

# RISK MANAGEMENT...

managing risk with responsibility

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Risk Management Department

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May 21, 2007

**Signature on File**

TO: Mr. Daniel Boegli,, Principal  
**Sheridan Technical Center**

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

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 433, 434, 435 and 529**

| <b>For Custodial Supervisor Use Only</b> |                                |
|--|--------------------------------|
| <input type="checkbox"/>                 | Custodial Issues Addressed     |
| <input type="checkbox"/>                 | Custodial Issues Not Addressed |
| _____                                    |                                |
| _____                                    |                                |

On March 15, 2007 Richard Rosa conducted an assessment of FISH 433, 434, 435 and 529 at **Sheridan Technical Center**. 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. Harry LaCava, Area Superintendent  
Fran Bolden, Area Director  
Jeffrey S. Moquin, Director, Risk Management  
Joe DeLillo, Project Manager, Facilities and Construction Management  
Diane Watts, Broward Teachers Union  
Roy Jarrett, Federation of Public 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

Sheridan Technical Center

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="433"/> | <input type="text" value="77.1"/>         | <input type="text" value="72 - 78"/> | <input type="text" value="46.9"/> | <input type="text" value="30% - 60%"/> | <input type="text" value="839"/>            | <input type="text" value="Max 700 &gt; Ambient"/> | <input type="text" value="2"/> |
| Noticeable Odor                  |   | Visible water damage / staining?     |                                   | Visible microbial growth?              |   | Amount of material affected                       |                                |
| <input type="text" value="No"/>  |   | <input type="text" value="No"/>      |                                   | <input type="text" value="No"/>        |   | <input type="text" value="None"/>                 |                                |
| 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="Plaster"/>      |                                      | <input type="text" value="Yes"/>  | <input type="text" value="No"/>        | <input type="text" value="10 square feet"/> |   |                                |
| Flooring                         | <input type="text" value="Carpet"/>       |                                      | <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="No"/>  | <input type="text" value="Yes"/> | <input type="text" value="Yes"/> | <input type="text" value="Replace per survey"/> |
| 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:**

- Moisture under window sill and damaged plaster due to water intrusion on both sides of window
- HFSP advised that PPO is schedule to repair the rooms in question

**-Recommendations:**

**Site Based Maintenance:**

- Follow up with PPO to confirm schedule to repair rooms
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

# IAQ Assessment

Sheridan Technical Center

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="434"/> | <input type="text" value="75.5"/>         | <input type="text" value="72 - 78"/> | <input type="text" value="48.6"/> | <input type="text" value="30% - 60%"/> | <input type="text" value="850"/>  | <input type="text" value="Max 700 &gt; Ambient"/> | <input type="text" value="2"/> |
| Noticeable Odor                  |   | Visible water damage / staining?     |                                   | Visible microbial growth?              |                                   | Amount of material affected                       |                                |
| <input type="text" value="No"/>  |   | <input type="text" value="No"/>      |                                   | <input type="text" value="No"/>        |                                   | <input type="text" value="None"/>                 |                                |
| 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="No"/>        | <input type="text" value="None"/> | <input type="text" value="40 square feet"/>       |                                |
| Wall Type                        | <input type="text" value="Plaster"/>      | <input type="text" value="Yes"/>     | <input type="text" value="No"/>   | <input type="text" value="No"/>        | <input type="text" value="None"/> | <input type="text" value="None"/>                 |                                |
| Flooring                         | <input type="text" value="Carpet"/>       | <input type="text" value="No"/>      | <input type="text" value="No"/>   | <input type="text" value="No"/>        | <input type="text" value="None"/> | <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="No"/>  | <input type="text" value="Yes"/> | <input type="text" value="Yes"/> | <input type="text" value="Replace per survey"/> |
| 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:**

- Moisture under window sill and damaged plaster due to water intrusion on both sides of window
- HFSP advised that PPO is schedule to repair the rooms in question

**-Recommendations:**

**Site Based Maintenance:**

- Follow up with PPO to confirm schedule to repair rooms
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

