REPORTED

IN THE COURT OF SPECIAL APPEALS

OF MARYLAND

No. 959

September Term, 2008

JOHN CRANE, INC.

v.

JOHN LINKUS, PERSONAL REPRESENTATIVE OF THE ESTATE OF GEORGE J. LINKUS, SR.

Eyler, James R.,
Meredith,
Moylan, Jr., Charles E.
(Retired, specially assigned),

JJ.

Opinion by Eyler, James R., J.

Filed: February 1, 2010

John Crane, Inc., defendant below and appellant herein, appeals from a judgment entered in the Circuit Court for Baltimore City in this asbestos related disease case, in favor of George J. Linkus, Sr, plaintiff. On May 7, 2009, during the pendency of this appeal, Mr. Linkus died, and John Linkus, personal representative of the estate of George J. Linkus, Sr., appellee, has been substituted as a party. We shall use the designation "appellee" to refer to both Mr. Linkus and his personal representative, regardless of the context. Appellant contends the court erred in (1) denying its motion for judgment and judgment notwithstanding the verdict on the ground that expert testimony that its products released asbestos fibers was required to establish causation; (2) denying its motion for new trial and not ordering a remittitur on the ground that the verdict was excessive; and, (3) granting appellee's motion to enter judgment without crediting settlement amounts received from several bankrupt defendants. We shall affirm.

Relevant Procedural History In This Case

The decedent was a shipyard worker. In 1988, counsel for numerous shipyard workers filed a master complaint in circuit court, to be followed by a short form complaint by each plaintiff. On April 4, 2005, appellee was diagnosed with pleural mesothelioma, which is cancer of the lining of the lung, and on April 29, 2005, appellee filed a short form complaint,[1] naming appellant and 63 other entities as defendants. The short form complaint contained counts in strict liability, breach of warranty, negligence,

[1]Helen I. Linkus, the decedent's spouse, was a plaintiff, but she died in March, 2006.

fraud, conspiracy, and market share liability. In the short form complaint, appellee alleged that he was employed at the Key Highway shipyard as a machinist and that he was exposed to asbestos containing products from 1952 through the 1970's.

During the period leading up to trial, the period of exposure was narrowed, and the number of defendants was narrowed. In January and February, 2008, the case was tried with appellant as the sole defendant and four entities who had settled with appellee as cross defendants. The jury returned a verdict in favor of appellee, on counts of strict liability and negligence, in the amount of $335,274.00 in medical expenses and $15,000,000.00 in noneconomic loss, for a total of $15,335,274.00. The jury also found that cross-defendants, Owens-Illinois (OI) and Foster Wheeler, were liable, but also found that other cross defendants, who were on the verdict sheet, were not liable.

The jury was asked to determine (1) whether appellee developed mesothelioma and, if so (2) whether it was caused by asbestos exposure, if so (3) whether appellee was exposed to asbestos containing products manufactured or sold by appellant, if so (4) whether appellee's exposure to appellant's products was a substantial contributing factor in the development of appellee's mesothelioma, if so (5) whether appellant was negligent in the manufacture and sale of its products (6) whether appellant was strictly liable for the manufacture and sale of its products and (7) if applicable, the amount of compensatory damages. The jury was also asked to answer questions relating to causation, negligence, and strict liability as to the cross defendants.

In opening statements, in pertinent part, counsel for the parties stated the

following. Appellee's counsel advised the court that he was proceeding on a failure to warn theory. He also advised that appellant's products involved were rope and wicking[2] and that, while there might be evidence of the presence of graphited gasket material, appellee was not making a claim with respect to that material. Appellee's counsel advised that testimony would show that " . . . any exposure above background or the ambient air contributes to the total dose, contributes to the disease and becomes a substantial contributing factor." Needless to say, it was appellee's position that he was exposed to asbestos from appellant's products, which was a substantial contributing factor in the development of his mesothelioma.

In opening statement, appellant's counsel agreed that appellee has mesothelioma and that it was caused by asbestos exposure but stated that the evidence would show that appellant's products were not a contributing cause. In essence, counsel advised that appellant's products did not emit significant amounts of asbestos fibers; the type of asbestos fiber, chrysotile, was the least potent; and the size of the fibers minimized the danger. In contrast, appellant's counsel advised that appellee was exposed to products manufactured by others that did emit large quantities of dangerous, respirable asbestos fibers.

The causation question, therefore, was whether appellant's products were capable of emitting respirable asbestos fibers in sufficient quantities to be a substantial

[2] We understand that both products are string-like, but wicking is thinner than rope.

contributing cause of appellee's mesothelioma.

