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April 12, 2005

TO: Ms. Bettye Brown, Principal
Margate Middle School

FROM: Kenneth I. Partee, Project Manager, Occupational Health and Environmental
Control
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 103, 120F and 225

On April 4 and 5, 2005 the IAQ Assessment Team conducted an assessment of FISH 103, 120F, and 225 at **Margate 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 754-321-3200.

cc: Dr. Joanne Harrison, Area Superintendent
Sharon Airaghi, Area Director
Jeffrey S. Moquin, Director, Risk Management
Philip Kaufold, Project Manager II, Facilities and Construction Management
Ruby Fitzgerald, Broward Teachers Union
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

KP/tc
Enc.

IAQ Assessment

Margate 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 style="width: 50px;" type="text" value="103"/>	<input style="width: 50px;" type="text" value="77.5"/>	<input style="width: 50px;" type="text" value="72 - 78"/>	<input style="width: 50px;" type="text" value="43"/>	<input style="width: 50px;" type="text" value="30% - 60%"/>	<input style="width: 50px;" type="text" value="936"/>	<input 1,000="" ppm)"="" style="width: 50px;" type="text" value("<=""/>	<input style="width: 50px;" type="text" value="4"/>
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="Yes"/>		<input style="width: 100px;" type="text" value="Yes"/>		<input style="width: 100px;" type="text" value="4 Ceiling Tiles"/>	
Ceiling Type		Wall Type		Flooring			
<input style="width: 100px;" type="text" value="2 x 4 Lay In"/>		<input style="width: 100px;" type="text" value="Plaster"/>		<input style="width: 100px;" type="text" value="Carpet"/>			
		<input style="width: 50px;" type="text" value="No"/>		<input style="width: 50px;" type="text" value="No"/>		<input style="width: 100px;" type="text" value="None"/>	
		<input style="width: 50px;" type="text" value="No"/>		<input style="width: 50px;" 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: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 100px;" type="text" value="Replace Ceiling Tiles"/>
Walls	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text" value=""/>
Flooring	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text" value=""/>
HVAC Supply Grills	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 100px;" type="text" value="Clean with Wexcide Disinfectant"/>
HVAC Return Grills	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 100px;" type="text" value="Clean with Wexcide Disinfectant"/>
Ceiling at Supply Grills	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 100px;" type="text" value="Clean as appropriate"/>
Surfaces in Room	<input style="width: 50px;" type="text" value="Yes"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 50px;" type="text" value="No"/>	<input style="width: 100px;" type="text" value=""/>

Observations

Findings:

- Microbial growth on ceiling due to past leak
- Conduits in false ceiling require sealing
- Dust and debris on HVAC supply and return grills
- Minor dust and debris on ceiling at supply grills

Recommendations:

Site Based Maintenance:

- Remove and replace ceiling tiles
- Clean HVAC supply and return grills with wexcide disinfectant solution
- Clean ceiling at supply grills as appropriate
- 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:

- Seal two conduits in false ceiling to prevent future leaks

IAQ Assessment

Margate 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="120F"/>	<input type="text" value="74.5"/>	<input type="text" value="72 - 78"/>	<input type="text" value="44.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="1033"/>	<input 1,000="" ppm)"="" type="text" value("<=""/>	<input type="text" value="5"/>
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="Ceiling Tiles at Supply Grill"/>	
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="Yes"/>	<input type="text" value="No"/>		<input type="text" value="Ceiling Tiles at Supply Grill"/>	
Wall Type	<input type="text" value="Plaster"/>		<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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Remove Carpet and Replace with Tile"/>
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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Replace Stained Ceiling Tiles"/>
Surfaces in Room	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>

Observations

Findings:	<ul style="list-style-type: none"> - Stained ceiling tiles at supply grill - Carpet is stained - Need HVAC return grill on occupant door - Missing HVAC supply and return grills - Possible diverter installed on supply grill
Recommendations:	
Site Based Maintenance:	<ul style="list-style-type: none"> - Remove and replace stained ceiling tiles at supply grill and insulate as needed - 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:	<ul style="list-style-type: none"> - Remove carpet and replace with tile - Install return grill to occupant door - Replace missing HVAC supply and return grills - Evaluate and repair supply grill as appropriate

IAQ Assessment

Margate Middle School

Evaluation Requested April 4, 2005

Time of Day 9:30 am

Evaluation Date April 5, 2005

Outdoor Conditions Temperature 76.6 Relative Humidity 55.8 Ambient CO2 459

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
225	68.2	72 - 78	63.2	30% - 60%	848	< 1,000 PPM	8
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		No	No	None		
Flooring	Tile		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Ceiling tiles to be replaced by Head Custodian
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Clean and Sanitize Floor
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide Disinfectant
HVAC Return Grills				Unable to locate return grill
Ceiling at Supply Grills	No	Yes	Yes	Replace ceiling tiles with new ceiling tiles
Surfaces in Room	Yes	No	No	

Observations

<p>Findings:</p> <ul style="list-style-type: none"> - School is in the process of replacing ceiling tiles - Room is very cold - Exhaust fans in 225B and 225C not functioning properly - Dust and debris on floor - Dust and debris on HVAC supply grill <p>Recommendations:</p> <p>Site Based Maintenance:</p> <ul style="list-style-type: none"> - Remove and replace ceiling tile - Clean and sanitize floor - Clean HVAC supply grill 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 <p>Physical Plant Operations Division:</p> <ul style="list-style-type: none"> - Evaluate and repair HVAC and thermostat as appropriate - Evaluate and repair exhaust fans in 225B and 225C as appropriate
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