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January 14, 2009

Signature re on File

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

FROM: Richard Rosa, Project Manager
Facilities and Construction Management

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 604, 617 and 621

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

On October 7, 2008 I conducted an assessment of FISH 604, 617 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.

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 754-321-1637.

cc: Dr. Joel Herbst, Area Superintendent
Valerie Wanza, Area Director
Jeffrey S. Moquin, Executive Director, Support Operations
Bob Sharps, Project Manager, Facilities and Construction Management
Jamie Daniels, 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

RR/tc
Enc.

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="75"/>	<input type="text" value="72 - 78"/>	<input type="text" value="55.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="772"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="22"/>
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"/>		<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="12 x 12 Vinyl"/>		<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="No"/>	<input type="text" value="Yes"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean as appropriate"/>
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:

- Functional space is a science lab and room is too cluttered to be cleaned properly
- Dust and debris on light fixtures
- Minor dust build up on elevated surfaces

Recommendations:

Site Based Maintenance:

- Wipe down light fixtures with Wexcide disinfectant solution. Ensure that power is turned off prior to cleaning.
- Thoroughly clean elevated surfaces throughout the room to remove dust build up
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

IAQ Assessment

South Broward High School

Location Number 0171
 Evaluation Requested October 3, 2008
 Evaluation Date October 7, 2008

Time of Day 11:00 am

Outdoor Conditions Temperature 85.9 Relative Humidity 65.1 Ambient CO2 336

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
617	73.9	72 - 78	49.4	30% - 60%	581	Max 700 > Ambient	20
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4		Yes	Yes	@40 ceiling tiles		
Wall Type	Drywall		No	No	None		
Flooring	12 x 12 Vinyl		No	No	None		

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

Observations

Findings:

- Water staining and visible microbial growth around all HVAC supply diffusers
- @40 stained or damaged ceiling tiles
- Minor dust build up on elevated surfaces
- Heavy dust and debris on HVAC return grills in FISH 404 and 409 due to infrequent filter change

Recommendations:

Site Based Maintenance:

- Thoroughly clean elevated surfaces throughout the room to remove dust build up
- Ensure that HVAC filters are changed as needed and ensure that proper sizes are being used
- Clean HVAC return grills in FISH 404 and 409 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

Physical Plant Operations:

- Evaluate duct work at ceiling and reinsulate as appropriate. Remove and replace damaged ceiling tiles and repair/replace rusted/damaged ceiling grid as necessary.
- Clean duct work 10 feet from supply/return as necessary

IAQ Assessment

Location Number 0171
 Evaluation Requested October 3, 2008
 Evaluation Date October 7, 2008

South Broward High School

Time of Day 11:00 am

Outdoor Conditions Temperature 85.9 Relative Humidity 65.1 Ambient CO2 336

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
621	70.4	72 - 78	57.6	30% - 60%	715	Max 700 > Ambient	24
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4		Yes	Yes	@40 ceiling tiles		
Wall Type	Drywall		No	No	None		
Flooring	12 x 12 Vinyl		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	No	Yes	Yes	Remove and replace ceiling tiles
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	No	Yes	Yes	Remove and replace ceiling tiles
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Water staining and visible microbial growth around all HVAC supply diffusers
- @40 stained or damaged ceiling tiles

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 duct work at ceiling and reinsulate as appropriate. Remove and replace damaged ceiling tiles and repair/replace rusted/damaged ceiling grid as necessary.
- Clean duct work 10 feet from supply/return as necessary