

RISK MANAGEMENT...

managing risk with responsibility

Aston A. Henry, Supervisor
Risk Management Department

Telephone: 754 321-1900
Fax: 754 321-1917

March 15, 2010

Signature on File

TO: Ms. Patricia Hague, Principal
Plantation Middle School

FROM: Edward See, Project Manager
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 127, 127A, 127B, 127E and 127F

For Custodial Supervisor Use Only	
<input type="checkbox"/>	Custodial Issues Addressed
<input type="checkbox"/>	Custodial Issues Not Addressed

On February 19, 2010 I conducted an assessment of FISH 127, 127A, 127B, 127E and 127F at **Plantation 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. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. 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 754-321-1900.

cc: Dr. Leontine Butler, Area Superintendent
Michaelle Pope, Area Director
Jeffrey S. Moquin, Executive Director, Support Operations
Aston Henry, Supervisor, Risk Management
Wayne Thrasher, 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.

IAQ Assessment

Location Number 0551
 Evaluation Requested February 16, 2010
 Evaluation Date February 19, 2010

Plantation Middle School

Time of Day 10:30 am

Outdoor Conditions Temperature 71.1 Relative Humidity 19.8 Ambient CO2 443

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
127	67.6	72 - 78	41.4	30% - 60%	884	Max 700 > Ambient	4
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		Yes		No		Various	
Wall Type		No		No		None	
Flooring		No		No		None	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Remove and replace ceiling tiles
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Clean and sanitize
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Temperature was low at the time of the assessment - ongoing HVAC project in progress
- Signs of water intrusion at exhaust hood
- Rodent droppings along baseboard and shelves. Multiple glue traps set.
- Dust and debris on HVAC supply and return grills
- Multiple stained ceiling tiles

Site Based Maintenance:

- Once pest issue is under control, coordinate with occupant to remove items and facilitate a thorough wipe down of the room with Wexcide disinfectant solution and clean and sanitize flooring.
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Remove and replace stained ceiling tiles and continue to monitor until repairs are facilitated by Physical Plant Operations
- 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 repair as appropriate.
- Follow up with Pest Control regarding status of rodent issues

Facilities and Construction Management:

- Advise HVAC contractor of low temperature

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Plantation Middle School

Time of Day 10:30 am

Outdoor Conditions Temperature 71.1 Relative Humidity 19.8 Ambient CO2 443

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
127A	67	72 - 78	41.7	30% - 60%	881	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		A/C grill	
Ceiling Type	2 x 4 Lay In		Yes	No	A/C grill		
Wall Type	Drywall/Plaster		No	No	None		
Flooring	12 x 12 Vinyl		Yes	No	Various		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	Yes	No	No	
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Evaluate for water damage/staining
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Water damage and possible termite damage at front desk under sink
- Water damage/staining on floor at front desk
- Rusted A/C grill
- Dust build on elevated surfaces
- Temperature was low at the time of the assessment - ongoing HVAC project in progress
- Occupant indicated that sinks in room are not working

Site Based Maintenance:

- Thoroughly clean elevated surfaces throughout the room
- Adjust thermostat to increase temperature
- Contact COMPASS to generate a work order to evaluate sinks
- 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 front desk sink area for cause of water damage and repair as appropriate. Repair/replace cabinet material as necessary.
- Evaluate flooring - water damage/staining
- Generate a work order for Pest Control
- Remove and replace rusted A/C grill

Facilities and Construction Management:

- Advise HVAC contractor of low temperature

IAQ Assessment

Location Number
 Evaluation Requested
 Evaluation Date

Plantation Middle School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="127B"/>	<input type="text" value="67"/>	<input type="text" value="72 - 78"/>	<input type="text" value="42.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="1061"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="21"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>	
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Drywall/Plaster"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="12 x 12 Vinyl"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Walls	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Return Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Ceiling at Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Surfaces in Room	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>

Observations

Findings:

- Minor rust on exhaust hood in science prep area
- Dust build on elevated surfaces
- Temperature was low at the time of the assessment - ongoing HVAC project in progress

Site Based Maintenance:

- Thoroughly clean elevated 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

Facilities and Construction Management:

- Advise HVAC contractor of low temperature

IAQ Assessment

Location Number
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Plantation Middle School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="127E"/>	<input type="text" value="67.4"/>	<input type="text" value="72 - 78"/>	<input type="text" value="41"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="894"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="3"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text" value="None"/>	
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Drywall/Plaster"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="12 x 12 Vinyl"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Walls	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
HVAC Return Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Ceiling at Supply Grills	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
Surfaces in Room	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>

Observations

Findings

- Temperature was low at the time of the assessment - ongoing HVAC project in progress
- Rodent droppings at baseboard - PPO pest control is aware

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

Facilities and Construction Management:

- Advise HVAC contractor of low temperature

IAQ Assessment

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Plantation Middle School

Time of Day 10:30 am

Outdoor Conditions Temperature 71.1 Relative Humidity 19.8 Ambient CO2 443

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
127F	69.2	72 - 78	43.5	30% - 60%	1280	Max 700 > Ambient	23
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Drywall/Plaster		No	No	None		
Flooring	12 x 12 Vinyl		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
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 Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- CO2 level was slightly elevated at the time of the assessment - ongoing HVAC project in progress
- Dust build on elevated surfaces
- Temperature was low at the time of the assessment - ongoing HVAC project in progress
- Occupant indicated rodent issue - PPO pest control is aware

Site Based Maintenance:

- Thoroughly clean elevated 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

Facilities and Construction Management:

- Advise HVAC contractor of low temperature and elevated CO2