

# RISK MANAGEMENT...

managing risk with responsibility

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November 9, 2009

**Signature on File**

TO: Mrs. Tracy Lockhart-Talley, Principal  
**Drew Resource Center**

FROM: Edward See, Project Manager  
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 401, 402, 403 and 404**

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

On October 8, 2009 I conducted an assessment of FISH 401, 402, 403 and 404 at **Drew Resource 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. 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 me at 754-321-1900.

cc: Dr. Leontine Butler, Area Superintendent  
Dr. Desmond Blackburn, Area Director  
Jeffrey S. Moquin, Executive Director, Support Operations  
Aston Henry, Supervisor, Risk Management  
Robert Goode, Project Manager, Facilities and Construction Management  
Lynn Cavall, 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

ES/tc  
Enc.

# IAQ Assessment

Location Number 0301

Drew Resource Center

Evaluation Requested October 5, 2009

Time of Day 8:30 am

Evaluation Date October 8, 2009

Outdoor Conditions      Temperature 83.8      Relative Humidity 69.2      Ambient CO2 448

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
401	73.4	72 - 78	67.1	30% - 60%	454	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		light bracket and panel	
Ceiling Type	Popcorn		Yes	No		None	
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	Evaluate and Repair
Walls	Yes	No	No	
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

## Observations

### Findings:

- Visible condensation on HVAC supply grills
- Humidity level was elevated
- 2 potted plants in room
- Non-approved chemicals (air freshener)
- Observed pests in room (ants)
- Stained ceiling material at light bracket - appears to active leak coming from light bracket and old drilled holes
- Excessive dust build up on cabinets

### Site Based Maintenance:

- Remove non-approved chemicals (air freshener) from room
- Remove potted plants from room. Soil is a source of microbial growth.
- Contact Pest Control at 754-321-4600
- Thoroughly clean cabinets to remove dust
- 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
- Evaluate cause of staining on ceiling and repair as appropriate. Repair/replace ceiling material as necessary.

# IAQ Assessment

Location Number 0301

Drew Resource Center

Evaluation Requested October 5, 2009

Time of Day 8:30 am

Evaluation Date October 8, 2009

Outdoor Conditions      Temperature 83.8      Relative Humidity 69.2      Ambient CO2 448

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants	
402	72.7	72 - 78	67.2	30% - 60%	642	Max 700 > Ambient	21	
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected		
No		Yes		No		1 square foot		
Ceiling Type	Popcorn		Yes		No		None	
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	Evaluate and Repair
Walls	Yes	No	No	
Flooring	No	Yes	Yes	Clean and Sanitize
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	No	Yes	Yes	Clean as appropriate

## Observations

### Findings:

- Humidity level was elevated
- Dust and debris on flooring
- Observed pests in room (ants)
- Visible staining on ceiling at file cabinet (@1 square foot)
- Excessive clutter around HVAC return
- Dust impaction on ceiling

### Site Based Maintenance:

- Thoroughly clean and sanitize floor
- Contact Pest Control at 754-321-4600
- Remove clutter from around HVAC return
- Clean ceiling to remove dust
- 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
- Evaluate cause of staining on ceiling and repair as appropriate. Repair/replace ceiling material as necessary.

# IAQ Assessment

Location Number 0301

Drew Resource Center

Evaluation Requested October 5, 2009

Time of Day 8:30 am

Evaluation Date October 8, 2009

Outdoor Conditions      Temperature 83.8      Relative Humidity 69.2      Ambient CO2 448

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
403	75	72 - 78	71	30% - 60%	608	Max 700 > Ambient	23
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	Popcorn		No	No		None	
Wall Type	Tackable		Yes	No		East wall	
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	Evaluate and Repair
Flooring	Yes	No	No	
HVAC Supply Grills	Yes	No	No	
HVAC Return Grills	No	Yes	Yes	Clean with Wexcide disinfectant
Ceiling at Supply Grills				N/A
Surfaces in Room	No	Yes	Yes	Clean as appropriate

## Observations

### Findings:

- Dust impaction on ceiling above A/C
- Humidity level was elevated
- Visible staining on East wall adjacent to A/C
- Dust and debris on HVAC return grills
- Dust build up on environmental surfaces
- HVAC return grill damaged
- Baseboard in Southeast corner of room is loose

### Site Based Maintenance:

- Clean ceiling to remove dust
- Clean HVAC return grills with Wexcide disinfectant solution
- Thoroughly clean environmental surfaces
- Contact COMPASS to generate a work order to repair/replace HVAC return grill and repair baseboard in Southeast corner of 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 lower humidity
- Evaluate cause of staining on East wall adjacent to A/C and repair as appropriate. Repair/replace wall material as necessary.

# IAQ Assessment

Location Number 0301

Drew Resource Center

Evaluation Requested October 5, 2009

Time of Day 8:30 am

Evaluation Date October 8, 2009

Outdoor Conditions      Temperature 83.8      Relative Humidity 69.2      Ambient CO2 448

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">404</span>	<span style="border: 1px solid black; padding: 2px;">71.7</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">71.5</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">554</span>	<span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">21</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">None</span>	
Ceiling Type	<span style="border: 1px solid black; padding: 2px;">Popcorn</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">None</span>		
Wall Type	<span style="border: 1px solid black; padding: 2px;">Tackable/Drywall</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Various</span>		
Flooring	<span style="border: 1px solid black; padding: 2px;">12 x 12 Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">None</span>		

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
Walls	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Evaluate and Repair</span>
Flooring	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
HVAC Supply Grills	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>
HVAC Return Grills	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Clean with Wexcide disinfectant</span>
Ceiling at Supply Grills	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;"></span>	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Surfaces in Room	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Clean as appropriate</span>

## Observations

### Findings:

- Visible condensation on HVAC supply grills
- Humidity level was elevated
- Visible staining on wall
- Dust and debris on HVAC return grills
- Dust build up on environmental surfaces

### Site Based Maintenance:

- Clean HVAC return grills with Wexcide disinfectant solution
- Thoroughly clean environmental 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 lower humidity
- Evaluate cause of staining on walls and repair as appropriate. Repair/replace wall material as necessary.