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Is Wood The Next Asbestos? It Shouldn't Be

Law360, New York (July 10, 2009) -- It's a naturally occurring material. When handled in ways that generate substantial amounts of inhalable dust over extended periods of time, exposure to it has been associated with respiratory health problems including asthma and even cancer.

Some plaintiffs' lawyers claim one rare form of cancer is a "signature" disease for exposure to it. The United States Occupational Safety & Health Administration has recognized one of its chemically complex by-products as a known carcinogen.

Its common use in construction and certain manufacturing industries provides a ready-made pool of potential plaintiffs.

No, the material is not asbestos. After failed attempts to "asbestos-ize" silica and even mold, the newest "mass tort," in at least some plaintiffs' lawyers' crosshairs, arises out of one the most ubiquitous and seemingly benign products around — wood.

Background

Wood is one of the world's most important renewable natural resources. Wood generally is separated into hardwoods and softwoods, but the terms "hardwood" and "softwood" refer to the species of trees, and not necessarily to the hardness of the wood. Roughly two-thirds of the wood used commercially worldwide is softwood.

Wood dust consists of tiny particles of wood produced during the processing and handling of wood, such as when it is chipped, sawed, turned, drilled or sanded. Breathing in wood dust may cause it to deposit in the nose, throat and other airways.

Wood dust's chemical composition depends on the species of tree, but consists mostly of cellulose, polyose and lignin.

Cellulose, a complex carbohydrate, is the primary component of both hardwood and softwood. Polyose, a type of carbohydrate that contains sugar, is present in larger amounts in hardwood than in softwood. Lignin, a binding, complex polymer, is present in larger amounts in softwood than in hardwood.

Some studies have suggested that processing hardwood creates a higher proportion of fine wood dust particles than processing softwood, but the evidence is not uniform.

Wood dust also is characterized by its moisture content, with dry wood referring to wood with a moisture content of less than 15 percent, and moist wood referring to wood with a moisture content of greater than 15 percent. Woodworking operations using dry wood typically generate more wood dust and a greater volume of inhalable dust particles than those using moist wood.

Wood dust primarily is a byproduct of wood working industries and, with the exception of use as composting material, typically is not produced as a product in and of itself.

Industries in which large amounts of wood dust are produced include sawmills, furniture making, cabinet making and carpentry. It is estimated that at least two million people are routinely occupationally exposed to wood dust world wide.

Setting aside the potential health issues that can arise from the inhalation of wood dust discussed below, concentrations of wood dust in the air separately is very dangerous because it is highly flammable and potentially explosive.

If not properly controlled, overheated motors, sparks, and other common ignition sources in industrial settings can ignite wood dust fires or even spark serious explosions.

Perhaps the most interesting news to products liability observers, however, may be that wood dust is listed by OSHA as a known carcinogen.

An association between wood dust exposure and sinonasal malignancies (“SNM”) first became apparent in the 1960s, when a cluster of the extremely rare cancer known as nasal adenocarcinoma was found in a furniture-making center in England.

SNM are extremely rare, however, and some sources estimate that only about 2000 new SNM are diagnosed in the United States each year. Within that small number of cases, it is estimated that less than 10 percent are nasal adenocarcinomas.

Further, review of the relationship between wood dust exposure and nasal adenocarcinoma shows that the exposure needed to develop nasal adenocarcinoma is extreme, both in time and volume.

Essentially, to develop wood dust-related nasal adenocarcinoma, an individual would likely need to be exposed to large volumes of wood dust eight hours a day for about 20

to 30 years. Thus, while the prognosis for individuals with SNM is poor, it is the rare individual who actually develops such malignancies.

Although there may be an established association between nasal adenocarcinoma and wood dust under certain extreme circumstances, there is much uncertainty about whether wood exposure is causally related to other types of nasal cancers.

In fact, many studies have found that with the exception of nasal adenocarcinoma, other types of nasal cancer are not correlated with wood-related industries or occupations.

For example, a 1986 case-control study of individuals with wood-related occupations found nasal squamous cell carcinoma among subjects who had a little or no exposure to wood dust.

A 1997 review of North American cohort studies showed that rates of non-adenocarcinoma nasal cancers were not significantly elevated in wood workers.

More recently, a six-year, two million dollar research study conducted by a research team at Tulane University concluded that wood dust exposure levels at furniture and cabinetry manufacturing facilities did not generate statistically significant adverse effects on employees.

In addition to these studies involving wood workers, other studies have found an increased risk of nasal cancer among leather workers, shoemakers, textile workers, metal workers, and construction workers.

All these findings combine to suggest that other causes such as smoking and exposure to other chemicals such as nickel dust, mustard gas, chromium, and isopropyl oil, are more likely responsible for other nasal cancers.

Currently, there is insufficient epidemiological data available to state that there is a causational relationship between wood dust exposure and an increased risk for cancer (other than nasal adenocarcinoma).

Wood Dust Litigation — Past, Present and Future

Given the lack of uniform agreement in the scientific and medical fields regarding the effect of wood dust on respiratory health, there is at least thus far a predictable dearth of decisions regarding liability for the carcinogenic properties of wood dust.

