

managing risk with responsibility

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Jeffrey S. Moquin, Director Risk Management Department

FISH 106A, 201I and 201R

March 20, 200	Signature on File	For Custodial Supervisor Use Only			
TO:	Ms. Aimee Zekofsky, Principal Apollo Middle School	Custodial Issues Addressed Custodial Issues Not Addressed			
FROM:	Edward See, Project Manager Risk Management Department				
SUBJECT:	Indoor Air Quality (IAQ) Assessment				

On March 17, 2008 I conducted an assessment of FISH 106A, 201I and 201R at **Apollo Middle School**. This evaluation included observations of the flooring system, ceiling tiles, false ceiling plenum, environmental surfaces, interior and exterior walls, and the accessible ventilation equipment. Additionally, environmental parameter measurements were taken to include temperature, relative humidity, and carbon dioxide. The detailed findings, along with the recommended corrective action can be found on the attached IAQ Assessment Worksheets.

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. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all 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 me at 754-321-3200.

CC: Dr. Joel Herbst, Area Superintendent
 Valerie Wanza, Area Director
 Jeffrey S. Moquin, Director, Risk Management
 Rodney Williams, Project Manager, Facilities and Construction Management
 Diane Watts, Broward Teachers Union
 Roy Jarrett, Federation of Public Employees
 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

ES/tc Enc.

Outdoor Conditions Temperature Temperature Range Relative Humidity Range CO2 Range # Occupants 106A 73.5 72 - 78 58 30% - 60% 1036 Max 700 > Ambient C2 Noticeable Odor No Visible water damage / staining? Ceiling Type 2 x 4 Lay In Yes Wall Type Drywall/Plaster No No None Clean Minor Dust Needs / Debris Cleaning Ceiling No Yes Yes Remove and replace stained ceiling tile Walls Flooring Walls Wal	Time of Day	2:00 pm					Evaluation Date	Marcl	h 17, 2008
106A 73.5 72 - 78 58 30% - 60% 1036 Max 700 > Ambient 2	Outdoor Cond	itions Ten	nperature 7	79.3	Relative Humid	ity 62	Ambi	ent CO2	477
Noticeable Odor No damage / staining? Visible microbial affected affected affected serving provided provided affected serving provided	Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Ra	nge	# Occupants
Ceiling Type	106A	73.5	72 - 78	58	30% - 60%	1036	Max 700	0 > Ambie	nt 2
Wall Type Drywall/Plaster No No No None Carpet No No No None	Noticeable Oc	on No							
Flooring Carpet No No No None Clean Minor Dust / Debris Cleaning Corrective Action Required Ceiling No Yes Yes Remove and replace stained ceiling tile Walls Yes No No No Flooring Yes No No No HVAC Supply Grills Yes No No No HVAC Return Grills Yes No No No Ceiling at Supply Yes No No No Ceiling at Supply Yes No No No Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	Ceiling Type	2 x 4 Lay	In	Yes	Yes		1	ceiling tile	
Clean Minor Dust / Debris Cleaning Corrective Action Required Ceiling No Yes Yes Remove and replace stained ceiling tile Walls Yes No No Flooring Yes No No HVAC Supply Grills Yes No No HVAC Return Grills Yes No No Ceiling at Supply Yes No No Grills Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	Wall Type	Drywall/Pla	aster	No	No			None	
Ceiling No Yes Yes Remove and replace stained ceiling tile Walls Yes No No Flooring Yes No No HVAC Supply Grills Yes No No HVAC Return Grills Yes No No Ceiling at Supply Yes No No Ceiling at Supply Yes No No Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	Flooring	Carpet		No	No			None	
Walls Yes No No Flooring Yes No No HVAC Supply Grills Yes No No HVAC Return Grills Yes No No Ceiling at Supply Yes No No Grills Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:		Clean				Corre	ective Action R	equired	
Flooring Yes No No No HVAC Supply Grills Yes No No No Ceiling at Supply Yes No No No Grills Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	Ceiling	No	Yes	Yes	Re	move and	replace stain	ed ceiling	tile
HVAC Supply Grills Yes No No No Ceiling at Supply Yes No No No Grills Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	Walls	Yes	No	No					
HVAC Return Grills Yes No No Ceiling at Supply Yes No No Grills Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	Flooring	Yes	No	No					
Ceiling at Supply Yes No No Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	HVAC Supply	Grills Yes	No	No					
Grills Surfaces in Room No Yes Yes Clean as appropriate Observations Findings: - Environmental parameters were acceptable at the time of the assessment - 1 stained ceiling tile - Dust build up on environmental surfaces - knick knacks and stuffed animals 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:	HVAC Return	Grills Yes	No	No					
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	Findings: - Environmenta - 1 stained ceilii - Dust build up of the stained seilii - Recommendat Site Based Ma - Clean environ - Continue to mappropriate Physical Plant	ng tile on environmenta tions: intenance: mental surfaces ionitor this location	I surfaces - knic throughout the r on for any signs	k knacks and oom of microbial g	stuffed animals		ebris accumula	tion and cle	ean as

