

# RISK MANAGEMENT...

managing risk with responsibility

Jeffrey S. Moquin, Director  
Risk Management Department

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

November 7, 2008

**Signature re on File**

TO: Ms. Patricia Yackel, Principal  
**Pines Lakes Elementary School**

FROM: Edward See, Project Manager  
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 003, 117, 139 and 140**

<u>For Custodial Supervisor Use Only</u>	
<input type="checkbox"/>	Custodial Issues Addressed
<input type="checkbox"/>	Custodial Issues Not Addressed
_____	
_____	

On October 30, 2008 I conducted an assessment of FISH 003, 117, 139 and 140 at **Pines Lakes Elementary 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.

*Please ensure that your Head Facilities Serviceperson receives a copy of this correspondence so that the recommendations requiring their attention can be addressed. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all 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 me at 754-321-3200.

cc: Dr. Joel Herbst, Area Superintendent  
Valerie Wanza, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Frank Girardi, Project Manager, Facilities and Construction Management  
Steve Feldman, Broward Teachers Union  
Roy Jarrett, Federation of Public Employees  
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

ES/tc  
Enc.

# IAQ Assessment

Location Number   
 Evaluation Requested   
 Evaluation Date

Pines Lakes Elementary School

Time of Day

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="003"/>	<input type="text" value="71.5"/>	<input type="text" value="72 - 78"/>	<input type="text" value="45.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="678"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text"/>
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 4"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Wall Type	<input type="text" value="Homasote"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Flooring	<input type="text" value="12 x 12 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"/>
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:**

- No issues identified

**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

Location Number   
 Evaluation Requested   
 Evaluation Date

Pines Lakes Elementary School

Time of Day

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="117"/>	<input type="text" value="74.4"/>	<input type="text" value="72 - 78"/>	<input type="text" value="43.1"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="673"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text"/>
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 4"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Wall Type	<input type="text" value="Homasote"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>
Flooring	<input type="text" value="12 x 12 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"/>
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:**  
 - No issues identified

**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

Pines Lakes Elementary School

Location Number 2861  
 Evaluation Requested October 13, 2008  
 Evaluation Date October 30, 2008

Time of Day

Outdoor Conditions      Temperature 76.9      Relative Humidity 44.8      Ambient CO2 397

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">139</span>	<span style="border: 1px solid black; padding: 2px;">75.8</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">45.5</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">671</span>	<span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">23</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		Yes		No		2 ceiling tiles	
Wall Type		No		No		None	
Flooring		No		No		None	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<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;">Remove and replace ceiling tiles</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; display: inline-block; width: 100%; height: 15px;"></span>
Flooring	<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; display: inline-block; width: 100%; height: 15px;"></span>
HVAC 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; display: inline-block; width: 100%; height: 15px;"></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; display: inline-block; width: 100%; height: 15px;"></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; display: inline-block; width: 100%; height: 15px;"></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;">No</span>	<span style="border: 1px solid black; display: inline-block; width: 100%; height: 15px;"></span>

**Observations**

**Findings:**

- Occupant advised that A/C went down
- A/C return vent is incorporated into light grids
- Room feels stuffy
- 2 stained ceiling tiles at stove exhaust vent requiring cut

**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:**

- Evaluate cause of stained ceiling tiles at stove exhaust vent and repair as appropriate. Remove and replace stained ceiling tiles requiring cut.

# IAQ Assessment

Location Number   
 Evaluation Requested   
 Evaluation Date

Pines Lakes Elementary School

Time of Day

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="140"/>	<input type="text" value="76.5"/>	<input type="text" value="72 - 78"/>	<input type="text" value="41.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="614"/>	<input type="text" value="Max 700 &gt; Ambient"/>	<input type="text"/>
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 4"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Homasote"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="12 x 12 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"/>
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:**  
 - No issues identified

**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