

managing risk with responsibility

Jeffrey S. Moquin, Director Risk Management Department Telephone: 754-321-3200 Facsimile: 754-321-3290

September 22, 2	2008	Signature on File	Fo	r Custodial Supervisor Use Only
TO:	Ms. Margaret Roberts, 1 Welleby Elementary So	1		Custodial Issues Addressed
FROM:	Edward See, Project Ma Risk Management Depa	anager		Custodial Issues Not Addressed
SUBJECT:	Indoor Air Quality (IAC FISH 306, 308, 327, 331,			

On September 11, 2008 I conducted an assessment of FISH 306, 308, 327, 331 and Portable 119C and 918C at **Welleby Elementary 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. Leontine Butler, Area Superintendent Dr. Margaret Underhill, Area Director Jeffrey S. Moquin, Director, Risk Management Scott Gillen, Project Manager, Facilities and Construction Management Ruby Fitzgerald, 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.

			IAQ As	sessment	Locati	on Number	2881	
	We	lleby Elementar	y School		Evaluat	tion Requested	Septemb	per 2, 2008
Time of Day	1:00 pm					Evaluation Date	Septemb	er 11, 2008
Outdoor Cond	itions Terr	perature	82	Relative Humid	ty 88.2	2 Ambie	nt CO2	368
Fish	Temperature	Range Relat	tive Humidity	Range	CO2	Ran	nge #	Occupants
306	71.8 7	2 - 78	59.7	30% - 60%	835	Max 700	> Ambien	t 20
Noticeable Oc	dor No		isible water age / staining	Visible mi g? growt		Amount of ma affected	terial	
Ceiling Type	2 x 4 Lay	In	No	No]		None	
Wall Type	Drywall/Pla	ster	No	No]		None	
Flooring	12 x 12 Vir	nyl	No	No]		None	
	Clean	Minor Dust / Debris	Needs Cleaning		Corre	ctive Action Re	equired	
Ceiling	Yes	Νο	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes		CI	lean and sanitiz	ze	
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills Yes	Νο	No					
Ceiling at Sup Grills	oply Yes	No	No					
Surfaces in R	oom Yes	Νο	No					

Findings:

Dust and dirt build up on floor under computer table

Recommendations:

Site Based Maintenance:

- Thoroughly clean and sanitize floor under computer table - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

			IAQ As	sessment	Location Nu	mber	2881	
	We	lleby Elementa	ry School		Evaluation R	equested	Septemb	oer 2, 2008
Time of Day	1:00 pm				Evalua	ation Date	Septemb	er 11, 2008
Outdoor Condit	ions Ten	perature	82	Relative Humidity	88.2	Ambie	nt CO2	368
Fish T	emperature	Range Rela	ative Humidity	Range	CO2	Ran	ge #	Occupants
308	71.4 7	2 - 78	58.9	30% - 60%	717	Max 700	> Ambient	2
Noticeable Odd	or No		Visible water nage / staining	Visible micro growth?	obial Amo	ount of mat affected	terial	
Ceiling Type	2 x 4 Lay	In	Yes	No	3 sta	ined ceilin	g tiles and	light grids
Wall Type	Drywall/Pla	ster	No	No			None	
Flooring	12 x 12 Vi	nyl	No	No			None	
	Clean	Minor Dust / Debris	Needs Cleaning		Corrective	Action Re	quired	
Ceiling	No	Yes	Yes	R	emove and re	eplace cei	ling tiles	
Walls	Yes	Νο	No					
Flooring	Yes	Νο	No					
HVAC Supply G	Grills Yes	No	No					
HVAC Return G	Frills Yes	Νο	No					
Ceiling at Supp Grills	ly Yes	No	No					
Surfaces in Roo	om Yes	No	No					

Findings:

3 stained ceiling tiles

Recommendations:

Site Based Maintenance:

 Remove and replace stained ceiling tiles
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 cause of stained ceiling tiles and light grids and repair as appropriate

			IAQ As	sessment	Location	Number	2881	
	We	elleby Elemer	ntary School		Evaluation	Requested	Septemb	er 2, 2008
Time of Day	1:00 pm]			Eva	luation Date	Septembe	er 11, 2008
Outdoor Condition	ons Tei	mperature	82	Relative Humidity	88.2	Ambie	nt CO2	368
Fish Te	emperature	Range R	Relative Humidity	Range	CO2	Rar	nge #	Occupants
327	73	72 - 78	65	30% - 60%	847	Max 700	> Ambient	2
Noticeable Odo	r No],	Visible water damage / staining	Visible micro growth?	obial A	mount of ma affected	terial	
Ceiling Type	2 x 4 Lay	/ In	No	No			None	
Wall Type	Drywall/Pl	aster	No	No			None	
Flooring	12 x 12 V	inyl	Yes	No		at wo	od bookcas	e
	Clean	Minor Du / Debris			Correctiv	/e Action Re	equired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes		Clear	n and sanitiz	ze	
HVAC Supply G	rills Yes	No	No					
HVAC Return G	rills Yes	No	No					
Ceiling at Suppl Grills	y Yes	No	No					
Surfaces in Roo	om Yes	No	No					

