

Updates on legislation and insurance activity in the United States for ‘mould, asbestos and lead’

Walter H. Carter*, Dewayne R. Miller

RPIH, CIAQC

ABSTRACT

Trends in the Indoor Air & Environmental Quality (IA&EQ) litigation, regulations, legislation and insurance perspectives are addressed concerning Asbestos, Lead, and Mould (mold/fungi). Asbestos and lead health related exposures of the air and surfaces are well documented. The technological, governmental policies and professional practices are advancing at a mature rate in these areas. Mould is ‘new’ to many IA&EQ professionals as a potential health hazard. This has initiated awareness for the governmental to establish guidelines as a precursor for policies and regulations. Mould is at the beginning of investigative stage as a health issue. Mould/fungi have been around us since the beginning of time but with recent related health concerns, new technology, legislation policies and improvement in professional investigative techniques are forthcoming.

INDEX TERMS

Legal; Legislation; Residential; Standard(s)

INTRODUCTION

The asbestos and lead regulations have not changed significantly in recent years. There are renewed asbestos issues in Libby, Montana. Libby (Montana) could be the single biggest public health concern in the United States and it swirls around vermiculite which contained asbestos fibres. The 9/11 World Trade Center (WTC) bombing in New York City (NYC) stimulated an awareness of potential environmental hazards with airborne asbestos, particulates and lead hazards. Mould fears as they relate to health are at a peak concern today. These IA&EQ topics are addressed in this paper.

ASBESTOS

There are restrictions and a partial ban on asbestos products manufactured in the U.S. There are established standard practices and controls for asbestos such as the visual inspection of asbestos abatement projects (American Society for Testing and Materials [ASTM] Designation E 1368-99). The U.S. Occupational Safety and Health Administration (OSHA) has a number of specific industrial standards in the Federal Register such as 29 CFR 1910.1001 (General Industrial Standards), 29 CFR 1915.1001 (Shipyard Employment Standards), 29 CFR 1926.1101 (Construction Industrial Standards), and Respiratory Protection Standards 29 CFR 1910.134. The Environmental Protection Agency (EPA) 40 CFR Part 61 and Part 763. These have standards such as those under the National Emission Standard for Hazardous Air Pollutants (NESHAP), U.S. EPA Asbestos Hazard Emergency Response Act (AHERA), and ASHARA Amendment. These are some of the federal requirements.

Vermiculite contains Tremolite asbestos fibres. Loose-fill vermiculite was widely used as an insulation material in attic spaces. Aware of the potential health threat, the U.S. EPA contracted with Versar, Inc. of Springfield Virginia (Versar Report) in 1982 to assess the extent of human exposure to vermiculite. Vermiculite is mined as a mica-like material and

* Corresponding author. E-mail: walter@healthyairquality.com

resembles a closed book with pages of thin flakes bound tightly together. In 1982, 52 exfoliation plants were operating in 32 states. Asbestos fibres were found floating in the air 48 km away from the vermiculite processing and packaging plants. The Versar Report estimated that 476 000 tons of loose-fill vermiculite insulation had been installed during the 9-year period ending in 1980, exposing 1.6 million installers and 4.2 inhabitants to asbestos fibres. This study failed to take into account the houses insulated before 1972 or after 1980. The exposure of remodellers or homeowners who disturbed vermiculite already in place was not assessed. The Libby deposit is unique among commercial U.S. vermiculite deposits in having an average amphibole asbestos content of 4–6%. Some residents of Libby who were exposed to high levels of asbestos also have been diagnosed with asbestos-related symptoms.

Officials are concerned about the asbestos content of the soils around Libby and are using a hyperspectral remote-sensing survey in Libby to assist mapping the distributions of the form of asbestos amphiboles in soils. The Libby vermiculite mine closed in 1990, and shipments of vermiculite from the Libby mill site ended in 1992.

As a result of places such as Libby, Montana and WTC in NYC, litigation is working through the legal framework of establishing new and/or confirming existing regulations.

LEAD

Lead-based paints are ‘newcomers’ to the federal and state regulatory agencies. Today, lead is classified as a toxic substance and is known to cause adverse health effects in humans and the environment. In 1978 lead-based paint for residential uses was banned by the Consumer Products Safety Commission. However, lead-based paint for industrial uses, such as bridges and other steel structures, is still permitted.