During trial, appellant filed a motion for judgment on the ground that expert testimony was required to create a jury question as to whether exposure to its products, without expert testimony as to fiber release, was a substantial contributing factor to appellee's disease, and no such expert testimony was offered.

After trial, appellant filed a motion for judgment notwithstanding the verdict on the same ground. After verdict, appellant filed a motion for new trial on the ground that the verdict was excessive and requested that the court grant a new trial or, in the alternative, order a remittitur, and if remittitur was refused, grant a new trial. The court denied the motion.

Also after verdict, appellee filed a motion to enter judgment in the amount of $5,086,321.00, which reflected a pro rata reduction based on the liability of two cross defendants and the payment of settlement monies by certain bankrupt entities. Appellant opposed it on the ground that it should receive additional credits for payments made by other bankrupt entities. The court granted appellee's motion and entered judgment in the amount requested. Appellant noted an appeal to this Court.

General Background

Before addressing the causation issue in this case, it may be helpful to place it into context, given the long history of asbestos related litigation. The earliest plaintiffs tended to be insulators or other tradesmen who worked with asbestos containing products. The products tended to be insulation products, such as pipe covering, block, and cement,

which contained and emitted significant amounts of respirable asbestos fibers, particularly when handled. The manufacturers and sellers of those products asserted various defenses, including defenses related to their knowledge or lack thereof at relevant points in time with respect to the dangers of asbestos exposure, but generally did not contest the assertion that their products emitted respirable fibers in quantities sufficient to cause disease, assuming adequate exposure to the relevant products.

As the litigation progressed, many of the plaintiffs were tradesmen who did not work directly with asbestos containing products but were in proximity to those who were, and also plaintiffs who did not work in proximity to those who worked with asbestos containing products but claimed second hand exposure from those who did. The defendants sought a strict "but for" test for causation, while plaintiffs sought a less stringent rule, in terms of nature and extent of exposure.

Some plaintiffs could not prove that they frequently had been in proximity to asbestos containing products, and argued that asbestos fibers could migrate and that such proof should not be required. Maryland rejected both the "but for" test and the "fiber drift" theory and, as explained below, adopted the substantial factor test. That test required proof that the claimant was frequently in an area where respirable asbestos fibers existed as opposed to permitting an inference that fibers proved to exist in one area drifted to another area, where the claimant was located. It also required proof that the exposure was a substantial factor in causing the disease.

As the litigation continued to progress, and the manufacturers of insulation

products filed bankruptcy petitions, plaintiffs paid more attention to manufacturers and sellers of asbestos containing products containing lesser amounts of asbestos or treated asbestos. Those manufacturers and sellers began to assert as a defense that their products did not emit respirable asbestos fibers in sufficient quantities to cause disease or, in some cases, the disease in question, even when handled, despite proof that the plaintiff frequently worked in proximity to their products. In other words, the emphasis for those manufacturers and sellers shifted from exposure to products to exposure to asbestos fibers released from those products. It is this aspect of the causation issue that is involved in the case before us.

We recognize that, because the early cases generally involved products that emitted substantial quantities of respirable asbestos fibers, courts frequently spoke in terms of exposure to products without commenting on the quantity, size, or nature of fibers emitted from each product.

With respect to asbestos litigation in this State, it is worthy of note that there were two lengthy trials of consolidated cases in Maryland, each involving a large number of cases tried on common issues, and each involving a small number of cases tried on all issues. Each consolidated proceeding was appealed. *See* AC and S, Inc. v. Godwin, 340 Md. 334 (1995) (sometimes referred to as Abate I) and AC and S, Inc. v. Abate, 121 Md. App. 590 (1998) (sometimes referred to as Abate II). The consolidated cases tried on common issues were or will be the subject of mini trials on case specific issues. As distinguished from the cases tried on common issues, the case before us was tried on all

issues.

Relevant Evidence In This Case

Appellee testified to the following. At age 18, in 1952, he began working at the Bethlehem Steel Key Highway shipyard and worked there until 1959. For 6 to 8 months, appellee worked on board ships as a helper, removing valves from engine and boiler rooms to be taken to a machine shop to be reconditioned. When removing the valves, appellee removed insulation which created lots of dust. Appellee frequently was in the area when new insulation (pipe covering and cement) was applied by others, and that created dust. After that 6 to 8 month period, appellee worked in the inside machine shop as a helper, cleaning up debris and taking it to a dumpster. Ultimately, appellee became a specialist on overhauling valves. Appellee removed old insulation from the valves which created dust and put new "wicking or rope" packing in the valves. Appellee stated that the wicking and rope came from boxes with appellant's name on them. He described the wicking and rope as "dry," "white," and "powdery." He also stated that, when handled or cut, it produced "quite a bit of dust" which "would get . . . all over you. You would breathe it, get it over your clothes and all over your hands and everything."

