Jeffrey S. Moquin, Director
Risk Management Department

Telephone: 754-321-3200
Facsimile: 754-321-3290

September 30, 2005

Signature on File

TO: Mr. John Hodge, Principal
Deerfield Beach Elementary School

FROM: Robert J. Krickovich, Coordinator, LEA
Facilities and Construction Management, Environmental Division

SUBJECT: Indoor Air Quality (IAQ) Assessment
FISH 107, 108 and 109

On September 13, 2005 the IAQ Assessment Team conducted an assessment of FISH 107, 108 and 109 at **Deerfield Beach Elementary School**. The evaluation consisted of a walkthrough of the identified areas to assess the current condition of the location with regard to indoor air quality. This assessment included observations of the carpet, floor tile, ceiling tile, interior walls, false ceiling plenum, and accessible ventilation equipment.

Attached are the findings of this assessment along with recommendations for further assessment, remediation, or corrective actions, if needed.

Generally, the IAQ Assessment did not identify any existing conditions significantly impacting IAQ and thereby presenting immediate health and safety concerns 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.

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. Joanne Harrison, Area Superintendent
Craig Anderson, Area Director
Jeffrey S. Moquin, Director, Risk Management
Rigo Zubizarreta, Project Manager II, Facilities and Construction Management
LaFrances Trotter, Broward Teachers Union
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: 0011

Deerfield Beach Elementary School

Evaluation Requested: September 12, 2005

Time of Day: 12:55 pm

Evaluation Date: September 13, 2005

Outdoor Conditions Temperature: 90.5 Relative Humidity: 50.3 Ambient CO2: 373

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
107	79.6	72 - 78	44.5	30% - 60%	1202	Max 700 > Ambient	1

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	No			
Ceiling Type	2 x 4 Lay In	No	No	None
Wall Type	Plaster	No	No	None
Flooring	Wood	Yes	No	20 square feet at door

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

Observations

Findings:
- Wood floor at door is severely water damaged/wet
- Musty odor when rubber mat was lifted off the floor at the door
- Throw rug in room was dirty and stained
- HVAC unit was not working
- Visible microbial growth on exterior of HVAC unit
- Dust and debris on environmental surfaces throughout the room

Recommendations:

Site Based Maintenance:
- Remove rubber mat from in front of the door to allow wood floor to dry
- Thoroughly clean throw rug or remove from room
- Clean environmental 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 Division:
- Repair/replace water damaged/wet wood floor at door and evaluate for cause of damage (HVAC condensation, weather stripping at door)
- Evalaute and repair HVAC unit and evalaute introduction of fresh air (CO2 slightly elevated)
- Clean exterior of HVAC unit to remove microbial growth

IAQ Assessment

Location Number: 0011

Deerfield Beach Elementary School

Evaluation Requested: September 12, 2005

Time of Day: 12:55 pm

Evaluation Date: September 13, 2005

Outdoor Conditions Temperature: 90.5 Relative Humidity: 50.3 Ambient CO2: 373

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
108	72.5	72 - 78	57	30% - 60%	1195	Max 700 > Ambient	1

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	No			
Ceiling Type	2 x 4 Lay In	Yes	Yes	4 ceiling tiles
Wall Type	Plaster	Yes	No	East wall - paint peeling
Flooring	Wood	Yes	No	At door under HVAC

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

Observations

Findings:
- Wood floor at door is severely water damaged/wet from HVAC unit (condensate pan) dripping on floor
- HVAC thermostat was set at 60 degrees
- Visible microbial growth on exterior of HVAC unit
- Visible microbial growth on 4 ceiling tiles
- Paint peeling on East wall
- Throw rug on floor (shag carpet)
- Dust and debris on environmental surfaces throughout the room

Recommendations:

Site Based Maintenance:
- Remove and discard throw rug (shag carpet)
- Clean environmental 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 Division:
- Repair/replace water damaged/wet wood floor at door and evaluate for cause of damage (HVAC condensation pan leaking)
- Evalaute and repair HVAC unit and evalaute introduction of fresh air (CO2 slightly elevated)
- Clean exterior of HVAC unit to remove microbial growth
- Evaluate and repair cause of water damage to ceiling tiles (reinsulate chilled water lines) and replace ceiling tiles as necessary
- Evalaute and repair cause of paint peeling on East wall and repair/replace wall as necessary

IAQ Assessment

Location Number: 0011

Deerfield Beach Elementary School

Evaluation Requested: September 12, 2005

Time of Day: 12:55 pm

Evaluation Date: September 13, 2005

Outdoor Conditions Temperature: 90.5 Relative Humidity: 50.3 Ambient CO2: 373

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
109	74.5	72 - 78	54.5	30% - 60%	1227	Max 700 > Ambient	1

		Visible water damage / staining?	Visible microbial growth?	Amount of material affected
Noticeable Odor	No			
Ceiling Type	2 x 4 Lay In	No	No	None
Wall Type	Plaster	No	No	None
Flooring	Wood	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				N/A
Surfaces in Room	No	Yes	Yes	Clean as appropriate

Observations

Findings:
- Visible microbial growth on exterior of HVAC unit
- Dust and debris on HVAC supply and return grills
- Dust and debris on environmental surfaces throughout the room

Recommendations:

Site Based Maintenance:
- Clean environmental 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 Division:
- Clean exterior of HVAC unit to remove microbial growth
- Thoroughly clean HVAC supply and return grills