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Memorandum

To: Scott Alfonse, City of New Bedford
From: David M. Sullivan, LSP, CHMM, TRC Environmental Corporation
CC: Cheryl Henlin, City of New Bedford
Subject: Polychlorinated Biphenyl Indoor Air Sampling Results
Date: January 10, 2011

TRC Environmental Corporation (TRC) has prepared this memorandum to transmit validated indoor air sampling results for polychlorinated biphenyls (PCBs) conducted at the Little Whaler's Day Care in Room A-227-4 at New Bedford High School (NBHS). The sampling was conducted concurrent with the Keith Middle School (KMS) summer air sampling event.

Consistent with past rounds of PCB air sampling at NBHS, the indoor air samples were collected over a 24-hour period consistent with United States Environmental Protection Agency (EPA) Method TO-10A, *Determination of Pesticides and Polychlorinated Biphenyls in Ambient Air Using Low Volume Polyurethane Foam (PUF) Sampling Followed by Gas Chromatographic/Multi-Detector Detection (GC/MD), January 1999*. All air samples were analyzed for PCB homologs (i.e., PCBs grouped by level of chlorination) by EPA Method 680, *Determination of Pesticides and PCBs in Water and Oil/Sediment by Gas Chromatography/Mass Spectrometry November 1985*, which is a procedure that provides for an accurate determination of total PCBs in each air sample. The samples were collected on August 25, 2010 by scientists from TRC's Air Measurements Group. The samples were analyzed by Northeast Analytical Laboratories of Schenectady, New York.

The results of analysis are provided in the attached table and summarized below. All units are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$):

- Number of Samples Collected: 1 plus a duplicate.
- Concentration of Total PCBs Detected: $0.00763\text{J } \mu\text{g}/\text{m}^3$ ($0.0054\text{J } \mu\text{g}/\text{m}^3$ duplicate) (Note: the "J" designation indicates that the results were qualified as estimated following validation review due to slightly high surrogate recovery in the original sample and variability in the trichlorobiphenyls between the original and field duplicate sample).
- Results with PCB Air Concentrations above the EPA *Threshold for Further Investigation* ($0.05 \mu\text{g}/\text{m}^3$): None

- Results with PCB Air Concentrations Above the *Acceptable Long-Term Average Exposure Concentration* (0.3 ug/m³)¹: None
- Results with PCB Air Concentrations Above the EPA *Public Health Levels*²: None

As noted above and in the attached table, the PCB results are well below comparison levels applicable to the project and those introduced in recent EPA guidance. Therefore, it is safe to continue use of the room as a daycare center.

TRC appreciates the opportunity to support your project. If you have any questions or comments, please do not hesitate to contact me at 978-656-3565.

¹ The 0.3 µg /m³ value represents a long-term average concentration that corresponds to acceptable risk benchmarks established by the Massachusetts Department of Environmental Protection (MassDEP), assuming 25 years of daily work place exposure. Short-term exposures at this concentration level do not represent an immediate threat to health.

² United States Environmental Protection Agency (USEPA). 2009. Public Health Levels for PCBs in Indoor School Air. <http://www.epa.gov/pcbsincaulk/> September 2009.

Summary of Analytical Results for Air Samples - August 2010
New Bedford High School
New Bedford, Massachusetts

Analysis	Analyte										Sample ID: NBHS-A227-4				
		EPA Public Health Levels								EPA Project Threshold for Further Investigation	Acceptable Long-Term Average Exposure Concentration	Sample Date:			
		Age 1-<2 yr	Age 2-<3 yr	Age 3-<6 yr	Age 6-<12 yr Elementary School	Age 12-<15 yr Middle School	Age 15-<19 yr High School	Age 19+ yr Adult	8/25/2010			8/25/2010 Field Dup			
PCB Homologs															
(ug/m3)	Monochlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000685	U	0.000658	U
	Dichlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00301	J	0.00334	
	Trichlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00461	J	0.00206	J
	Tetrachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00137	U	0.00132	U
	Pentachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00137	U	0.00132	U
	Hexachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00137	U	0.00132	U
	Heptachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00206	U	0.00197	U
	Octachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00206	U	0.00197	U
	Nonachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00343	U	0.00329	U
	Decachlorobiphenyl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00343	U	0.00329	U
	Total PCBs	0.07	0.07	0.1	0.3	0.45	0.6	0.45	0.05	0.3	0.00763	J	0.00540	J	

Notes:

ug/m3 - micrograms per cubic meter.

J - Estimated value.

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

PCBs - Polychlorinated Biphenyls.