ABS ENVIRONMENTAL INCORPORATED

February 7, 2025

Summary of Findings – October 2024 Testing
Hilton Head Island School for the Creative Arts
Follow Up Mercury Vapor in Gym Evaluation and Air Testing
Beaufort County School District, Beaufort, South Carolina

Dear Mr. Oetting:

ABS Environmental (ABS) is pleased to present the results of the mercury vapor air testing conducted on October 14-16, 2024, to re-evaluate the mercury vapor concentrations in several schools. This evaluation was performed as a follow-up based on the results of the testing performed and evaluations.

This evaluation was performed in October which is generally cooler in temperature; therefore, the temperature in most gyms is constant (<72°F) and the potential for "off-gassing" is significantly lower. For future evaluation testing, we recommend this testing be performed in the late summer months and would recommend scheduling the annual testing in August 2025.

EVALUATION CRITERIA

The Agency for Toxic Substances Disease Registry (ATSDR) guideline document provides the following information based on mercury spills in residential and school environments:

Consideration should be given to closing or isolating areas of schools with mercury concentrations of ≥ 10 µg/m³, depending on the exposures. ATSDR recommends a range of ≤ 3 µg/m³ before resuming normal operations of the school. This recommendation is based on the residential action levels and adjusted for a normal school day. Presuming all visible mercury in the setting has been removed, this action level is considered appropriate.[1]"

Based on the ATSDR guidelines, The District has adopted a reference target value for mercury vapor in the school gyms that are being monitored at <3.0 micrograms per cubic meter (µg/m³). Gyms that exhibit mercury vapor concentrations below the target value are considered acceptable for routine use until abatement of the rubberized flooring material can be conducted.

Dr. Gochfeld summarizes recommended mercury in air concentrations by various agencies. The agencies include:

- The Occupational Safety and Health Administration (OSHA)
- National Institute of Occupational Safety and Health (NIOSH)
- Agency for Toxic Substances and Disease Registry (ATSDR)
- The Environmental Protection Agency (EPA)
- California OSHA
- Minnesota Department of Health (MDH)

[1] ATSDR, 2012. Agency for Toxic Substances and Disease Registry. Chemical-Specific Health Consultation for Joint EPA/ATSDR National Mercury Cleanup Policy Workgroup Action Levels for Elemental Mercury Spills www.atsdr.cdc.gov.

These agencies report the air concentrations in different units of measurement; from milligrams (mg) to micrograms (µg) to nanograms (ng). For the purpose of aiding with conversion, please use:

1 µg = 0.001 mg = 1,000 ng

The air testing evaluation was conducted during normal school hours on a representative school day. ABS collected 5-15 readings in each gym using the Jerome J405 mercury vapor analyzer. The readings were collected in a grid-like pattern in the gym.

- Hilton Head Island School for the Creative Arts

Mercury vapor was detected below the ATSDR target value of 3.0 µg/m^3 in the gyms. In addition, the levels are below the most stringent criteria adopted by the Minnesota Department of Health of <750 ng/m^3.

None of the schools had noteworthy detectable mercury vapor concentrations detected. Based on these measurements, data and past evaluations, the guidelines adopted by the BCSD and procedures set forth by BCSD in keeping the temperatures in the gym at a stable lower temperature and not in energy conservation mode are keeping the mercury vapor levels below the recommended ranges during summer months and decreasing the air temperature as much as feasibly possible.

A summary of the data is attached.

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2024 OCTOBER RE-EVALUATION TESTING
SUMMARY OF MERCURY VAPOR TESTING RESULTS
USING JEROME J405 DIRECT READING INSTRUMENT

Jerome Model: J405-0007
Serial Number: 405-00166

PRIOR TO USE AT EACH SCHOOL, THE INSTRUMENT WAS "ZEROED" FOR CALIBRATION PURPOSE. **BOLD are actual readings in the gym at various locations. Depending on size of the gym, 5 to 15 readings were measured.**

DATE	MEASURMENT Units	Temp-C°	LOCATION/SCHOOL
HILTON HEAD ISLAND SCHOOL for the CREATIVE ARTS			
14-OCT-2024,14:19:15,	0.00, ug/m3,	26.87,M,ZERO0	
14-OCT-2024,14:20:39,	**0.00, ug/m3,**	**26.93,M,**	**HHI SCA**
14-OCT-2024,14:21:05,	**0.00, ug/m3,**	**26.93,M,**	**HHI SCA**
14-OCT-2024,14:21:33,	**0.00, ug/m3,**	**26.93,M,**	**HHI SCA**
14-OCT-2024,14:21:59,	**0.00, ug/m3,**	**26.93,M,**	**HHI SCA**
14-OCT-2024,14:22:22,	**0.00, ug/m3,**	**26.93,M,**	**HHI SCA**
14-OCT-2024,18:05:29,	**0.00, ug/m3,**	**31.12,R,**	**HHI SCA**
14-OCT-2024,19:24:47,	**0.00, ug/m3,**	**27.93,R,**	**HHI SCA**
HILTON HEAD ISLAND School for the CREATIVE ARTS			
15-OCT-2024,09:56:00,	0.00, ug/m3,	24.25,M,ZERO0	
15-OCT-2024,09:56:19,	0.00, ug/m3,	24.25,M,ZERO0	
15-OCT-2024,09:56:41,	0.00, ug/m3,	24.25,M,ZERO0	
15-OCT-2024,09:57:37,	**0.00, ug/m3,**	**24.25,M,**	**HHI SCA**
15-OCT-2024,09:58:00,	**0.00, ug/m3,**	**24.25,M,**	**HHI SCA**
15-OCT-2024,09:58:26,	**0.00, ug/m3,**	**24.25,M,**	**HHI SCA**
15-OCT-2024,09:58:52,	**0.00, ug/m3,**	**24.25,M,**	**HHI SCA**
15-OCT-2024,09:59:16,	**0.00, ug/m3,**	**24.25,M,**	**HHI SCA**
15-OCT-2024,09:59:42,	**0.00, ug/m3,**	**24.25,M,**	**HHI SCA**
15-OCT-2024,10:00:04,	**0.00, ug/m3,**	**24.18,M,**	**HHI SCA**