

# managing risk with responsibility

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Signature on File

TO: Ms. Jeannie Floyd, Principal

Park Lakes Elementary (Annex) School

FROM: Kenneth I. Partee, Project Manager, Occupational Health and Environmental

Control

Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

FISH 101, 106, 137, 139 and 140

On August 8, 2005 the IAQ Assessment Team conducted an assessment of FISH 101, 106, 137, 139 and 140 at **Park Lakes Elementary (Annex) School**. The evaluation consisted of a walkthrough of the identified areas to assess the current condition of the location with regard to indoor air quality. This assessment included observations of the carpet, floor tile, ceiling tile, interior walls, false ceiling plenum, and accessible ventilation equipment.

Attached are the findings of this assessment along with recommendations for further assessment, remediation, or corrective actions, if needed.

Generally, the IAQ Assessment did not identify any existing conditions significantly impacting IAQ and thereby presenting immediate health and safety concerns 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.

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. Harry LaCava, Area Superintendent

Fran Bolden, Area Director

Jeffrey S. Moquin, Director, Risk Management

Israel Rodriguez-Soto, Project Manager II, Facilities and Construction Management

Dane Ramson, Broward Teachers Union

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

KP/tc

Enc.

Park Lakes Elementary School						Evaluation Requested August 8, 2005			
Time of Day	1:00 pm		_		1	Evaluation Date A	ugust 8, 2005		
Outdoor Condi	tions T	emperature		Relative Humidit	у	Ambient CO	2		
Fish	Temperature	Range	Relative Humidity	<sup>'</sup> Range	CO2	Range	# Occupants		
101	76.8	72 - 78	55.6	30% - 60%	1024	Max 700 > Am	bient 4		
Noticeable Od	lor No		Visible water damage / staining	Visible mic g? growth		Amount of material affected			
Ceiling Type	2 x 4 L	ay In	No	No	]	None			
Wall Type	Woo	od	No	No	]	None			
Flooring	Carp	et	No	No	]	None			
	Clean	Minor D / Debr		I	Corre	ctive Action Require	d		
Ceiling	Yes	No	No						
Walls	Yes	No	No						
Flooring	Yes	No	No						
HVAC Supply	Grills				Rep	lace Missing Grills			
HVAC Return (	Grills				Rep	lace Missing Grills			
Ceiling at Sup Grills	ply No	Yes	Yes		Cle	an as appropriate			
Surfaces in Ro	oom Yes	No	No						

# Observations

## Findings:

- HVAC supply and return grills are missing
- Dust and debris on ceiling at HVAC supply grills
- HVAC unit is very loud. Principal advised cannot work or talk with the unit on.

## Recommendations:

## Site Based Maintenance:

- Clean ceiling tiles at HVAC supply grills as appropriate
- 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 Division:

- Replace missing HVAC supply and return grills
- Evaluate and repair HVAC unit as appropriate for noise

	Parl	k Lakes Elemer	tary School		Evalua	tion Requested	August 8, 2005
Time of Day	12:29 pm					Evaluation Date	August 8, 2005
Outdoor Condi	tions T	emperature [		Relative Humid	lity	Ambien	t CO2
Fish	Temperature	Range R	elative Humidity	Range	CO2	Rang	e # Occupants
106	76.7	72 - 78	63.1	30% - 60%	771	Max 700 >	Ambient 16
Noticeable Od	or Yes		Visible water lamage / staining	Visible m grow		Amount of mate affected	rial
Ceiling Type	2 x 4 L	ay In	Yes	Yes	<u>;</u>	20 Ce	iling tiles
Wall Type	Plas	ter	No	No		N	one
Flooring	Carp	et	Yes	No		3' x 6	' section
Ceiling	Clean	Minor Dus / Debris Yes	st Needs Cleaning Yes			ective Action Req	
Cennig	[140]	103	103		Керіас	e stanica cennig	tiles
Walls	Yes	No	No				
Flooring	No	Yes	Yes		Clean w	rith extraction ma	achine
HVAC Supply	Grills No	Yes	Yes		Clean wi	th Wexcide disin	fectant
HVAC Return	Grills No	Yes	Yes		Clean wi	th Wexcide disin	fectant
Ceiling at Sup Grills	ply No	Yes	Yes	Remov	e and repl	ace or clean tiles	as appropriate
Surfaces in Ro	oom No	Yes	Yes		CI	ean bookshelves	3

