

# managing risk with responsibility

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

October 16, 200	7 Signature on File
TO:	Mr. Wade Edmond, Principal Blanche Ely High School
FROM:	Robert Krickovich, Coordinator, LEA Facilities and Construction Management
SUBJECT:	Indoor Air Quality (IAQ) Assessment FISH 152, 152A, 152B, 152C, 835 and 841

F	or Custodial Supervisor Use Only
	Custodial Issues Addressed
	Custodial Issues Not Addressed

On October 12, 2007 Edward See and I conducted an assessment of FISH 152, 152A, 152B, 152C, 835 and 841 at **Blanche Ely High 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 754-321-1638.

cc: Dr. Joanne Harrison, Area Superintendent Jackie Haywood, Area Director Jeffrey S. Moquin, Director, Risk Management Robert Bellot, Project Manager, Facilities and Construction Management Lynn Cavall, 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

RK/tc Enc.

		IAQ A	ssessment	Locatio	on Number	0361	
	Blanch	e Ely High School		Evaluati	on Requested	October	11, 2007
Time of Day	2:00 pm			E	valuation Date	October	12, 2007
Outdoor Condition	ns Temperat	ure 86.5	Relative Humid	lity 64	Ambie	nt CO2	430
Fish Ten	nperature Range	e Relative Humid	<sup>ity</sup> Range	CO2	Ran	nge #	Occupants
152	72.6 <b>72 - 78</b>	61.4	30% - 60%	990	Max 700	> Ambient	4
Noticeable Odor	No	Visible wate damage / staini			Amount of main affected	terial	
Ceiling Type	2 x 4 Lay In	Yes	No		1 c	eiling tile	
Wall Type	Plaster	No	No	] [		None	
Flooring (	Carpet/12 x 12 Vinyl	No	No			None	
Ceiling	/ [	or Dust Need Debris Cleanin Yes Yes	ng 		tive Action Re	•	
Walls	Yes	No					
Flooring	Yes	No					
HVAC Supply Gri	lls Yes	No					
HVAC Return Gri	lls No	Yes		Clean with	n Wexcide disi	nfectant	
Ceiling at Supply Grills	Yes	No					
Surfaces in Roon	n No	Yes		Clea	an as appropria	ate	

## Findings:

- One stained ceiling tile at corridor wall
- Minor dust and debris on HVAC return grill
- Minor dust build up on environmental surfaces
- Humidity level was slightly elevated

#### Recommendations:

#### Site Based Maintenance:

- Remove and replace stained ceiling tile

- Clean HVAC return grill with Wexcide disinfectant solution

- Clean environmental surfaces

- 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

		IAQ As	sessment	Location Number	0361
	Blanche	Ely High School		Evaluation Requested	October 11, 2007
Time of Day	2:00 pm			Evaluation Date	October 12, 2007
Outdoor Condition	s Temperatur	e 86.5	Relative Humidity	64 Ambie	ent CO2 430
Fish Tem	perature Range	Relative Humidity	Range	CO2 Rar	nge # Occupants
152A	72.6 <b>72 - 78</b>	61.4	30% - 60%	990 Max 700	> Ambient 4
Noticeable Odor	Yes	Visible water damage / staining	Visible micro g? growth?	obial Amount of ma affected	terial
Ceiling Type	2 x 4 Lay In	No	No		None
Wall Type	Plaster	No	No		None
Flooring	Carpet	No	No		None
Osilian	/ De	Dust Needs bris Cleaning o No	I	Corrective Action Re	equired
Ceiling					
Walls	Yes	o No			
Flooring	Yes	o No			
HVAC Supply Grill	s Yes N	o No			
HVAC Return Grill	s No Ye	Yes	CI	lean with Wexcide disi	nfectant
Ceiling at Supply Grills	Yes	o No			
Surfaces in Room	ΝοΥε	Yes		Clean as appropri	ate

#### Findings:

- Odor in room from air fresheners
- Minor dust and debris on HVAC return grill
- Minor dust build up on environmental surfaces
- Humidity level was slightly elevated

#### Recommendations:

#### Site Based Maintenance:

- Remove air fresheners from room

- Clean HVAC return grill with Wexcide disinfectant solution

- Clean environmental surfaces

- 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

			IAQ As	sessment	Locatio	n Number	0361	
	E	Blanche Ely Hig	gh School		Evaluation	on Requested	October	11, 2007
Time of Day	2:00 pm				E	valuation Date	October	12, 2007
Outdoor Condi	itions Tem	perature	86.5	Relative Humidit	y 64	Ambie	nt CO2	430
Fish	Temperature	Range Rela	ative Humidity	Range	CO2	Ran	ige #	Occupants
152B	72.6 <b>7</b>	2 - 78	61.4	30% - 60%	990	Max 700	> Ambient	4
Noticeable Oc	lor No		Visible water nage / staining	Visible mic growth		Amount of mat affected	terial	
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		Correc	tive Action Re	equired	
Ceiling	Yes	Νο	No					
Walls	Yes	No	No					
Flooring	Yes	Νο	No					
HVAC Supply	Grills Yes	Νο	No					
HVAC Return	Grills No	Yes	Yes		Clean with	Wexcide disi	nfectant	
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in Ro	oom No	Yes	Yes		Clea	n as appropri	ate	

