THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Tips for Asbestos Consultants
Bulk Sample Analysis by PLM in Massachusetts

The Department of Labor Standards ("DLS") provides this reminder to consultants regarding the analysis of asbestos bulk samples collected in Massachusetts.

Scope
This guidance applies to all settings where bulk samples are collected and analyzed by Polarized Light Microscopy ("PLM") for asbestos content, including but not limited to: asbestos sampling for compliance with AHERA; pre-demolition compliance with National Emissions Standard for Hazardous Air Pollutants ("NESHAP"); building inventory; hazard assessment; or abatement project.

Analytical Method
The following chart summarizes the analytical methods that are accepted by DLS. In 1993, an improved PLM method was developed and has since become the recognized standard for PLM analysis.

Material Submitted for Analysis	Analytical Method Accepted by DLS
Friable thermal system insulation	EPA 600/R-93/116[1]; *or* EPA 600/M4-82-020[2]; *or* TEM[3]
Friable surfacing material Examples: spray on insulation	EPA 600/R-93/116[1] *or* TEM[3]
Friable miscellaneous Examples: plaster, sheetrock, textured paint	EPA 600/R-93/116[1] *or* TEM[3]
Non-Friable, Organically Bound Materials Examples: Vinyl floor tile, linoleum, mastic, asphalt shingles, roofing materials, paint chips, caulking, glazing, sink undercoating and other organically bound materials.	EPA 600/R-93/116[1] *or* TEM[3]
Vermiculite Attic Insulation	The EPA currently recommends that all Vermiculite Attic Insulation is considered to contain asbestos. Current PLM and TEM analysis methods are inadequate. A technical sampling plan is required to ensure that all layers of insulation are collected and analyzed.[4]

Material Submitted for Analysis	Analytical Method Accepted by DLS
Samples analyzed by the original 1982 PLM method. Examples: plaster, sheetrock, textured paint, vinyl floor tile, linoleum, mastic, asphalt shingles, roofing materials, caulking, glazing, sink undercoating and other organically bound materials.	Re-test is not required if previous testing indicates material contains >1% asbestos. Re-test is not required for friable thermal insulation and spray-on materials that were found by the 1982 PLM method to not contain asbestos. DLS recommends re-testing Non-Friable Organically Bound material when it may be disturbed by building renovation or demolition.

1 EPA/600/R-93/116 (1993) "Method for the Determination of Asbestos in Bulk Building Materials."
2 EPA 600/M4-82-020 (1982) "Interim Method for the Determination of Asbestos in Bulk Insulation Samples."
3 Transmission Electron Microscopy (TEM).
4 EPA/600/R-04/004 (2004) "Research Method for Sampling and Analysis of Fibrous Amphibole in Vermiculite Attic Insulation."

Laboratory Certification
Laboratories and Asbestos Analytical Service Providers offering analysis of bulk asbestos samples by PLM must be certified for either Class A or Class B analysis, depending on the type of building the sample originates from: Class A (AHERA); and Class B (non-AHERA setting).

Laboratory Reports
Laboratory reports should contain, at a minimum:

- Laboratory name, address and MA certification number;
- Name and address of client;
- Unique identification number for each sample submitted;
- The specific EPA method that was used for analysis;
- The results of analysis, including the percentage of asbestos, and the percentage of any other fibrous analytes, and to the extent feasible, the type and percentage of the matrix. Samples in which no asbestos is detected should identify other matrices;
- Date of analysis;
- The name and signature of the analyst. A signed cover letter attached to the laboratory report is not considered a signed laboratory report.

Rebuttal of the Presence of Asbestos
Any material that has been determined to contain greater than 1% asbestos by PLM shall not be reanalyzed to rebut the presence of asbestos. If a situation should arise where a material that previously tested positive for asbestos needs to be re-tested, such material shall be analyzed using quantitative TEM. DLS will not accept PLM analysis alone to rebut the presence of asbestos in a sample that previously tested positive for asbestos.