

Aston A. Henry, Supervisor
Risk Management Department

Telephone: 754 321-1900
Fax: 754 321-1917

August 12, 2009

Signature on File

TO: Mr. Lincoln Pasteur, Principal
Collins Elementary School

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

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 311, 312, 403, 503, 506, 606 and 707

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

On August 11, 2009 I conducted an assessment of FISH 311, 312, 403, 503, 506, 606 and 707 at **Collins Elementary School**. The assessment consisted of a reevaluation walkthrough of the previously identified areas to assess the current condition of the location with regard to indoor air quality. This assessment included reviewing previously generated work orders, if applicable, as well as observation of the area of concern as stated in the IAQ Assessments performed on October 21, 2008 and May 15, 2009. 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 754-321-1638.

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

RK/tc
Enc.

IAQ Assessment

Collins Elementary School

Location Number 0331
 Evaluation Requested August 10, 2009
 Evaluation Date August 11, 2009

Time of Day 10:15 am

Outdoor Conditions Temperature 84.8 Relative Humidity 63.6 Ambient CO2 454

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
311	75.3	72 - 78	61.7	30% - 60%	451	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		2 stained and 1 missing tile	
Ceiling Type	2 x 4 Lay In		Yes	No		@15 square feet	
Wall Type	Drywall		Yes	No		@15 square feet	
Flooring	12 x 12 Vinyl		No	No		None	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Replace ceiling tiles
Walls	No	Yes	Yes	Repair/replace wall material
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:
 - Elevated moisture content in wall near door to FISH 312 (4 feet out from door to 1 foot past wall angle 3 feet high) - @15 square feet.
 - 2 stained ceiling tiles and one missing. Recent roof repair was completed, however, there appears to be an additional leak.

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 for cause of stained ceiling tiles and repair as appropriate. Roof repair recently completed, however, may be additional leak. Replace ceiling tiles as necessary.
 - Repair/replace wet wall material near door to FISH 312 - @15 square feet

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Evaluation Date August 11, 2009

Outdoor Conditions Temperature 84.8 Relative Humidity 63.6 Ambient CO2 454

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
312	77.1	72 - 78	60.7	30% - 60%	472	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		2 stained and 2 missing tile	
Ceiling Type	2 x 4 Lay In		Yes	No		behind door	
Wall Type	Drywall		Yes	No			
Flooring	12 x 12 Vinyl		No	No		None	

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

Observations

Findings:

- Spotting on wall surfaces and water damaged paint on wall behind door - wall is dry.
- Dust and debris on floor
- Dust and debris on HVAC supply grills
- No air flow in the room - A/C does not appear to be working
- 2 stained ceiling tiles and two missing. Recent roof repair was completed.
- Dust build up on surfaces throughout the room

Recommendations:

Site Based Maintenance:

- Clean wall surfaces with Wexcide disinfectant solution
- Clean and sanitize floor
- Clean HVAC supply grills with Wexcide disinfectant solution
- Thoroughly clean all surfaces throughout the room
- 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:

- Replace ceiling tiles as necessary.
- Repair/replace water damaged wall material behind door
- Paint entire room with anti-microbial coating
- Evaluate HVAC system for proper operation and repair as appropriate

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403	76.3	72 - 78	53.7	30% - 60%	444	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="checkbox"/> Yes		<input type="checkbox"/> No		<input type="checkbox"/> No		<input type="checkbox"/> None	
Ceiling Type	<input type="checkbox"/> Tectum		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> None		
Wall Type	<input type="checkbox"/> Plaster/Drywall		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> None		
Flooring	<input type="checkbox"/> 12 x 12 Vinyl		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	Yes	No	No	<input style="width: 100%;" type="text"/>
Walls	Yes	No	No	<input style="width: 100%;" type="text"/>
Flooring	No	Yes	Yes	Clean and sanitize
HVAC Supply Grills	Yes	No	No	<input style="width: 100%;" type="text"/>
HVAC Return Grills	Yes	No	No	<input style="width: 100%;" type="text"/>
Ceiling at Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A - Floor mounted fan coil unit
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Excessive clutter in room. Dust build up on surfaces throughout the room.
- Dust and debris on floor
- Odor in room from A/C unit

Recommendations:

Site Based Maintenance:

- Advise occupant to reduce clutter in room to assist with cleaning efforts. Thoroughly clean all surfaces throughout the room.
- Clean and sanitize floor
- 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:

- Thoroughly clean interior of fan coil unit - A/C

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503	73.1	72 - 78	57.3	30% - 60%	451	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		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	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills				N/A - Floor mounted fan coil unit
Surfaces in Room	Yes	No	No	

Observations

Findings:
 - Musty odor in room - wall material over fan coil unit is damp

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:
 - Thoroughly clean interior of fan coil unit - A/C
 - Repair/replace wall material over fan coil unit with moisture resistant materials. Air from fan coil unit is blowing directly on homasote causing condensation on/in wall.

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
506	74.8	72 - 78	55.4	30% - 60%	452	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Yes		No		No		None	
Ceiling Type	Tectum		No	No		None	
Wall Type	Homasote/Tackboard		Yes	No		Under windows	
Flooring	12 x 12 Vinyl		No	No		None	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	Yes	No	No	
Walls	No	Yes	Yes	Repair/replace wall material
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills				N/A - Floor mounted fan coil unit
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Water damaged wall under windows

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 for cause of water intrusion at windows and repair as appropriate. Remove cabinet under window and repair/replace water damaged wall material as necessary.

- Thoroughly clean interior of fan coil unit - A/C

IAQ Assessment

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Location Number
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 Evaluation Date

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="606"/>	<input type="text" value="74.6"/>	<input type="text" value="72 - 78"/>	<input type="text" value="51.6"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="508"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="3"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>	
Ceiling Type	<input type="text" value="Tectum"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Homasote/Tackboard"/>		<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"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N/A - Floor mounted fan coil unit"/>
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 at the time of the assessment

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

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
707	74.6	72 - 78	50.8	30% - 60%	456	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Yes		No		No		None	
Ceiling Type	Tectum		No	No	None		
Wall Type	Homasote/Tackboard		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	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills				N/A - Floor mounted fan coil unit
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Musty odor in room

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:

- Thoroughly clean interior of fan coil unit - A/C