

managing risk with responsibility

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

May 7, 2012	Signature on File	For Custodial Supervisor Use Only
TO:	Delicia Decembert, Principal Hollywood Central Elementary School	Custodial Issues Addressed Custodial Issues Not Addressed
FROM:	Robert Krickovich, Coordinator I, LEA Facilities and Construction Management	
SUBJECT:	Indoor Air Quality (IAQ) Assessment	

On November 9, 2011, I conducted an assessment at **Hollywood Central 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: Area Superintendent

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.

			IAQ Ass	sessment	Locatior	n Number		
	Hollyw	ood Central Ele	mentary		Evaluatio	n Requested	Novemb	oer 9, 2011
Time of Day	9:45				Ev	aluation Date	Novemb	oer 9, 2011
Outdoor Cond	itions Terr	perature	81	Relative Humidit	y 61.8	Ambie	nt CO2	482
Fish	Temperature	Range Relat	tive Humidity	Range	CO2	Ran	ige #	Occupants
102	75.8 <b>7</b>	2 - 78	64	30% - 60%	811	Max 700	> Ambien	t 3
Noticeable Oc	lor No		'isible water age / staining	Visible mic ? growth		Amount of material affect	-	
Ceiling Type	2 x 4 Lay	In	No	No			None	
Wall Type	Plaster		No	No			None	
Flooring	Carpet		No	No			None	
	Clean	Minor Dust / Debris	Needs Cleaning		Correct	ive Action Re	equired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	Yes	Νο	No					
HVAC Supply	Grills No	Yes	Yes		Clear	n as appropri	ate	
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in Ro	oom Yes	No	No					

Findings

- Humidity level elevated

- Tape residue on HVAC supply grills

- Visible microbial growth on bookcases

## Site Based Maintenance:

- Clean HVAC supply grills and all bookcases. If microbial growth returns on bookcases they will need to be discarded and replaced.

- 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 and repair HVAC system to lower humidity level.

- NOTE: Work orders EQ02244 through EQ02248 generated 12-1-11

			IAQ Ass	essment	Location Number	
	Hollyw	ood Central Ele	ementary		<b>Evaluation Requested</b>	November 9, 2011
Time of Day	9:45				Evaluation Date	November 9, 2011
Outdoor Cond	itions Ten	perature	81 F	Relative Humidity	61.8 Ambi	ent CO2 482
Fish	Temperature	Range Rela	tive Humidity	Range	CO2 Ra	nge # O <u>ccupants</u>
103	73.4 7	2 - 78	67.3	30% - 60%	772 Max 700	) > Ambient 4
Noticeable Oc	lor No		'isible water age / staining?	Visible micro growth?	bial Amount material affe	
Ceiling Type	2 x 4 Lay	In	No	No		None
Wall Type	Plaster		No	No		None
Flooring	Carpet		No	No		None
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective Action R	equired
Ceiling	Yes	No	No			
Walls	Yes	Νο	No			
Flooring	Yes	No	No			
HVAC Supply	Grills No	Yes	Yes		Clean as appropr	iate
HVAC Return	Grills No	Yes	Yes		Clean as appropr	iate
Ceiling at Sup Grills	ply No	Yes	Yes		Clean as appropr	iate
Surfaces in Ro	oom No	Yes	Yes		Clean as appropr	iate

#### Findings

- Humidity level elevated

- Dust build up on HVAC supply and return grills and on ceiling at supply grills

- Dust build up on surfaces throughout the room

### Site Based Maintenance:

- Clean HVAC supply and return grills and ceiling around supply grills.

- Clean all surfaces in the room

- Followup with Physical Plant Operations on status of work orders previously generated to address water intrusion (J518656 and J520907)

- 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 and repair HVAC system to lower humidity level.

