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**Buildings constructed prior to 1978 may contain caulking made with polychlorinated biphenyls (PCBs). Long-term public health impacts are not well documented and understood.**

May 10, 2010 - Last September, the U.S. Environmental Protection Agency, (EPA) announced that certain building materials, in particular caulking, may contain polychlorinated biphenyls (PCBs). Along with this announcement, the EPA provided general guidance which contained information about studies that have been conducted on buildings built between 1950 and 1978. In general, schools and buildings built after 1978 do not contain PCBs in caulk. At one time caulk was manufactured to contain PCBs because PCBs imparted flexibility. Caulk is a flexible material used to seal gaps to make windows, door frames, masonry and joints in buildings and other structures watertight or airtight.

PCBs are persistent manmade chemicals that were widely used prior to 1978. PCBs accumulate in our bodies over time because we consume them in some of the food we eat and environment in which we live. Most of us have low levels of PCBs that can be measured in our blood which do not appear to cause any harm. High levels of exposure over a long period of time may be harmful to our health. There are several unresolved scientific questions that must be better understood to assess the magnitude of the problem and identify the best long-term solutions. The link between the concentrations of PCBs in caulk and PCBs in the air or dust is not well understood. While the PCBs in caulking and other building materials have been in place for over 30 years, associated health effects, if any, have never been conclusively determined.

Taking a proactive approach to the announcement from the EPA, Patrick Goddard, Director of the Public Facilities Department, decided to find out the status of a subset of public buildings in Lexington by hiring a consultant to begin an investigation. Following EPA's guidance, the town's consultant (Universal Environmental Consultants) collected samples of exterior caulking from a subset of all the public buildings, including all schools constructed or renovated between 1950 and 1978. The consultant also collected several indoor air samples and exterior soil samples.

Preliminary results indicate that caulk samples exceeded 50 parts per million (ppm) for PCBs in exterior caulk samples at three buildings (Town Office Building, Clarke Middle School, and Estabrook Elementary School). Building materials such as wood, concrete, caulk, etc., that contain levels of PCBs greater than or equal to 50 parts per million meet the EPA definition of PCB bulk product waste and must be removed, repaired or sealed. The Department of Public

Facilities has budgeted building funds for fiscal year 2010 and 2011 that will be available for repairs and/or removal of caulking during the summer of 2010 at the Clarke Middle School. Caulk at Estabrook and the Town Office Building is intact and will be monitored by Public Facilities staff for chipping and degradation.

*“Preliminary air sampling for PCBs in the indoor air of three buildings represents no public health hazard for workers. The levels were all below the Occupational Safety and Health Administration’s workplace standards for a 40 hour work-week. The detection limits in the current sampling effort were not sensitive enough for school indoor air levels of PCBs which are measured in nanograms per cubic meter (ng/m<sup>3</sup>). As a result, the full public health implications of the air data for PCBs cannot be evaluated and more testing will be necessary. However, the preliminary air test have provided some reassurance that the indoor air quality meets OSHA standards for safe indoor air in the work environment.”* said Gerard Cody, Health Director.

It is important to more fully characterize the health risks, if any, to children related to the presence of PCBs in the indoor air of schools in order to implement preventative measures. The Office of Community Development, Health Division is currently in the process of recommending an environmental consulting firm with significant experience in dealing with this complex, emerging issue to conduct the next round of testing. According to Cody, *“we are specifically concerned with measuring PCBs in indoor air at concentrations low enough that their presence could potentially affect children”*. Plans are underway for a second round of air sampling this summer in the school buildings where elevated levels of PCBs in caulk were originally discovered.

The Department of Public Facilities has shared all analytical results with the Lexington Board of Health and Office of Community Development, Health Division. The Health Division has contacted the Massachusetts Department of Public Health, Bureau of Environmental Health, (MDPH/BEH) U.S. Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR) Region 1 and is coordinating all the communication efforts between the various State and Federal agencies in order to provide the most accurate and effective response as possible.

An information booklet addressing *“the PCB containing materials in the Indoor Environment of Schools and Other Public Buildings”* has been prepared by the Massachusetts Department of Public Health. It was developed to provide assistance to school and public building officials and the general public in assessing potential health concerns associated with polychlorinated biphenyl (PCB) compounds in building materials used in Massachusetts and elsewhere. The booklet is also available online at [http://www.mass.gov/Eeohhs2/docs/dph/environmental/exposure/pcbs\\_guidance.pdf](http://www.mass.gov/Eeohhs2/docs/dph/environmental/exposure/pcbs_guidance.pdf).

The Office of Community Development, Health Division has developed an information guide (*“PCB Questions and Answers”*) as it specifically pertains to this issue in Lexington. It can be accessed online through the Lexington town website or a copy can be obtained from the Health Division.

The US EPA has also developed a website, <http://www.epa.gov/pcbsincaulk>, with updated information on this issue. Concerned parties can also call an EPA hotline toll free at 1-888-835-5372 or MDPH/BEH at 617-624-5757

For further information or to obtain a copy of these informational materials, you may contact the Office of Community Development, Health Division by phone at 781-862-0500 x 200 or by email at [gcody@lexingtonma.gov](mailto:gcody@lexingtonma.gov).