

# RISK MANAGEMENT...

managing risk with responsibility

Jeffrey S. Moquin, Director  
Risk Management Department

Telephone: 765-8864  
Facsimile: 765-6105

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**TO:** Dr. Timothy Gadson, Principal  
Boyd Anderson High School

**FROM:** Jeffrey S. Moquin, Director  
Risk Management Department

**SUBJECT:** Indoor Environmental Quality Assessment  
Boyd Anderson High School  
Rooms 614A, 614B, and 643

On September 20, 2004, the IAQ Assessment Team conducted an assessment of rooms **614A, 614B, and 643** at Boyd Anderson High School. The evaluation consisted of a walkthrough of the identified areas to assess the current condition of these locations with regard to indoor environmental quality. This assessment included observation of the floor and ceiling systems, false ceiling plenum, general contents, and measurement of environmental parameters.

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

1. **Rooms 614A and 614B** are the science chemical storage rooms. The indoor environmental quality assessment of these rooms revealed signs of microbial activity on the ceiling systems, inside portion of the doors, and widespread on various chemical containers (labels). The microbial activity on the ceiling systems was primarily isolated around the light fixtures and emergency fire sprinklers. Observation within the ceiling system was not permissible because the false ceiling is a plaster material. Although the pattern of microbial activity on the ceiling system suggests a potential leak, this could not be confirmed due to the lack of access above the ceiling. Measurement of the room environmental parameters identified elevated humidity levels within both storage rooms. (*It is believed the primary cause of microbial activity is the elevated humidity levels within these rooms.*) Additionally, the exhaust fans in the rooms did not appear to be operable.

Outlined in the table below are the temperature and relative humidity levels measured in the chemical storage rooms.

	Temperature	Humidity
Room 614A	70.8f	70.2%
Room 614B	71.4f	69.7%

*The humidity levels measured in the chemical storage rooms on the date of the assessment exceed 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:**

- Inspect above the ceiling plenums to identify potential sources of water intrusion. If a leak is identified take appropriate corrective action to eliminate further water intrusion.
- Repair the exhaust fans within these rooms.
- Evaluate the operation of the HVAC system within this area to ensure the humidity levels are maintained below 60%.

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

- Site-based staff will create an inventory of all science chemicals that have been affected by the microbial activity and submit it to the Risk Management Department.
- Once the Risk Management Department arranges to have the affected chemical containers removed from the school, site-based custodial staff should clean and sanitize all environmental surfaces within these rooms utilizing the District's approved germicidal cleaner. (*Appropriate personal protection such as gloves and goggles should always be utilized when working with any chemical cleaner.*)

**The Risk Management Department will complete the following items:**

- Arrange to have the District's authorized vendor to dispose of all affected chemicals within these rooms.
  - Work with the Science Curriculum Department to replace the chemical inventory.
2. The indoor environmental quality assessment of Room 643 also identified signs of microbial activity, primarily around the return air register. Staff reported this activity is consistent with the problem experienced prior to the beginning of the school year. Observation within the false ceiling plenum revealed the air duct was appropriately insulated, and there were no signs of water intrusion. Measurement of the room environmental parameters identified an elevated humidity level. It is believed the primary cause of microbial activity is the elevated humidity level within this room.

Below are the temperature, relative humidity, and carbon dioxide levels measured in Room 643.

	Temperature	Humidity	CO2
Room 643	75.0f	52%	1380

*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 the operation of the HVAC system within this area to ensure the humidity levels are maintained below 60%.
- Install humidity data loggers in various areas throughout Building 6 in an effort to better understand the cause of the ongoing humidity problems within the building. The data loggers should capture information for at least one week and through a weekend to evaluate how the operation of the system through Andover may be impacting the humidity issue.
- Replace affected ceiling tile (needs cutting) within this classroom.

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

- Replace the affected ceiling tiles within the classroom that do not require specialty cutting by Maintenance.

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 this building.

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

JSM

c: Dr. Harry LaCava, North Central Area Superintendent  
Fran Bolden, North Central Area Director School Improvement  
Mark Dorsett, Manager I, Area Maintenance  
Robert Krickovich, Project Manager II, Facilities and Construction Management  
Aston Henry, Supervisor, Risk Management  
Israel Rodriguez-Soto, Facilities and Construction Management  
Lou-Lou Hall, Office Manager, Risk Management Department