IAQ Assessment

Apollo Middle School

1791

March 17, 2008

Location Number
Evaluation Requested

			Apollo	Middle School		Evaluat	ion Requested	March 17, 2008	
Time of Day	2:00) pm				i	Evaluation Date	March 17, 2008	
Outdoor Condi	itions	Te	emperature	79.3	Relative Hu	midity 62	Ambie	nt CO2 477	
l	Tempera		Range	Relative Humidi	ity Range	CO2	Ran	ige # Occupant	s
2011	70.	.3	72 - 78	66.2	30% - 60%	952	Max 700	> Ambient 1	
Noticeable Od	dor _	No		Visible wate damage / staini		e microbial rowth?	Amount of ma affected	terial	
Ceiling Type	2	2 x 4 La	ay In	No		Yes		None	
Wall Type	Dr	ywall/F	Plaster	No		No		None	
Flooring		Carp	et	Yes		No	,	Various	
	С	lean	Minor I			Correc	ctive Action Re	equired	
Ceiling	[Yes	No	No					
Walls	[Yes	No	No					
Flooring	[No	Yes	Yes		Cle	ean and sanitiz	ze	
HVAC Supply	Grills [Yes	No	No					
HVAC Return	Grills [N/A		
Ceiling at Sup Grills	ply [Yes	No	No					
Surfaces in Ro	oom [No	Yes	Yes		Clea	an as appropri	ate	
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IAQ Assessment

Location Number

Observations

Findings: Principal's conference room

- Temperature was low and humidity level was slightly elevated at the time of the assessment
- Light ballast not operating properly potential IAQ concern
- Old cardboard boxes in room
- No A/C return in room
- Carpet worn and soiled
- Dust build up on environmental surfaces

Recommendations:

Site Based Maintenance:

- Remove cardboard boxes from room. Utilize plastic containers to store items.
- Clean carpet with extraction machine. Generate work order through COMPASS to evaluate carpet if cleaning the carpet does not rectify concerns.
- Clean environmental surface 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:

- Evaluate HVAC system for proper operation and repair as appropriate to increase temperature and lower humidity level. Evaluate for possible installation of return grill.
- Evaluate light ballast for proper operation and repair/replace as appropriate

-		Apollo Midd	lie School		Lvaiuati	on Requested [March 17, 2008	
Time of Day	2:00 pm]			E	valuation Date	March 17, 2008	
Outdoor Conditi	ions Ten	nperature	79.3	Relative Humidity	62	Ambie	nt CO2 477	
Fish To	emperature	Range Rel	ative Humidity	Range	CO2	Ran	ge # Occupants	
201R	73.1	72 - 78	64.5	30% - 60%	973	Max 700	> Ambient 3	
Noticeable Odd	or No		Visible water nage / staining	Visible micro growth?	bial	Amount of mat affected	erial	
Ceiling Type	2 x 4 Lay	In	No	Yes			None	
Wall Type	Drywall/Pla	aster	No	No			None	
Flooring	12 x 12 Vi	nyl	No	No	[None	
	Clean	Minor Dust / Debris	Needs Cleaning		Correc	tive Action Re	quired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	Yes	No	No					
HVAC Supply G	Grills Yes	No	No					
HVAC Return G	irills Yes	No	No					
Ceiling at Supp Grills	ly Yes	No	No					
Surfaces in Roo	om Yes	No	No					
Findings: - Humidity level was slightly elevated at the time of the assessment 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: - Evaluate HVAC system for proper operation and repair as appropriate to lower humidity level								

IAQ Assessment

1791

Location Number