

RISK MANAGEMENT...

managing risk with responsibility

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Risk Management Department

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September 5, 2007

Signature on File

TO: Mr. David Olafson,, Principal
Plantation Middle School

FROM: Edward See, Project Manager
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 150A-F, 150H and 150K

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

On April 28, 2008 I conducted an assessment of FISH 150A-F, 150H and 150K 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. 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. Verda Farrow, Area Superintendent
Jan Beal, Area Director
Jeffrey S. Moquin, Director, Risk Management
Wayne Thrasher, Project Manager, Facilities and Construction Management
Ruby Fitzgerald, Broward Teachers Union
Roy Jarrett, National Federation of Public and Private Employees
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

ES/tc
Enc.

IAQ Assessment

Location Number 0551

Plantation Middle School

Evaluation Requested April 16, 2008

Time of Day 2:30 pm

Evaluation Date April 28, 2008

Outdoor Conditions Temperature 91.4 Relative Humidity 42.1 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
150A	71.9	72 - 78	46.3	30% - 60%	771	Max 700 > Ambient	5
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	Plaster/Drywall		No	No	None		
Wall Type	Plaster/Drywall		No	No	None		
Flooring	Carpet		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	Yes	No	No	

Observations

Findings:
- No signs of water intrusion or microbial growth

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

IAQ Assessment

Location Number 0551

Plantation Middle School

Evaluation Requested April 16, 2008

Time of Day 2:30 pm

Evaluation Date April 28, 2008

Outdoor Conditions Temperature 91.4 Relative Humidity 42.1 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
150B	72.7	72 - 78	46.7	30% - 60%	745	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	Plaster/Drywall		No	No	None		
Wall Type	Plaster/Drywall		No	No	None		
Flooring	Carpet		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	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- No signs of water intrusion or microbial growth
- Dust and debris on HVAC return grills

Recommendations:

Site Based Maintenance:

- 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

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="150C"/>	<input type="text" value="77.6"/>	<input type="text" value="72 - 78"/>	<input type="text" value="35.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="775"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
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="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Carpet"/>		<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:
 - No signs of water intrusion or microbial growth
 - Occupant complained of musty odor in the morning. No odor detected.

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

IAQ Assessment

Location Number 0551

Plantation Middle School

Evaluation Requested April 16, 2008

Time of Day 2:30 pm

Evaluation Date April 28, 2008

Outdoor Conditions Temperature 91.4 Relative Humidity 42.1 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
150D	73.2	72 - 78	46	30% - 60%	826	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	Plaster/Drywall		No	No	None		
Wall Type	Plaster/Drywall		No	No	None		
Flooring	Carpet		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	Yes	No	No	

Observations

Findings:

- No signs of water intrusion or microbial growth
- Non-approved chemicals in room (air freshener)

Recommendations:

Site Based Maintenance:

- Remove non-approved chemicals from room (air freshener)
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

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="150E"/>	<input type="text" value="76.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="42"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="843"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
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="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Carpet"/>		<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:
 - No signs of water intrusion or microbial growth

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

IAQ Assessment

Location Number 0551

Plantation Middle School

Evaluation Requested April 16, 2008

Time of Day 2:30 pm

Evaluation Date April 28, 2008

Outdoor Conditions Temperature 91.4 Relative Humidity 42.1 Ambient CO2 436

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
150F	71.9	72 - 78	44.6	30% - 60%	797	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	Plaster/Drywall		No	No	None		
Wall Type	Plaster/Drywall		No	No	None		
Flooring	Carpet		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	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- No signs of water intrusion or microbial growth
- Dust and debris on HVAC return grills

Recommendations:

Site Based Maintenance:

- 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

IAQ Assessment

Location Number
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Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="150H"/>	<input type="text" value="73.8"/>	<input type="text" value="72 - 78"/>	<input type="text" value="46.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="791"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
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="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Carpet"/>		<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:
 - No signs of water intrusion or microbial growth

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 AHU's that service office areas (150A-H) and clean coils and pan as appropriate

IAQ Assessment

Location Number
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 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="150K"/>	<input type="text" value="75.3"/>	<input type="text" value="72 - 78"/>	<input type="text" value="45.4"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="787"/>	<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="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Plaster/Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Flooring	<input type="text" value="Carpet"/>		<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"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="N/A"/>
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:
 - No signs of water intrusion or microbial growth

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