Findings:

- Dust and dirt build up on floor

- Visible staining/damage on bottom of bookcases - dry at the time of assessment. Appears to be from previous leak in AHU room (FISH 331)

- Humidity level was slightly elevated at the time of assessment

Recommendations:

Site Based Maintenance:

- Thoroughly clean and sanitize floor

- 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 for proper operation and repair as appropriate to lower humidity level

			IAQ Ass	sessment	Locat	ion Number	2881	
	W	elleby Elementar	y School		Evalua	tion Requested	Septemb	per 2, 2008
Time of Day	1:00 pm]				Evaluation Date	Septemb	er 11, 2008
Outdoor Condi	itions Te	mperature	82	Relative Humi	dity 88.	2 Ambie	nt CO2	368
	Temperature	Range Rela	tive Humidity	Range	CO2	Ran	ige #	Occupants
331		72 - 78		30% - 60%		Max 700	> Ambien	t 1
Noticeable Od	lor No		/isible water age / staining	Visible m ? grow		Amount of ma affected	terial	
Ceiling Type	Concre	te	No	No	>		None	
Wall Type	Drywa	II	Yes	No	>	@ 2 :	square feet	
Flooring	Concre	te	Yes	No	>	@ 2	square feet	t
	Clean	Minor Dust / Debris	Needs Cleaning		Corre	ective Action Re	equired	
Ceiling	Yes	No	No					
Walls	No	Yes	Yes		Clean w	ith Wexcide dis	infectant	
Flooring	No	Yes	Yes		Cle	ean as appropri	ate	
HVAC Supply	Grills							
HVAC Return	Grills							
Ceiling at Sup Grills	ply							
Surfaces in Ro	oom Yes	No	No					

Findings: AHU Room

- Leak at drain pan near double doors. Minor water pooling on floor.

- Visible water damage to Southeast wall

Recommendations:

Site Based Maintenance:

- Wipe down walls with Wexcide disinfectant solution

- Clean floor as appropriate and monitor until cause of leak is repaired

- 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 cause of leak at drain pan and repair as appropriate

			IAQ As	sessment	Locati	on Number	2881	
	Wel	leby Elementary	y School		Evaluat	tion Requested	Septemb	per 2, 2008
Time of Day	1:00 pm				l	Evaluation Date	Septemb	er 11, 2008
Outdoor Condit	tions Tem	perature 8	82	Relative Humi	dity 88.2	2 Ambie	nt CO2	368
Fish 1	Femperature F	ange Relat	ive Humidity	Range	CO2	Ran	ge #	Occupants
P-119C	72.1 7 2	2 - 78	52.7	30% - 60%	394	Max 700	> Ambien	t 2
Noticeable Od	or Yes		isible water age / staining	Visible m g? grow		Amount of ma affected	terial	
Ceiling Type	2 x 4 Lay	n	No	No	>		None	
Wall Type	Drywall		No	No	>		None	
Flooring	12 x 12 Vir	yl	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 Supp Grills	ply Yes	Νο	No					
Surfaces in Ro	oom Yes	Νο	No					

Findings:

· Portable recently painted. Odor in room from off-gassing of materials

Recommendations:

Site Based Maintenance:

 Ensure that one A/C unit remains on during unoccupied hours
Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

			IAQ As:	sessment	Locatio	n Number	2881	
	Wel	leby Elementa	ry School		Evaluatio	on Requested	Septemb	ber 2, 2008
Time of Day	1:00 pm				E	valuation Date	Septemb	er 11, 2008
Outdoor Conditio	ons Tem	perature	82	Relative Humidity	88.2	Ambie	nt CO2	368
Fish Ter	nperature F	Range Rela	ative Humidity	Range	CO2	Ran	ige #	Occupants
P-918C	77.4 7	2 - 78	61.2	30% - 60%	961	Max 700	> Ambient	t 14
Noticeable Odor	No		Visible water nage / staining	Visible micro g? growth?		Amount of mat affected	terial	
Ceiling Type	2 x 4 Lay	ln	No	No			None	
Wall Type	Homasot	Э	Yes	No		North a	nd West wa	lls
Flooring	12 x 12 Vir	ıyl	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 Gr	ills Yes	No	No					
HVAC Return Gri	ills Yes	No	No					
Ceiling at Supply Grills	/ Yes	No	No					
Surfaces in Roor	m Yes	No	No					

Findings:

- Elevated moisture content in North and West walls, above and below white board and under West A/C unit (25-95% WME)

- Exterior walls - East and West - have visible wood rot with visible microbial growth (@ 2 square feet)

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 elevated moisture content in North and West walls, above and below white board and under West A/C unit and repair as appropriate. Repair/replace wall material as necessary.

- Evaluate exterior of portable and repair as appropriate