

June 13, 2012

TO:

# managing risk with responsibility

Aston A. Henry, Supervisor Risk Management Department

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

Signature on File

**Country Isles Elementary School** 

FROM: Robert Krickovich, Coordinator I, LEA

Tonya Frost, Principal

Facilities and Construction Management

SUBJECT: Indoor Air Quality (IAQ) Assessment

For	Custodial Supervisor Use Only
	Custodial Issues Addressed
	Custodial Issues Not Addressed
_	

On June 12, 2012, I conducted an assessment at Country Isles Elementary School. Attached are findings and recommendations for further assessment, remediation, or corrective actions 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. 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 site based custodial 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 us at 754-321-1907.

Area Superintendent cc:

Area Directors

Shelley Meloni, Executive Director, Facilities and Construction Management Mark Dorsett, Acting Director, Physical Plant Operations Division, Maintenance Sonja Coley, Project Manager III, Facilities and Construction Management Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division Aston Henry, Supervisor, Risk Management Broward Teachers Union

Federation of Public Employees

RK/tc Enc.

Country isles Elementary Eval	uation Date	June 12, 2012	Time of Day	1.00	
Outdoor Conditions Temperature 93.9	Relative Humi	dity 39.4	Ambient CO2 4	21	
Fish         Temperature         Range         Relative Hum           850         75.0         72 - 78         50.1	aidity Range 30% - 60%	co <sup>2</sup> 398		ccupants 1	
Noticeable Odor No Visible water da staining?	mage /	ible microbial growth?	Amount of material affected		
Ceiling 2' X 4' Lay in No		No			
Walls Drywall No		No			
Flore: 40% (40%) (invit					
Floor 12 x 12 vinyi No		No			
Ceiling Clean  Yes  Walls Clean  Flooring Clean  No  HVAC Sure Grills Clean  Inside of Duct Clean	Supply Vos	<b>-</b>	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A	
Room Surfaces No Ceiling at Clean Grills Cle					
Trash Removed Yes Exhaust Fans	_	<b>-</b> -	Unapproved Chemicals / Cleaners in Room	No	
Signs of Pests No Drain Tr	raps Wet Yes	<u>3</u>	Air Frankanara	□ Na □	
Room Cluttered No Food if Stored in in Sealed Contain	I NI/A		Air Fresheners in Room	No	
Mechanical Equipment Location Bard Unit in Classro	om		Mechanical Room Clean	N/A	
Filters Installed Properly Yes Filter	s Clean No		Inside of HVAC Unit Clean	N/A	
Condensate Pan Clean N/A Cooling Co	oil Clean N/A				
Fresh Air Intake Location Outside of classroom	n	▼	Fresh Air Intake Free of Obstruction	Yes	
Pollutant Sources Near Air Intake		▼			
Observations			. A. eu		
Heavy dust on surfaces - heavy dust / debris on floor in the control of the contr	in corners and a	iround edges of	room - Air filters dirty		
Fans/lights in bathrooms were left on.					
Cracks in exterior walls around the entire building					
Corrective Actions to be Completed by Site Based Staff  Corrective Actions to be Completed by PPO					
Clean HVAC supply and return grills with Wexcide ▼ Repair HVAC to reduce humidity level ▼					
Clean ceilings around HVAC supply grills			ated compared to outdoo		
Thoroughly clean all surfaces	_	uate and repair	exterior of building (cracl		
Thoroughly clean and sanitize flooring	<b>V</b>			<b>▼</b>	
Remove and replace A/C filters	<b>▼</b>			▼	