In the residential housing sector, the U.S. Department of Housing and Urban Development (HUD) estimates that there are 57 million privately owned and occupied homes built before 1980 that contain lead-based paint. Of those homes, approximately 9.9 million are occupied by children younger than 7 years old. Children under the age 7 are at the greatest risk to lead-based paint hazards. It should be noted that, if it is in good condition and when it is left intact, lead-based paint as well as asbestos by itself is not likely to present a hazard. Like asbestos, deteriorating lead-based paint presents a significant public health challenge. However, for lead-based paint in residential housing specifically children under the age of 7 years old present significant health challenges whereas for asbestos the main thrust is for worker safety in an industrial setting.

There are federal and state regulations, rules, and memorandums dealing with the lead issue. Most of the driving force has come from the EPA such as from the HUD part VIII. The Federal Register’s Wednesday, 6 March 1996 has 24 CFR Part 35 and 40 CFR 745 which deals with lead; requirements for the disclosure of known lead-based paint and/or lead-based paint hazards in housing; final rule. The residential community is under an obligation to disclose to prospective buyers, etc. if there is lead-based paint present in housing built prior to 1978.

Then Attorney General Janet Reno and Housing Secretary Andrew Cuomo announced in mid-summer of 1999 multiple court actions of over \$1 million dollars against landlords who violated federal law by failing to warn their tenants that their homes may contain lead-based paint hazards. During that same time period EPA cites seven private and parochial schools in Washington, D.C. for violating regulations on the inspection and management of asbestos in schools.

As technology improves laws and regulations may be amended to reflect new knowledge.

However, the existing laws and regulations appear to be sufficient at this time and can be easily obtained through the Environmental Protection Agency (EPA).

MOULD/FUNGI

Fungi/mould are all around us all the time and almost everywhere. It went into space with the astronauts and clouded the window. With all the intricate details to cleanliness that NASA (National Aeronautics & Space Administration) provides, mould still prevailed. If mould could do that, then there is no practical reason why mould cannot be inside our place of work, residence or anywhere else we visit.

The fungi's sole function is to break down cellulose (complex carbohydrate) to its simpler components. Mould mainly needs food and moisture to survive. There generally is not a shortage of food. The favourite phrase to assist people to understand this is: *It is all about Moisture. Follow the moisture trail. Repair the source and remove the mould.*

Mould is a 'newcomer' as compared to asbestos and lead to the public awareness, legislation, litigation, insurance industry, regulatory agencies and professional investigators. There is activity on the federal and state legislation levels with certain states taking an early lead regarding mould.

There has been litigation in the court system dealing with asbestos and lead. There are some insurance precedents and, as always, is evolving and has been and will be for years to come. Court decisions have been made in the asbestos and lead arena. Mould, on the other hand, is currently under a state of flux in activity both in the legislation and court sectors. The insurance industry is trying to manage this new perceived risk. The insurance industry is accustomed to working with risk in an established field but they are not familiar with an evolving field such as what is occurring in the mould domain. The time eternal question of what comes first 'the chicken or the egg?' Is it: technology, legislation, regulation or litigation? What is driving whom? And why?

MOULD LEGAL ISSUES

Many lawsuits have been filed in recent years and awards given out by the court system. Some of the more notable examples are: \$65 million suit filed in New York for bodily injury due to exposure to toxic mould; \$60 million awarded for toxic mould infestation in Florida that included building repairs, defense expenditures, relocation expenses, and workers' compensation claims; and \$18 million awarded in California for failure to properly handle a toxic mould claim.

The previous litigation issues mainly deal with improper handling of covered water damage losses, which resulted in mould amplification so extensive and severe as to present potentially serious health hazards. In many situations, they suffered actual health problems. Not only were building inhabitants involved but also potentially anyone who unwittingly entered the structure. Mould growth has and can cause structural damage as well as damage to other building materials that are cellulose based such as paper and wood products. There are many other forms of litigation in various stages of development.

Potential defendants in litigation include anyone or organization who is connected to the mould invasion usually brought about through an elevation in moisture through a variety of reasons.