Appellee identified exhibits reflecting that, between 1952 and 1959, he was exposed to asbestos containing products manufactured by 9 entities other than appellant.

In November, 2004, appellee "started getting short on breath." In early 2005, appellee had fluid removed from his lungs on two occasions and had biopsies taken from his lungs. In March or April, appellee was diagnosed with mesothelioma and underwent

surgery. Appellee underwent chemotherapy treatments until September, 2005 and again from July through September, 2006. Appellee was advised that his condition was terminal. Appellee described the difficulties associated with the chemotherapy treatments and his deteriorating health generally.

John Floyd Nichols testified to the following on behalf of appellee. Mr. Nichols worked at the Key Highway shipyard and machine shop from 1940 until 1975. Mr. Nichols observed appellee work with appellant's asbestos rope and wicking on a daily basis. When handled, the rope and wicking produced visible dust. Appellee also worked with another type of packing material that came out of boxes marked with appellant's name that was "graphited." That material did not produce as much dust as the "dry" rope and wicking. Mr. Linkus also worked with sheet gasket material that came out of boxes marked with appellant's name, and that produced "some" dust.

The parties stipulated that appellant's rope and wicking material was obtained from another manufacturer and that the manufacturer took the position that its product contained a "maximum asbestos percentage of 90 percent." Appellant produced evidence at trial that the percentage of asbestos in the product was approximately 60 percent.

Dr. Samuel Hammar, a pathologist, testified on behalf of appellee as follows. He was accepted as an expert in the diagnosis and cause of asbestos related diseases; the types of fibers which cause such diseases; anatomic, clinical and experimental pathology; microscopy; immunohistochemistry; and carcinogenesis. He testified that asbestos fibers

are “incredibly tiny” and cannot be seen with the naked eye. He explained that “if you saw a dust cloud of asbestos fiber, there would be billions and billions, probably trillions of fibers in that dust cloud.” The witness opined that invisible amounts of asbestos fibers can cause asbestos related diseases. The witness discussed the different types of asbestos fibers, the disease causing process, and the disease of mesothelioma. In doing so, he testified that mesothelioma is a dose-related disease, meaning the higher the dose of an agent, the higher the risk of developing a disease caused by that agent (the dose-response relationship). He opined that all exposures to asbestos above background levels contribute to the development of mesothelioma.

Dr. Edward S. Gabrielson testified on behalf of appellee. Dr. Gabrielson was a professor in the departments of pathology and oncology at The Johns Hopkins Hospital. Dr. Gabrielson testified as an expert in anatomic and clinical pathology, the diagnosis of asbestos related diseases, and carcinogenesis. Dr. Gabrielson opined that appellee was suffering from mesothelioma caused by asbestos exposure. He was asked to opine whether there was any safe level of exposure to asbestos below which mesothelioma would not develop. He replied:

> Well, there is no recognized threshold below which there are no mesotheliomas whatsoever. The Occupational Health Safety Administration, OSHA, has set some levels whereby they believe that below that level there is reasonable safety.
>
> In other words, there may be occasional mesotheliomas if an individual is exposed below those levels, but probably very few, and in practical terms, that’s a level that can be achieved and provides a reasonable level of safety, but there is no absolute-no level where it is absolutely safe that nobody will ever get a mesothelioma.

Dr. Gabrielson also opined, in response to a hypothetical question, that assuming appellee worked with appellant's rope and wicking in the 1950's and "assuming that he breathed asbestos dust as a result of working with this product," the exposure contributed to the mesothelioma. He also opined that exposure to asbestos containing products manufactured by others also contributed to his mesothelioma.

The following exchange is pertinent:

> Q. Do you need to test the air to determine whether or not Mr. Linkus had an occupational exposure to asbestos?
>
> A. No, sir. In Mr. Linkus's case, there is pretty good evidence that-from apparently what workers verified that he worked with these products and that he broke the products and it is quite common for looking back retrospectively that measurements were never made. In fact, measurements were rarely made in the workplaces in the 1950's and 60's.
>
> Individuals inhaled asbestos dust. They were working with asbestos. They typically didn't wear appropriate protective materials and no measurements were made.
>
> One can't use that as a standard to say that the person was or wasn't exposed to asbestos fibers that they inhaled.
>
> Q. And, Doctor, do you need to test the air to determine whether or not a product is a substantial contributing factor, assuming he had an individual—the individual had an occupational exposure to the material?
>
> A. No, sir. Again, we have to go with the best evidence available. And assuming that the available evidence is consistent with Mr. Linkus having inhaled asbestos fibers from a particular exposure, even if no measurements were made and, of course, in most situations they were not then, but even though no measurements were made, we can come to a reasonable conclusion that more likely than not the inhalation of those asbestos fibers contributed to the development of the cancer.
>
> Q. And, Doctor, assuming whatever the background level may be in

the air, .1 or whatever it may be, does the use of an asbestos-containing product which releases fibers into the air increase the level of asbestos in the air above background?

