

RISK MANAGEMENT...

managing risk with responsibility

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Risk Management Department

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January 14, 2008

Signature on File

TO: Ms. Mary Lou Ridge,, Principal
Bethune Elementary School

FROM: Robert Krickovich, Coordinator, LEA
Facilities and Construction Management

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 850, 851, 852 and **Portable 122C**

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

On January 8, 2008 I conducted an assessment of FISH 850, 851, 852 and Portable 122C at **Bethune 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 754-321-1638.

cc: Dr. Joel Herbst, Area Superintendent
Steven Friedman, Area Director
Jeffrey S. Moquin, Director, Risk Management
Bob Sharps, Project Manager, Facilities and Construction Management
Jamie Daniels, 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

RK/tc
Enc.

IAQ Assessment

Location Number 0341
 Evaluation Requested January 7, 2008
 Evaluation Date January 8, 2008

Bethune Elementary School

Time of Day 12:00 pm

Outdoor Conditions Temperature 78 Relative Humidity 51.6 Ambient CO2 431

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
850	71.3	72 - 78	69.3	30% - 60%	705	Max 700 > Ambient	4
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		1 ceiling tile	
Ceiling Type	2 x 4 Lay In		Yes	No	1 ceiling tile		
Wall Type	Drywall		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 ceiling tile
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	No	Yes	Yes	Clean as appropriate
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Roofers were on site at the time of the assessment
- 1 stained ceiling tile
- Dust and debris on HVAC supply grills and on ceiling at HVAC supply grills
- Humidity level was elevated
- Dust and debris on A/C filters

Recommendations:

Site Based Maintenance:

- Remove and replace stained ceiling tile
- Clean HVAC supply grills with Wexcide disinfectant solution and clean ceiling at HVAC supply grills
- Remove and replace A/C filters
- 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 system for proper operation and repair as appropriate to lower humidity level

NOTE: EQ01115 generated for corrective action

IAQ Assessment

Location Number 0341
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 Evaluation Date January 8, 2008

Bethune Elementary School

Time of Day 12:00 pm

Outdoor Conditions Temperature 78 Relative Humidity 51.6 Ambient CO2 431

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
851	72.2	72 - 78	71.4	30% - 60%	643	Max 700 > Ambient	4
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Yes		Yes		No		2 ceiling tile	
Ceiling Type	2 x 4 Lay In		Yes	No	2 ceiling tile		
Wall Type	Drywall		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 ceiling tiles
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	No	Yes	Yes	Clean as appropriate
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Roofers were on site at the time of the assessment
- 2 stained ceiling tiles
- Dust and debris on HVAC supply grills and on ceiling at HVAC supply grills
- Humidity level was elevated
- Dust and debris on A/C filters

Recommendations:

Site Based Maintenance:

- Remove and replace stained ceiling tiles
- Clean HVAC supply grills with Wexcide disinfectant solution and clean ceiling at HVAC supply grills
- Remove and replace A/C filters
- 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 system for proper operation and repair as appropriate to lower humidity level

NOTE: EQ01115 generated for corrective action

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Bethune Elementary School

Time of Day 12:00 pm

Outdoor Conditions Temperature 78 Relative Humidity 51.6 Ambient CO2 431

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
852	71.6	72 - 78	69.5	30% - 60%	595	Max 700 > Ambient	20
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Yes		Yes		Yes		5 stained/ 1 with growth	
Ceiling Type	2 x 4 Lay In		Yes	Yes		5 stained/ 1 with growth	
Wall Type	Drywall		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 ceiling tiles
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
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:

- Roofers were on site at the time of the assessment
- 5 stained ceiling tiles and 1 with visible microbial growth
- Water leak on drain pipe under right sink
- Visible growth under sink, on furnishings, wood shelving, vinyl mats, etc.
- Excess growth inside electrical panel cover
- Dust and debris on HVAC supply grills and on ceiling at HVAC supply grills
- Humidity level was elevated
- Dust and debris on A/C filters

Recommendations:

Site Based Maintenance:

- Remove and replace stained ceiling tiles
- Clean HVAC supply grills with Wexcide disinfectant solution and clean ceiling at HVAC supply grills
- Remove and replace A/C filters
- 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 leak on drain pipe under right sink and repair cabinet and wall material as appropriate
- Evaluate drywall above ceiling in the back of the room between sink and door and repair/replace as appropriate
- Evaluate HVAC system for proper operation and repair as appropriate to lower humidity level
- Provide custodial assistance to wipe down all surfaces and items in the room
- Clean inside of electrical panel to remove microbial growth

NOTE: EQ01115 generated for corrective action

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Time of Day 12:00 pm

Outdoor Conditions Temperature 78 Relative Humidity 51.6 Ambient CO2 431

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
P-122C		72 - 78		30% - 60%		Max 700 > Ambient	
Noticeable Odor 		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type							
Wall Type							
Flooring							

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Walls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Flooring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HVAC Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ceiling at Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Surfaces in Room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Observations

Findings:

- Complaint of visible growth on exterior of portable
- Green mossy growth on exterior windows on North side of portable - one area the size of a dime and another on the bottom of the glass in the door about 1/4" x 6" on the silicone caulk. Note: Growth is naturally occurring in the outdoor environment.

Recommendations:

Site Based Maintenance:

- Clean exterior of portable monthly or as needed to remove excess growth
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate