

RISK MANAGEMENT...

managing risk with responsibility

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Risk Management Department

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October 2, 2008

Signature on File

TO: Mr. Jon Marlow, Principal
Deerfield Beach High School

FROM: Aston Henry, Supervisor
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 001, 194 and 195

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

On September 26, 2008 I conducted an assessment of FISH 001, 194 and 195 at **Deerfield Beach 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 754-321-3200.

cc: Sharon Airaghi, Area Superintendent
David Hall, Area Director
Jeffrey S. Moquin, Director, Risk Management
Sam Bays, 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
Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

AH/tc
Enc.

IAQ Assessment

Deerfield Beach High School

Location Number 1711
 Evaluation Requested September 26, 2008
 Evaluation Date September 26, 2008

Time of Day 11:30 a.m.

Outdoor Conditions Temperature 85.1 Relative Humidity 54.1 Ambient CO2 335

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
001	76.3	72 - 78	64.6	30% - 60%	991	Max 700 > Ambient	10
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	Concrete		No	No	None		
Wall Type	Concrete		No	No	None		
Flooring	Tile		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				N/A
HVAC Return Grills				N/A
Ceiling at Supply Grills				N/A
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Front hallway entrance into the school. No A/C supply or return grills in this location.
- Front doors are constantly being opened and closed
- No signs of microbial growth or water intrusion

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 hallway area for possible improvement to air circulation

IAQ Assessment

Location Number 1711
 Evaluation Requested September 26, 2008
 Evaluation Date September 26, 2008

Deerfield Beach High School

Time of Day 11:30 a.m.

Outdoor Conditions Temperature 85.1 Relative Humidity 54.1 Ambient CO2 335

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
194	65.7	72 - 78	73.1	30% - 60%	805	Max 700 > Ambient	3
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		Yes	No	3 ceiling tiles		
Wall Type	Drywall		No	No	None		
Flooring	Tile		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	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Visible signs of microbial growth on several items throughout the classroom
- 3 stained ceiling tiles
- Dust and debris on HVAC return grills
- Temperature was low and humidity level was elevated at the time of the assessment

Recommendations:

Site Based Maintenance:

- Wipe down items throughout the room with Wexcide disinfectant solution. Continue to wipe down items until repairs to HVAC system are completed.
- Remove and replace stained ceiling tiles. If stain returns contact COMPASS to generate a work order for Physical Plant Operations to evaluate cause.
- 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:

- Evaluate HVAC system for proper operation and repair as appropriate to increase temperature and lower humidity level

IAQ Assessment

Location Number
 Evaluation Requested
 Evaluation Date

Deerfield Beach High School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="195"/>	<input type="text" value="66.6"/>	<input type="text" value="72 - 78"/>	<input type="text" value="71.4"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="1041"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="31"/>
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"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Tile"/>		<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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean with Wexcide disinfectant"/>
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:

- Visible signs of microbial growth on several items throughout the classroom
- Dust and debris on HVAC return grills
- Temperature was low and humidity level was elevated at the time of the assessment

Recommendations:

Site Based Maintenance:

- Wipe down items throughout the room with Wexcide disinfectant solution. Continue to wipe down items until repairs to HVAC system are completed.
- 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:

- Evaluate HVAC system for proper operation and repair as appropriate to increase temperature and lower humidity level