Symposium on Natural Occurrences of Asbestos (NOA)

Sponsored by ASTM Committee D22 on Air Quality

April 30 – May 1, 2015
Marriott Anaheim
Anaheim, CA

Symposium Co-Chairmen:  Mark Bailey
Asbestos TEM Labs
Berkeley, CA

Jim Millette
MVA Scientific Consultants
Duluth, GA

ABOUT THE EVENT
Identified occurrences of NOA with the potential to affect workers and the general public continue to be discovered at an ever increasing rate, with many of the new occurrences being found in rock & soil that is not from expected ultra-mafic rock sources. The presence of NOA in rock and soil presents great challenges to parties involved in assessing and mitigating exposures to this hazardous material. The problems presented by NOA require specialists in multiple disciplines, including asbestos laboratory technical supervisors, toxicologists, epidemiologists, risk assessors, government regulators, industrial hygienists, environmental consultants, geologists, mineralogists and soil scientists. It is the goal of this proposed two-day conference to bring together the leading specialists from the various disciplines described above to discuss new information that has been recently discovered about NOA, and to delve deeply into the problems and complexities that NOA presents, in order to increase the knowledge and understanding of all who attend. The four sessions are:

1. Occurrence and Geology of NOA/Field Assessment & Sampling
2. Mineralogy of NOA/Laboratory Issues Related to Sample Preparation, Asbestos Definitions and Mineral Identification
3. Epidemiological/Toxicological Issues of NOA
4. Assessing Risk and the Effectiveness of Current Regulations Concerning NOA
THURSDAY, APRIL 30, 2015

8:00 AM
Introduction to NOA and a Comparison of Assessment Methods to ACBM
Bailey/ATEM

8:20 AM
Overview of Naturally Occurring Asbestos (NOA), and other Hazardous Effects, and Implications for Environmental and Risk Assessments
Miller/NIH

8:40 AM
100% Natural? Asbestos in the Ground
Harper/CDC-NIOSH

9:00 AM
Progress toward a Geologic Map of the United States Showing Potential for Natural Occurrences of Asbestos, Fibrous Amphiboles, and Erionite: Implications for Occupational and Environmental Health
Plumlee/USGS

CASE STUDIES

LIBBY, MONTANA

9:20 AM
The Rainy Creek Igneous Complex
Sanchez/RJLG

9:40 AM
Background Soil Investigation for Libby Amphibole in the Kootenai Valley
Berry/EPA

10:00 AM        BREAK

10:20 AM
Libby Asbestos Exposures in the Natural Landscape: Forest-Related Exposures and Their Implications for Risk Managers
Progress/EPA

10:40 AM
Lessons Learned in Libby: A Review of the Libby Montana Project as a Case Study of a Large Scale NOA Contamination Project
Cahill/EMSL
BOULDER CITY NEVADA

11:00 AM
Unusual Occurrences of Fibrous Winchite and Actinolite near Populated Areas of Southern Nevada, USA
Metcalf/UNLV

11:20 AM
Occurrence, Distribution and Morphology of Naturally Occurring Asbestos in Southern Nevada and Northwest Arizona
Buck/UNLV

11:40 AM
Geologic Site Characterization for NOA, Phase 2, Boulder City Bypass project, Boulder City, NV
Backstrom-Erskine/Kleinfelder

12:00 PM Lunch (On Your Own)

CALAVERAS DAM

1:00 PM
Building a Dam out of “Naturally Occurring Asbestos”; Challenges and Solutions at the Calaveras Dam Replacement Project
Erskine/Kleinfelder

1:20 PM
Challenges with Identification of Asbestiform Minerals on the Calaveras Dam Replacement Project
Bailey/ATEM

1:40 PM
Applying Trend and Amphibole Speciation Analyses to Distinguish CDRP and non-CDRP Emissions Sources at the Calaveras Dam Replacement (CDRP)
Berman/Aeolus

2:00 PM
Applying Amphibole Speciation to Determine Asbestos Emission Source and Assess Offsite Emissions Calaveras Dam Replacement Project, California
Erskine/Kleinfelder

