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November 7, 2006

*Signature on File*

TO: Ms. Millicent Thorpe , Principal  
**Riverland Elementary School**

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

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 102 and 115**

On October 4, 2006 I conducted an assessment of FISH 102 and 115 at **Riverland Elementary**. 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.

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  
Joel Herbst, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Wayne Thrasher, Project Manager II, Facilities and Construction Management  
Jerrod Neal, 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 0151  
 Evaluation Requested October 4, 2006  
 Evaluation Date October 4, 2006

Riverland Elementary School

Time of Day 12:15 am

Outdoor Conditions      Temperature 91.1      Relative Humidity 49.7      Ambient CO2 485

Fish	Temperature	Range	Relative Humidity	Range	CO2	Range	# Occupants
115	73.9	72 - 78	51.5	30% - 60%	683	Max 700 > Ambient	2
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling Type		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Wall Type		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Flooring		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	

	Clean	Minor Dust / Debris	Needs Cleaning	Corrective Action Required
Ceiling	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
Walls	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
Flooring	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
HVAC Supply Grills	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
HVAC Return Grills	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> No	
Ceiling at Supply Grills	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Clean as appropriate
Surfaces in Room	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	Clean as appropriate

**Observations**

**Findings:**

- Complaint of odor first thing in the morning when door is opened after being closed for prolonged period of time. Bionaire machine in room, time mist auto air freshener mounted over the door to the room and potpourri vase on cabinet in room.
- Air Handler Room - FISH 120 - was clean, coils pere clean, pans were clean and the filters were recently changed.
- Minor staining on carpet in FISH 115
- Minor dust build up on elevated surfaces
- Ceiling grid around HVAC supply grills is rusted and the ceiling tiles are dirty/stained, possibly from duct or supply box sweating.
- Carpet in FISH 102 (main office room) is heavily stained, soiled, rippled, etc.

**Recommendations:**

**Site Based Maintenance:**

- Remove air freshener and potpourri from room
- Clean carpet in FISH 115
- 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:**

- Remove carpet in **FISH 102** (main office room) and replace.
- Check insulation on duct and duct around HVAC supply grills and repair as appropriate. Remove and replace ceiling tiles around HVAC supply grills as appropriate.