Ensure fans/lights are off when unoccupied

Country Isles Ele	ementary Evaluation Dat	te June 12, 2012	Time of Day	1:00
Outdoor Conditions Temperatu	re 93.9 Relative	Humidity 39.4	Ambient CO2 4	21
Fish         Temperature         Rang           851         73.2         72 - 7	·	Range CO <sup>2</sup> % - 60%	Range # 00 MAX 700 > Ambient	ccupants 1
Noticeable Odor No  Ceiling 2' X 4' Lay in  Walls Drywall  Floor 12" x 12" Vinyl	Visible water damage / staining? No No No	Visible microbial growth?  No  No  No	Amount of material affected	
Ceiling Clean Yes Walls Clean Yes Flooring Clean No Room Surfaces No Clean	HVAC Supply Grills Clean Inside of Supply Duct Clean Ceiling at Supply Grills Clean	No Yes No	HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Trash Removed Yes  Signs of Pests No  Room Cluttered No	Exhaust Fans Working  Drain Traps Wet  Food if Stored in Room is in Sealed Containers	Yes Yes N/A	Unapproved Chemicals / Cleaners in Room Air Fresheners in Room	No No
Mechanical Equipment Location B Filters Installed Properly Yes Condensate Pan Clean N/A	ard Unit in Classroom  Filters Clean  Cooling Coil Clean	No N/A	Mechanical Room Clean Inside of HVAC Unit Clean	N/A
Pollutant Sources Near Air	outside of classroom	▼	Fresh Air Intake Free of Obstruction	Yes
Observations				
Heavy dust on surfaces - heavy du Thermostat display indicates to "cl Fans/lights in bathrooms were left	hange filters" - Plants growii		room - Air filters dirty	
- and nyme in valinooms were left	VIII			
Opening the Anthony to be Opening	ad has Oita Bass I Otall			
Close HVAC cumply and return or	<del></del>		ns to be Completed by PF	20  ▼
Clean HVAC supply and return gr	TIIIS WITH WEXCIDE  ▼	Repair HVAC to	reduce humidity level	▼

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼
	▼

Officerive Actions to be completed by 11 C	
Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Clean sink drain / trap	▼
	▼
	▼
	▼
	▼
	▼

Country Isles	Elementary Evaluation Dat	te June 12, 2012	Time of Day1	:00
Outdoor Conditions Tempera	ature 93.9 Relative	e Humidity 39.4	Ambient CO2 42	21
		Range CO <sup>2</sup> 428	Range # Oc MAX 700 > Ambient	cupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 4' Lay in	Yes	No	1 tile	
Walls Drywall	Yes	No	10 square feet	
Floor 12" x 12" Vinyl	No	No		
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
Flooring Clean No	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	N/A
Room Surfaces No Clean	Ceiling at Supply Grills Clean	No		
Trash Removed Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No  Room Cluttered No	Drain Traps Wet Food if Stored in Room is in Sealed Containers	Yes N/A	Air Fresheners in Room	No
Mechanical Equipment Location	Bard Unit in Classroom		Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Outside of classroom	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	Lawn	▼	of Obstruction	
Observations				
Heavy dust on surfaces - heavy of covered with food debris - Air filt of Bard unit - Water damaged wa	ters dirty - Thermostat display	indicates to "change fi	Iters" - Stained ceiling tile	
Fans/lights in bathrooms were le	 eft on.			

## **Corrective Actions to be Completed by Site Based Staff**

Corrective Actions to 20 completed 2, one 2000 of	<u> </u>
Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean stained carpet	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼

#### Corrective Actions to be Completed by PPO

Confective Actions to be Completed by 11 C	
Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Evaluate and repair cause of stained ceiling tiles	▼
Evaluate and repair cause of water damaged wall	▼
material in FISH 852 and 856 (at mop sink)	▼
Remove and replace wall material as necessary	▼
	▼
	▼

Country Isles I	Elementary Evaluation Da	te June 12, 2012	Time of Day1	1:00
Outdoor Conditions Tempera	ture 93.9 Relativ	e Humidity 39.4	Ambient CO2 4	21
	nge Relative Humidity - 78 56.6 30	Range <u>co</u> <sup>2</sup> 0% - 60% 403		ccupants 1
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 4' Lay in	Yes	No	2 tiles	
Walls Drywall	No	No		
Floor 12" x 12" Vinyl				<u> </u>
1.1001 1.2 x 1.2 v 1.1y.	No	No		
Ceiling Clean Yes	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
Walls Clean Yes Flooring Clean No	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	N/A
Room Surfaces No Clean	Ceiling at Supply Grills Clean	No		
Trash Removed Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests Yes	Drain Traps Wet	Yes		
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location	Bard Unit in Classroom		Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Outside of classroom	▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Air Intake	Lawn	▼	or obstruction	
Observations				
Heavy dust on surfaces - heavy on Thermostat display indicates to '				room
Fans/lights in bathrooms were le	ft on.			
Corrective Actions to be Comple	eted by Site Based Staff	Corrective Actio	ns to be Completed by PF	<u> </u>

Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼
	▼

-,	
vel ▼	Repair HVAC to reduce humidity leve
tdoors ▼	Humidity level elevated compared to out
ing tiles ▼	Evaluate and repair cause of stained ceiling
Ants ▼	Generate work order for pest control - A
▼	
▼	
▼	
▼	