MOULD REGULATION

There are threshold limit values (TLV)® for a number of the more common chemical substances and physical agent and Biological Exposure Indices (BEI)®. TLVs by definition refer to air concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects (1998). BEIs® are related to TLVs®. BEI® determinants are an index of an individual's 'uptake' of a chemical or chemicals. Air monitoring to determine the TLV® indicates the potential 'inhalation exposure' of an individual or group. There are Time Weighted Averages

(TWA), Permissible Exposure Limits (PEL) and Excursion Limits (EL) for a number of similar chemical entities. These relate mainly to particulates and volatile organic compounds (VOCs). There are other factors including acoustic, ergonomic, etc. These are used to assist in determining the potential health concerns for individual or groups encountering the common chemical substances and physical agent.

One of the least known areas of IA&EQ is regarding mould/fungi. There are no TLVs® for most bioaerosols because sufficient information is not yet available. There are few, if any, standards established that relate to this class of IA&EQ fungi bioaerosol issues. The ACGIH¹ Bioaerosols Assessment and Control book adopted the phrase ‘biological derived airborne contaminants’ to describe bioaerosols (airborne particulates composed of, or derived from, living organisms) and VOCs released from living organisms. Bioaerosols include whole microorganisms as well as fragments, toxins, and particulate waste products from all varieties of living things (e.g. bacteria, fungi, plants, and animals). The ACGIH Bioaerosols Assessment and Control book refers to their standard in the following definition. The publication states:

“Standards to prevent harmful exposures to air contaminants have five primary components: (a) the criteria or scientific basis for the standard, (b) a sampling method, (c) an analytical method, (d) a sampling method, and (e) a limit value. ACGIH has considered the possibility of recommending TLVs for bioaerosols and concluded that sufficient information is not yet available on these five components to which workers are exposed in non-manufacturing environments ACGIH (1998). TLVs exist for certain substances of biological origin, including cellulose; some wood, cotton, and grain dust; nicotine; pyrethrum; starch; subtilisins (proteolytic enzymes); sucrose; vegetable oil mist; and volatile components produced by living organisms (e.g., ammonia, carbon dioxide, ethanol and hydrogen sulfide). However, there are no mandatory numerical limits against which investigators can compare measurements of air or source concentrations for the majority of substances of biological origin that are associated with building-related exposures. Thus, in the U.S., sampling for biological derived airborne contaminants is not conducted for the purpose of complying with any federal or state regulations other than for the agent for which existing TLVs have been adopted as standards.”

There are only guidelines for mould remediation: United States Environmental Protection Agency (EPA) *Mold Remediation in Schools and Commercial Buildings* issued in 2001; American Conference of Governmental Industrial Hygienists (ACGIH) in Cincinnati, Ohio *Bioaerosols Assessment and Control* issued in 1999; New York City Department of Health (NYCDH) in New York City, New York *Assessment and Remediation of Fungi in Indoor Environments* issued in 2000 by the New York City Department of Health, Bureau of Environmental & Occupational Disease Epidemiology.

Mould/fungi have been around us since the beginning of time but with recent related health concerns, new technology, legislation policies and improvement in professional investigative techniques are forthcoming.

MOULD LEGISLATION

In the 2001 session of the California Legislature, Governor Davis signed two bills SB732 and AB284. SB732 is a multifaceted attempt to protect the public from adverse health effects relating to indoor moulds. SB732 requires the Department of Health Services (DHS) to

¹ American Conference of Governmental Industrial Hygienists (ACGIH).

