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October 18, 2004

**TO:** Karla Gary-Orange, Principal  
Maplewood Elementary School

**FROM:** Aston A. Henry, Jr., Supervisor  
Risk Management Department

**SUBJECT:** **Indoor Environmental Quality Assessment  
Maplewood Elementary School  
FISH (136, 137, 139, 140, 141 & 142) 116, 138, 204, 404 & 501**

On September 1, 2004 the Risk Management Department conducted an assessment of **FISH (136, 137, 139, 140, 141 & 142) 116, 138, 204, 404 & 501 at Maplewood Elementary School**. The evaluation consisted of a walkthrough of the identified areas to assess the current conditions of these locations with regard to indoor environmental quality. This assessment included observation of the carpet, floor tiles, ceiling tiles, false ceiling plenum, accessible ventilation supply and interior walls for signs of water intrusion.

Outlined below are the findings of this assessment along with recommendations for further assessment and/or remediation:

1. The indoor environmental quality assessment of **FISH 116** revealed no visible signs of microbial growth or water intrusion. The false ceiling plenum appeared clean and dry at the accessed location. Several stained ceiling were identified surrounding the air supply vent. The stained ceiling tiles occurred as a result of an old roof leak, which has been repaired. The air supply vents, return air register grill, interior walls and carpet appeared clean on the date of the assessment. The Assistant Principal reported complaints of possible mold and mildew. Twenty-five occupants were present on date of the assessment.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on September 1, 2004.

	Temperature	Humidity	CO2
<b>FISH 116</b>	75.9F	57.3%	1002

**RECOMMENDED COURSE OF ACTION**

**Site-Based Staff will complete the following items immediately:**

- Site-based maintenance staff will remove the stained and damaged ceiling tiles and install new ceiling tiles.
  - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.
2. The indoor environmental quality assessment of FISH (136, 137, 139, 140, 141 & 142) revealed visible signs of microbial growth on the bathroom doors and doorframes. No sign of water intrusion were identified. The ceiling, walls and tile floor appeared clean on the date of the assessment. The Assistant Principal reported complaints of possible mold and mildew.

**RECOMMENDED COURSE OF ACTION**

**The Maintenance Department will initiate a work order to address the following items:**

- Evaluate and repair as appropriate, the exhaust fans in each bathroom.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items.

**Site-Based Staff will complete the following items immediately:**

- Site-based maintenance will clean the doors and doorframes with a wex-cide disinfectant solution in order to remove any signs of microbial growth.
  - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.
3. The indoor environmental quality assessment of FISH 138 revealed no visible signs of microbial growth or water intrusion. The false ceiling plenum appeared clean and dry at the accessed location. Three stained ceiling tiles have been identified. Per the Head Facilities Serviceperson, the old roof leak has been repaired. The air supply vents, return air register grill, interior walls and tile floor appeared clean on the date of the assessment. The Assistant Principal reported complaints of possible mold and mildew. Two occupants were present on the date of the assessment.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on September 1, 2004.

	Temperature	Humidity	CO2
FISH 138	73.9F	57.7%	1457

*The carbon dioxide level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 1,000 ppm.*

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## RECOMMENDED COURSE OF ACTION

### The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the fresh air damper servicing this location in order to lower the CO2 level.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items.

### Site-Based Staff will complete the following items immediately:

- Site-based maintenance staff will remove stained ceiling tiles and install new ceiling tiles.
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.

4. The indoor environmental quality assessment of **FISH 204** revealed visible signs of microbial growth on the north wall adjacent to both air-handler units. Water has been identified on the top of the sheet metal compartments, which house the air filters. The Assistant Principal reported complaints of possible mold and mildew.

## RECOMMENDED COURSE OF ACTION

### The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, both air-handler units in order to elevate the buildup of water on the sheet metal compartment which houses the air filters.
- Evaluate and repair as appropriate, the north wall in order to remove any signs of microbial growth.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items.

### Site-Based Staff will complete the following items immediately:

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

5. The indoor environmental quality assessment of **FISH 404** revealed no visible signs of microbial growth or water intrusion. The false ceiling plenum appeared clean and dry at the accessed location. The ceiling tiles, air supply vents, return air register grill, interior walls and tile floor appeared clean on the date of the assessment. Repairs to the interior south-wall have not been completed as of this date. The Assistant Principal reported complaints of possible mold and mildew. Two occupants were present on the date of the assessment.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on September 1, 2004.

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	Temperature	Humidity	CO2
FISH 404	78.0F	57.2%	1584

*The carbon dioxide level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 1,000 ppm.*

#### RECOMMENDED COURSE OF ACTION

The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the fresh air damper servicing this location in order to lower the carbon dioxide level.
- Evaluate and complete the necessary repairs to the interior south-wall.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items.

Site-Based Staff will complete the following items immediately:

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.
6. The indoor environmental quality assessment of FISH 501 revealed visible signs of bubbling paint, microbial growth, water intrusion and cracking drywall on the south, east and west wall. The false ceiling plenum appeared clean and dry at the accessed location. The ceiling tiles, air supply vents, return air register grill and tile floor appeared clean on the date of the assessment. The Assistant Principal reported complaints of possible mold and mildew. Four occupants were present on the date of the assessment.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on September 1, 2004.

	Temperature	Humidity	CO2
FISH 501	75.1F	58.5%	1991

*The carbon dioxide level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 1,000 ppm.*

#### RECOMMENDED COURSE OF ACTION

The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the fresh air dampers servicing this location in order to lower the carbon dioxide level.
- Evaluate and repair as appropriate, the exterior and interior south, east and west wall in order to prevent further water damage.

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- **The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items.**

**Site-Based Staff will complete the following items immediately:**

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

The indoor environmental quality assessment revealed a number of items that should be addressed as soon as possible. Please have your site-based maintenance staff implement the above recommendations in order to improve the indoor environmental quality for all occupants within your school.

Generally, the Risk Management Department did not identify any existing conditions significantly impacting IEQ 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 IEQ, prevent development of future IEQ-related problems, and reduce the potential for IEQ-related complaints by building occupants, the Risk Management Department recommends appropriate follow up of each item identified and previously listed.

Should any questions or concerns arise, or if these complaints continue after the above recommendations have been addressed, please feel free to contact me at (954) 765-8864.

AAH/ldh

c: Dr. Joanne Harrison, North Area Superintendent  
Ulysses Jackson, North Area Director School Improvement  
Greg Boardman, Project Manager, Facilities and Construction Management  
Ruby Fitzgerald, Broward Teachers Union.