Coun	try Isles Eleme	ntary <b>Eval</b> ı	uation Dat	t <b>e</b> June	12, 2012	Time of Day	1:00
Outdoor Conditions 1	Temperature	93.9	Relative	Humidity	39.4	Ambient CO2	421
Fish         Temperatu           858         71.0	re Range 72 - 78	Relative Hum 61.1	$\neg$	Range % - 60%	<b>co</b> <sup>2</sup> 412		Occupants
Noticeable Odor	No	Visible water dar staining?	nage /	Visible m grow		Amount of material affected	
Ceiling 2' X 4' Lay	in	No		N	<u>o</u>		
Walls Drywall		No		No	0		
Floor 12" x 12" Vi	nyl	No		No	0		
Ceiling Clean Yes Walls Clean Yes	_	HVAC Su Grills Cle		No		HVAC Return Grills Clean	No
Flooring Clean No	=	Inside of S Duct Clea		Yes		Inside of Return Duct Clean	N/A
Room Surfaces No Clean		Ceiling at Grills Clea		No			
Trash Removed Yes	=	Exhaust Fans V	_	Yes		Unapproved Chemicals Cleaners in Room	/ No
Signs of Pests No		Drain Tr	aps Wet	Yes		Air Fresheners	No
Room Cluttered No	<u>)</u>	Food if Stored in in Sealed Contain		N/A		in Room	
Mechanical Equipment Lo	ocation Bard	Unit in Classroo	om			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters	s Clean	No		Inside of HVAC Unit Clear	N/A
Condensate Pan Clean	N/A	Cooling Co	il Clean	N/A			
Fresh Air Intake Location	Outs	ide of classroon	n		▼	Fresh Air Intake Free of Obstruction	Yes
Pollutant Sources Near Ai Intake	Lawr	1			▼	or obstruction	
Observations							
Heavy dust on surfaces - Thermostat display indic	•				_	_	
Fans/lights in bathrooms	s were left on.						
Corrective Actions to be	Completed b	y Site Based Sta	aff	Corre	ctive Actio	ns to be Completed by F	PPO
· · · · ·	Clean HVAC supply and return grills with Wexcide ▼ Repair HVAC to reduce humidity level ▼						
Clean ceilings arou	und HVAC sup	oply grills	▼	Humidity	y level elev	ated compared to outdo	ors ▼

Clean HVAC supply and return grills with Wexcide	▼		
Clean ceilings around HVAC supply grills			
Thoroughly clean all surfaces	▼		
Thoroughly clean and sanitize flooring	▼		
Remove and replace A/C filters	▼		
Ensure fans/lights are off when unoccupied	▼		
Ensure toilets are flushed after use	▼		
	▼		

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
	▼
	•
	•
	•
	▼
	▼

Country Isles	Elementary Evaluation Date	e June 12, 2012	Time of Day 1	:00
Outdoor Conditions Tempera	ature 93.9 Relative	Humidity 39.4	Ambient CO2 42	21
		Range CO <sup>2</sup> 421	Range # Oc MAX 700 > Ambient	cupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 4' Lay in	Yes	No	1 tile	
Walls Drywall	Yes	No	10 Sq ft	
Floor 12" x 12" Vinyl	No	No		
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean	No	HVAC Return Grills Clean	No
Flooring Clean No	Inside of Supply Duct Clean	Yes	Inside of Return Duct Clean	N/A
Room Surfaces No Clean	Ceiling at Supply Grills Clean	No		
Trash Removed Yes	Exhaust Fans Working	Yes	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	Yes	Air Fresheners	- No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	in Room	No
Mechanical Equipment Location	Bard Unit in Classroom		Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	No	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location	Outside of classroom	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	Lawn	▼	of Obstruction	
Observations				
Heavy dust on surfaces - heavy Thermostat display indicates to tile right of Bard unit - Throw ru Fans/lights in bathrooms were lo	"change filters" - Water damage g stained - Stained ceiling tile w	ed wall right side of Ba	ard unit - Water damaged	

#### Corrective Actions to be Completed by Site Based Staff

Corrective Actions to be completed by the Based of	
Clean HVAC supply and return grills with Wexcide	▼
Clean ceilings around HVAC supply grills	▼
Thoroughly clean all surfaces	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean stained carpet	▼
Remove and replace A/C filters	▼
Ensure fans/lights are off when unoccupied	▼
	▼

# **Corrective Actions to be Completed by PPO**

Repair HVAC to reduce humidity level	▼
Humidity level elevated compared to outdoors	▼
Evaluate and repair cause of stained ceiling tiles	▼
Evaluate and repair cause of water damaged wall	▼
Remove and replace wall material as necessary	▼
	▼
	▼
	▼

