has an open work order to replace the door. Exterior block joint over the door is open and may be the cause of the water intrusion. Remove and replace damaged wall material as appropriate.
- **FISH 167E** - Evaluate and repair cause of water intrusion on Southeast wall and ceiling. Remove and replace wall material and ceiling tiles as appropriate.
- Evaluate and repair HVAC system to increase temperature and lower humidity level. Investigate complaint of elevated humidity and need for dehumidifiers. Possibly exhaust fans are not tied into the HVAC controls or there are issues with the dampers.