

managing risk with responsibility

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July 28, 2005

TO:	Ms. Kathy Sedlack, Principal Martin Luther King Elementary School
FROM:	Robert J. Krickovich, Coordinator, LEA Facilities and Construction Management, Environmental Division
SUBJECT:	Indoor Air Quality (IAQ) Assessment FISH 101, 101C, 101L, 101N, 302 and 401

On July 15, 2005 the IAQ Assessment Team conducted an assessment of FISH 101, 101C, 101L, 101N, 302 and 401 at **Martin Luther King Elementary 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 754-321-1638.

cc: Dr. Verda Farrow, Area Superintendent
Kevin Sawyer, Area Director
Jeffrey S. Moquin, Director, Risk Management
Rodney Williams, Project Manager II, Facilities and Construction Management
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Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

RK/tc Enc.

IAQ Assessment								
Ma	artin Luther King	g Elementary	School		Evaluat	ion Requested	July 1	3, 2005
Time of Day 11	1:50 am				E	Evaluation Date	July 1	5, 2005
Outdoor Conditions	5 Temper	ature 89).7	Relative Hum	nidity 74.4	Ambie	nt CO2	425
Fish Temp	erature Ran	ge Relati	ve Humidity	Range	CO2	Ran	ge #	Occupants
101	76.3 72 - 7	78	63.9	30% - 60% 🛛	511	Max 700	> Ambient	2
Noticeable Odor	No		sible water ge / staining?		microbial wth?	Amount of mat affected	terial	
Ceiling Type	2x4 Lay In		No	Ν	No		None	
Wall Type	Drywall		No	Ν	No		None	
Flooring	Carpet		Yes	N	No	Ent	ire Carpet	
		inor Dust / Debris	Needs Cleaning		Correc	ctive Action Re	quired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	Νο	Yes	Yes		Rep	lace entire car	pet	
HVAC Supply Grills	s Yes	No	No					
HVAC Return Grills	Yes	No	No					
Ceiling at Supply Grills	Yes	Νο	No					
Surfaces in Room	Yes	Νο	No					

Findings:

- Stains and ripples on carpeting throughout all administrative suites

- Elevated humidity level

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 Division:

- Replace carpeting throughout all administrative suites

- Evaluate and repair HVAC system to lower humidity level

			IAQ Ass	sessment				
M	lartin Luther	King Elementar	y School		Evaluat	tion Requested	July 1	3, 2005
Time of Day 1	1:50 am				I	Evaluation Date	July 1	5, 2005
Outdoor Condition	s Tem	perature 8	9.7	Relative Hun	nidity 74.4	Ambie	nt CO2	425
Fish Tem	perature	Range Relat	tive Humidity	Range	CO2	Ran	ge #	Occupants
101C	73.7 7	2 - 78	69.5	30% - 60%	475	Max 700	> Ambient	1
Noticeable Odor	No		isible water age / staining		microbial owth?	Amount of mat affected	terial	
Ceiling Type	2x4 Lay I	n	No		No		None	
Wall Type	Drywall		Yes		No	Damag	e at window	/
Flooring	Carpet		Yes		No	Ent	ire Carpet	
	Clean	Minor Dust / Debris	Needs Cleaning		Corre	ctive Action Re	equired	
Ceiling	Yes	Νο	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes		Rep	lace entire car	pet	
HVAC Supply Grill	ls Yes	Νο	No					
HVAC Return Grill	s Yes	Νο	No					
Ceiling at Supply Grills	Yes	No	No					
Surfaces in Room	No	Yes	Yes		Cle	an as appropria	ate	

Findings:

- Damage to drywall at window (from the floor up 1 foot)
- Stains and ripples on carpeting throughout all administrative suites
- Elevated humidity level
- Dust and debris on environmental surfaces

Recommendations:

Site Based Maintenance:

- Clean environmental surfaces throughout the room

- 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 all windows in building for possible water intrusion and repair as appropriate
- Repair water damaged wall
- Replace carpeting throughout all administrative suites
- Evaluate and repair HVAC system to lower humidity level

IAQ Assessment						
Ma	rtin Luther King El	ementary School		Evaluation Requested	July 13, 2005	
Time of Day 11	:50 am			Evaluation Date	July 15, 2005	
Outdoor Conditions	Temperatu	re 89.7	Relative Humidity	74.4 Ambie	ent CO2 425	
Fish Tempe	erature Range	Relative Humidity	/ Range	CO2 Rai	nge # Occupants	
101L 7	2.1 72 - 78	67.3	30% - 60%	493 Max 700	> Ambient 3	
Noticeable Odor	No	Visible water damage / stainin	Visible micro g? growth?	obial Amount of ma affected		
Ceiling Type	2x4 Lay In	No	No		None	
Wall Type	Tackboard	No	No		None	
Flooring	Carpet	Yes	No	En	tire Carpet	
		Dust Needs bris Cleaning	9	Corrective Action R	equired	
Ceiling	Yes	No				
Walls	Yes	lo No				
Flooring	No	es Yes		Replace entire ca	rpet	
HVAC Supply Grills	Yes	No				
HVAC Return Grills	Yes	No				
Ceiling at Supply Grills	Yes	No				
Surfaces in Room	Yes	o No				

