

# RISK MANAGEMENT...

managing risk with responsibility

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Risk Management Department

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November 21, 2007

**Signature on File**

TO: Ms. Robin David, Principal  
**Royal Palm Elementary School**

FROM: Edward See, Project Manager  
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 134 and 134C**

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

On October 25, 2007 I conducted a follow-up assessment of FISH 134 and 134C at **Royal Palm Elementary School**. The assessment consisted of a reevaluation walkthrough of the previously identified area to assess the current condition of the location with regard to indoor air quality. This assessment included reviewing previously generated work orders as well as observation of the area of concern as stated in the IAQ Assessments performed on March 15, 2007. Attached are the findings of this assessment along with recommendations for further assessment, remediation, or corrective actions, if needed.

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. Leontine Butler, Area Superintendent  
Fran Bolden, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Robert Goode, Project Manager, Facilities and Construction Management  
Ruby Fitzgerald, Broward Teachers Union  
Roy Jarrett, National Federation of Public and Private 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 1851

Royal Palm Elementary School

Evaluation Requested

Time of Day 3:30 pm

Evaluation Date October 25, 2007

Outdoor Conditions      Temperature 85.6      Relative Humidity 61      Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
134	74.2	72 - 78	49.9	30% - 60%	600	Max 700 > Ambient	2
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	No	Yes	Yes	Remove and replace ceiling tiles
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:**  
 - 2 stained ceiling tiles  
 - 4 potted plants

**Recommendations:**

**Site Based Maintenance:**  
 - Remove and replace stained ceiling tiles  
 - Remove potted plants.  
 - 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 for cause of stained ceiling tiles and repair as appropriate

**Previous work orders - J279957 and EQ00926, 927 and 928 - However, appears leak not repaired**

**Note:** Plants are often pleasant additions to trouble free indoor environments. However, they can be sources for contamination by molds. Often they can be a source of water, which leads to the amplification of mold in the building. Their presence in a building or an area that is experiencing air quality concerns can be confusing and confounding. The simple and most direct solution is to remove the plants.

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Royal Palm Elementary School

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Evaluation Date October 25, 2007

Outdoor Conditions      Temperature 85.6      Relative Humidity 61      Ambient CO2 467

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">134C</span>	<span style="border: 1px solid black; padding: 2px;">76.1</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">55.8</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">636</span>	<span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">1</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<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;">@ 2 square feet</span>	
Ceiling Type	<span style="border: 1px solid black; padding: 2px;">Plaster</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;">@ 2 square feet</span>		
Wall Type	<span style="border: 1px solid black; padding: 2px;">Plaster</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>		
Flooring	<span style="border: 1px solid black; padding: 2px;">12 x 12 Vinyl</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>		

	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;">Clean as appropriate</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;">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>
HVAC Supply Grills	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;">N/A</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;"></span>	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;">N/A</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; padding: 2px;"></span>

**Observations**

**Findings:**

- Minor dust and debris on ceiling
- Visible microbial growth on ceiling (@ 2 square feet)
- Visible microbial growth on chair
- A/C return not operational
- Grid around vent is rusted and paint is bubbling

**Recommendations:**

**Site Based Maintenance:**

- Clean ceiling as appropriate to remove dust and debris and microbial growth
- Clean chair 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 HVAC for proper operation and repair as appropriate
- Evaluate cause of rusted vent bubbling paint and stained ceiling material and repair as appropriate

**Previous work orders - J279957 and EQ00926, 927 and 928**