# IAQ Assessment

Sheridan Technical Center

Location Number

Evaluation Requested

Time of Day

Evaluation Date

Outdoor Conditions      Temperature       Relative Humidity       Ambient CO2

|                                  |   |                                      |                                   |  |   |   |                                |
|----------------------------------|---|--------------------------------------|-----------------------------------|--|---|---|--------------------------------|
| Fish                             | Temperature                               | Range                                | Relative Humidity                 | Range                                  | CO2   | Range   | # Occupants                    |
| <input type="text" value="435"/> | <input type="text" value="72.7"/>         | <input type="text" value="72 - 78"/> | <input type="text" value="51.5"/> | <input type="text" value="30% - 60%"/> | <input type="text" value="864"/>            | <input type="text" value="Max 700 &gt; Ambient"/> | <input type="text" value="2"/> |
| Noticeable Odor                  |   | Visible water damage / staining?     |                                   | Visible microbial growth?              |   | Amount of material affected                       |                                |
| <input type="text" value="No"/>  |   | <input type="text" value="No"/>      |                                   | <input type="text" value="No"/>        |   | <input type="text" value="None"/>                 |                                |
| 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="No"/>        | <input type="text" value="40 square feet"/> |   |                                |
| Wall Type                        | <input type="text" value="Plaster"/>      | <input type="text" value="Yes"/>     | <input type="text" value="No"/>   | <input type="text" value="No"/>        | <input type="text" value="None"/>           |   |                                |
| Flooring                         | <input type="text" value="Carpet"/>       | <input type="text" value="No"/>      | <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="No"/>  | <input type="text" value="Yes"/> | <input type="text" value="Yes"/> | <input type="text" value="Replace per survey"/> |
| 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:**

- Moisture under window sill and damaged plaster due to water intrusion on both sides of window
- HFSP advised that PPO is schedule to repair the rooms in question

**-Recommendations:**

**Site Based Maintenance:**

- Follow up with PPO to confirm schedule to repair rooms
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

# IAQ Assessment

Sheridan Technical Center

Location Number 1051

Evaluation Requested March 15, 2007

Time of Day 1:00 pm

Evaluation Date March 15, 2007

Outdoor Conditions      Temperature 78.1      Relative Humidity 70.5      Ambient CO2 446

|                 |             |                                  |                   |                           |     |                             |             |
|-----------------|-------------|----------------------------------|-------------------|---------------------------|-----|-----------------------------|-------------|
| Fish            | Temperature | Range                            | Relative Humidity | Range                     | CO2 | Range                       | # Occupants |
| 529             | 71.3        | 72 - 78                          | 73.5              | 30% - 60%                 | 468 | Max 700 > Ambient           | 2           |
| Noticeable Odor |             | Visible water damage / staining? |                   | Visible microbial growth? |     | Amount of material affected |             |
| Ceiling Type    |             | Yes                              |                   | No                        |     | 9 Ceiling Tiles             |             |
| Wall Type       |             | No                               |                   | No                        |     | None                        |             |
| Flooring        |             | No                               |                   | No                        |     | None                        |             |

|                          | Clean | Minor Dust / Debris | Needs Cleaning | Corrective Action Required    |
|--------------------------|-------|---------------------|----------------|-------------------------------|
| Ceiling                  | No    | Yes                 | Yes            | Replace stained ceiling tiles |
| Walls                    | Yes   | No                  | No             |                               |
| Flooring                 | Yes   | No                  | No             |                               |
| HVAC Supply Grills       | Yes   | No                  | No             |                               |
| HVAC Return Grills       | Yes   | No                  | No             |                               |
| Ceiling at Supply Grills | Yes   | No                  | No             |                               |
| Surfaces in Room         | No    | Yes                 | Yes            | Clean as appropriate          |

**Observations**

**Findings:**

- 9 stained ceiling tiles - in a row
- Duct work above drop ceiling in location of water stains. Possible insulation breach.
- Dust build up on environmental surfaces
- Temperature was low and humidity level was elevated

**-Recommendations:**

**Site Based Maintenance:**

- Replace stained ceiling tiles
- Clean environmental 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:**

- Evaluate duct work above drop ceiling for possible source of water intrusion - possible insulation breach.
- Evaluate HVAC for proper operation and repair as appropriate to lower humidity level and increase temperature