

RISK MANAGEMENT...

managing risk with responsibility

Jeffrey S. Moquin, Director
Risk Management Department

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September 19, 2008

Signature on File

TO: Ms. Lee Dollar, Principal
Village Elementary School

FROM: Aston A. Henry, Supervisor
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 901, 905, 906, 911, 915 and 916

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

On September 18, 2008 I conducted an assessment of FISH 901, 905, 906, 911, 915 and 916 at **Village 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

AH/tc
Enc.

IAQ Assessment

Location Number
 Evaluation Requested
 Evaluation Date

Village Elementary School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="901"/>	<input type="text" value="74.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="62.1"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="488"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
Noticeable Odor	<input type="text" value="No"/>	Visible water damage / staining?	<input type="text" value="No"/>	Visible microbial growth?	<input type="text" value="No"/>	Amount of material affected	<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="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:
 - Humidity level was elevated at the time of the assessment

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 HVAC system for proper operation and repair as appropriate to lower humidity level

IAQ Assessment

Location Number 1621

Village Elementary School

Evaluation Requested September 16, 2008

Time of Day 11:15 am

Evaluation Date September 18, 2008

Outdoor Conditions Temperature 95.1 Relative Humidity 50.1 Ambient CO2 278

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
905	74.1	72 - 78	62.1	30% - 60%	554	Max 700 > Ambient	24
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		No		No		None	

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

Observations

Findings:
 - Humidity level was elevated at the time of the assessment

Recommendations:

Site Based Maintenance:
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IAQ Assessment

Location Number 1621

Village Elementary School

Evaluation Requested September 16, 2008

Time of Day 11:15 am

Evaluation Date September 18, 2008

Outdoor Conditions Temperature 95.1 Relative Humidity 50.1 Ambient CO2 278

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
906	73.2	72 - 78	63	30% - 60%	535	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		No		No		None	

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

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IAQ Assessment

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Time of Day 11:15 am

Evaluation Date September 18, 2008

Outdoor Conditions Temperature 95.1 Relative Humidity 50.1 Ambient CO2 278

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
911	78.2	72 - 78	64.7	30% - 60%	525	Max 700 > Ambient	2
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Drywall		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	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:
 - Temperature and humidity were elevated at the time of the assessment

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

IAQ Assessment

Location Number 1621

Village Elementary School

Evaluation Requested September 16, 2008

Time of Day 11:15 am

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Outdoor Conditions Temperature 95.1 Relative Humidity 50.1 Ambient CO2 278

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
915	80.1	72 - 78	64	30% - 60%	506	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		No		No		None	

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

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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

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

IAQ Assessment

Location Number
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 Evaluation Date

Village Elementary School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="916"/>	<input type="text" value="77.9"/>	<input type="text" value="72 - 78"/>	<input type="text" value="64.5"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="524"/>	<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="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="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"/>

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Findings:
 - Temperature and humidity were elevated at the time of the assessment

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