

# managing risk with responsibility

Aston A. Henry, Supervisor Telephone: 754 321-1900 Risk Management Department Fax: 754 321-1917

December 21	., 2012	Signature on File	For Custodial Supervisor Use Only
TO:	Kellee Stroup, Principal		Custodial Issues Addressed
	Country Hills Elementary School	ol	Custodial Issues Not Addressed
FROM:	Robert Krickovich, Coordinator I Facilities Design and Construction	·	
SUBJECT:	Indoor Air Quality (IAQ) Assess	ment	

On December 14, 2012, I conducted an assessment at **Country Hills 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.

cc: Directors, School Performance & Accountability
Shelley Meloni, Executive Director, Facilities Design and Construction
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division
Aston Henry, Supervisor, Risk Management
Sonja Coley, Senior Project Manager, Facilities Design and Construction
Broward Teachers Union
Federation of Public Employees

RK/tc Enc.

Country Hills Elementary	Evaluation Date	December 14, 2012	Time of Day	9:45
Outdoor Conditions Temperature 67	8 Relative Hu	midity 89.9	Ambient CO2 48	82
Fish         Temperature         Range         Re           130         73.7         72 - 78	Ran 60.5 30% - 6	4575	Range # Oc MAX 700 > Ambient	ccupants 13
Noticeable Odor No Visible	e water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 4' Lay in	No	No		
Walls Drywall/Tackboard  Floor 12" x 12" Vinyl	No No	No L		
12 X 12 VIIIyi	No	No L		
Ceiling Clean Yes	HVAC Supply Grills Clean	⁄es	HVAC Return Grills Clean	Yes
Walls Clean Yes Flooring Clean Yes	Inside of Supply Duct Clean	/es	Inside of Return Duct Clean	Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	/es		
Trash Removed Yes Exha	aust Fans Working		Jnapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	⁄es .	Air Fresheners	No
itooni olattoroa	f Stored in Room is ed Containers	N/A	in Room	
Mechanical Equipment Location Above Ceili	ng		Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	res Ins	side of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Fresh Air Intake Location Outside of	Room	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake Plants / Oal	k Trees	▼	of Obstruction	
Observations				
Complaint of odor in mornings and muggy for drywall is dry (paper is not allowing tackable				
Corrective Actions to be Completed by Site	Based Staff	Corrective Actions	to be Completed by PP	0
Remove paper from tack board walls		•	reduce CO2 levels	<b>▼</b>
	<b>─</b>	Repair HVAC to re	educe humidity level	▼
	▼			
	▼			▼
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Country Hills Elementary

Evaluation Date December 14, 2012

Time of Day

Outdoor Conditions Temperature	67.8 Relative	e Humidity 89.9	Ambient CO2 48	32
Fish         Temperature         Range           131         72.5         72 - 78		Range <u>CO</u> % - <b>60</b> % 161		cupants 21
Noticeable Odor No  Ceiling 2' X 4' Lay in	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Walls Drywall/Tackboard  Floor 12" x 12" Vinyl	No No	No No		
Ceiling Clean Yes Walls Clean Yes	HVAC Supply Grills Clean Inside of Supply	No	HVAC Return Grills Clean Inside of Return	Yes
Flooring Clean Yes  Room Surfaces Yes  Clean	Duct Clean  Ceiling at Supply Grills Clean	Yes	Duct Clean	Yes
Trash Removed Yes Signs of Pests No	Exhaust Fans Working  Drain Traps Wet	N/A Yes	Unapproved Chemicals / Cleaners in Room	No
Room Cluttered No	Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location Abo	ve Ceiling		Mechanical Room Clean	N/A
Filters Installed Properly  Condensate Pan Clean  N/A	Filters Clean Cooling Coil Clean	Yes N/A	Inside of HVAC Unit Clean	N/A
Pollutant Sources Near Air	side of Room Trees	▼     ▼	Fresh Air Intake Free of Obstruction	Yes
Observations Minor dust on HVAC supply grills - Ta	ick board walls covered ii	n cloth (all dry)		
Corrective Actions to be Completed	by Site Based Staff	Corrective Action	ons to be Completed by PP	0
Clean HVAC supply grills with	Wexcide ▼ ▼	•	to reduce humidity level C to reduce CO2 levels	▼
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Country Hills Elementary

