



April 19, 2016

United Mining Industries
Shaukat Parkar
United Mining Industries
Light Industrial Area, Al Razi St.
Yanbu Al Sinaiyah
SAUDIA ARABIA

Dear Shaurkat:

Thank you for choosing UL Environment and its ISO/IEC 17025 accredited testing laboratories for your analytical needs. Attached is the final report, which presents the test protocols and resulting data. The analysis of the submitted product identified as "Fiber Cement Board, 16mm" (18360-010AA) was an assessment following EPA/600/R-93/116 satisfying applicable requirements of the USEPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Sample", EPA-600/M4-82-020, December 1982, published as Appendix E to Subpart E of 40CFR763. This analysis was completed by Bureau Veritas North America, Inc., Kennesaw, GA.

Based on the Bureau Veritas report for Project 9078-11235971, the analysis gave a result of "none detected."

We appreciate this opportunity to assist you. If you have any questions or wish to discuss your results, please feel free to contact us at (888) 485-4733.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. Elliott Horner'.

W. Elliott Horner, PhD, LEED® AP
Lead Scientist

Attachment



April 18, 2016

Melany Atwell
UL ENVIRONMENT
2211 Newmark Pkwy.
Suite 106
Marietta, GA 30067

Bureau Veritas Work Order No. A1604096

Reference: 9078-11235971

Dear Melany Atwell:

Bureau Veritas North America, Inc. received 1 sample on April 11, 2016 for the analyses presented in the following report.

The results apply only to the samples analyzed in this project. Please note that any unused portion of the samples will be discarded after a sixty-day holding period, unless you have requested otherwise.

This material is confidential and is intended solely for the person to whom it is addressed. If this is received in error, please contact the number provided below.

We appreciate the opportunity to assist you. If you have any questions concerning the report, please contact the analyst whose name appears on the report or myself at (770) 499-7701.

Sincerely,

Jon Perrenoud

Senior Microscopist

Electronic signature authorized through password protection

Bureau Veritas North America, Inc.

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Kennesaw, GA 30144

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Fax: (770) 499-7511
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CASE NARRATIVE

Date: 18-Apr-16

CLIENT: UL ENVIRONMENT

Project: 9078-11235971

Work Order No A1604096

ANALYTICAL METHOD FOR ASBESTOS IN BULK SAMPLES USING POLARIZED LIGHT MICROSCOPY (PLM)

The results of this report relate only to the samples listed in the body of this report.

Unless otherwise noted below, the following statements apply: 1) all samples were received in acceptable condition, 2) all quality control results associated with this sample set were within acceptable limits and/or do not adversely affect the reported results, and 3) the industrial hygiene results have not been blank corrected unless otherwise noted.

Use of EPA/600/R-93/116 satisfies applicable requirements of the USEPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Sample", EPA-600/M4-82-020, December 1982, published as Appendix E to Subpart E of 40CFR763. Bulk samples analyzed by New York State methods follow stratified point counting methods (198.1) or Method 198.6 for PLM non-friable organically bound materials (NYSDOH Lab Code -11645). Percentages are visual estimations of asbestos >10:1 aspect ratio. The reliable limit of quantitation of the method is 1%, although asbestos may be qualitatively detected at concentrations less than 1%. Samples for which asbestos is detected at <1% are reported as trace, "<1%". "None Detected" indicates that no asbestos fibers were observed. NESHAP requires point counting of a bulk sample when the result is <10% by a method other than point counting. EPA, however states that if 3 mounts of the sample are analyzed and the asbestos percentage is <10% by visual estimation, the client may elect to assume the amount to be greater than 1% or require verification by point counting. If the result by point counting is different than the result obtained by visual estimation, the point count result will be used. Sample friability or non-friability noted on the report is a requirement for the State of California and refers only to the condition of the sample under macroscopic examination. It does not imply friability or non-friability for the sample as collected or observed in the field as determined by the person collecting the sample. The Kennesaw, Georgia lab is accredited by NVLAP -Lab Code 101125-0.

(a)Polarized- light microscopy is not consistently reliable in detecting asbestos in floor coverings, similar non-friable organically bound materials, soil and vermiculite. Quantitative electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. When analysis of such materials by PLM yields results negative for the presence of asbestos, Bureau Veritas recommends utilizing quantitative transmission electron microscopy (TEM). For more information, contact the laboratory.

References



CLIENT: UL ENVIRONMENT

Project: 9078-11235971

Work Order No A1604096

McCrone, Walter C. 1980. The Asbestos Particle Atlas. Ann Arbor, MI: Ann Arbor Science Publishers, Inc.

United States Environmental Protection Agency. Environmental Monitoring Systems Laboratory. 1982. Interim Method for the Determination of Asbestos in Bulk Insulation Samples. EPA-600/M4-82-020. Washington: GPO, December.

United States Environmental Protection Agency. Method for the Determination of Asbestos in Bulk Building Materials. EPA-600/R-93/116, July 1993 (PLM)

Fed. Reg. Vol. 55, No.224, 11/20/90, p.48415 (NESHAP)
EPA Memorandum 5/8/1991 –NESHAP Clarifications

NYSDOH Methods 198.1/198.6

