

RISK MANAGEMENT...

managing risk with responsibility

Aston A. Henry, Supervisor
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November 10, 2009

Signature on File

TO: Mr. Shawn Cerra, Principal
Taravella High School

FROM: Edward See, Project Manager
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 702, 706, 710, 711, 714 and 716

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

On October 30, 2009, Robert Krickovich and I conducted an assessment of FISH 702, 706, 710, 711, 714 and 716 at **Taravella 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. 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: Sharon Airaghi, Area Superintendent
Anne Dilgen, Area Director
Jeffrey S. Moquin, Executive Director, Support Operations
Aston Henry, Supervisor, Risk Management
Gerry Devio, Project Manager, Facilities and Construction Management
Ruby Fitzgerald, 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 2751

Taravella High School

Evaluation Requested October 19, 2009

Time of Day 10:15 am

Evaluation Date October 30, 2009

Outdoor Conditions Temperature 85.4 Relative Humidity 63.7 Ambient CO2 390

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
702	76.3	72 - 78	45.7	30% - 60%	1781	Max 700 > Ambient	15
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	2 x 4 Lay In		No	No		None	
Wall Type	Drywall/Plaster		Yes	No		4 square feet	
Flooring	12 x 12 Vinyl		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	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Multiple occupants in 700 building expressed health concerns
- CO2 level was slightly elevated at the time of the assessment
- Dust and debris on HVAC return grills
- Paint bubbling and peeling on South wall. HFSP advised that there are multiple areas in the building with old damage.
- Non-approved chemicals in room (air freshener)

Site Based Maintenance:

- Clean HVAC return grills with Wexcide disinfectant solution
- Contact COMPASS to generate a work order to repair damaged wall material and forward work order number to Risk Management.
- Remove non-approved chemicals from room. Chemicals not approved by SBBC can have a negative impact on indoor air quality.
- 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 for proper operation and repair as appropriate to lower CO2 level - **WORK ORDER EQ01334**

IAQ Assessment

Location Number 2751

Taravella High School

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Time of Day 10:15 am

Evaluation Date October 30, 2009

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
706	74.5	72 - 78	41.9	30% - 60%	1464	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	2 x 4 Lay In		No	No		None	
Wall Type	Drywall/Plaster		No	No		None	
Flooring	12 x 12 Vinyl		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	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Multiple occupants in 700 building expressed health concerns
- CO2 level was slightly elevated at the time of the assessment
- **A/C return box is offset possibly allowing the intrusion of outside air**
- **Room is a computer room**
- **FISH 718 - mechanical room - old water stain on floor**

Site Based Maintenance:

- Ensure that all computers are turned off during non-occupied hours
- FISH 718 - thoroughly clean floor and monitor for return of stain or signs of water intrusion
- 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 for proper operation and repair as appropriate to lower CO2 level - WORK ORDER EQ01334**
- Evaluate A/C return box for intrusion of outside air and repair as appropriate

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
710	73.7	72 - 78	43.4	30% - 60%	1485	Max 700 > Ambient	7
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Drywall/Plaster		Yes	No	3 square feet		
Flooring	12 x 12 Vinyl		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	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Multiple occupants in 700 building expressed health concerns
- CO2 level was slightly elevated at the time of the assessment
- Dust and debris inside HVAC return
- Old water damage/staining on wall in Southwest corner. HFSP advised that there are multiple areas in the building with old damage.
- Old water stain under sink

Site Based Maintenance:

- Clean HVAC return as appropriate to remove dust and debris
- Contact COMPASS to generate a work order to repair damaged wall material and forward work order number to Risk Management.
- Thoroughly clean under sink and monitor for return of stain or signs of water intrusion
- 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:

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
711	75	72 - 78	46.8	30% - 60%	1747	Max 700 > Ambient	25
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	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Multiple occupants in 700 building expressed health concerns
- CO2 level was slightly elevated at the time of the assessment

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 HVAC for proper operation and repair as appropriate to lower CO2 level - WORK ORDER EQ01334

IAQ Assessment

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
714	75.8	72 - 78	42.6	30% - 60%	1635	Max 700 > Ambient	4
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	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Multiple occupants in 700 building expressed health concerns
- CO2 level was slightly elevated at the time of the assessment
- Adjacent to this room is the girls locker room which is pulling A/C from this room
- FISH 721 (mechanical room) - no issues identified

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:

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Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
716	77.9	72 - 78	43.9	30% - 60%	1914	Max 700 > Ambient	26
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		No		No		None	
Ceiling Type	2 x 4 Lay In		No	No		None	
Wall Type	Drywall/Plaster		No	No		None	
Flooring	12 x 12 Vinyl		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	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- Multiple occupants in 700 building expressed health concerns
- CO2 level was slightly elevated at the time of the assessment
- **Occupant advised that room is stuffy**

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 HVAC for proper operation and repair as appropriate to lower CO2 level - **WORK ORDER EQ01334**