

# managing risk with responsibility

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Jeffrey S. Moquin, Director Risk Management Department

November 7, 2008		Signature on File	For Custodial Supervisor Use Only				
TO:		oln Pasteur, Principal Elementary School	Custodial Issues Addressed Custodial Issues Not Addressed				
FROM:		See, Project Manager nagement Department					
SUBJECT:	Indoor A	ir Quality (IAQ) Assessment					

On October 21, 2008 I conducted an assessment of FISH 201, 311A, 503, 506, 606 and 710 at Collins 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.

FISH 201, 311A, 503, 506, 606 and 710

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
 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
 Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

ES/tc Enc.

<u> </u>	(	Collins Elem	entary School		Evaluat	ion Requested	Octobe	er 7, 2008
Time of Day					E	Evaluation Date	Octobe	r 21, 2008
Outdoor Condit	ions Te	— emperature	83.5	Relative Humidi	ty 61.7	Ambie	nt CO2	405
r:-t T	omporatura	_						
Fish T 201	emperature 71	Range 72 - 78	Relative Humidity 51.7		<b>CO2</b> 846	Ran	ge # > Ambien	Occupants t 10
		72 - 78	Visible water	30% - 60% Visible mid				10
Noticeable Ode	or No		damage / staining			Amount of mat affected	teriai	
Ceiling Type	2 x 4	1	Yes	No		2 ce	eiling tiles	
Wall Type	Drywall/P	laster	No	No			None	
Flooring	Carpe	et	No	No			None	
	Clean	Minor D		ſ	Correc	ctive Action Re	equired	
Ceiling	No	Yes	Yes		Remove a	and replace cei	ling tiles	
Walls	Yes	No	No					
Flooring	Yes	No	No					
HVAC Supply (	Grills Yes	No	No					
HVAC Return G	Grills Yes	No	No					
Ceiling at Supp Grills	oly Yes	No	No					
Surfaces in Ro	om Yes	No	No					
)hservations								
appropriate  Facilities and C	ons:  htenance: place stained nitor this locat  onstruction I	ceiling tiles ion for any s Managemen	signs of microbial g					

0331

**Location Number** 

	Со	llins Elemen	tary School		Evaluat	ion Requested	October 7, 2008
Time of Day					E	Evaluation Date	October 21, 2008
Outdoor Condi	tions Tem	perature [	83.5	Relative Humidi	ty 61.7	Ambier	nt CO2 405
Fish 311A			elative Humidity	Range	<b>CO2</b> 552	Rang	
Noticeable Od		2 - 78	Visible water	30% - 60% Visible mid	crobial	Amount of mate	
Ceiling Type		a	amage / staining Yes	? growt	n? ]	affected Areas adja	acent to supply
Wall Type	Drywall/Plas	ster	No	No	]	ı	None
Flooring	Wood		No	No	]		None
	Clean	Minor Dus	st Needs Cleaning		Correc	ctive Action Re	quired
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 Sup Grills	ply No	Yes	Yes		Repair/re	eplace ceiling n	naterial
Surfaces in Ro	oom No	Yes	Yes		Clean wit	h Wexcide disi	nfectant
bservations							

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**Location Number** 

# 0

- Storage area off of stage. Surplus furniture being stored in room.
- Minor microbial growth on items in the room (clipboards, projector, etc.)
- Staining and visible microbial growth on ceiling at HVAC supply grills
- Humidity level was slightly elevated at the time of the assessment

# Recommendations:

# Site Based Maintenance:

- Wipe down nonporous items with Wexcide disinfectant solution. Discard porous items that cannot be cleaned.
- 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 cause of stained ceiling material at HVAC supply grills and repair as appropriate. Repair/replace ceiling material as
- Evaluate HVAC for proper operation and repair as appropriate to lower humidity level

	C	Collins Eleme	ntary School		Evaluati	ion Requested	October 7, 2008
Time of Day		]			E	Evaluation Date	October 21, 2008
Outdoor Condit	ions Te	mperature	83.5	Relative Humidity	61.7	Ambient	CO2 405
Fish T	emperature	Range F	Relative Humidity	Range	CO2	Range	# Occupants
503	73.8	72 - 78	68.3	30% - 60%	1354	Max 700 > A	Ambient 18
Noticeable Odd	or Yes	]	Visible water damage / staining	Visible micro growth?		Amount of materi affected	al
Ceiling Type	Tectur	n	Yes	No		Vari	ious
Wall Type	Tackab	le	Yes	No		Vari	ous
Flooring	12 x 12 V	inyl	No	No		No	one
	Clean	Minor Du / Debris			Correc	ctive Action Requ	ired
Ceiling	No	Yes	Yes		Repair/r	eplace as approp	riate
Walls	No	Yes	Yes		Repair/r	eplace as approp	riate
Flooring	Yes	No	No				
HVAC Supply 6	Grills Yes	No	No				
HVAC Return G	Grills Yes	No	No				
Ceiling at Supp Grills	oly					N/A	
Surfaces in Roo	om Yes	No	No				