## Findings:

- Minor dust and debris on HVAC return grill

- Minor dust build up on environmental surfaces

- Humidity level was slightly elevated

# **Recommendations:**

#### Site Based Maintenance:

- Clean HVAC return grill with Wexcide disinfectant solution

- Clean environmental surfaces

- 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

			IAQ As	sessment	Location	Number	0361	
	E	Blanche Ely Hig	h School		Evaluation	Requested	October	11, 2007
Time of Day	2:00 pm				Eva	luation Date	October	12, 2007
Outdoor Condi	itions Terr	perature 8	36.5	Relative Humidity	/ 64	Ambie	nt CO2	430
Fish	Temperature	Range Rela	tive Humidity	Range	CO2	Ran	nge #	Occupants
152C	72.6 <b>7</b>	2 - 78	61.4	30% - 60%	990	Max 700	> Ambient	4
Noticeable Oc	lor No		/isible water hage / staining	Visible micr growth		mount of ma affected	terial	
Ceiling Type	2 x 4 Lay	In	Νο	No			None	
Wall Type	Plaster		No	No			None	
Flooring	Carpet		Yes	No		Min	or Staining	
	Clean	Minor Dust / Debris	Needs Cleaning		Correctiv	ve Action Re	equired	
Ceiling	Yes	No	No					
Walls	Yes	No	No					
Flooring	No	Yes	Yes		Clear	n and sanitiz	ze	
HVAC Supply	Grills Yes	No	No					
HVAC Return	Grills No	Yes	Yes	C	lean with V	Vexcide disi	nfectant	
Ceiling at Sup Grills	ply Yes	No	No					
Surfaces in Ro	oom No	Yes	Yes		Clean	as appropri	ate	

# Findings:

- Carpet is worn with minor staining.
- Minor dust and debris on HVAC return grill
- Minor dust build up on environmental surfaces
- Humidity level was slightly elevated

#### Recommendations:

#### Site Based Maintenance:

- Thoroughly clean and sanitize carpet. If unable to clean, initiate a work order through Physical Plant Operations to evaluate for replacement.

- Clean HVAC return grill with Wexcide disinfectant solution

- Clean environmental surfaces

- 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

			IAQ Ass	sessment	Locatio	n Number	0361	
	E	Blanche Ely H	ligh School		Evaluation	on Requested	October	11, 2007
Time of Day	2:00 pm				E	valuation Date	October	12, 2007
Outdoor Conditio	ons Terr	perature	86.5	Relative Humidit	y 64	Ambie	nt CO2	430
Fish Te	mperature	Range Re	elative Humidity	Range	CO2	Ran	ge #	Occupants
835	71.1 <b>7</b>	2 - 78	51.1	30% - 60%	790	Max 700	> Ambient	2
Noticeable Odor	No	da	Visible water amage / staining	Visible mic ? growth		Amount of mat affected	terial	
Ceiling Type	2 x 4 Lay	In	Yes	Yes		1 c	eiling tile	
Wall Type	Drywall		Νο	No			None	
Flooring	12 x 12 Vii	nyl	No	No	[		None	
	Clean	Minor Dus / Debris	t Needs Cleaning		Correc	tive Action Re	equired	
Ceiling	Νο	Yes	Yes					
Walls	Yes	No	No					
Flooring	Yes	No	No					
HVAC Supply Gr	rills Yes	No	No					
HVAC Return Gr	ills Yes	No	No					
Ceiling at Supply Grills	y Yes	No	No					
Surfaces in Roor	m Yes	No	No					

## Findings:

- One stained ceiling tile with visible microbial growth at exhaust fan

- Temperature was low at the time of assessment.

- Exterior of building has deteriorated paint and stucco. Drywall in stairwells and exterior walls of corridors is severely water damaged. Repairs are being included in Facilities project.

#### Recommendations:

#### Site Based Maintenance:

- Adjust thermostat to increase temperature

- 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 exhaust fan dampers for proper operation and repair as appropriate. Remove and replace stained ceiling tile.

## Facilities and Construction Management:

- Include exterior of building, drywall in stairwells and exterior walls of corridors Facilities project to repair/replace all water damaged drywall on exterior walls.

			IAQ Ass	sessment	Locatio	on Number	0361	
	BI	anche Ely H	ligh School		Evaluat	ion Requested	October	11, 2007
Time of Day 2	2:00 pm				E	Evaluation Date	October	12, 2007
Outdoor Conditions	s Temp	perature	86.5	Relative Humi	idity 64	Ambie	nt CO2	430
Fish Temp	erature R	ange Re	elative Humidity	Range	CO2	Ran	ige #	Occupants
841	73.5 <b>72</b>	- 78	46.6	30% - 60%	894	Max 700	> Ambient	2
Noticeable Odor	No	da	Visible water amage / staining		nicrobial wth?	Amount of main affected	terial	
Ceiling Type	2 x 4 Lay Ir	١	Yes	Ye	es	3 ce	eiling tiles	
Wall Type	Drywall		No	Ν	0		None	
Flooring	12 x 12 Viny	/I	No	Ν	0		None	
	Clean	Minor Dus / Debris	t Needs Cleaning		Correc	ctive Action Re	equired	
Ceiling	Νο	Yes	Yes		Remove a	and replace cei	ling tiles	
Walls	Yes	No	No					
Flooring	Yes	No	No					
HVAC Supply Grills	s Yes	No	No					
HVAC Return Grills	s Yes	No	No					
Ceiling at Supply Grills	Yes	Νο	No					
Surfaces in Room	Yes	No	No					

# Findings:

- Three stained ceiling tiles with visible microbial growth at exhaust fan

- Exterior of building has deteriorated paint and stucco. Drywall in stairwells and exterior walls of corridors is severely water damaged. Repairs are being included in Facilities project.

# **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 exhaust fan dampers for proper operation and repair as appropriate. Remove and replace stained ceiling tiles.

#### Facilities and Construction Management:

- Include exterior of building, drywall in stairwells and exterior walls of corridors Facilities project to repair/replace all water damaged drywall on exterior walls.