Evaluation Date December 14, 2012

Time of Day

Outdoor Condition	s Tem	perature	67.8	Relativ	e Humidity [	89.9	Ambient CO	2 4	82
Fish Ten	70.7	Range 72 - 78	Relative Hu	<del></del> i	Range % - 60%	128		_	ccupant 23
Noticeable Odor	No		Visible water d staining		Visible m grow		Amount material aff		
	4' Lay in		No		No	_			
	II/Tackboa x 12" Vinyl	ira	No No		No.	_			
Ceiling Clean	Yes		HVAC S Grills Cl		No		HVAC Retu Grills Clea		Yes
Walls Clean Flooring Clean	Yes		Inside o Duct Cle	f Supply ean	Yes		Inside of R Duct Clean	• • • • • • • • • • • • • • • • • • • •	Yes
Room Surfaces Clean	Yes		Ceiling a Grills Cl	at Supply lean	Yes				
Trash Removed	Yes		Exhaust Fans	Working	N/A		Unapproved Chen Cleaners in Room		No
Signs of Pests  Room Cluttered	No		Drain Train Train Sealed Conta		Yes N/A		Air Fresheners in Room		No
Mechanical Equip	ment Loca	tion Abov	ve Ceiling				Mechanical Room	Clean	N/A
Filters Installed Pro		Yes		ers Clean	Yes		Inside of HVAC Unit	Clean	N/A
Condensate Par	n Clean [	N/A	Cooling C	oil Clean	N/A				
Fresh Air Intake Lo Pollutant Sources I			ide of Room Trees			▼	Fresh Air Intakon of Obstruction	e Free	Yes
Intake Observations									
Minor dust on HV	AC supply	grills - Ta	ck board walls	covered i	n cloth (all d	ry)			
Close HVA				taff			ons to be Complete		PO <b>T</b>
Clean HVA	o suppiy (	yınıs witii	vvexulue	▼			to reduce humidity C to reduce CO2 lev		•
				▼					▼
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Country Hills Elementary	Evaluation Dat	December 14, 201	2 Time of Day	9:45
Outdoor Conditions Temperature 67.8	Relative	Humidity 89.9	Ambient CO2 4	82
Fish         Temperature         Range         Related           404         70.3         72 - 78		Range <u>CO</u> % - <b>60</b> % 167		20
	water damage / taining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 4' Lay in	No	No		
Walls Drywall/Tackboard  Floor 12" x 12" Vinyl	No	No No		
FIOOI 12 X 12 VIIIyI	No	No		
	HVAC Supply Grills Clean	Yes	HVAC Return Grills Clean	Yes
	nside of Supply Duct Clean	Yes	Inside of Return Duct Clean	Yes
	Ceiling at Supply Grills Clean	Yes		
Trash Removed Yes Exhau	st Fans Working	N/A	Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Traps Wet	Yes	Air Fresheners	
itooni olattoroa ito	Stored in Room is d Containers	N/A	in Room	No
Mechanical Equipment Location Above Ceiling	g		Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A Co	oling Coil Clean	N/A		
Fresh Air Intake Location Outside of Ro	oom	▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake		▼	of Obstruction	1.00
Observations				
All tack board walls covered solid with paper - causing moisture to be trapped in wall materia		is dry (paper is not al	llowing tackable surface to	breath
Corrective Actions to be Completed by Site Ba			ons to be Completed by PF	0
Remove paper from tack board walls	▼		ture to 72 - 78 degrees C to reduce CO2 levels	▼
		Nopali IIVAC	J.J. IOGGOO GOZ IOTOIG	▼
	▼			▼
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Country Hills	Elementary Evaluation Da	December 14, 2012	Time of Day 9:45
Outdoor Conditions Temper	ature 67.8 Relativ	re Humidity 89.9	Ambient CO2 482
	ange Relative Humidity 2 - 78 57.3 30	Range CO <sup>2</sup> 0% - 60% 1153	Range # Occupan MAX 700 > 21 Ambient
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Ceiling 2' X 4' Lay in  Walls Drywall/Tackboard	No No	No No	
Floor 12" x 12" Vinyl	No	No	
Ceiling Clean Yes  Walls Clean Yes  Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	Yes	HVAC Return Grills Clean  Inside of Return Duct Clean  Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	Yes	
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		Unapproved Chemicals / No Cleaners in Room  Air Fresheners in Room
Mechanical Equipment Location Filters Installed Properly Yes	Above Ceiling	Yes	Mechanical Room Clean  N/A  nside of HVAC Unit Clean  N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A	
Fresh Air Intake Location  Pollutant Sources Near Air Intake	Outside of Room  Palm Trees	▼	Fresh Air Intake Free of Obstruction
Observations			
Corrective Actions to be Comp	leted by Site Based Staff	Corrective Action	s to be Completed by PPO
	▼		
	▼		
	▼		
	▼		