0331

**Location Number** 

# **Observations**

#### Findings:

- Odor in room from Wexcide
- A/C 2 individual floor vents and outside intakes are low to the ground (less than 1 foot)
- A/C drain pipes are inverted
- Humidity and CO2 were slightly elevated at the time of the assessment
- Visible staining on ceiling material
- Wall material under windows and in Southwest corner is effervescing

#### 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 cause of stained ceiling and repair as appropriate. Repair/replace ceiling material as necessary.
- Evaluate cause of wall material effervescing under windows and in Southwest corner and repair as appropriate. Repair/replace wall material as necessary.
- Evaluate HVAC for proper operation and repair as appropriate to lower humidity and CO2 level
- Evaluate A/C drain pipes and position of outside A/C intake

	Co	ollins Elementar	y School		Evaluati	on Requested [	October 7, 2008	
Time of Day					E	valuation Date	October 21, 2008	
Outdoor Condi	itions Tem	nperature 8	3.5	Relative Humidity	61.7	Ambier	nt CO2 405	
Fish	Temperature <sub>I</sub>	Daniel Balan	(l		200		<b>"</b> • • • • • • • • • • • • • • • • • • •	
506	· ·	Range Relat	64.7	Range 30% - 60%	<b>CO2</b> 907	Rang Max 700	ge # Occupants > Ambient 12	
Noticeable Oc		<b>V</b>	/isible water age / staining	Visible micro		Amount of mate		
Ceiling Type	Tectum		Yes	No	[		arious	
Wall Type	Tackable	<del></del>	No	No	[		None	
Flooring	12 x 12 Vir	nyl	No	No			None	
	Clean	Minor Dust / Debris	Needs Cleaning		Correc	tive Action Re	quired	
Ceiling	No	Yes	Yes		Repair/re	eplace as appro	opriate	
Walls	Yes	No	No					
Electing	Yes	No	No					
Flooring	res	NO	NO					
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	pply					N/A		
Surfaces in Ro	oom Yes	No	No					
bservations								
- Humidity level	room ntakes are 2 feet a was slightly elev g on ceiling mate	ated at the time		sment				
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							
- Evaluate HVA	e of stained ceilir	ation and repair		Repair/replace ceili te to lower humidity		rial as necessary	<i>/</i> .	

0331

**Location Number** 

	Co	ollins Elementa	ry School		Evaluation	Requested	Octobe	17,2008
Time of Day					Eval	uation Date	October	21, 2008
Outdoor Condi	tions Tem	perature	33.5	Relative Humidity	61.7	Ambien	it CO2	405
Fish		Range Rela	tive Humidity	Range	CO2	Rang	je #	Occupants
606	73.5 <b>7</b>	2 - 78	64.4	30% - 60%	1418	Max 700 >	- Ambient	22
Noticeable Od	lor No		/isible water nage / staining	Visible micro growth?		mount of mate affected		
Ceiling Type	Tectum		Yes	No		2 sq	uare feet	
Wall Type	Tackable/Hom	nasote	No	No		ı	lone	
Flooring	12 x 12 Vir	nyl	No	No			None	
	Clean	Minor Dust / Debris	Needs Cleaning		Correctiv	e Action Red	quired	
Ceiling	No	Yes	Yes		Repair/repl	ace as appro	priate	
Walls	Yes	No	No					
Flooring	Yes	No	No					
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in Ro	oom Yes	No	No					
bservations								
Findings:								

0331

**Location Number** 

# 0

- Humidity and CO2 level were slightly elevated at the time of the assessment
- Visible staining on ceiling material @2 square feet above dry erase board

# 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 cause of stained ceiling and repair as appropriate. Repair/replace ceiling material as necessary.
- Evaluate HVAC for proper operation and repair as appropriate to lower humidity and CO2 level

			Collins Eler	nentary School		Evalua	ation Requested	Octobei	7, 2008
Time of Day							<b>Evaluation Date</b>	October	21, 2008
Outdoor Condi	itions	To	— emperature	83.5	Relative Hur	nidity 61	.7 Ambie	nt CO2	405
Fish	Tempei	rature	Range	Relative Humic	lity Banas	CO2	Ran		Occupants
710	-	6.1	72 - 78	61.9	30% - 60%	1507		ye # > Ambient	
Noticeable Oc	lor [	No	 	Visible wat		microbial	Amount of ma		
				damage / stair	_	owth?	affected	Na	
Ceiling Type		Tectu		No		No		None	
Wall Type		Tacka		Yes		No	Under No	rtheast wind	iow
Flooring	1	12 x 12	Vinyl	No		No		None	
Clean Minor Dust Needs Corrective Action Required / Debris Cleaning									
Ceiling		Yes	No	No					
Walls		No	Ye	Yes	3	Repair	/replace as appr	opriate	
Flooring		Yes	No	No					
HVAC Supply	Grills	Yes	No	No					
HVAC Return	Grills	Yes	No	No					
Ceiling at Sup Grills	ply						N/A		
Surfaces in Ro	oom	Yes	No	No					
) bservations									
- Wall material of Recommendat  Site Based Mal - Continue to mappropriate  Physical Plant - Evaluate caus necessary.	ions: intenar onitor to Opera e of wa	nce: his loca tions:	et window is	signs of microbia	al growth as well a	repair as app	debris accumulation propriate. Repaira O2 level		

0331

**Location Number**