

RISK MANAGEMENT...

managing risk with responsibility

Aston A. Henry, Supervisor
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October 12, 2009

Signature on File

TO: Mr. Bruce Voelkel, Principal
Banyan Elementary School

FROM: Edward See, Project Manager
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 851, 854, 855 and 856

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

On October 6, 2009 I conducted an assessment of FISH 851, 854, 855 and 856 at **Banyan 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. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. 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 754-321-1900.

cc: Dr. Leontine Butler, Area Superintendent
Dr. Desmond Blackburn, Area Director
Jeffrey S. Moquin, Executive Director, Support Operations
Aston Henry, Supervisor, Risk Management
Pierre Dougniaux, Project Manager, Facilities and Construction Management
Ruby Fitzgerald, 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 2001

Banyan Elementary School

Evaluation Requested September 24, 2009

Time of Day 2:30 pm

Evaluation Date October 6, 2009

Outdoor Conditions Temperature 91.2 Relative Humidity 56.4 Ambient CO2 446

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
851	72.7	72 - 78	49.8	30% - 60%	548	Max 700 > Ambient	1
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 stained ceiling tile
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:

- One stained ceiling tile
- 2" x 2" hole in outside West wall

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

Facilities and Construction Management:

- Contractor to evaluate and repair exterior of portable as necessary to prevent water intrusion
- Contractor to evaluate and repair interior of portable, including replacement of stained ceiling tiles

Note - this information is not intended to be used exclusively as identification of the water damaged material in the classrooms and the contractor will make the final determination based on their own thorough investigation of the classrooms.

IAQ Assessment

Location Number 2001

Banyan Elementary School

Evaluation Requested September 24, 2009

Time of Day 2:30 pm

Evaluation Date October 6, 2009

Outdoor Conditions Temperature 91.2 Relative Humidity 56.4 Ambient CO2 446

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
854	70.1	72 - 78	55.2	30% - 60%	483	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		3 ceiling tiles	
Ceiling Type	2 x 4 Lay In		Yes	No		3 ceiling tiles	
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 stained 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:

- Three stained ceiling tiles
- Minor bubbling paint on North wall adjacent to stained ceiling tiles

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

Facilities and Construction Management:

- Contractor to evaluate and repair exterior of portable as necessary to prevent water intrusion
- Contractor to evaluate and repair interior of portable, including replacement of stained ceiling tiles

Note - this information is not intended to be used exclusively as identification of the water damaged material in the classrooms and the contractor will make the final determination based on their own thorough investigation of the classrooms.

IAQ Assessment

Location Number 2001

Banyan Elementary School

Evaluation Requested September 24, 2009

Time of Day 2:30 pm

Evaluation Date October 6, 2009

Outdoor Conditions Temperature 91.2 Relative Humidity 56.4 Ambient CO2 446

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
855	73.1	72 - 78	59.4	30% - 60%	446	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		4 ceiling tiles	
Ceiling Type	2 x 4 Lay In		Yes	No		4 ceiling tiles	
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 stained 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:

- Four stained ceiling tiles
- Minor bubbling paint on South wall adjacent to stained ceiling tiles
- 2" x 2" hole in outside West wall

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

Facilities and Construction Management:

- Contractor to evaluate and repair exterior of portable as necessary to prevent water intrusion
- Contractor to evaluate and repair interior of portable, including replacement of stained ceiling tiles

Note - this information is not intended to be used exclusively as identification of the water damaged material in the classrooms and the contractor will make the final determination based on their own thorough investigation of the classrooms.

IAQ Assessment

Location Number 2001
 Evaluation Requested September 24, 2009
 Evaluation Date October 6, 2009

Banyan Elementary School

Time of Day 2:30 pm

Outdoor Conditions Temperature 91.2 Relative Humidity 56.4 Ambient CO2 446

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
856	73.6	72 - 78	73.6	30% - 60%	585	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		5 ceiling tiles	
Ceiling Type	2 x 4 Lay In		Yes	No	5 ceiling tiles		
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 stained 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:

- Five stained ceiling tiles
- Elevated moisture content in South wall with peeling paint.
- Hole in outside East wall

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

Facilities and Construction Management:

- Contractor to evaluate and repair exterior of portable as necessary to prevent water intrusion
- Contractor to evaluate and repair interior of portable, including replacement of stained ceiling tiles

Note - this information is not intended to be used exclusively as identification of the water damaged material in the classrooms and the contractor will make the final determination based on their own thorough investigation of the classrooms.