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September 21, 2005

**Signature on File**

TO: Mr. Martin Reid, Principal  
**Lauderdale Lakes Middle School**

FROM: Kenneth I. Partee, Project Manager, Occupational Health and Environmental Control  
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment  
FISH 176H

On August 22, 2005 the IAQ Assessment Team conducted an assessment of FISH 176H at **Lauderdale Lakes Middle 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 754-321-3200.

cc: Dr. Harry LaCava, Area Superintendent  
Fran Bolden, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Israel Rodriguez-Soto, Project Manager II, Facilities and Construction Management  
Dane Ramson, Broward Teachers Union  
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

KP/tc  
Enc.

# IAQ Assessment

Lauderdale Lakes Middle School

Location Number 1701  
 Evaluation Requested August 19, 2005  
 Evaluation Date August 22, 2005

Time of Day 12:30 pm

Outdoor Conditions      Temperature 94.6      Relative Humidity 53.8      Ambient CO2 497

|  |  |   |  |   |  |  |   |
|--|--|---|--|---|--|--|---|
| Fish   | Temperature  | Range   | Relative Humidity  | Range   | CO2  | Range  | # Occupants   |
| <span style="border: 1px solid black; padding: 2px;">176H</span> | <span style="border: 1px solid black; padding: 2px;">89.7</span>     | <span style="border: 1px solid black; padding: 2px;">72 - 78</span> | <span style="border: 1px solid black; padding: 2px;">65.1</span> | <span style="border: 1px solid black; padding: 2px;">30% - 60%</span> | <span style="border: 1px solid black; padding: 2px;">845</span>              | <span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span> | <span style="border: 1px solid black; padding: 2px;">1</span> |
| Noticeable Odor  | <span style="border: 1px solid black; padding: 2px;">No</span>       |   | Visible water damage / staining?                                 | Visible microbial growth?   | Amount of material affected  |  |   |
| Ceiling Type   | <span style="border: 1px solid black; padding: 2px;">Concrete</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;">Concrete</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;">Entire Rear Wall</span> |  |   |
| Flooring   | <span style="border: 1px solid black; padding: 2px;">Tile</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;">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>            |
| 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;">Clean with Wexcide disinfectant</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;"></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>                             |
| 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;">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>            |
| 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 microbial growth on rear wall
- Boxes are stacked too close to walls
- Exhaust fan is not working
- Dust on ceiling at supply grills and various other areas throughout the room
- Dust observed on environmental surfaces
- Dust and debris on HVAC supply grills in 176H and 176J (office)
- Temperature was elevated
- Humidity level was slightly elevated

**Recommendations:**

**Site Based Maintenance:**

- Clean rear wall with Wexcide disinfectant solution
- Stack boxes at least one inch away from the wall so as not to trap moisture
- Clean ceiling at supply grills and throughout room as appropriate
- Clean HVAC supply grills in 176H and 176J with Wexcide disinfectant solution
- 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:**

- Evaluate and repair/replace exhaust fan as appropriate
- Evaluate and repair HVAC system to lower temperature and humidity level