

RISK MANAGEMENT...

managing risk with responsibility

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Signature on File

TO: Ms. Stephanie Bevill,, Principal
Broward Estates Elementary School

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

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 119 and Portable 277C

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

On November 29, 2007 I conducted an assessment of FISH 119 and Portable 277C at **Broward Estates Elementary 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. 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. Verda Farrow, Area Superintendent
Michaelle Pope, Area Director
Jeffrey S. Moquin, Director, Risk Management
Sheldon Dash, Project Manager, Facilities and Construction Management
Jerrod Neal, 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

Location Number 0501
 Evaluation Requested November 16, 2007
 Evaluation Date November 29, 2007

Broward Estates Elementary School

Time of Day 11:00 am

Outdoor Conditions Temperature 82.1 Relative Humidity 64.6 Ambient CO2 448

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
119	70.9	72 - 78	66.3	30% - 60%	779	Max 700 > Ambient	3
Noticeable Odor	Yes		Visible water damage / staining?	Visible microbial growth?	Amount of material affected		
Ceiling Type	2 x 4 Lay In		No	No	None		
Wall Type	Plaster/Drywall		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	No	Yes	Yes	Clean as appropriate
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	Yes	No	No	

Observations

Findings: (Art Room)

- Excessive amounts of paper around the room. Some paper shows signs of water damage. Musty odor in room.
- Temperature was low and humidity was elevated
- Dust and debris on HVAC return grills and on ceiling at supply grills
- Dust on wall at high point in room directly in front of HVAC supply grill
- **FISH 119F** - Stained ceiling tiles -apparent roof leak
- **FISH 119C** - Stained ceiling tiles around kiln hood - apparent roof leak
- **FISH 119D** - Complaint that rain comes in through hood for paint booth
- **FISH 122** - Mechanical Room - AHU #3 filter filler panels were not installed allowing air to by pass filters (may be cause of dust and debris on ceilings and walls in FISH 119)
- **FISH 122** - AHU #3 condensate pan is holding one inch of water with minor slime build up

Recommendations:

Site Based Maintenance:

- Encourage occupant to reduce amounts of paper in the room. Dispose of water damaged paper.
- Clean HVAC return grills with Wexcide disinfectant solution and ceiling at supply grills.
- Wipe down walls to remove dust and debris
- 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
- **FISH 119C, 119D, 119F** - Evaluate roof for leaks and repair as appropriate. Evaluate cause of watering entering paint booth through exhaust duct (119D) and repair. Remove and replace stained ceiling tiles.
- **FISH 122 - AHU #3** - Install filter filler panels to prevent air bypass. Clean pan, coils and duct work for FISH 119.
- **FISH 119F** - Evaluate electric box in ceiling with bare wires exposed.

Note - FISH 115B and 115E were also looked at. Staff advised that work order were called in to address water intrusion. There is severe water damaged around the exterior doors to the rooms. Appears to be roof leak at flashing. After water issues are corrected, wall repairs and carpet replacement will need to be done.

IAQ Assessment

Location Number 0501
 Evaluation Requested November 16, 2007
 Evaluation Date November 29, 2007

Broward Estates Elementary School

Time of Day 11:00 am

Outdoor Conditions Temperature 82.1 Relative Humidity 64.6 Ambient CO2 448

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
P - 277C	77.6	72 - 78	43.5	30% - 60%	1041	Max 700 > Ambient	3
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
No		Yes		No		4 ceiling panels	
Ceiling Type	4 x 8 Vinyl Panel		Yes	No		4 ceiling panels	
Wall Type	Wood Paneling		Yes	No		Around window	
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	No	Yes	Yes	Clean with Wexcide disinfectant
HVAC Return Grills	Yes	No	No	
Ceiling at Supply Grills	Yes	No	No	
Surfaces in Room	Yes	No	No	

Observations

Findings:

- 4 water damaged ceiling panels
- Water damage on wood walls around windows and in the center of the portable at both ends where trailer 1/2's are put together.
- A/C filter is not proper size and allowing air bypass
- Dust and debris on A/C supply grills
- Non-approved chemicals in room - cinnamon broom

Recommendations:

Site Based Maintenance:

- Install proper size filters in A/C units
- Clean A/C supply grills with Wexcide disinfectant solution
- Remove non-approved chemicals from room - cinnamon broom
- 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 cause of stained ceiling panels and repair as appropriate and replace ceiling material as necessary
- Evaluate cause of damaged walls around windows and in the center of the portable as outline above and repair as appropriate and replace wall material as necessary