Country Hills Elementary

Evaluation Date December 14, 2012

Time of Day

Outdoor Conditions	Temperature	67.8 Rela	ative Humidity	89.9	Ambient CO2 4	82
Fish Temperatu 74.8	re Range 72 - 78	Relative Humidity 55.1	Range 30% - 60%	<b>CO</b>		ccupants 19
Noticeable Odor	No	Visible water damage staining?	/ Visible m grow		Amount of material affected	
Ceiling 2' X 4' Lay		No	No	0		
Walls Drywall/Tack		No	No	<u>o</u>		
Floor 12" x 12" V	inyl	No	No	<u>o</u>		
Ceiling Clean Ye	s	HVAC Supply Grills Clean	Yes		HVAC Return Grills Clean	Yes
Walls Clean Ye	S	Inside of Supp	lv []		Inside of Return	
Flooring Clean Ye	s	Duct Clean	Yes		Duct Clean	Yes
Room Surfaces Ye	s	Ceiling at Supp Grills Clean	Yes			
Trash Removed Ye	s	Exhaust Fans Worki	ng N/A		Unapproved Chemicals / Cleaners in Room	No
Signs of Pests Ye	s	Drain Traps V	Vet Yes		Air Fresheners	No
Room Cluttered No.		Food if Stored in Roon in Sealed Containers	n is N/A		in Room	NO
Mechanical Equipment L	ocation Abov	e Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly	Yes	Filters Clea	an Yes		Inside of HVAC Unit Clean	N/A
Condensate Pan Clean	N/A	Cooling Coil Clea	an N/A			
Fresh Air Intake Location	Outsi	de of Room		▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Ai Intake	r Oak 1	Trees		▼	of Obstruction	100
Observations						
Signs of pests under sin	k (roach dropp	oings)				
Corrective Actions to be	e Completed by	v Site Based Staff	Corre	ctive Action	ons to be Completed by Pl	PO
	į	▼			C to reduce CO2 levels	
		<b>▼</b>	Gen	nerate wor	k order for pest control	▼
		▼				<u>▼</u>
		▼				
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Country Hills Elementary