## **Observations**

## Findings: (Media Center)

- Stained ceiling tiles
- Dust and debris and stain on carpet
- Dust and debris on HVAC supply and return grills
- Dust and debris on ceiling at HVAC supply grills
- Dust and debris on bookshelves
- Leak at HVAC return grill
- Elevated humidity level caused by non working chiller (one unit not functioning)
- Dust and debris in ducts for quad 106, 137, 137A, 139 and 140

## Recommendations:

#### Site Based Maintenance:

- Replace stained ceiling tiles
- Clean carpet with extraction machine
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Clean/replace ceiling tiles at supply grills as appropriate
- Clean bookshelves as appropriate
- 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 Division:

- Evaluate and repair cause of stained ceiling tiles and repair/replace as appropriate
- Evaluate and repair leak at HVAC return grill
- Repair chiller unit
- Clean ducts for quad 106, 137, 137A, 139 and 140

## Project Manager:

Evaluate roof and initiate project to repair

<u> </u>	Park	Lakes Elementa	ry School		Evalua	tion Requested	August 8, 2005
Time of Day	11:30 am					Evaluation Date	August 8, 2005
Outdoor Condi	tions Te	emperature		Relative Humid	dity	Ambien	t CO2
Fish	Temperature	Range Rel	ative Humidity	Range	CO2	Rang	e # Occupants
137	73.4	72 - 78	68.2	30% - 60%	593	Max 700 >	Ambient 1
Noticeable Od	lor Yes		Visible water mage / staining	Visible m grow		Amount of mate affected	rial
Ceiling Type	2 x 4 La	y In	Yes	Yes	S	60% (	of ceiling
Wall Type	Concrete/Ho	omosote	No	No	•	N	lone
Flooring	Tile		No	No			None
	Clean	Minor Dust / Debris	Needs Cleaning		Corre	ective Action Req	uired
Ceiling	No	Yes	Yes	Ren	nove and r	eplace ceiling tile	es with mold
Walls	Yes	No	No				
Flooring	Yes	No	No				
HVAC Supply	Grills No	Yes	Yes		Clean wi	th Wexcide disin	fectant
HVAC Return	Grills No	Yes	Yes		Clean wi	th Wexcide disin	fectant
Ceiling at Sup Grills	ply No	Yes	Yes	Re	emove and	replace tiles as a	appropriate
Surfaces in Ro	oom Yes	No	No				

# Observations

#### Findings:

- Visible microbial growth and heavy dust and debris on ceiling tiles (60% of room)
- Heavy dust and debris on HVAC supply and return grills
- Broken HVAC return grill
- Broken thermostat
- Elevated humidity level caused by non working chiller (one unit not functioning)
- Dust and debris in ducts for quad 106, 137, 137A, 139 and 140

#### Recommendations:

#### Site Based Maintenance:

- Clean HVAC supply and return grills with Wexcide disinfectant solution
- · 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 Division:

- Evaluate and repair cause of stained ceiling tiles and repair/replace as appropriate
- Replace broken HVAC return grill
- Replace broken thermostat
- Repair chiller unit
- Clean ducts for quad 106, 137, 137A, 139 and 140

