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July 28, 2005

TO: Mr. Vincent Alessi, Principal
Deerfield Beach Middle School

FROM: Robert J. Krickovich, Coordinator, LEA
Facilities and Construction Management, Environmental Division

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 142, 759 and 904

On July 12, 2005 the IAQ Assessment Team conducted an assessment of FISH 142, 759 and 904 at **Deerfield Beach Middle School**. The evaluation consisted of a walkthrough of the identified areas to assess the current condition of the location with regard to indoor air quality. This assessment included observations of the carpet, floor tile, ceiling tile, interior walls, false ceiling plenum, and accessible ventilation equipment.

Attached are the findings of this assessment along with recommendations for further assessment, remediation, or corrective actions, if needed.

Generally, the IAQ Assessment did not identify any existing conditions significantly impacting IAQ and thereby presenting immediate health and safety concerns 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.

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
Craig Anderson, Area Director
Jeffrey S. Moquin, Director, Risk Management
Rigo Zubizarreta, Project Manager II, Facilities and Construction Management
LaFrances Trotter, Broward Teachers Union
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

RK/tc
Enc.

IAQ Assessment

Deerfield Beach Middle School

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="144"/>	<input type="text" value="81.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="77.5"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="511"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="1"/>
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="2x4 Lay In"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>	<input type="text" value="None"/>	<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="No"/>	<input type="text" value="None"/>	<input type="text" value="None"/>	<input type="text" value="None"/>
Flooring	<input type="text" value="12x12 Vinyl"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>	<input type="text" value="None"/>	<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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean with Wexcide disinfectant"/>
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:

- HVAC system in the building was not working
- Visible microbial growth on edges of wood desks and bookcases
- Minor dust and debris on HVAC supply and return grills **(Same condition for all rooms throughout entire building)**
- HVAC supply grill stuffed full of newspaper
- One live plant in room
- Non-approved SBBC cleaners found in room

Recommendations:

Site Based Maintenance:

- Clean edges of desks and bookcases with Wexcide disinfectant solution to remove microbial growth
- Clean HVAC supply and return grills with Wexcide disinfectant solution throughout the entire building
- Remove newspaper from HVAC supply grill
- Remove live plant
- Remove non-approved SBBC cleaners
- 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 Division:

- Evaluate and repair HVAC system

IAQ Assessment

Deerfield Beach Middle School

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Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="759"/>	<input type="text" value="79.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="82.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="412"/>	<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="Yes"/>		<input type="text" value="No"/>		<input type="text" value="One tile at exterior wall"/>	
Ceiling Type		<input type="text" value="2x2 Lay In"/>		<input type="text" value="Yes"/>		<input type="text" value="No"/>	
Wall Type		<input type="text" value="Drywall"/>		<input type="text" value="Yes"/>		<input type="text" value="No"/>	
Flooring		<input type="text" value="12x12 Vinyl"/>		<input type="text" value="No"/>		<input type="text" value="No"/>	
		<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:

- HVAC system in the building was not working
- One water damaged ceiling tile
- Wall material around windows is water damaged in all rooms of this building

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 Division:

- Evaluate and repair HVAC system
- Evaluate and repair cause of water damaged ceiling tile and replace tile
- Seal all windows for this building and repair interior walls throughout the building

IAQ Assessment

Deerfield Beach Middle School

Evaluation Requested

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Evaluation Date

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input style="width: 50px;" type="text" value="904"/>	<input style="width: 50px;" type="text" value="76.4"/>	<input style="width: 50px;" type="text" value="72 - 78"/>	<input style="width: 50px;" type="text" value="65.6"/>	<input style="width: 50px;" type="text" value="30% - 60%"/>	<input style="width: 50px;" type="text" value="437"/>	<input style="width: 50px;" type="text" value="Max 700 > Ambient"/>	<input style="width: 50px;" type="text" value="3"/>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	
Ceiling Type		<input style="width: 100px;" type="text" value="2x2 Lay In"/>		<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	
Wall Type		<input style="width: 100px;" type="text" value="Drywall"/>		<input style="width: 100px;" type="text" value="Yes"/>		<input style="width: 100px;" type="text" value="At windows"/>	
Flooring		<input style="width: 100px;" type="text" value="12x12 Vinyl"/>		<input style="width: 100px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>
Walls	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>
Flooring	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>
HVAC Supply Grills	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>
HVAC Return Grills	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>
Ceiling at Supply Grills	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>
Surfaces in Room	<input style="width: 40px;" type="text" value="Yes"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 40px;" type="text" value="No"/>	<input style="width: 90%; height: 20px;" type="text"/>

Observations

Findings: One large room being converted into smaller rooms

- HVAC system in the building was not working
- Visible microbial growth under windows in two rooms where the plaster fell off the wall
- Wall material around windows is water damaged in all rooms of this building

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 Division:

- Evaluate and repair HVAC system
- Seal all windows for this building and repair interior walls throughout the building