

RISK MANAGEMENT...

managing risk with responsibility

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Risk Management Department

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March 17, 2008

Signature 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 301, 302, 303, 304 and 305

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

On February 29, 2008 I conducted an assessment of FISH 301, 302, 303, 304 and 305 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, 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 2861
 Evaluation Requested February 15, 2008
 Evaluation Date February 29, 2008

Pines Lakes Elementary School

Time of Day 3:15 pm

Outdoor Conditions Temperature 71.9 Relative Humidity 56.5 Ambient CO2 444

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
301	66.8	72 - 78	61.4	30% - 60%	659	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Yes		Yes		No		2 ceiling tiles	
Ceiling Type	2 x 4 Lay In		Yes	No	2 ceiling tiles		
Wall Type	Tackable/Plaster		No	No	None		
Flooring	12 x 12 Vinyl		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Remove and replace stained tiles
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Clean 8' x 10' Rug
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant solution
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	No	Yes	Yes	Clean as appropriate
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Musty odor in room. Butterfly net farm with 11 butterflies equipped with sugar water bottles and orange wedges. Possible source of dander and airborne pollutants.
- 2 stained ceiling tiles
- Dust and debris on HVAC supply grills and on ceiling at supply grills
- Dust build up on environmental surfaces
- Temperature was low and humidity level was slightly elevated
- Dust and dirt build up on 8' x 10' rug in room

Recommendations:

Site Based Maintenance:

- Encourage occupant to remove butterfly farm from indoor occupied spaces
- Remove and replace stained ceiling tiles. If stains return, contact Physical Plant Operations to generate a work order to evaluate cause.
- Clean HVAC supply grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Clean environmental surfaces throughout the room
- Adjust thermostat to increase temperature which will in turn lower the humidity level
- Thoroughly clean 8' x 10' rug with extraction machine
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

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Time of Day 3:15 pm

Outdoor Conditions Temperature 71.9 Relative Humidity 56.5 Ambient CO2 444

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
302	66.3	72 - 78	64.6	30% - 60%	669	Max 700 > Ambient	2
Noticeable Odor	Yes		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		Yes	No	1 ceiling tile		
Wall Type	Tackable/Plaster		No	No	None		
Flooring	12 x 12 Vinyl		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Remove and replace stained tiles
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Clean and sanitize
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant solution
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	No	Yes	Yes	Clean as appropriate
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Musty odor in room. Butterfly net farm with 6 butterflies equipped with sugar water bottles and orange wedges. Possible source of dander and airborne pollutants.
- 1 stained ceiling tiles
- Dust and debris on HVAC supply grills and ceiling at supply grills
- Dust build up on environmental surfaces
- Temperature was low and humidity level was slightly elevated
- Dust and dirt build up on floor
- **FISH 305** (AHU) - A/C filters not taped together. Condensation on chilled water lines causing rust on AHU

Recommendations:

Site Based Maintenance:

- Encourage occupant to remove butterfly farm from indoor occupied spaces
- Remove and replace stained ceiling tiles. If stains return, contact Physical Plant Operations to generate a work order to evaluate cause.
- Clean HVAC supply grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Clean environmental surfaces throughout the room
- Adjust thermostat to increase temperature which will in turn lower the humidity level
- Thoroughly clean and sanitize floor
- **FISH 305** (AHU) - Tape A/C filters together
- 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 chilled water lines for AHU in **FISH 305** and repair as appropriate

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
303	66.1	72 - 78	64.9	30% - 60%	668	Max 700 > Ambient	2
Noticeable Odor	Yes		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Tackable/Plaster		No	No	None		
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	No	Yes	Yes	Clean with Wexcide disinfectant solution
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Musty odor in room. Butterfly net farm with 7 butterflies equipped with sugar water bottles and orange wedges. Possible source of dander and airborne pollutants.
- Dust and debris on HVAC supply grills
- Temperature was low and humidity level was slightly elevated

Recommendations:

Site Based Maintenance:

- Encourage occupant to remove butterfly farm from indoor occupied spaces
- Clean HVAC supply grills with Wexcide disinfectant solution
- Adjust thermostat to increase temperature which will in turn lower the humidity level
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

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Outdoor Conditions Temperature 71.9 Relative Humidity 56.5 Ambient CO2 444

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
304	68.1	72 - 78	63.3	30% - 60%	792	Max 700 > Ambient	23
Noticeable Odor	Yes		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Tackable/Plaster		No	No	None		
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	No	Yes	Yes	Clean with Wexcide disinfectant solution
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant solution
Ceiling at Supply Grills	No	Yes	Yes	Clean as appropriate
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Musty odor in room. Butterfly net farm with 3 (1 dead) butterflies equipped with sugar water bottles and orange wedges. Possible source of dander and airborne pollutants.
- Dust and debris on HVAC supply and return grills and on ceiling at supply grills
- Temperature was low and humidity level was slightly elevated

Recommendations:

Site Based Maintenance:

- Encourage occupant to remove butterfly farm from indoor occupied spaces
- Clean HVAC supply and return grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Adjust thermostat to increase temperature which will in turn lower the humidity level
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate