

PRELIMINARY DATA



MEMORANDUM

TO: Peter J. Gray-Mullen and Terri Bechta
FROM: Jeff Hamel
DATE: June 12, 2009
RE: Preliminary Results of the Interior Air Monitoring
UMass Amherst Lederle Graduate Research Center

The purpose of this memorandum is to provide a preliminary summary of the interior air sampling for PCBs conducted at the low rise building and Tower A of the Lederle Graduate Research Center (LGRC). The specific objectives for the air sampling were:

- To evaluate indoor air concentrations of PCBs at representative locations in the high rise Tower A, the low rise north wing, and the low rise library with respect to risk-based levels; and
- To obtain data over time for comparison and trend analysis.

On May 26, 2009 Woodard & Curran personnel collected eleven air samples from designated locations throughout the low rise and Tower A of the LGRC. The eleven air samples were collected in accordance with the procedures described in the May 2009 Interior Air Monitoring Plan submitted to you on May 21, 2009. The locations were selected based on three primary factors:

- Locations of existing glazing samples with known PCB concentrations;
- Distribution throughout the LGRC complex to obtain representative data from rooms of varying uses (classrooms, office space, etc.); and
- Location of previous air samples collected, primarily Post-Abatement (exterior façade project) air samples collected on July 22 and 23, 2008.

Air samples were collected in accordance with USEPA Compendium 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)"* and submitted for laboratory analysis of PCBs homologs.

At each of the sample locations an individually certified low volume PUF cartridge was connected to a personal air pump (SKC AIRCHEK Sampler) with flexible tubing. The cartridge was positioned at the appropriate height using a telescoping tubing stand or placed on a desk or tables as specified on Table 1 below.

To achieve the desired minimum laboratory reporting limit of 50 nanograms/m³, samples were collected at a rate of 2.5 L/min for the desired timeframe for a total sample volume of 300 liters. One duplicate sample was collected as part of the overall project Quality Assurance and Quality Control measures. At the end of the time interval, the pump was shut off and the cartridge was placed in aluminum foil, labeled, and placed on ice for delivery to the analytical laboratory.

Preliminary Sample Results

As of the date of this memo, the full laboratory analytical data packages have not been received; however, the lab has reported preliminary data. A summary of the preliminary air sample results are presented below. Analytical results indicate that the concentrations of PCBs reported in the samples ranged from 0.033 to 0.159 µg/m³. These results are slightly lower than the results from the July 2008 Post-abatement air sampling results, which ranged from 0.101 to 0.269 µg/m³. Where applicable, a direct comparison between the July 2008 and



May 2009 data points is included on Table 1. As a general comparison, the analytical results were also below the post-abatement re-occupancy criteria developed as part of the exterior abatement project (0.29 $\mu\text{g}/\text{m}^3$).

Table 1

Building	Air Sample	Sample Location	Total PCBs ($\mu\text{g}/\text{m}^3$)	
			26-May-09	22-23- Jul-08
Low-Rise Library	LGRC-IA-005	First floor, Southeast corner. Placement on table adjacent to windows.	0.056	0.239/0.256
	LGRC-IA-006	Second floor, Main study area to west of library desks. Placement on tables.	0.057	0.237
	LGRC-IA-004	Third Floor, Conference Room 365A. Placement on conference table.	0.061	0.257
Low-Rise North Wing	LGRC-IA-001	First floor, Room 125C, Office Space. Placement near windows at a height of 3-5 feet.	0.110	0.224
	LGRC-IA-003	Second floor, Room A251 office space. Placement near window at a height of 3-5 feet.	0.159	none
	LGRC-IA-002	Third Floor, Classroom A301; placement on first row of desks near windows.	0.046	none
High Rise Tower A	LGRC-IA-007	Fifth floor, elevator lobby. Placement near windows south of elevators at height of 3-5 feet.	0.065	none
	LGRC-IA-009/500	Room 801, Laboratory office space. Placement 3-5 feet.	0.036	0.101
	LGRC-IA-010	West side laboratory Room 1208. Placement at 3-5 feet.	0.033	none
	LGRC-IA-011	Room 1606, Common study area. Placement at 3-5 feet.	0.127	0.200
	LGRC-IA-008	East side conference Room 701E. Placement on conference room table.	0.036	none

Following receipt and validation of the laboratory reports, this memorandum will be finalized. The results will also be evaluated as part of the ongoing activities associated with the PCB containing glazing materials identified in the LGRC complex.