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August 2, 2012

Signature on File

TO: Priscilla Ribeiro, Principal
Fort Lauderdale High School

FROM: Richard Rosa, Project Manager
Facilities Design and Construction

SUBJECT: Indoor Air Quality (IAQ) Assessment

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

On October 26, 2011, I conducted an assessment at **Fort Lauderdale High School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions needed.

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. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all site based custodial 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 us at 754-321-1907.

cc: Directors, School Performance & Accountability
Shelley Meloni, Executive Director, Facilities Design and Construction
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division
Roy Norton, Manager, Custodial/Grounds, Physical Plant Operations Division
Aston Henry, Supervisor, Risk Management
Sonja Coley, Senior Project Manager, Facilities Design and Construction
Broward Teachers Union
Federation of Public Employees

RR/jg
Enc.

IAQ Assessment

Fort Lauderdale 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="507"/>	<input type="text" value="72.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="64.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="753"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
Noticeable Odor	<input type="text" value="No"/>		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	<input type="text" value="2 x 2 Lay in"/>		<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="2 stained ceiling tiles"/>		
Wall Type	<input type="text" value="Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Yes"/>	<input type="text" value="See Below"/>
Walls	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Flooring	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
HVAC Supply Grills	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean Appropriately"/>
Ceiling at Supply Grills	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Surfaces in Room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean Appropriately"/>

Observations

Findings
 - FISH 507- Elevated humidity level

Site Based Maintenance
 - FISH 507- Dust build up on HVAC return grills. Clean as appropriate.
 - FISH 507- 2 stained ceiling tiles. Remove and replace ceiling tiles and monitor. If staining returns contact COMPASS to generate a work order.
 - FISH 507-Dust build up on elevated surfaces and low corner. Clean as appropriate.

Physical Plant Operation
 -FISH 507- Evaluate HVAC system for proper operation and repair as appropriate to lower humidity level

-Note Work orders EQ02197 and EQ02198 issued 11/7/11

IAQ Assessment

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Fort Lauderdale High School

Time of Day

Outdoor Conditions Temperature Relative Humidity Ambient CO2

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<input type="text" value="519"/>	<input type="text" value="69.3"/>	<input type="text" value="72 - 78"/>	<input type="text" value="63"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="719"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
Noticeable Odor	<input type="text" value="No"/>		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	<input type="text" value="2 x 2 Lay in"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Wall Type	<input type="text" value="Drywall"/>		<input type="text" value="Yes"/>	<input type="text" value="No"/>	<input type="text" value="1 Sq Ft"/>		
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Walls	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text" value="See Below"/>
Flooring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
HVAC Supply Grills	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
Ceiling at Supply Grills	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Surfaces in Room	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>

Observations

Findings

- FISH 519- Elevated humidity level
- FISH 519- Water damaged wallboard in the northeast corner n the window wall. Staining on exterior of the building adjacent to inside damage.

Site Based Maintenance

- FISH 519- Dust build up on HVAC return grills. Clean as appropriate.
- FISH 519- Dust build up on HVAC supply grills. Clean as appropriate
- FISH 519-Dust build up on elevated surfaces and low corners. Clean as appropriate

Physical Plant Operation

- FISH 519- Evaluate HVAC system for proper operation and repair as appropriate to lower humidity level
- FISH 519- Evaluate for cause of water intrusion and repair as appropriate. Repair/replace wall and ceiling material as necessary.

-Note Work orders EQ02197 and EQ02198 issued 11/7/11

IAQ Assessment

Location Number

Fort Lauderdale High 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 type="text" value="520"/>	<input type="text" value="73.1"/>	<input type="text" value="72 - 78"/>	<input type="text" value="56.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="764"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
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"/>
Ceiling Type	<input type="text" value="2 x 2 Lay in"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Wall Type	<input type="text" value="Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Walls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Flooring	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
HVAC Supply Grills	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
Ceiling at Supply Grills	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Surfaces in Room	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>

Observations

Findings
 - FISH 520- Chiller HVAC system currently under repair , HFP states one chiller is continually running while the other chiller is being repaired

Site Based Maintenance
 - FISH 520- Dust build up on HVAC return grills. Clean as appropriate.
 - FISH 520- Dust build up on HVAC supply grills. Clean as appropriate
 - FISH 520-Dust build up on elevated surfaces and low corners. Clean as appropriate
 - FISH 520-Dust and debris on floor. Clean and sanitize.

Physical Plant Operation

-Note Work orders EQ02197 and EQ02198 issued 11/7/11

IAQ Assessment

Location Number

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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="521"/>	<input type="text" value="70.2"/>	<input type="text" value="72 - 78"/>	<input type="text" value="61.4"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="734"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
Noticeable Odor	<input type="text" value="No"/>		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	<input type="text" value="2 x 2 Lay in"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Wall Type	<input type="text" value="Drywall"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Walls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Flooring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
HVAC Supply Grills	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text" value="Clean Appropriately"/>
Ceiling at Supply Grills	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Surfaces in Room	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>

Observations

Findings
 - FISH 521- Chiller HVAC system currently under repair , HFP states one chiller is continually running while the other chiller is being repaired

Site Based Maintenance
 - FISH 521- Dust build up on HVAC return grills. Clean as appropriate.
 - FISH 521- Dust build up on HVAC supply grills. Clean as appropriate
 - FISH 521-Dust build up on elevated surfaces and low corners. Clean as appropriate

Physical Plant Operation

-Note Work orders EQ02197 and EQ02198 issued 11/7/11

IAQ Assessment

Fort Lauderdale 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="922"/>	<input type="text" value="73.8"/>	<input type="text" value="72 - 78"/>	<input type="text" value="56.2"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="580"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text"/>
Noticeable Odor	<input type="text" value="No"/>		Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling Type	<input type="text" value="2 x 2 Lay in"/>		<input type="text" value="Yes"/>		<input type="text" value="No"/>		<input type="text" value="2 stained tiles"/>
Wall Type	<input type="text" value="Drywall"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>
Flooring	<input type="text" value="Carpet"/>		<input type="text" value="No"/>		<input type="text" value="No"/>		<input type="text"/>

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Yes"/>	<input type="text" value="See below"/>
Walls	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Flooring	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
HVAC Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean Appropriately"/>
HVAC Return Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="Yes"/>	<input type="text" value="Clean Appropriately"/>
Ceiling at Supply Grills	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Surfaces in Room	<input type="checkbox"/>	<input type="text" value="x"/>	<input type="checkbox"/>	<input type="text" value="Clean Appropriately"/>

Observations

Findings

- FISH 922- Chiller HVAC system currently under repair , HFP states one chiller is continually running while the other chiller is being repaired
- FISH 922-Signs of water intrusion and stained ceiling tiles, possible HVAC roof penetration,

Site Based Maintenance

- FISH 922- Dust build up on HVAC return grills. Clean as appropriate.
- FISH 922- Dust build up on HVAC supply grills. Clean as appropriate
- FISH 922-Dust build up on elevated surfaces, bookshelves and horizontal surfaces .Cobwebs in elevated corners. Clean as appropriate.

Physical Plant Operation

- FISH 922- Evaluate for cause of water intrusion. Repair/replace wall and ceiling material as necessary.

-Note Work orders EQ02197 and EQ02198 issued 11/7/11