

Jeffrey S. Moquin, Director  
Risk Management Department

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

August 8, 2005

TO: Ms. Dorothy Cain, Principal  
**Palm Cove Elementary School**

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

SUBJECT: Indoor Air Quality (IAQ) Assessment  
FISH 133, 136, 605 and 608

On July 22, 2005 the IAQ Assessment Team conducted an assessment of FISH 133, 136, 605 and 608 at **Palm Cove Elementary 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  
Pat Dixon, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Angelino Garcia, Project Manager II, Facilities and Construction Management  
Steve Feldman, 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

Palm Cove Elementary School

Evaluation Requested July 21, 2005

Time of Day 2:15 pm

Evaluation Date July 22, 2005

Outdoor Conditions      Temperature 92.7      Relative Humidity 54.5      Ambient CO2 444

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">133</span>	<span style="border: 1px solid black; padding: 2px;">75.5</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">60.2</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">624</span>	<span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">3</span>
Noticeable Odor	<span style="border: 1px solid black; padding: 2px;">Yes</span>		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	<span style="border: 1px solid black; padding: 2px;">2 x 2 Lay In</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">None</span>		
Wall Type	<span style="border: 1px solid black; padding: 2px;">Tackboard</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Various</span>		
Flooring	<span style="border: 1px solid black; padding: 2px;">Carpet</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Entire Carpet</span>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Walls	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Flooring	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Replace Carpet with Tile</span>
HVAC Supply Grills	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">133B - Clean with Wexcide Disinfectant</span>
HVAC Return Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Ceiling at Supply Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Surfaces in Room	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;"></span>

## Observations

### Findings:

- Carpet is wet and smells very bad
- Wall left of bathroom door is wet 8 inches up - 90% moisture content
- AKI tackboard panel that is tight to the floor wicked up water during stripping operation
- Dust and debris on coils and ducts in AHU for this room

### Recommendations:

### Site Based Maintenance:

- Clean HVAC supply grill in 133B 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:

- Replace carpet with tile
- Cut AKI tackboard panel from the floor up to stop water from wicking up
- Evaluate the need to install vents in the door to room 133B
- Clean coils and ducts in AHU for this room

# IAQ Assessment

Palm Cove Elementary 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="136"/>	<input type="text" value="78.8"/>	<input type="text" value="72 - 78"/>	<input type="text" value="61.3"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="619"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text" value="3"/>
Noticeable Odor	<input type="text" value="No"/>		Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input type="text" value="2 x 2 Lay In"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Wall Type	<input type="text" value="Tackboard"/>		<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="Entire Carpet"/>

	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 Carpet with Tile"/>
HVAC Supply Grills	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="136B - Clean with Wexcide Disinfectant"/>
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="Yes"/>	<input type="text"/>

## Observations

**Findings:**

- Carpet is wet around tile area (10-20% moisture content)
- Mechanics were working in AHU room and unit was off

**Recommendations:**

**Site Based Maintenance:**

- Clean HVAC supply grill in 136B 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:**

- Replace carpet with tile
- Evaluate the need to install vents in the door to room 136B

# IAQ Assessment

Palm Cove Elementary 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="605"/>	<input type="text" value="76.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="55.3"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="604"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text" value="3"/>
Noticeable Odor		<input type="text" value="Yes"/>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input type="text" value="2 x 2 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Tackboard"/>		<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="Various"/>		
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="Entire Carpet"/>		

	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 Carpet with Tile"/>
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="Yes"/>	<input type="text"/>

## Observations

### Findings:

- Carpet is wet around tile area (12-20% moisture content) and smells very bad
- Wall left of bathroom door is wet 8 inches up - 90% moisture content
- AKI tackboard panel that is tight to the floor wicked up water during stripping operation

### 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:

- Replace carpet with tile
- Cut AKI tackboard panel from the floor up to stop water from wicking up
- Clean coils and ducts in AHU for this room

# IAQ Assessment

Palm Cove Elementary School

Evaluation Requested July 21, 2005

Time of Day 2:15 pm

Evaluation Date July 22, 2005

Outdoor Conditions      Temperature 92.7      Relative Humidity 54.5      Ambient CO2 444

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
608	72.1	72 - 78	64.2	30% - 60%	605	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		Yes		No		Entire Carpet	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	Yes	No	No	
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Replace Carpet with Tile
HVAC Supply Grills	Yes	No	No	133B - Clean with Wexcide Disinfectant
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	Yes	

**Observations**

**Findings:**

- Carpet is wet around tile area (12-20% moisture content)

**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:**

- Replace carpet with tile