- NOTE: Work orders EQ02244 through EQ02248 generated 12-1-11

			IAQ Ass	essment	Location Nur	nber		
	Hollyw	vood Central Ele	ementary		Evaluation Re	quested	Novem	per 9, 2011
Time of Day	9:45				Evaluat	tion Date	Novem	per 9, 2011
Outdoor Cond	itions Ten	nperature	81	Relative Humidity	61.8	Ambie	nt CO2	482
Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Ran	ge #	# Occupants
404	71.9	/2 - 78	76.1	30% - 60%	494	Max 700	> Ambier	nt 3
Noticeable Oc	dor Yes		/isible water hage / staining?	Visible micro ? growth?		Amount of erial affect		
Ceiling Type	2 x 4 Lay	In	No	No			None	
Wall Type	Plaster		Yes	No		4 squar	e feet at do	oor
Flooring	12 x 12 Vi	nyl	No	No			None	
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective A	Action Re	equired	
Ceiling	Yes	No	No					
Walls	No	Yes	Yes		Paint as a	appropria	ate	
Flooring	Yes	No	No					
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	No	No					
Ceiling at Sup Grills	oply Yes	No	No					
Surfaces in Ro	oom Yes	No	No					

#### Findings

- Deteriorated caulk around cabinets

- Water damaged wall left side of door

- Staining on walls

Humidity level elevated

- Microbial growth on chilled water lines in FISH 405

# 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:

- Caulk all cabinets - Added to work order EQ01824

- Evaluate and repair cause of water damage to wall on left side of door and repair/replace wall material as necessary.

- Remove and replace all ceiling tiles

- Paint all walls with anti-microbial paint

- Repair HVAC system to lower humidity level. Pending additional information from Design Services re repair. EQ01820 in progress

- FISH 405 - Remove and replace chilled water pipe insulation and seal all penetrations in room to prevent outside air intrusion

- NOTE: Work orders EQ01820 and EQ01824 generated in August. EQ02244 through EQ02248 generated 12-1-11

			IAQ Asse	essment	Location Numb	ber			
	Hollyw	vood Central Ele	ementary		Evaluation Requ	uested [	Novemb	er 9, 2011	
Time of Day	9:45				Evaluatio	on Date [	Novemb	er 9, 2011	
Outdoor Cond	itions Ten	nperature	81 R	elative Humidity	61.8	Ambie	nt CO2	482	
Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Ran	ge #	Occupan	ts
520	72.9	/2 - 78	69.5 <b>3</b>	30% - 60%	890 M	lax 700 :	> Ambien	<b>t</b> 19	
Noticeable Oc	lor No	-	/isible water age / staining?	Visible micro growth?		nount of rial affec			_
Ceiling Type	2 x 4 Lay	In	No	No			None		]
Wall Type	Tackboa	rd	No	No			None		
Flooring	12 x 12 Vii	nyl	No	No			None		]
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective Ac	ction Re	quired		
Ceiling	Yes	No	Νο						]
Walls	Yes	Νο	No						]
Flooring	No	Yes	Yes		Clean as ap	ppropria	ate		]
HVAC Supply	Grills Yes	No	No						]
HVAC Return	Grills No	Yes	Yes		Clean as ap	ppropria	ate		]
Ceiling at Sup Grills	ply Yes	No	No						]
Surfaces in Ro	oom Yes	No	No						]

Findings

- Humidity level elevated

- Dust build up on HVAC return grills

- Dust and debris in corners of room

## Site Based Maintenance:

- Clean HVAC return grills

- Clean and sanitize flooring

- 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 and repair HVAC system to lower humidity level.

- NOTE: Work orders EQ02244 through EQ02248 generated 12-1-11

			IAQ As	sessment	Locati	on Number		
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Outdoor Cond	itions Terr	perature	81	Relative Humid	ity 61.8	3 Ambie	ent CO2	482
Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Rar	nge #	Occupants
521	74 <b>7</b>	2 - 78	74.3	30% - 60%	821	Max 700	> Ambien	t 17
Noticeable Oc	dor No		/isible water nage / staining	Visible mi ? growt		Amount o material affeo	-	
Ceiling Type	2 x 4 Lay	In	No	No			None	
Wall Type	Plaster/Tack	board	No	No			None	
Flooring	12 x 12 Vir	iyl	No	No			None	
	Clean	Minor Dust / Debris	Needs Cleaning		Corre	ctive Action Re	equired	
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	oply Yes	No	No					
Surfaces in Ro	oom Yes	Νο	No					

Findings

Humidity level elevated

- Door to room was propped open

### Site Based Maintenance:

- Ensure windows and doors remain closed at all times. Open windows and doors allow humid untreated air into occupied space.

- 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 and repair HVAC system to lower humidity level. Pending additional information from Design Services re repair. EQ01820 in progress

- NOTE: Work orders EQ01820 and EQ01824 generated in August. EQ02244 through EQ02248 generated 12-1-11