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July 28, 2006

Signature on File

TO: Mr. Alan Strauss, Principal
South Broward High School

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

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 310, 604 and 621

On July 14, 2006 I conducted an assessment of FISH 310, 604 and 621 at **South Broward 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.

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: Sam Gregg, Area Superintendent
Margaret Underhill, Area Director
Jeffrey S. Moquin, Director, Risk Management
Bob Sharps, Project Manager, Facilities and Construction Management
Diane Watts, 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

Location Number 0171
 Evaluation Requested July 14, 2006
 Evaluation Date July 14, 2006

South Broward High School

Time of Day 1:00 pm

Outdoor Conditions Temperature 94.7 Relative Humidity 68.7 Ambient CO2 512

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
310	71	72 - 78	58.4	30% - 60%	506	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		Yes	Yes	Various		
Wall Type	Plaster		Yes	Yes	West wall		
Flooring	Tile		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Replace ceiling tiles
Walls	No	Yes	Yes	Repair/replace as appropriate
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills	No	Yes	Yes	Replace ceiling tiles
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Visible microbial growth on 10 ceiling tiles around HVAC supply grills on West side of room. Water damage on 2 ceiling tiles (East side) requiring cuts.
- Dust and dirt build up on walls
- Dust and debris on HVAC supply and return grills
- Dust build up on environmental surfaces
- Temperature was low and humidity level was slightly elevated
- Gap at bottom of door

Recommendations:

Site Based Maintenance:

- Clean walls to remove dust and dirt build up
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Thoroughly clean environmental surfaces throughout the room
- Adjust thermostat to increase temperature and lower humidity level
- 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 cause of stained ceiling tiles and repair. Remove and replace ceiling tiles as appropriate.
- Evaluate gap at bottom of door as possible source of outside air

IAQ Assessment

South Broward High School

Location Number
 Evaluation Requested
 Evaluation Date

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="604"/>	<input type="text" value="70.7"/>	<input type="text" value="72 - 78"/>	<input type="text" value="64.3"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="532"/>	<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="Yes"/>	Visible microbial growth?	<input type="text" value="Yes"/>	Amount of material affected	<input type="text" value="2 Light Diffusers"/>
Ceiling Type	<input type="text" value="2 x 4 Lay In"/>		<input type="text" value="Yes"/>		<input type="text" value="Yes"/>		<input type="text" value="2 Light Diffusers"/>
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="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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Evaluate ceiling tile tracks"/>
Walls	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>
Flooring	<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value=""/>
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" value=""/>
Surfaces in Room	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>

Observations

Findings:

- Dirt and microbial growth on 2 light diffusers
- Dust and dirt build up on walls
- Dust and debris on HVAC supply and return grills
- Dust build up on environmental surfaces
- Ceiling tile track is rusty due to condensate build up
- Temperature was low and humidity level was slightly elevated

Recommendations:

Site Based Maintenance:

- Clean 2 light diffusers to remove dirt and microbial growth
- Clean walls to remove dust and dirt build up
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Thoroughly clean environmental surfaces throughout the room
- Adjust thermostat to increase temperature and lower humidity level
- 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 ceiling tile tracks (rusted) and repair/replace as appropriate

IAQ Assessment

South Broward High School

Location Number
 Evaluation Requested
 Evaluation Date

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="621"/>	<input type="text" value="70.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="57"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="509"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
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="Various"/>	
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="Various"/>	
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="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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Replace moisture impacted tiles"/>
Walls	<input type="text" value="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>
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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>

Observations

Findings:

- Moisture impact on several ceiling tiles
- Dust and dirt build up on walls
- Dust and debris on HVAC supply and return grills
- Dust build up on environmental surfaces
- Temperature was low at the time of the assessment

Recommendations:

Site Based Maintenance:

- Replace moisture impacted ceiling tiles as appropriate
- Clean walls to remove dust and dirt build up
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Thoroughly clean environmental surfaces throughout the room
- Adjust thermostat to increase temperature and lower humidity level
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate