

RISK MANAGEMENT...

managing risk with responsibility

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May 22, 2007

Signature on File

TO: Ms. Sarah Hausman,, Principal
Wingate Oaks Center

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

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 701, 701A, 702, 702A, 703, 703A and 802

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

On March 26, 2007 Richard Rosa conducted an assessment of FISH 701, 701A, 702, 702A, 703, 703A and 802 at **Wingate Oaks Center**. 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 754-321-1638.

cc: Dr. Harry LaCava, Area Superintendent
Toni Weissberg, Area Director
Jeffrey S. Moquin, Director, Risk Management
Robert Goode, Project Manager, Facilities and Construction Management
Dane Ramson, Broward Teachers Union
Roy Jarrett, National Federation of Public and Private Employees
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

RK/tc
Enc.

IAQ Assessment

Wingate Oaks Center

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="701"/>	<input type="text" value="71.8"/>	<input type="text" value="72 - 78"/>	<input type="text" value="64.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="528"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="2"/>
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 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Tackboard/Plaster"/>		<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="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="Yes"/>	<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text"/>
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:

- Dust and debris on HVAC supply grills
- Humidity level was elevated at the time of the assessment
- Minor dust build up on elevated surfaces

-Recommendations:

Site Based Maintenance:

- Clean HVAC supply grills with Wexcide disinfectant solution
- Clean elevated surfaces 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 level

IAQ Assessment

Wingate Oaks Center

Location Number 0991
 Evaluation Requested March 23, 2007
 Evaluation Date March 26, 2007

Time of Day 12:20 pm

Outdoor Conditions Temperature 77.8 Relative Humidity 56.3 Ambient CO2 424

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
701A	70.7	72 - 78	66.2	30% - 60%	489	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		4 Ceiling Tiles	
Ceiling Type	2 x 4 Lay In		Yes	No		4 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	Replace stained ceiling tiles
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills				N/A
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Dust and debris on HVAC supply grills
- Temperature was low and humidity level was elevated at the time of the assessment
- Dust build up on environmental surfaces
- 4 stained ceiling tiles. A/C pipe above drop ceiling may be source of water intrusion

-Recommendations:

Site Based Maintenance:

- Clean HVAC supply grills with Wexcide disinfectant solution
- Thoroughly clean 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 and lower humidity level
- Evaluate cause of stained ceiling tiles and repair as appropriate. A/C pipe above drop ceiling may be source of leak.
- Evaluate door for possible return - undercut door

IAQ Assessment

Location Number 0991
 Evaluation Requested March 23, 2007
 Evaluation Date March 26, 2007

Wingate Oaks Center

Time of Day 12:40 pm

Outdoor Conditions Temperature 77.8 Relative Humidity 56.3 Ambient CO2 424

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
702	70.5	72 - 78	63.9	30% - 60%	594	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		No		No		None	

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

Observations

Findings:

- Dust and debris on HVAC return grills and on ceiling at supply grills
- Temperature was low and humidity level was elevated at the time of the assessment
- Minor dust build up on elevated surfaces
- 15 live plants in office

-Recommendations:

Site Based Maintenance:

- Clean HVAC return grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Clean elevated surfaces as appropriate
- Remove live plants
- 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 and lower humidity level

IAQ Assessment

Wingate Oaks Center

Location Number 0991
 Evaluation Requested March 23, 2007
 Evaluation Date March 26, 2007

Time of Day 1:00 pm

Outdoor Conditions Temperature 77.8 Relative Humidity 56.3 Ambient CO2 424

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
702A	69.7	72 - 78	65.7	30% - 60%	609	Max 700 > Ambient	1
Noticeable Odor	No		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		Yes	No	4 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	Replace stained ceiling tiles
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills				N/A
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Dust and debris on HVAC supply grills
- Temperature was low and humidity level was elevated at the time of the assessment
- Minor dust build up on elevated surfaces
- 4 stained ceiling tiles. A/C pipe above drop ceiling may be source of water intrusion

-Recommendations:

Site Based Maintenance:

- Clean HVAC supply grills with Wexcide disinfectant solution
- Clean elevated surfaces
- 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 and lower humidity level
- Evaluate cause of stained ceiling tiles and repair as appropriate. A/C pipe above drop ceiling may be source of leak.
- Evaluate door for possible return - undercut door

IAQ Assessment

Location Number 0991
 Evaluation Requested March 23, 2007
 Evaluation Date March 26, 2007

Wingate Oaks Center

Time of Day 1:20 pm

Outdoor Conditions Temperature 77.9 Relative Humidity 56.3 Ambient CO2 424

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
703	68.7	72 - 78	64.9	30% - 60%	663	Max 700 > Ambient	6
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		No		No		None	
Wall Type		No		No		None	
Flooring		No		No		None	

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

Observations

Findings:

- Dust and debris on HVAC supply and return grills and on ceiling at supply grills
- Temperature was low and humidity level was elevated at the time of the assessment
- Minor dust build up on elevated surfaces
- Bowed ceiling tiles

-Recommendations:

Site Based Maintenance:

- Clean HVAC supply and return grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Clean elevated surfaces as appropriate
- Remove and replace ceiling tiles that are bowed
- 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 and lower humidity level

IAQ Assessment

Wingate Oaks Center

Location Number 0991
 Evaluation Requested March 23, 2007
 Evaluation Date March 26, 2007

Time of Day 1:20 pm

Outdoor Conditions Temperature 77.8 Relative Humidity 56.3 Ambient CO2 424

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
703A	69	72 - 78	65.4	30% - 60%	621	Max 700 > Ambient	1
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		2 Ceiling Tiles	
Ceiling Type	2 x 4 Lay In		Yes	No		2 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	Replace stained ceiling tiles
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills				N/A
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:

- Dust and debris on HVAC supply grills
- Temperature was low and humidity level was elevated at the time of the assessment
- Minor dust build up on elevated surfaces
- 2 stained ceiling tiles. A/C pipe above drop ceiling may be source of water intrusion

-Recommendations:

Site Based Maintenance:

- Clean HVAC supply grills with Wexcide disinfectant solution
- Clean elevated surfaces
- 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 and lower humidity level
- Evaluate cause of stained ceiling tiles and repair as appropriate. A/C pipe above drop ceiling may be source of leak.
- Evaluate door for possible return - undercut door

IAQ Assessment

Wingate Oaks Center

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="802"/>	<input type="text" value="70.5"/>	<input type="text" value="72 - 78"/>	<input type="text" value="63.9"/>	<input type="text" value="30% - 60%"/>	<input type="text" value="594"/>	<input type="text" value="Max 700 > Ambient"/>	<input type="text" value="1"/>
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 Lay In"/>		<input type="text" value="No"/>	<input type="text" value="No"/>	<input type="text" value="None"/>		
Wall Type	<input type="text" value="Tackboard/Plaster"/>		<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="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="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:

- Dust and debris on HVAC return grills and on ceiling at supply grills
- Temperature was low and humidity level was elevated at the time of the assessment
- Minor dust build up on elevated surfaces

-Recommendations:

Site Based Maintenance:

- Clean HVAC return grills with Wexcide disinfectant solution and clean ceiling at supply grills
- Clean elevated surfaces 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 increase temperature and lower humidity level