Country Isl	es Elementary	Evaluation Da	te June	12, 2012	Time of Day	1:00
Outdoor Conditions Temp	erature 93.9	Relativ	e Humidity [	39.4	Ambient CO2	421
		ve Humidity 59.2 30	Range )% - 60%	CO <sup>2</sup> 418	Range MAX 700 > Ambient	# Occupants
Noticeable Odor No		ater damage / aining?	Visible m grow		Amount of material affec	
Ceiling 2' X 4' Lay in		No	No			
Walls Drywall		No	No			
Floor 12" x 12" Vinyl		No	No			
Ceiling Clean Yes		/AC Supply ills Clean	No		HVAC Return Grills Clean	No No
Walls Clean Yes Flooring Clean No		side of Supply uct Clean	Yes		Inside of Retu Duct Clean	urn N/A
Room Surfaces No Clean		eiling at Supply Fills Clean	No			
Trash Removed Yes	Exhaus	t Fans Working	Yes		Unapproved Chemic Cleaners in Room	cals / No
Signs of Pests No  Room Cluttered No	Food if St	Orain Traps Wet ored in Room is Containers	Yes N/A		Air Fresheners in Room	No
Mechanical Equipment Location	on Bard Unit in C	lassroom			Mechanical Room C	lean N/A
Filters Installed Properly	′es	Filters Clean	No	ı	Inside of HVAC Unit C	lean N/A
Condensate Pan Clean N/A Cooling Coil Clean N/A						
Fresh Air Intake Location	Outside of cla	ssroom		▼	Fresh Air Intake F	ree Yes
Pollutant Sources Near Air Intake	Lawn			▼		
Observations						
Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Air filters dirty Thermostat display indicates to "change filters"						
Fans/lights in bathrooms were left on.						
Corrective Actions to be Completed by Site Based Staff  Corrective Actions to be Completed by PPO						
Clean HVAC supply and retu					reduce humidity lev	
Clean ceilings around F			Humidity	level eleva	ted compared to ou	
Thoroughly clean	all surfaces	▼				▼

▼

Thoroughly clean and sanitize flooring Remove and replace A/C filters

Ensure fans/lights are off when unoccupied

Country Isles	<u>Elementary</u> <b>Eval</b> u	uation Date	June 12	2, 2012	Time of Day	1:00
Outdoor Conditions Tempera	ature 93.9	Relative I	Humidity	39.4	Ambient CO2	421
	Relative Hum 60.6	i i	ange - 60%	<b>CO</b> <sup>2</sup> 424	Range # ( MAX 700 > Ambient	Occupants
Noticeable Odor No	Visible water dar staining?	mage /	Visible mid growtl		Amount of material affected	
Ceiling 2' X 4' Lay in	No		No	] [		
Walls Drywall  Floor 12" x 12" Vinyl	No No		No	[		
Ceiling Clean Yes Walls Clean Yes Flooring Clean No	HVAC Su Grills Clea Inside of Duct Clea	an Supply	No Yes		HVAC Return Grills Clean Inside of Return Duct Clean	No N/A
Room Surfaces No Clean	Ceiling at Grills Clea	Supply	No			
Trash Removed Yes  Signs of Pests No	Exhaust Fans V		Yes		Unapproved Chemicals Cleaners in Room	/ No
Signs of Pests No  Room Cluttered No	Food if Stored in in Sealed Contain		Yes N/A		Air Fresheners in Room	No
Mechanical Equipment Location	Bard Unit in Classroo	om			Mechanical Room Clean	N/A
Filters Installed Properly  Condensate Pan Clean  N/A	<b>-</b>	s Clean il Clean	No N/A	In	side of HVAC Unit Clear	N/A
Fresh Air Intake Location  Pollutant Sources Near Air Intake	Outside of classroom	n		▼	Fresh Air Intake Free of Obstruction	Yes
Observations						
Heavy dust on surfaces - heavy dust / debris on floor in corners and around edges of room - Air filters dirty Thermostat display indicates to "change filters"						
Fans/lights in bathrooms were left on.						
Corrective Actions to be Completed by Site Based Staff  Corrective Actions to be Completed by PPO						
Clean HVAC supply and return		▼ [	Repai	r HVAC to r	educe humidity level	▼
Clean ceilings around HV		<b>▼</b>	Humidity I	level elevat	ed compared to outdo	
Thoroughly clean al	l surfaces	▼				▼

▼

Thoroughly clean and sanitize flooring Remove and replace A/C filters

Ensure fans/lights are off when unoccupied