Asbestos—
The Dangers and You

EPA’s Asbestos Expert, Larry Dorsey, addresses the important issues

Larry Dorsey has been with the Environmental Protection Agency for 10 years and represents the Agency as the head of its division for asbestos research and education and as their official spokesman on this potential health hazard.

During the past 3 1/2 years, Dorsey and his staff at EPA have concentrated their efforts on educating an apprehensive public about the life-threatening dangers of asbestos exposure. Recently, his agency has been working jointly with the Foundation of the Wall and Ceiling Industries in developing a comprehensive training course designed primarily for contractors interested in entering and bidding in the new asbestos abatement market.

These seminars will also be important to all wall and ceiling contractors who anticipate performing renovation projects where they will be coming in contact with asbestos.

Dorsey consented to spend several hours of his valuable time discussing with CONSTRUCTION DIMENSIONS the future of asbestos and its impact on the wall and ceiling industry.

DIMENSIONS: For years now, we have been hearing reports about the dangers of asbestos. Some say that it is a health hazard of tremendous magnitude, while others claim the reports have been exaggerated. Exactly, what’s all the concern about?

DORSEY: The most important statement to be made about asbestos is that it is a known human carcinogen. Also, it is one of the best studied carcinogens in existence. All the assembled medical experts and researchers throughout the world are in unanimous agreement that asbestos is a definite health hazard.

However, the EPA cannot tell you exactly what quantity constitutes a problem. They cannot tell you that if you inhale a certain amount of fibers over a specific period of time that a certain type of disease will be manifested. We do know that a group of people that inhale the same level of fibers over the same period of time will not all develop the same disease. At the same time, we can tell you that if you smoke and work with asbestos, your chances of getting lung cancer are multiplied five times.

Research has conclusive evidence that high levels of exposure will develop Asbestososis, which is hardening in the lungs. In addition, Meso-thelioma is a disease which is caused only by asbestos and is directly associated with exposure to asbestos.

As with most diseases, asbestos related diseases have long incubation periods, and it is, therefore, very difficult to trace back through the patient’s history to his actual time of exposure.

DIMENSIONS: Is there any positive way of knowing whether you have
been exposed to high levels of asbestos?

DORSEY: That poses another problem. When you are exposed to asbestos, there is no immediate pain and usually no complicating factors.

Basically, the problem will manifest itself in fifteen to thirty years. Mesothelioma can take up to thirty years to develop while lung cancer might reveal itself in fifteen or less. Asbestosis is a progressive disease. Once you have been exposed and develop the symptoms, it will continue to worsen until you eventually die. There is no medical cure.

DIMENSIONS: Why should wall and ceiling contractors be concerned about the asbestos problem?

DORSEY: Every contractor, especially those in your industry, are bound to come into contact with asbestos.

Some might want to take advantage of the new bidding opportunities offered by asbestos removal or encapsulation projects. Here, the exposure and potential dangers are obvious. Not so obvious is the fact that most buildings which contain asbestos are ten to thirty years old. This means that they are prime prospects for extensive renovation programs or demolition. At that point, the material will be distributed and the workers will be exposed.

Contractors must be educated on asbestos recognition, analysis, safety procedures and corrective action. Because, sometime in the future, whether he likes it or not he is going to become involved with asbestos.

DIMENSIONS: What has been the Environmental Protection Agency’s involvement in the asbestos abatement program?

DORSEY: Originally, we were petitioned by the Environmental Defense Fund to investigate the problem. We knew that this material was in numerous buildings throughout the United States, and we had under the 1973 Clean Air Act prohibited future use of this material in most sprayed-on insulation.

In 1973, the EPA became concerned about the problem of asbestos in existing buildings. We started to investigate.

Since that time, we have developed the Technical Assistance Program which is primarily designed to provide guidance to building owners. So far, the program has been directed at school buildings, because we have identified more of this material in school buildings than in any other type of structure.

DIMENSIONS: What regulations have the EPA already implemented, and do you foresee new regulations in the future?

DORSEY: In addition to the Technical Assistance Program which has been in effect since May 1979, a new regulation requiring every school building, public and private, in the country be surveyed for friable asbestos materials was proposed on September 17, 1980. Whenever the material is identified as containing asbestos, records must be kept in the school and all school employees and workers are educated on the facts and hazards of asbestos exposure. We are particularly interested in notifying the construction industries so that the material is not disturbed.

In the past, we have found cases where the material has been disturbed, because the workers did not know that it contained asbestos. Basically, this regulation does not require corrective action.

