

# RISK MANAGEMENT...

managing risk with responsibility

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November 10, 2009

**Signature on File**

TO: Mr. Leo Nesmith, Principal  
**The Quest Center**

FROM: Edward See, Project Manager  
Risk Management Department

SUBJECT: Indoor Air Quality (IAQ) Assessment  
**FISH 110, 128C, 128D and 225**

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

On October 19, 2009, I conducted an assessment of FISH 110, 128C, 128D and 225 at **The Quest 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.

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.

*Please ensure that your Head Facilities Serviceperson receives a copy of this correspondence so that the recommendations requiring their attention can be addressed. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. 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 754-321-1900.

cc: Dr. Joel Herbst, Area Superintendent  
Dr. Gina Eyerman, Area Director  
Jeffrey S. Moquin, Executive Director, Support Operations  
Aston Henry, Supervisor, Risk Management  
Herbert Lee, Project Manager, Facilities and Construction Management  
Iris Froehlich, 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  
Robert Krickovich, Coordinator, LEA, Facilities and Construction Management

ES/tc  
Enc.

# IAQ Assessment

Location Number 1021  
 Evaluation Requested October 2, 2009  
 Evaluation Date October 19, 2009

The Quest Center

Time of Day 12:55 pm

Outdoor Conditions      Temperature 77.7      Relative Humidity 52.6      Ambient CO2 397

|                 |             |                                  |                   |                           |     |                             |             |
|-----------------|-------------|----------------------------------|-------------------|---------------------------|-----|-----------------------------|-------------|
| Fish            | Temperature | Range                            | Relative Humidity | Range                     | CO2 | Range                       | # Occupants |
| 110             | 66.6        | 72 - 78                          | 56.5              | 30% - 60%                 | 651 | Max 700 > Ambient           | 3           |
| Noticeable Odor |             | Visible water damage / staining? |                   | Visible microbial growth? |     | Amount of material affected |             |
| Ceiling Type    |             | No                               |                   | No                        |     | None                        |             |
| Wall Type       |             | No                               |                   | No                        |     | None                        |             |
| Flooring        |             | 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       | Yes   | No                  | No             |                            |
| HVAC Return Grills       | Yes   | No                  | No             |                            |
| Ceiling at Supply Grills | Yes   | No                  | No             |                            |
| Surfaces in Room         | Yes   | No                  | No             |                            |

**Observations**

**Findings:**

- New roof recently installed
- A/C work ongoing
- Temperature was low and humidity level was greater than outdoors
- Non-approved chemicals in room (Glade)

**Site Based Maintenance:**

- Remove non-approved chemicals from room
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

**Facilities and Construction Management:**

- Advise A/C contractor of low temperature and elevated humidity levels

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|  |  |   |  |   |  |  |   |
|--|--|---|--|---|--|--|---|
| Fish   | Temperature  | Range   | Relative Humidity  | Range   | CO2  | Range  | # Occupants   |
| <span style="border: 1px solid black; padding: 2px;">128C</span> | <span style="border: 1px solid black; padding: 2px;">67.8</span>             | <span style="border: 1px solid black; padding: 2px;">72 - 78</span> | <span style="border: 1px solid black; padding: 2px;">53.6</span> | <span style="border: 1px solid black; padding: 2px;">30% - 60%</span> | <span style="border: 1px solid black; padding: 2px;">798</span>  | <span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span> | <span style="border: 1px solid black; padding: 2px;">2</span> |
| Noticeable Odor  |  | Visible water damage / staining?                                    |  | Visible microbial growth?   |  | Amount of material affected  |   |
| <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;">No</span>        |  | <span style="border: 1px solid black; padding: 2px;">None</span>                 |   |
| Ceiling Type   | <span style="border: 1px solid black; padding: 2px;">2 x 4 Lay In</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;">Drywall/Homasote</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> |  |   |
| Flooring   | <span style="border: 1px solid black; padding: 2px;">12 x 12 Vinyl</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;">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> |
| Walls                    | <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> |
| 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;">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 Return Grills       | <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> |
| Ceiling at Supply Grills | <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> |
| Surfaces in Room         | <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> |

