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January 31, 2022

Ms. Sarah Bell
Business Administrator/Board Secretary
Kingsway Regional &
South Harrison Twp. Elem. School Districts
213 Kings Highway
Woolwich Twp., NJ 08085

Dear. Ms. Bell,

This report summarizes the results of our January 26-27, 2022 routine mercury air monitoring of the South Harrison Elementary School Gym. This assessment was conducted by Mr. Richard A. Lynch, MBA, CIEC. The objectives of this assessment were to determine if the gym's overhead air handling systems are effective at controlling airborne mercury levels during the winter season thermostat settings and outdoor air introduction rates.

Executive Summary of Findings

Airborne mercury levels within the South Harrison Elementary School gym during the 28-hour monitoring period averaged 0.13 µg/m^3; well below the NJ Department of Health Guideline of 0.8 ug/m^3. No mercury inhalation hazard is suggested.

I. Evaluation Criteria and Methods

Evaluation criteria were previously described and will not be repeated herein.

The following methods were observed during our January 26-27, 2022 monitoring period.

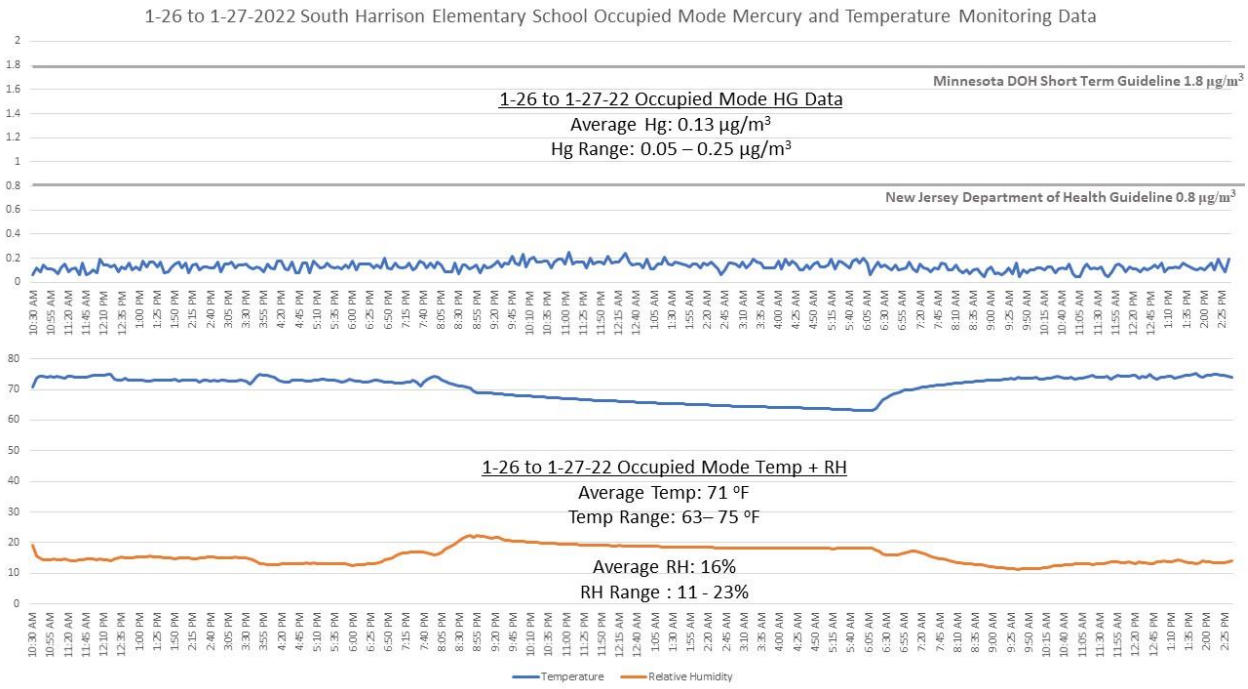
- Continuous air monitoring was conducted within the gym over an approximate 28-hour period between approximately 10:30 AM on January 26, 2022 and 2:35 PM on January 27, 2022.
- Temperature and humidity were monitored over the same period using a TSI Q-Trak 7575 IAQ monitor.
- Spot air measurements were collected within the gym and surrounding hallways and offices on January 27, 2022.
- All mercury air monitoring was conducted using a calibrated Jerome J505 Mercury Vapor Analyzer with a reported detection limit of 0.05 µg/m^3 which reads as low as 0.00 µg/m^3 with a resolution of 0.01.

II. Observations and Mercury Air Monitoring Findings

Findings revealed the following:

- Outdoor airborne mercury was at approximately 0.02 micrograms per cubic meter (µg/m^3). Outdoor temperature ranged from 18 to 34 ºF during the monitoring period.
- Spot air measurements in the gym averaged 0.15 µg/m^3 (range 0.09 – 0.17 µg/m^3)
- Spot air measurements in the surrounding hallways and offices averaged 0.02 µg/m^3 (range 0.00 – 0.06 µg/m^3).
- Airborne mercury levels measured at the gym/stage area during the 28-hour occupied mode **averaged 0.13 µg/m^3** (range 0.05 - 0.25 µg/m^3); below the NJDOH Guideline of 0.8 µg/m^3.
- Gym temperature averaged 71ºF (range 63- 75 ºF) during this monitoring period. Relative humidity averaged 16%.

Continuous air monitoring findings over the 24-hour monitoring period are shown in the Figure below:



IV. Conclusions and Recommendations

Airborne mercury levels within the South Harrison Elementary School gym during the January 26-27, 2022 monitoring period, averaged 0.13 µg/m^3; well below the NJ Department of Health Guideline of 0.8 ug/m^3. Based upon these findings, it is our professional opinion that the gym's HVAC systems were effective at controlling airborne mercury concentrations.

Recommendations

Based upon these findings, the following recommendations should be considered

1. Continue to operate the HVAC systems on their current schedule.
2. Continue to perform non-abrasive cleaning of gym floors and other surfaces to reduce dust accumulation.

Our next monitoring will be scheduled for February 2022. Thank you for the opportunity to assist you with the evaluation. Please contact me with any questions.

Sincerely,
Richard A. Lynch
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Industrial Hygienist
NJ Licensed Indoor Environmental Consultant
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