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April 5, 2006

**Signature on File**

TO: Ms. Linda Wilhoit, Principal  
**Dave Thomas Education Center - West**

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

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 207, 209, 209B and 211**

On April 3, 2006 I conducted a follow up assessment of FISH 207, 209, 209B and 211 at **Dave Thomas Education Center - West** to investigate reported odors. This assessment included reviewing previously generated work orders as well as observations of the areas of concern as stated in the IAQ Assessment performed on March 6, 2006 by a member of the IAQ Assessment Team, a representative from Physical Plant Operations and a Project Manager. 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.

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  
Philip Kaufold, Project Manager, Facilities and Construction Management  
Greg Boardman, Project Manager, Facilities and Construction Management  
Ruby Fitzgerald, Broward Teachers Union  
Mark Dorsett, Manager 1, Physical Plant Operations Division, Zone 1  
Roy Norton, Manager Custodial/Grounds, Physical Plant Operations Division

KP/tc  
Enc.

# IAQ Assessment

Dave Thomas Education Center - West

Location Number   
 Evaluation Requested   
 Evaluation Date

Time of Day

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

|                                  |  |                                      |                                   |  |                                  |   |                                |
|----------------------------------|--|--------------------------------------|-----------------------------------|--|----------------------------------|---|--------------------------------|
| Fish                             | Temperature                                | Range                                | Relative Humidity                 | Range                                  | CO2                              | Range   | # Occupants                    |
| <input type="text" value="207"/> | <input type="text" value="71.6"/>          | <input type="text" value="72 - 78"/> | <input type="text" value="60.9"/> | <input type="text" value="30% - 60%"/> | <input type="text" value="463"/> | <input type="text" value="Max 700 &gt; Ambient"/> | <input type="text" value="3"/> |
| Noticeable Odor                  |  | Visible water damage / staining?     |                                   | Visible microbial growth?              |                                  | Amount of material affected                       |                                |
| <input type="text" value="No"/>  |  | <input type="text" value="Yes"/>     |                                   | <input type="text" value="No"/>        |                                  | <input type="text" value="1 ceiling tile"/>       |                                |
| Ceiling Type                     | <input type="text" value="2 x 4 Lay In"/>  |                                      | <input type="text" value="Yes"/>  | <input type="text" value="No"/>        |                                  | <input type="text" value="1 ceiling tile"/>       |                                |
| Wall Type                        | <input type="text" value="Drywall"/>       |                                      | <input type="text" value="No"/>   | <input type="text" value="No"/>        |                                  | <input type="text" value="None"/>                 |                                |
| Flooring                         | <input type="text" value="12 x 12 Vinyl"/> |                                      | <input type="text" value="No"/>   | <input type="text" value="No"/>        |                                  | <input type="text" value="None"/>                 |                                |

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

**Observations**

**Findings:**

- Occupant stated that odor comes and goes and after being in the room for several hours they get headaches
- No odor detected at the time of the assessment
- 1 live plant with visible microbial growth on soil
- 1 stained ceiling tile in center of room. Tile is under a duct penetration through the floor above.
- Inside of air handler unit that services first floor is clean and condensate pans are clean

**Recommendations:**

**Site Based Maintenance:**

- Remove live plant from room
- Replace stained ceiling tile in center of room
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

# IAQ Assessment

Dave Thomas Education Center - West

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Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

| Fish  | Temperature                                | Range                                | Relative Humidity                       | Range                                  | CO2                                | Range   | # Occupants                    |
|---|--|--------------------------------------|---|--|------------------------------------|---|--------------------------------|
| <input type="text" value="209 &amp; 209B"/> | <input type="text" value="72.1"/>          | <input type="text" value="72 - 78"/> | <input type="text" value="60.1"/>       | <input type="text" value="30% - 60%"/> | <input type="text" value="473"/>   | <input type="text" value="Max 700 &gt; Ambient"/> | <input type="text" value="2"/> |
| <b>Noticeable Odor</b>                      | <input type="text" value="No"/>            |                                      | <b>Visible water damage / staining?</b> | <b>Visible microbial growth?</b>       | <b>Amount of material affected</b> |   |                                |
| <b>Ceiling Type</b>                         | <input type="text" value="2 x 4 Lay In"/>  |                                      | <input type="text" value="No"/>         | <input type="text" value="No"/>        | <input type="text" value="None"/>  |   |                                |
| <b>Wall Type</b>                            | <input type="text" value="Drywall"/>       |                                      | <input type="text" value="No"/>         | <input type="text" value="No"/>        | <input type="text" value="None"/>  |   |                                |
| <b>Flooring</b>                             | <input type="text" value="12 x 12 Vinyl"/> |                                      | <input type="text" value="No"/>         | <input type="text" value="No"/>        | <input type="text" value="None"/>  |   |                                |