#### Project Manager:

Evaluate roof and initiate project to repair

<u> </u>	Park	Lakes Elemen	tary School		Evalua	tion Requested	August 8, 2005
Time of Day	11:55 am					Evaluation Date	August 8, 2005
Outdoor Condi	tions T	emperature [		Relative Humid	lity	Ambien	t CO2
Fish	Temperature	Range Re	elative Humidity	Range	CO2	Rang	e # Occupants
139	71.7	72 - 78	70.8	30% - 60%	596	Max 700 >	Ambient 1
Noticeable Od	lor Yes	d	Visible water amage / staining	Visible mi ? grow		Amount of mate affected	erial
Ceiling Type	2 x 4 L	ay In	Yes	Yes	;	1 ceiling	tile - center
Wall Type	Conci	ete	No	No		N	lone
Flooring	Tile		No	No			None
Ceiling	Clean	Minor Dus / Debris Yes	t Needs Cleaning Yes			ective Action Rec	·
Coming							9
Walls	Yes	No	No				
Flooring	Yes	No	No				
HVAC Supply	Grills No	Yes	Yes		Clean w	ith Wexcide disin	fectant
HVAC Return	Grills No	Yes	Yes		Clean w	ith Wexcide disin	fectant
Ceiling at Sup Grills	ply No	Yes	Yes	Re	move and	replace tiles as	appropriate
Surfaces in Ro	oom Yes	No	No				

# Observations

# Findings:

- One stained ceiling tile in center of room
- Dust and debris on HVAC supply and return grills
- Dust and debris on ceiling at HVAC supply grills
- Dust and debris on speaker next to clock
- Elevated humidity level caused by non working chiller (one unit not functioning)
- Dust and debris in ducts for quad 106, 137, 137A, 139 and 140

#### Recommendations:

#### Site Based Maintenance:

- Replace stained ceiling tile in center of room
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Clean/replace ceiling tiles at supply grills as appropriate
- Clean speaker next to clock
- 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 Division:

- Repair chiller unit
- Clean ducts for quad 106, 137, 137A, 139 and 140

## Project Manager:

Evaluate roof and initiate project to repair

	Park	k Lakes Elemen	tary School		Evalua	tion Requested	Augus	st 8, 2005
Time of Day	12:10 pm					Evaluation Date	Augus	st 8, 2005
Outdoor Condi	tions To	emperature [		Relative Humidity	у	Ambien	it CO2	
Fish	Temperature	Range R	elative Humidity	Range	CO2	Rang	ge #	# Occupants
140	70.6	72 - 78	68.4	30% - 60%	631	Max 700 >	- Ambien	nt 1
Noticeable Od	lor Yes	d	Visible water lamage / staining	Visible micr g? growth		Amount of mate affected	erial	
Ceiling Type	2 x 4 La	ay In	Yes	No		7 Ce	iling tiles	
Wall Type	Concr	ete	No	No		l l	None	
Flooring	Tile	)	No	No			None	
	Clean	Minor Dus / Debris	Cleaning			ective Action Rec		
Ceiling	No	Yes	Yes		керіас	ce stained ceiling	tiles	
Walls	Yes	No	No					
Flooring	No	Yes	Yes	Clean	up wate	er and clean and	sanitize	floor
HVAC Supply	Grills No	Yes	Yes		Clean wi	ith Wexcide disir	nfectant	
HVAC Return	Grills No	Yes	Yes		Clean wi	ith Wexcide disir	nfectant	
Ceiling at Sup Grills	ply No	Yes	Yes	Remove a	and repl	lace or clean tile	s as appı	ropriate
Surfaces in Ro	oom Yes	No	No					

# Observations

# Findings:

- Stained ceiling tiles
- Dust and debris on HVAC supply and return grills
- Dust and debris on ceiling at HVAC supply grills
- Water puddle on floor (has been there for some time ring stain).
- Elevated humidity level caused by non working chiller (one unit not functioning)
- Dust and debris in ducts for quad 106, 137, 137A, 139 and 140

#### Recommendations:

#### Site Based Maintenance:

- Replace stained ceiling tiles
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Clean/replace ceiling tiles at supply grills as appropriate
- Clean up water and clean and sanitize floor as appropriate
- 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 Division:

- Repair chiller unit
- Clean ducts for quad 106, 137, 137A, 139 and 140

# Project Manager:

- Evaluate roof and initiate project to repair