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Risk Management Department

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January 26, 2012

Signature on File

TO: Jonathan Williams, Principal
Northeast High School

FROM: Robert Krickovich, Coordinator, LEA
Facilities and Construction Management

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 6, 2011 I conducted an assessment at **Northeast 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 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: Area Superintendent
Area Directors
Shelley Meloni, Executive Director, Facilities and Construction Management
Mark Dorsett, Acting Director, Physical Plant Operations Division, Maintenance
Sonja Coley, Project Manager III, Facilities and Construction Management
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division
Aston Henry, Supervisor, Risk Management
Broward Teachers Union
Federation of Public Employees

RK/tc
Enc.

IAQ Assessment

Location Number 1241

Northeast High School

Evaluation Requested September 21, 2011

Time of Day 1:00 PM

Evaluation Date October 6, 2011

Outdoor Conditions Temperature 85.1 Relative Humidity 51.6 Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
121	66.9	72 - 78	58.2	30% - 60%	730	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		Yes		1 tile	
Ceiling Type	2 x 4 Lay In		Yes	Yes	1 tile		
Wall Type	Plaster		No	No	None		
Flooring	12 x 12 Vinyl		No	No	None		

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

Observations

Findings

- Temperature was low at the time of the assessment
- Dust build up on walls, ceiling and surfaces throughout the room
- Heavy dust build up on HVAC supply and return grills.
- Visible microbial growth on ceiling tile at emergency light

Site Based Maintenance:

- Thoroughly clean walls, ceiling and all surfaces throughout the room
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Contact COMPASS to generate a work order to remove and replace ceiling tile at emergency light
- 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 HVAC system for proper operation and repair as appropriate to increase temperature

- NOTE: Work order EQ02168 generated 10/17/2011 to address HVAC system

IAQ Assessment

Location Number 1241

Northeast High School

Evaluation Requested September 21, 2011

Time of Day 1:00 PM

Evaluation Date October 6, 2011

Outdoor Conditions Temperature 85.1 Relative Humidity 51.6 Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
145	72.1	72 - 78	41.5	30% - 60%	914	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		2 tiles	
Ceiling Type	2 x 4 Lay In		Yes	No	Various		
Wall Type	Plaster		Yes	No	None		
Flooring	12 x 12 Vinyl		No	No			

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	Yes	No	No	
Walls	No	Yes	Yes	Clean as appropriate
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

- Fan on roof making loud noise
- All sinks (10) dry and floor drain at eye wash and shower dry.
- Heavy dust build up on surfaces and dust on walls in corridor. Clean as appropriate.

Site Based Maintenance:

- Ensure water is run down all drains at least once a week.
- Thoroughly clean all surfaces throughout the room and walls in corridor
- 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 fan on roof and repair as appropriate to alleviate noise

- NOTE: Work order EQ02167 generated 10/17/2011 to address roof fan

IAQ Assessment

Northeast High School

Location Number 1241
 Evaluation Requested September 21, 2011
 Evaluation Date October 6, 2011

Time of Day 1:00 PM

Outdoor Conditions Temperature 85.1 Relative Humidity 51.6 Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
212	68.9	72 - 78	51.4	30% - 60%	805	Max 700 > Ambient	2
Noticeable Odor	Yes		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	Open Tectum		No	No	None		
Wall Type	Plaster		No	No	None		
Flooring	Carpet		No	No	None		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Walls	No	Yes	Yes	Clean as appropriate
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide
Ceiling at Supply Grills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

- Findings**
- Temperature was low at the time of the assessment
 - Dust build up on walls, ceiling and surfaces throughout the room
 - Heavy dust build up on HVAC supply and return grills.
 - FISH 212C, 212J, 212K, 212L and 212N - Visible microbial growth on walls and ceilings. Two dehumidifiers were not running in 212N due to full pans.

Site Based Maintenance:

- Thoroughly clean walls, ceiling and all surfaces throughout the room
- Clean HVAC supply and return grills with Wexcide disinfectant solution
- Clean walls and ceilings in FISH 212C, 212J, 212K, 212L and 212N and ensure dehumidifier pans are emptied regularly.
- 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 HVAC system for proper operation and repair as appropriate to increase temperature

- NOTE: Work order EQ02168 generated 10/17/2011 to address HVAC system

IAQ Assessment

Location Number 1241

Northeast High School

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Time of Day 1:00 PM

Evaluation Date October 6, 2011

Outdoor Conditions Temperature 85.1 Relative Humidity 51.6 Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
276	73.1	72 - 78	63.2	30% - 60%	827	Max 700 > Ambient	4
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Wall Type		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Flooring		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
Walls	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Clean as appropriate
Flooring	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
HVAC Supply Grills	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
HVAC Return Grills	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Clean with Wexcide
Ceiling at Supply Grills	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Clean as appropriate
Surfaces in Room	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Clean as appropriate

Observations

Findings

- Dust build up on walls and surfaces throughout the room
- Dust build up on HVAC return grills and ceiling at supply grills
- Yellow spotty staining on corner bookcase
- Humidity level was slightly elevated at the time of the assessment

Site Based Maintenance:

- Thoroughly clean walls and all surfaces throughout the room
- Clean HVAC return grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Clean bookcase 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:

- Evaluate HVAC system for proper operation and repair as appropriate to lower humidity

- NOTE: Work order EQ02168 generated 10/17/2011 to address HVAC system

IAQ Assessment

Location Number 1241

Northeast High School

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Time of Day 1:00 PM

Evaluation Date October 6, 2011

Outdoor Conditions Temperature 85.1 Relative Humidity 51.6 Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
287	71.2	72 - 78	59.6	30% - 60%	882	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Wall Type		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Flooring		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	

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

Observations

Findings

- Dust build up on floor and surfaces throughout the room
- Dust build up on HVAC supply and return grills.

Site Based Maintenance:

- Thoroughly clean floor and all surfaces throughout the room
- Clean HVAC supply and return grills 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

IAQ Assessment

Location Number 1241

Northeast High School

Evaluation Requested September 21, 2011

Time of Day 1:00 PM

Evaluation Date October 6, 2011

Outdoor Conditions Temperature 85.1 Relative Humidity 51.6 Ambient CO2 445

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
308	67.5	72 - 78	52.6	30% - 60%	604	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		Yes		Yes		10 tiles	
Wall Type		No		No		None	
Flooring		No		No		None	

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

Observations

Findings

- Temperature was low at the time of the assessment
- Visible microbial growth on computer desks and wall surfaces.
- Stained ceiling tiles in FISH 308 and 308A
- Paint on wall surfaces is blistered and peeling
- Hallway has heavy condensation dripping from ceiling and metal access covers. Water stains on walls and concrete floor.

Possible air leak above ceiling.

Site Based Maintenance:

- Continue to wipe down walls, ceiling and all surfaces throughout the room
- 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 HVAC system for proper operation and repair as appropriate to increase temperature
- Evaluate for cause of stained ceiling tiles (roof leak?) and repair as appropriate. Remove and replace ceiling tiles as necessary
- Evaluate HVAC controls to ensure shut down with unit
- Evaluate for cause of condensation on plaster ceiling corridor outside of FISH 308 and repair as appropriate
- Once cause of condensation and water intrusion is identified and repaired, paint rooms with anti-microbial paint

- NOTE: Work orders EQ01846-1848 generated 9/2/2011 (from previous assessment 8/30/11)