|                                 | Clean                            | Minor Dust / Debris              | Needs Cleaning                   | Corrective Action Required                      |
|---------------------------------|----------------------------------|----------------------------------|----------------------------------|---|
| <b>Ceiling</b>                  | <input type="text" value="Yes"/> | <input type="text" value="No"/>  | <input type="text" value="No"/>  | <input type="text"/>                            |
| <b>Walls</b>                    | <input type="text" value="Yes"/> | <input type="text" value="No"/>  | <input type="text" value="No"/>  | <input type="text"/>                            |
| <b>Flooring</b>                 | <input type="text" value="No"/>  | <input type="text" value="Yes"/> | <input type="text" value="Yes"/> | <input type="text" value="Clean and sanitize"/> |
| <b>HVAC Supply Grills</b>       | <input type="text" value="Yes"/> | <input type="text" value="No"/>  | <input type="text" value="No"/>  | <input type="text"/>                            |
| <b>HVAC Return Grills</b>       | <input type="text" value="Yes"/> | <input type="text" value="No"/>  | <input type="text" value="No"/>  | <input type="text"/>                            |
| <b>Ceiling at Supply Grills</b> | <input type="text" value="Yes"/> | <input type="text" value="No"/>  | <input type="text" value="No"/>  | <input type="text"/>                            |
| <b>Surfaces in Room</b>         | <input type="text" value="Yes"/> | <input type="text" value="No"/>  | <input type="text" value="No"/>  | <input type="text"/>                            |

**Observations**

**Findings:**

- Swirl marks on floor in FISH 209 from being washed with dirty water and white chalky build up on floor
- Water stains on floor in FISH 209B in front of refrigerator and in combustible storage room next to refrigerator
- Inside of air handler unit that services first floor is clean and condensate pans are clean

**Recommendations:**

**Site Based Maintenance:**

- Thoroughly clean and sanitize floor in FISH 209 and 209B
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

# IAQ Assessment

Dave Thomas Education Center - West

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Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

|                                  |  |                                      |                                  |  |                                  |   |                                   |
|----------------------------------|--|--------------------------------------|----------------------------------|--|----------------------------------|---|-----------------------------------|
| Fish                             | Temperature                                | Range                                | Relative Humidity                | Range                                  | CO2                              | Range   | # Occupants                       |
| <input type="text" value="211"/> | <input type="text" value="71.9"/>          | <input type="text" value="72 - 78"/> | <input type="text" value="58"/>  | <input type="text" value="30% - 60%"/> | <input type="text" value="446"/> | <input type="text" value="Max 700 &gt; Ambient"/> | <input type="text" value="2"/>    |
| Noticeable Odor                  | <input type="text" value="Yes"/>           |                                      | Visible water damage / staining? |  | Visible microbial growth?        |   | Amount of material affected       |
| Ceiling Type                     | <input type="text" value="2 x 4 Lay In"/>  |                                      | <input type="text" value="No"/>  |  | <input type="text" value="No"/>  |   | <input type="text" value="None"/> |
| Wall Type                        | <input type="text" value="Drywall"/>       |                                      | <input type="text" value="No"/>  |  | <input type="text" value="No"/>  |   | <input type="text" value="None"/> |
| Flooring                         | <input type="text" value="12 x 12 Vinyl"/> |                                      | <input type="text" value="No"/>  |  | <input type="text" value="No"/>  |   | <input type="text" value="None"/> |

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

**Observations**

**Findings: Room is not occupied**

- Room has an odor of damp cardboard. There are several boxes and pieces of cardboard in the room.
- Dust, debris and pieces of cardboard on floor
- Dust, debris and pieces of cardboard on environment surfaces
- Inside of air handler unit that services first floor is clean and condensate pans are clean

**Recommendations:**

**Site Based Maintenance:**

- Thoroughly clean and sanitize floor
- Thoroughly 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