

July 31, 2020

Ms. Paula J. Smith  
Business Administrator  
Cape May County Technical School District  
188 Crest Haven Road  
Cape May Court House, NJ 08210

Dear Ms. Smith,

This report summarizes the results of the July 28, 2020 mercury air monitoring of the Cape May Technical School MAC gym. This report is a follow-up to our mercury screening report on June 26, 2020. Mr. Richard A Lynch, MBA, CIEC, conducted this assessment.

### **Airborne Mercury Test Results**

The MAC gym's overhead air handler was operating at the time of inspection. Operating parameters were reported at 24/7 occupied mode at set point 64°F. The damper position was described as having been manually closed per our instructions.

Air Monitoring Findings revealed the following:

- Outdoor airborne mercury was measured at approximately 0.05 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) approximately equivalent to the lower detection limit for the J505 Mercury Vapor Monitor. Outdoor temperature was approximately 99°F@45% relative humidity at the time of monitoring. This is equivalent to 126 grains of moisture per pound of air.
- Gym temperature ranged from 67 -68 °F during this monitoring period and average relative humidity was 71% (70 grains of moisture per pound of air).
- Spot monitoring for mercury within the gym vestibule, main hallway, weight room and locker rooms ranged between 0.14 and 0.30  $\mu\text{g}/\text{m}^3$ ; well below the NJ Department of Health guideline of 0.8  $\mu\text{g}/\text{m}^3$ .
- Continuous air monitoring conducted within the center of the MAC gym between approximately 11:30 AM and 2:15 PM revealed average airborne mercury levels at 0.59  $\mu\text{g}/\text{m}^3$  and a range of 0.50 - 0.69  $\mu\text{g}/\text{m}^3$ ; below the NJ Department of Health guideline of 0.8  $\mu\text{g}/\text{m}^3$ .

### **Conclusions and Recommendations**

Based upon the above, it is our professional opinion that the airborne mercury levels within the

MAC gym during our July 2020 monthly air monitoring with the HVAC running in 24/7 occupied mode with the damper mainly closed averaged  $0.59 \mu\text{g}/\text{m}^3$ ; lower than NJ Department of Health guideline of  $0.8 \mu\text{g}/\text{m}^3$ . These findings also indicate that the MAC gym's air conditioning system was effective at removing significant moisture content from the extreme hot and humid outdoor air while maintaining airborne mercury within NJ Department of Health guidelines with outdoor air dampers manually closed.

Based upon these findings, the following recommendations should be considered for continued management of airborne mercury levels within the MAC gym during the remainder of the summer:

1. Continue to operate the gym with outdoor air dampers closed through August to help reduce introduction of humidity to the gym.
2. Monitor humidity within the gym periodically. If condensation is observed within the gym or if humidity is excessive during the next month, notify me immediately, and install supplemental de-humidifiers if necessary to control airborne humidity below 65%.
3. Continue regular non-abrasive floor cleaning of the MAC gym floor and stage areas to prevent accumulation of excessive dusts.

Our next monthly monitoring will be scheduled for August 2020.

Thank you for the opportunity to assist you with the evaluation. Please contact me with any questions at (856)764-3557.

Sincerely,

*Richard M. Lynch*

Richard M. Lynch, Ph.D., CIH, FAIHA, CMC, CMRS, CHFM

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*Certified Microbial Consultant*

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