## Observations

### Findings:

- New roof recently installed
- A/C work ongoing
- Temperature was low and humidity level was greater than outdoors

### Site Based Maintenance:

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

### Facilities and Construction Management:

- Advise A/C contractor of low temperature and elevated humidity levels

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|  |  |   |  |   |  |  |   |
|--|--|---|--|---|--|--|---|
| Fish   | Temperature  | Range   | Relative Humidity  | Range   | CO2  | Range  | # Occupants   |
| <span style="border: 1px solid black; padding: 2px;">128D</span> | <span style="border: 1px solid black; padding: 2px;">68.7</span>             | <span style="border: 1px solid black; padding: 2px;">72 - 78</span> | <span style="border: 1px solid black; padding: 2px;">53.9</span> | <span style="border: 1px solid black; padding: 2px;">30% - 60%</span> | <span style="border: 1px solid black; padding: 2px;">822</span>  | <span style="border: 1px solid black; padding: 2px;">Max 700 &gt; Ambient</span> | <span style="border: 1px solid black; padding: 2px;">2</span> |
| Noticeable Odor  |  | Visible water damage / staining?                                    |  | Visible microbial growth?   |  | Amount of material affected  |   |
| <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;">No</span>        |  | <span style="border: 1px solid black; padding: 2px;">None</span>                 |   |
| Ceiling Type   | <span style="border: 1px solid black; padding: 2px;">2 x 4 Lay In</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;">Drywall/Homasote</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> |  |   |
| Flooring   | <span style="border: 1px solid black; padding: 2px;">12 x 12 Vinyl</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;">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> |
| Walls                    | <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> |
| 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;">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 Return Grills       | <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> |
| Ceiling at Supply Grills | <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> |
| Surfaces in Room         | <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> |

## Observations

### Findings:

- New roof recently installed
- A/C work ongoing
- Temperature was low and humidity level was greater than outdoors

### Site Based Maintenance:

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

### Facilities and Construction Management:

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|                 |               |                                  |                   |                           |     |                             |             |
|-----------------|---------------|----------------------------------|-------------------|---------------------------|-----|-----------------------------|-------------|
| Fish            | Temperature   | Range                            | Relative Humidity | Range                     | CO2 | Range                       | # Occupants |
| 225             | 67.8          | 72 - 78                          | 54.4              | 30% - 60%                 | 753 | Max 700 > Ambient           | 10          |
| Noticeable Odor |               | Visible water damage / staining? |                   | Visible microbial growth? |     | Amount of material affected |             |
| No              |               | Yes                              |                   | Yes                       |     | 4 ceiling tiles             |             |
| Ceiling Type    | 2 x 4 Lay In  |                                  | Yes               | No                        |     | None                        |             |
| Wall Type       | Drywall       |                                  | No                | No                        |     | None                        |             |
| Flooring        | 12 x 12 Vinyl |                                  | No                | No                        |     | None                        |             |

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

## Observations

### Findings:

- New roof recently installed
- A/C work ongoing
- Temperature was low and humidity level was greater than outdoors
- 4 stained ceiling tiles
- Dust and debris on floor. Two inch hole in VCT in Southwest area of room.
- FISH 221C (closet) - stained ceiling tiles and evidence of pests identified.

### Site Based Maintenance:

- Remove and replace stained ceiling tiles as necessary
- Clean and sanitize floor. Contact COMPASS to generate a work order to repair flooring as necessary.
- FISH 221C (closet) - remove and replace ceiling tiles as necessary and contact COMPASS to generate a work order for pest control.
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate

### Facilities and Construction Management:

- Advise A/C contractor of low temperature and elevated humidity levels