Findings:

- Stains and ripples on carpeting throughout all administrative suites

- Elevated humidity level

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 Division:

- Replace carpeting throughout all administrative suites

- Evaluate and repair HVAC system to lower humidity level

			IAQ AHU As	sessment		
		Martin Luther King	Elementary	Ev	aluation Requested	July 13, 2005
Time of Day	y 12:2	0 pm			Evaluation Date	July 15, 2005
Outdoor Co	nditions	Temperature	89.7 R	elative Humidity	74.4 Ambie	nt CO2 425
AHU Roor	m #	Temperature R	ange Relative	Humidity Range	CO2	Range
101N		72	2 - 78	30% - 60%	6	< 1,000 PPM
Noticeable	Odor	No	Visible water damage / staining?	Visible microbial growth?	Amount of ma affected	terial
Ceiling Typ	e	Plaster	No	No	No	one
Wall Typ	e	Plaster	No	No	No	one
Flooring	9	Concrete	Yes	No	Standir	ng Water
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective Ac Required	
Room	No	Yes	Yes		Clean as appropriat	e
Filters	Yes	No	No			
Coil	Yes	No	No			
Pan	Yes	No No	No			
Duct	Yes	No	No			
Motorized I	Damper In	stalled No				
Damper	Open / Op	erating Yes	S			
Fresh Air Intake Un-obstructed Yes						
Pollutant So	Pollutant Sources Near Air Intake No					
AHU Su	pply Wate	er Temp 45	AH	IU Return Water Te	mp 54	

Findings:

- Heavy dust and debris throughout entire room
- Ceiling heavily stained with dust and debris rom air intrusion through ceiling openings
- Walls stained with heavy dust build up
- Heavy dust and debris on floor
- Standing water on floor from chilled water pipe condensation chilled water pipe insulation removed
- Minor build up in HVAC pan holding water

Recommendations:

Physical Plant Operations Division:

- Repair all openings in walls to stop air infiltration
- Thoroughly clean and sanitize entire room

		IAQ As	sessment		
Martir	n Luther King Eler	entary School		Evaluation Requested	July 13, 2005
Time of Day 11:50	0 am			Evaluation Date	July 15, 2005
Outdoor Conditions	Temperature	89.7	Relative Humidity	74.4 Ambi	ent CO2 425
Fish Tempera	^{ature} Range	Relative Humidity	Range	CO2 Ra	nge # Occupants
302 71.6	6 72 - 78	57.5	30% - 60%	453 Max 70) > Ambient 3
Noticeable Odor	No	Visible water damage / staining	Visible micro g? growth?		
Ceiling Type 2x4 L	Lay In/Drywall	Yes	No	20	Square Feet
Wall Type	Drywall	Yes	No	200	Square Feet
Flooring Carpe	et/Ceramic Tile	No	No		None
CI	lean Minor D / Debi			Corrective Action R	equired
Ceiling	Yes No	No			
Walls	Yes	No			
Flooring	Yes	No			
HVAC Supply Grills	Yes No	No			
HVAC Return Grills	No	Yes	C	lean with Wexcide dis	sinfectant
Ceiling at Supply	Yes No	No			
Surfaces in Room	Yes	No			

Findings:

- Dust and debris on HVAC return grills

- Windows in cupola area leaking. Drywall around windows blistered and paint bubbling. Drywall ceiling in cupola cracked/blistered. Columns around cupola damaged. Possible roof leak.

Recommendations:

Site Based Maintenance:

- Clean HVAC 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 for roof leak and leak at cupola windows and repair as necessary and repair/replace damaged interior drywall

		IAQ As	sessment		
Mar	rtin Luther King Ele	ementary School		Evaluation Requested	July 13, 2005
Time of Day 11:	:50 am			Evaluation Date	July 15, 2005
Outdoor Conditions	Temperatu	re 89.7	Relative Humidity	74.4 Ambie	ent CO2 425
Fish Tempe	erature Range	Relative Humidity	/ Range	CO2 Ra	nge # Occupants
401 69	9.8 72 - 78	61.5	30% - 60%	404 Max 700) > Ambient 3
Noticeable Odor	No	Visible water damage / stainin	Visible micro g? growth?		
Ceiling Type	Open Grid	No	No		None
Wall Type	Drywall	No	No		None
Flooring	Sheet Vinyl	No	No		None
	Clean Mino / De	Dust Needs bris Cleaning	9	Corrective Action R	equired
Ceiling	Yes	lo No			
Walls	Yes	No			
Flooring	Yes	No			
HVAC Supply Grills	Yes	lo No			
HVAC Return Grills	Yes	No			
Ceiling at Supply Grills	Yes	lo No			
Surfaces in Room	Yes	o No			

Findings:

- HVAC duct is condensating on uninsulated sections and dripping onto tables

- Temperature is low

- Humidity level is slightly elevated

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 Division:

- Repair HVAC duct to correct condensation problem
- Evaluate and repair HVAC to increase temperature and lower humidity level