DIMENSIONS: What is the EPA’s definition of a friable material?

DORSEY: Friable material is a term used by civil engineers and architects and it basically relates to the ease with which the material can be disturbed. Many times simply touching or any slight nearby movement may disturb the material. The greater the friability, obviously, the easier it is to disturb, and, therefore, release the fibers.

When inspecting the site, you may encounter a wide range of conditions. The material may have been troweled on or applied with a wet slurry. It may be very hard and cementitious, or, if a great deal of air was used during the installation, you may encounter a material that is light and fluffy like cotton candy. This is the type of material that we are most concerned about because it is the easiest to disturb and damage.

DIMENSIONS: Has your survey determined the number of schools which contain friable asbestos material?

DORSEY: This data is not yet available but estimates project that fifteen percent of the school buildings in the country may contain friable asbestos material. However, until the surveys have been completed and every school has been inspected, this data will not be available.

DIMENSIONS: After a building has been inspected and it is determined to contain friable asbestos material, who recommends the type of corrective action to be taken?

DORSEY: We are working to develop a standard which addresses exposure problems and determines which corrective action is required. At this point, we have trained a number of state officials, EPA’s regional asbestos coordinators, various architects and civil engineers in the use of the algorithm.

Basically, the algorithm is a simple step-by-step procedure for determining asbestos problems. The asbestos algorithm examines eight factors which we consider important to assess asbestos exposure.

Structurally, all buildings differ. The use of the material differs, and you always encounter unusual circumstances. But if you are trained to observe the eight factors in the algorithm, you can work through the mechanism of assessment and arrive at an abatement decision.

With asbestos, we are particularly concerned about peak exposures which would occur only when the material has been disturbed. For example, if a child disturbs the material by pulling a piece off of the wall with his hand, we know that there has been potential for peak exposure. This single moment of exposure could pose a serious health problem.

DIMENSIONS: Okay, you have con-
vinced the public that we have a potential hazard. However, isn’t the EPA over-reacting to the situation like the Food and Drug Administration did with their ban on Saccharine?

**DORSEY:** Not really. The presence of asbestos in a building does not necessarily mean that it is creating an exposure problem.

We spend fifty percent of our time educating building owners on exposure problems and corrective action. The remaining fifty percent of the time is spent convincing building owners that although there is asbestos in their buildings, they do not have a problem that warrants corrective action.

Let’s not forget, that as long as the material is non-friable, it is better to leave it alone and check periodically for deterioration than to remove it.

**DIMENSIONS:** Previously, you mentioned that only a small percentage of the schools which contain asbestos actually pose a health hazard. Yet, you’ve also stated that friable asbestos materials deteriorate naturally. Does this mean that it is only a matter of time before some sort of corrective action must be taken?

**DORSEY:** Yes! Dr. Sawyer of Yale has made the comment that the asbestos problem is going to be with us for many years. At some point in the future, all buildings which contain asbestos are going to become obsolete or go through extensive renovation.

**DIMENSIONS:** What advice can you offer the wall and ceiling contractor who is interested in getting into the asbestos abatement program?

**DORSEY:** There is no mystery about working with asbestos. Many times, I think people are intimidated when they see workers with respirators, disposable clothes and plastic barriers. But actually, it is not as complicated as it appears.

There are two regulations which come into play when working with asbestos. The first, from OSHA, protects the worker and defines the procedures and precautions that must be followed. It is a relatively simple regulation, which, unlike most, can be easily understood and adhered to. The other regulation comes under the Clean Air Act and is designed to protect the ambient environment. The procedures are outlined in the EPA’s guidance document, Asbestos Containing Materials in School Buildings.

**DIMENSIONS:** How does the EPA propose to keep the fly-by-night contractor from performing asbestos abatement in an unsafe manner?

**DORSEY:** The best method of insuring that workers are being properly protected and that contractors are not coming in during the middle of the night and ripping the material down from the ceiling without proper equipment or procedures, is education. By educating the building owners, the public and the contractors that these procedures must be followed, the EPA hopes to prevent unsafe work practices. Also, asbestos abatement sites are monitored by both the EPA and OSHA.

Once again, the best method of preventing asbestos exposure is through education. The EPA and the Foundation of the Wall and Ceiling Industries are working together in presenting eight training seminars which will take place at various locations around North America. These seminars will serve as an excellent starting point for any contractor who is or who might be exposed to asbestos or who is thinking of bidding on future asbestos abatement projects.

Don’t forget, this problem is going to be with us for quite some time. And, at least for the time being, education is the only answer.