consider the adoption of PELs for moulds for indoor environments. SB732 requires the DHS to give special consideration to immune-compromised individuals, pregnant women, infants, the elderly, and other 'eggshell' groups in adopting PELs. AB284 is based on the idea of promoting a more thorough understanding of the options for addressing mould contamination. A Texas bill SB859 relates to establishing mandatory guidelines for indoor air quality in newly constructed or renovated public school buildings. U.S. Congress (107th) Representative John Conyers from Michigan introduce his 'United States Toxic Mold Safety & Protection Act' this summer (2002). The major components of his bill would: (1) Call on the EPA to issue guidelines that specifically spells out what levels of mould are acceptable, what levels are dangerous. (2) Establish EPA guidelines to set standards and government oversight over what has become an unregulated industry of inspectors and clean-ups by requiring states to license and monitor mould inspectors and mould remediators (mould removers). (3) Call on the Center For Disease Control (CDC) to authorize a long-term study of the health effects of mould, and publish these findings in a report to Congress and the President. (4) Allow states to tap federal dollars to clean mould disasters. (5) Establish a federal toxic mould insurance programme that would provide adequate compensation for families that do not have home owners insurance, or whose private home owners insurance does not sufficiently cover the cost of toxic mould removal, or any other cost incurred such as moving into a new home or an apartment. (6) Families or individuals whose health has been adversely impacted due to exposure to toxic mould, and has been diagnosed by a physician, would be eligible to receive Medicaid, if they are (a) uninsured or (b) underinsured at the time they suffered physical harm due to toxic mould poisoning. (7) Mandate federal guidelines that states must adhere to that require home owners and residential real estate developers to disclose mould problems upon the sale of their houses.

MOULD INSURANCE

It is all about covered losses for the insurance companies and re-insurers. Texas' most popular homeowners' insurance policy (HO-B) covers water damage if it was the result of an 'accidental' discharge. Because 'accidental' is both vague and broad, most states add the word 'sudden', as in 'sudden and accidental'. It is a qualifier that tends to limit claims to events such as burst pipes and ruptured washing machine hoses, and to exclude events such as dripping pipes and leaking roofs. Thus, in Texas, to the extent the policies cover more instances of water damage than the policies in other states, and courts have ruled that mould resulting from such water damage must be covered. Texas homeowners have obtained more substantial coverage for mould than homeowners in other states.

Insurance policies can be like 'reading the complete unabridged congressional record in a single sitting after working a 12-h shift'. That withstanding *The Wall Street Journal* 14 May 2002 edition had a headline that read, 'Harsh Policies Hit With Big Losses, Insurers Put Squeeze on Homeowners'.

Texas appears to be the mould capital of the U.S. with Corpus Christi as the hub. The City of Corpus Christi is reported to have five times more claims than any other city in Texas. It is logical to infer that California is the mould celebrity capital of the U.S. Several large insurance companies (they are reported to have written about 70% of the homeowners policies) in Texas have restricted issuing coverage for mould. If mould coverage is available it is high or may be unattainable for individuals or companies. This is especially true if there was a previous mould or water related claim at the location.

Despite average home insurance being higher (~\$500) in Texas, insurers claim that they are experiencing significantly higher losses in Texas than in other states because of the excessive number and severity of mould-related claims. As a result, Texas Insurance Commissioner,

Jose Montemayer, issued an order on 28 November 2001 that allowed insurers, beginning 1 January 2002, to limit coverage under the modified HO-B policies for some mould damage that resulted from a covered peril. The order also makes it mandatory for insurance companies to offer 'buy-back' coverage. Additional coverage is available as a percent of the policy. Under this order, insurers may offer the new coverage as early as 1 January 2002, but must offer it by 1 January 2003. Homeowners who elect to purchase the additional coverage will be subjected to underwriting on an individual basis.

All of the states are trying to come to grips with this very important aspect of being able to provide insurance to its constituents.

CONCLUSIONS

In the asbestos arena, activities in Libby, Montana and WTC in NYC are ongoing with potential litigation as they work through the legal framework of establishing new and/or confirming existing regulations. As lead technology improves, laws and regulations may be amended to reflect new knowledge. However, the existing laws and regulations appear to be sufficient at this time and can be easily obtained through the Environmental Protection Agency (EPA). Asbestos and lead health related exposures of the air and surfaces are well documented. The technological, governmental policies and professional practices are advancing at a mature rate in these areas.

Mould/fungi have been around us since the beginning of time but with recent related health concerns, new technology, legislation policies and improvement in professional investigative techniques are forthcoming. Potential defendants in mould litigation include anyone who is connected to the site. All of the states are trying to come to grips with this very important aspect of being able to provide insurance to its constituents. Mould is at the beginning of an investigative stage as a health issue. There is an acute awareness of related health concerns. New technology, legislation policies and improvement in professional investigative techniques are rapidly being developed.