There have been cases however, from as early as the 1950s, in which plaintiffs have alleged that wood dust caused their disability. The results of such litigation are varied.

In Parr v. Dept. of Labor and Industries, 278 P.2d 666 (Wash. 1955), a plaintiff unsuccessfully sought workmen’s compensation for occupational asthma allegedly caused by wood dust.

In affirming the denial of the plaintiff's workmen's compensation claim, the court focused on the fact that the plaintiff actually had allergic reactions to a wide variety of dusts, including household, road, and wood.

Because the plaintiff's allergies were triggered by any number of dusts, the court held that the plaintiff could not prove the fact that his job required him to be exposed to wood dust for several hours a day was the proximate cause of his disabling condition.

Thus, the court determined, plaintiff was not entitled to workmen's compensation, as the causal relationship between the disabling disease and the worker's employment could not be established definitively.

In Boone v. Employers Mutual Liability Ins. Co. of Wisconsin, 152 F. Supp. 41 (E.D.La. 1957), another workmen's compensation case was brought by a plaintiff who alleged that he became disabled as a result of occupational exposure to wood dust when he worked as a shaper in a sawmill and woodworking plant.

Interestingly, the plaintiff did not seek to recover for his lung cancer and subsequent pneumonectomy, because it was not compensable under Louisiana's Compensation Act, but instead sought recovery for contracting pneumoconiosis, a respiratory condition that was compensable under the act.

Although the court recognized that the plant was a "sweatshop of the lowest order in so far as health conditions ... were concerned," and that "the entire plant was laden with wood dust and shavings sometimes five to six feet deep," the court ultimately decided that the plaintiff's disability was the result of his lung cancer and pneumonectomy, and not from any wood dust in his remaining lung.

The court did not find that wood dust inhalation was the cause of plaintiff's cancer. Thus, the court granted judgment for the defendant.

Not all wood dust based claims have failed. In Chakuroff v. Boyle, 667 A.2d 1256 (R.I. 1995), a plaintiff successfully recovered personal injury damages for his wood dust induced disability.

The plaintiff in Chakuroff was a worker in a woodworking classroom who brought a premises-liability claim against a city school district superintendent and other related defendants claiming that the defendants failed to properly maintain the woodworking classroom in a local high school.

The plaintiff claimed that the improper maintenance caused him to develop occupational asthma that disabled him to the point where he could no longer work.

In returning a verdict for the plaintiff, the jury found that the defendants failed to take any action to control excessive wood dust levels in the workshop, despite both actual and constructive notice of the problem.

While plaintiff's recovery ultimately was reduced under a cap established by Rhode Island's State Tort Claims Act, the case is significant in that liability was established for injuries caused solely by wood dust, even though the injury was not cancer.

Given the mixed reported success achieved by plaintiffs pursuing claims based on alleged wood dust exposure, one might suspect that wood dust litigation is not a serious litigation risk to many industries, except perhaps those involved with the supply or fabrication of wood materials, or workers' compensation insurance carriers.

Some plaintiffs' attorneys, though, are already advertising for nasal cancer plaintiffs on the Internet and their targets are broader than one might expect.

A recently filed lawsuit in Alabama targets not just wood-product suppliers, but all the manufacturers of the equipment and power tools used at the plaintiff's employer, and the respiratory mask manufacturers whose masks may (or may not) have been used there.

Dust control and ventilation equipment manufacturers are surely the next logical target.

Some Steps Companies Might Take to Alleviate Potential Liability

Given the potential for a storm of new wood dust based litigation, what can potential defendants do now to lessen the risk of future claims? One key, as with asbestos, silica and other potentially hazardous substances, is to minimize or prevent exposure.

Fortunately for potential defendants, many of the mistakes made before the dangers of asbestos were known have not been repeated in the realm of wood dust exposure.

To the contrary, many of the precautions already being taken to protect against the flammable and explosive characteristics of wood dust, such as installing appropriate ventilation or dust control systems, and properly maintaining equipment to maximize equipment performance and thereby minimizing the creation of wood dust, probably minimize potential exposure to the dangerous levels of wood dust inhalation necessary to be associated with nasal adenocarcinoma.

In addition, many wood dust inhalation prevention measures are already required or utilized by employers.

For example, at the federal level, OSHA sets permissible exposure limits to protect workers against the health effects of exposure to various hazardous substances, 29 C.F.R. § 1910.1000, and wood dust levels are already currently regulated.

In addition to federal regulations, many states also already have established their own standards and enforcement policies with regard to wood dust. Many worksites utilize appropriate industrial hygiene practices, including the use of respirators.

Conclusion

Increased focus on the dangers posed by naturally occurring materials like asbestos has led to an increased awareness of other potentially dangerous, naturally-occurring by-products such as wood dust.

Although wood dust has been associated with a very specific and very rare type of cancer under certain circumstances, general exposure to wood dust, even in occupational settings, likely is insufficient to be a cause of most nasal and paranasal cancers.

With this epidemiology and the knowledge, laws and industrial hygiene practices that are (or should be) already in place to minimize large concentrations or significant exposures to wood dust, there is every reason to think wood dust litigation should not develop into a noteworthy mass tort.

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