2:20 PM
Naturally Occurring Asbestos (NOA) Exposures and Health Risk Assessment from Selected Construction Activities at the Calaveras Dam Replacement Project
Hernandez/DFSJV
EL DORADO HILLS

2:40 PM
The El Dorado Story Revisited
Fitzgerald/SAIL

3:00 PM BREAK

ERIONITE

3:20 PM
Is All Erionite the Same? A Comparison of Materials from Different Localities
Harper/CDC NIOSH

3:40 PM
Comparison of Erionite from Different Locations by Scanning Electron Microscopy
Compton/MVA

MISCELLANEOUS

4:00 PM
Natural Occurrence of Asbestos in Germany, Measurement of Inhalative Exposure and Limit Values: Analytical Methods
Koenig/APC

4:20 PM
Mineralogy and Morphology of Amphiboles Observed in Soils and Rocks in Susan, Jechon, South Korea
Roh/ChanhamNatU

4:40 PM
OSHA Regulatory Response to Asbestos Minerals Found in Natural Settings
Crane/OSHA

5:00 PM Symposium Adjourns for the Day

5:30 PM Reception (Cash Bar) [Grand Salons H-K Lobby Level]
FRIDAY, MAY 1, 2015

8:00 AM  
Conducting a Geological Investigation for NOA, Examples from the Field  
Erskine/Kleinfeld

8:20 AM  
Topics for ARB Test Method 435 Guidance Document  
Neumann/CARB

9:00 AM  
Incremental Sampling: An Overview and its Application for Sampling Asbestos in Soils  
Frederick-Wroble/EPA

9:30 AM  
Comparative Methods Study – Emerging Techniques for Sampling and Analysis of Bulk Soils: Sumas Mountain Naturally Occurring Asbestos Site  
Wroble-Frederick/EPA

10:00 AM  BREAK

10:20 AM  
Considerations When Submitting Rock/Soil Samples for NOA Laboratory Analysis  
Mark Bailey PG, President, Asbestos TEM Labs, Bailey/ATEM

10:40 AM  
Problems with Laboratory Identification of Noncommercial Fibrous and Asbestiform Amphiboles  
Meeker/USGS

11:20 AM  
Fluidized Bed Asbestos Segregator [FBAS] Preparation Method - an Update  
Berry-Januch/EPA

11:40 AM  
XRD Sample Preparation, Concentration, and Analysis Methodologies for Various Rocks and Soils in Support of ASTM Working Group WK 39550 PLM Analysis of Soils and Gravels  
Tomaino/Minteq

12:00 PM  Lunch (On Your Own)

1:00 PM  
Introduction to Asbestos-Related Disease, Epidemiology, Toxicology, and Risk  
Berman/Aeolus
1:20 PM
**Individual Prospective Exposure Assessment is Necessary for True Ascertainment of Risk: the Example of El Dorado County, CA**
Case/McGill U

1:40 PM
**Erionite in Road Gravel Associated With Interstitial and Pleural Changes-An Occupational Hazard in Western United States**
Lockey/Ucinn

2:00 PM
**HRCT/CT and Associated Spirometric Effects of Low Libby Amphibole Asbestos Exposure**
Lockey/Ucinn

2:20 PM
**Autoimmune Impacts from Exposure to Mineral Fibers**
Pfau/IdahoSU

2:40 PM
Woodbury/CDM
**Evaluation of Cumulative Human Health Risks from Asbestos Exposures at the Libby Asbestos Superfund Site**

3:00 PM BREAK

3:00 PM BREAK

3:20 PM
**Development of a Non Cancer Toxicity Factor for Libby Amphibole Asbestos**
Benson-Berry/EPA

3:50 PM
**Evaluation of US EPA's Non-cancer Risk Assessment of Libby Amphibole Asbestos**
Goodman/Gradient

4:20 PM
**Reliability of Risk Assessment for Non-Occupational Asbestos Exposure**
Peto/LSH&TM

4:50 PM
**Summary of Asbestos-Related Disease, Epidemiology, Toxicology, and Risk as it Applies to NOA**
Berman/Aeolus

5:10 PM
**Closing Remarks**
Bailey/ATEM

5:25 PM SYMPOSIUM ADJOURNS