Evaluation Date December 14, 2012

Time of Day

Outdoor Conditions Tempe	erature 67.8	Relative Humidity [	89.9	Ambient CO2 4	82
	Range Relative Humic 72 - 78 57.0	30% - 60%	1099		ccupants 3
Noticeable Odor No	Visible water dam staining?	age / Visible m grow		Amount of material affected	
Ceiling 2' X 4' Lay in	No	No			
Walls Drywall/Tackboard	No	No			
Floor 12" x 12" Vinyl	No	No			
Ceiling Clean Yes	HVAC Sup Grills Clea			HVAC Return Grills Clean	Yes
Walls Clean Yes	Inside of S	upply -		Inside of Return	
Flooring Clean Yes	Duct Clean	,		Duct Clean	Yes
Room Surfaces Yes Clean	Ceiling at S Grills Clea	• • • • • • • • • • • • • • • • • • • •			
Trash Removed Yes	Exhaust Fans W	orking N/A		Unapproved Chemicals / Cleaners in Room	No
Signs of Pests No	Drain Tra	ps Wet Yes			
Room Cluttered No	Food if Stored in R in Sealed Containe	i NI/A		Air Fresheners in Room	No
Mechanical Equipment Location	Above Ceiling			Mechanical Room Clean	N/A
Filters Installed Properly Ye	es Filters	Clean Yes		Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/	Cooling Coil	Clean N/A			
Fresh Air Intake Location	Outside of Room		▼	Fresh Air Intake Free	Yes
Pollutant Sources Near Air Intake	Oak Trees		▼	of Obstruction	163
Observations					
Cinnamon odor in room - unab	le to locate source				
Corrective Actions to be Com	pleted by Site Based Staf	f Corre	ctive Actio	ns to be Completed by Pl	PO
			t temperat	ure to 72 - 78 degrees	▼
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Country Hills Ele	mentary Evaluation Da	December 14, 2012	Time of Day	9:45
Outdoor Conditions Temperatur	e 67.8 Relativ	e Humidity 89.9	Ambient CO2 4	82
Fish         Temperature         Range           512         69.2         72 - 78		Range CO <sup>2</sup> 1225		ccupants
Noticeable Odor No	Visible water damage / staining?	Visible microbial growth?	Amount of material affected	
Ceiling 2' X 4' Lay in	No_	No		
Walls Drywall/Tackboard	No	No		
Floor 12" x 12" Vinyl	No	No		
Ceiling Clean Yes Walls Clean Yes Flooring Clean Yes	HVAC Supply Grills Clean Inside of Supply Duct Clean	Yes	HVAC Return Grills Clean Inside of Return Duct Clean	Yes
Room Surfaces Yes Clean	Ceiling at Supply Grills Clean	Yes		
Trash Removed Yes  Signs of Pests No	Exhaust Fans Working  Drain Traps Wet	N/A Yes	Unapproved Chemicals / Cleaners in Room	Yes
Room Cluttered Yes	Food if Stored in Room is in Sealed Containers	N/A	Air Fresheners in Room	No
Mechanical Equipment Location Al	pove Ceiling		Mechanical Room Clean	N/A
Filters Installed Properly Yes	Filters Clean	Yes	Inside of HVAC Unit Clean	N/A
Condensate Pan Clean N/A	Cooling Coil Clean	N/A		
Pollutant Sources Near Air	utside of Room ak Trees	<b>▼</b>	Fresh Air Intake Free of Obstruction	Yes
Observations				
2 cans of spray paint, 409 cleaner a Room too cluttered to clean proper	•		ented candles found abo	ve sink -
Corrective Actions to be Complete	d by Site Based Staff	Corrective Actio	ns to be Completed by PF	 20
Encourage occupant to red	uce clutter ▼		ure to 72 - 78 degrees	▼
Remove non-approved ch	nemicals ▼	Repair HVAC	to reduce CO2 levels	▼
Remove stuffed animals as the				▼
of allergens unless thoroughly cle	eaned frequently  ▼			▼

Country Hills Elementary

Evaluation Date December 14, 2012

Time of Day

Outdoor Conditions Tem	perature _	67.8	Relative	Humidity [	89.9	Ambient CO2	482
Fish Temperature 608 70.3	Range 72 - 78	Relative Humi 59.8	<b>—</b> i	Range % - 60%	103		# Occupants
Noticeable Odor No	Vi	sible water dan staining?	nage /	Visible mi grow		Amount of material affects	ed
Ceiling 2' X 4' Lay in		No		No			
Walls Drywall/Tackboa	rd	No		No			
Floor 12" x 12" Vinyl		No		No			
Ceiling Clean Yes		HVAC Sup Grills Clea		Yes		HVAC Return Grills Clean	Yes
Walls Clean Yes Flooring Clean Yes		Inside of S Duct Clear		Yes		Inside of Return Duct Clean	rn Yes
Room Surfaces Yes Clean		Ceiling at Grills Clea		Yes			
Trash Removed Yes	ı	Exhaust Fans W	orking/	N/A		Unapproved Chemica Cleaners in Room	ıls / Yes
Signs of Pests No		Drain Tra	ps Wet	Yes		Air Fresheners	No
Room Cluttered No		od if Stored in F Sealed Contain		N/A		in Room	
Mechanical Equipment Locat	ion Above (	Ceiling				Mechanical Room Cle	an N/A
Filters Installed Properly	Yes	Filters	Clean	Yes		Inside of HVAC Unit Cle	ean N/A
Condensate Pan Clean	N/A	Cooling Coi	l Clean	N/A			
Fresh Air Intake Location	Outside	of Room			▼	Fresh Air Intake Fr	ee Yes
Pollutant Sources Near Air Intake	None				▼	of Obstruction	
Observations							
Borax and Windex found un with paper is dry.	der sink - sec	tion of tack be	oard wa	I covered wi	ith paper	is wet, section of wall	not covered
Corrective Actions to be Co	mpleted by S	Site Based Sta	ff	Correc	tive Action	ons to be Completed b	v PPO
Remove non-appr		als	▼ [	331100		to be completed b	▼
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