

RISK MANAGEMENT...

managing risk with responsibility

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March 19, 2003

TO: Bettye Brown, Principal
Margate Middle School

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

A.H.

SUBJECT: Indoor Environmental Quality Assessment
Margate Middle School
FISH 102E, 152, & 410

On March 13, 2003, the Risk Management Department conducted an assessment of **FISH 102E, 152 and 410 at Margate Middle 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 102E** revealed no signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The Risk Management Department did not identify any visible signs of microbial growth or any visible signs of water intrusion. Paint is peeling off of one of the walls in this office. The carpet reveals signs of staining and soiling. The air in this office feels very stuffy. The air supply vent is currently not blowing out a sufficient amount of air. The false ceiling plenum at the accessed location appeared clean and dry. The return air register grill, which is located in the door of this office, is not functioning properly. The ceiling tiles appeared clean on the date of the assessment. The air supply vents and the return air register grill revealed signs of dust and debris buildup. The relative humidity measurement appeared high on the date of the assessment.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on March 13, 2003.

	Temperature	Humidity	CO2
FISH 102E	77.5f	67%	1061

The humidity 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 60%.

RECOMMENDED COURSE OF ACTION

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

- Evaluate and repair as appropriate, the air-handling unit servicing this location in order to lower the humidity level and increase air supply velocity.
- Evaluate the return air register grill to ensure proper functioning of same and repair as appropriate.
- Evaluate the peeling paint on the wall and repair as appropriate.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on the above items no later than April 30, 2003.

Site-Based Staff will complete the following items immediately:

- Site-based maintenance staff will clean the air-conditioning vents and return air register grills with a wexcide disinfectant solution in order to remove dust and debris buildup.
- Site-based maintenance staff will clean and sanitize the carpet.
- 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 152 revealed no signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The Risk Management Department did not identify any visible signs of microbial growth or any signs of water intrusion. Several dirty ceiling tiles were identified surrounding the air supply vents. The tile floor and walls appeared clean on the date of the assessment. The air supply vents and the return air register grills revealed minor signs of dust and debris buildup. The dehumidifier installed by the Maintenance Department is currently leaking. The relative humidity and carbon dioxide levels recorded on the date of the assessment were within acceptable ASHRAE (American Society of Heating and Refrigeration and Air Conditioning Engineers) Standards. The teacher occupying this room has informed me the Maintenance Department will install a second dehumidifier in the very near future. This same teacher has a log of high humidity measurements dating back for several months.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on March 13, 2003.

	Temperature	Humidity	CO2
FISH 152	73.0f	57%	918

RECOMMENDED COURSE OF ACTION

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

- Evaluate and repair dehumidifier as appropriate.
- Install second dehumidifier as per instructions from the Maintenance Department.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on the above items no later than April 30, 2003.

Site-Based Staff will complete the following items immediately:

- Site-based maintenance staff will remove dirty ceiling tiles and install new ceiling tiles.
 - Site-based maintenance staff will clean the air supply vents and the return air register grill with wexcide in order to remove dust and debris buildup.
 - Continue to monitor this location for any signs of microbial growth once the repairs have been completed and clean as appropriate.
3. The indoor environmental quality assessment of FISH 410 revealed minor signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The Risk Management Department did identify visible signs of microbial growth on one ceiling tile. The tile floor and walls appeared clean on the date of the assessment. An inspection of the false ceiling plenum revealed signs of water leaking from a roof drainage pipe. The roof drainage pipe should be inspected and repaired as appropriate. The air supply vents and the return air register grill revealed minor signs of dust and debris.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on March 13, 2003.

	Temperature	Humidity	CO2
FISH 410	71.1f	68%	792

The humidity 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 60%.

RECOMMENDED COURSE OF ACTION

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

- Evaluate and repair as appropriate, the air-handling unit servicing this location in hopes of lowering the humidity level.
- Inspect leaking roof drainage pipe within the false ceiling plenum and repair as appropriate.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on the above items no later than April 30, 2003.

Site-Based Staff will complete the following items immediately:

- **Site-based maintenance staff will clean the air-conditioning vents and return air register grills with a wexcide disinfectant solution in order to remove dust and debris buildup.**
- **Site-based maintenance staff will remove 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.**

Please observe the temperature, relative humidity and carbon dioxide levels measured outdoors at 10:31 a.m. on March 13, 2003; prior to conducting the IEQ assessment at this location.

	Temperature	Humidity	CO2
Outside	85.0F	70%	415

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/tpo

- c: Dr. Joanne Harrison, North Area Superintendent
Sharon Airaghi, North Area Director School Improvement
Philip Kaufold, Project Manager, Facilities and Construction Management