A. Yes, sir.

On cross examination, the witness testified that mesothelioma is caused by respirable asbestos fibers and can occur without any known exposure to asbestos fibers other than those contained in the ambient air. He stated that the cause in those cases is unknown. He also stated that the ambient air level often may be measured at 0.1 to 0.2 fibers per cubic centimeter, but it frequently it is higher in urban areas and sometimes lower in other areas. He also acknowledged that the human eye is not able to look at visible dust and determine whether the particles are asbestos. He explained that, to determine with "absolute certainty" whether dust contains respirable asbestos fibers, is "best determined" by an industrial hygienist or a person with similar experience. The following exchange occurred:

Q. Okay, now, respirable asbestos fibers are those fibers that can be breathed in and retained in the lung; is that not right?

A. Yes, sir.

Q. And those are fibers of a particular size?

A. Yes, sir. Certain sizes and shapes of certain particles are more likely to be breathed in and retained.

Other sizes and shapes of particles are either filtered out by the nose or upper respiratory tract or they can be inhaled and exhaled without ever lodging in the lungs.

So respirable fibers refer to fibers of the right size and shape that

they tend to be inhaled and deposited in the lungs.

Q. So if a fiber is too small, it goes in and goes back out?

A. Tends to go in and out, yes, sir.

Q. And if a fiber is too large, it doesn't get in there.

A. You could say it is too large or it is better if it is that size, yes, sir.

Q. All right. Or if a fiber is, say, attached to another material such as it becomes too large to come in and get back out; can that happen?

A. Yes. sir, it can happen.

Q. Now, when there is visible dust, the human eye is not seeing asbestos, is it? I mean, it is seeing dust?

A. What the human eye will see, of course, is simply a refraction of the light. The human eye is not able to look at individual particles and say this is asbestos or some other type of particles.

The human eye can just appreciate that there are particles in the air and it changes the way the light comes to them.

Q. Do you know whether any particular dust contains those respirable asbestos fibers, those ones we talked about that can go in and be retained, that dust has to be tested, doesn't it?

A. Yes, sir. It is best determined by an industrial hygienist or somebody who is experienced at looking at the dust itself and determining what types of particles are present.

Q. And so I guess to know the amount of respirable asbestos fiber in any particular dust, if any, those tests have to be done?

A. To know with absolute certainty, yes, sir. One needs to have some type of testing to know whether or not the fibers that are in a dust are of a respirable nature.

Q. And just to be clear now, it is the respirable asbestos fibers that cause the disease, correct?

A. Yes, sir.

Q. If you don't breathe in and retain the respirable-sized fibers, no disease is caused?

A. No disease can be caused by fibers that are not inhaled. So if there are other fibers, other fibers can cause a disease, but fibers that are not inhaled, fibers that are not respirable cannot cause mesothelioma.

Dr. Arnold R. Brody, the holder of a Ph.D degree in cell biology, testified on behalf of appellee as an expert in cell biology, anatomical pathology, and effects of asbestos fibers in the human body. Dr. Brody described how respirable asbestos fibers cause cancer. He testified that for mesothelioma there is no known level that is safe. On cross examination, he acknowledged that all persons living in urban areas are exposed to asbestos in the ambient air and probably have millions of asbestos fibers in their lungs. He stated that he did not know if a study had been done to determine if exposure to levels of asbestos no higher than 0.1 fibers per cubic centimeter caused asbestos related diseases.

Dr. Lanta Christine Oliver, an expert in the areas of internal and occupational medicine and the diagnosis of asbestos related diseases, testified on behalf of appellee. The witness examined appellee and reviewed his medical records and deposition. Dr. Oliver described appellee's medical treatment and opined that he had mesothelioma caused by asbestos exposure and that it was terminal. Dr. Oliver also opined that, assuming that appellee handled non-graphite rope and non-graphite wicking

manufactured by appellant which emitted respirable asbestos fibers, the exposure was a contributing cause of his disease, and if he had other exposures to such fibers, they would be contributing causes. The witness also opined that there was no known level of exposure to asbestos below which there is no risk of mesothelioma. Finally, the witness acknowledged that asbestos fibers are present in the ambient air.

Dr. John Dement, an industrial hygienist and epidemiologist, testified on behalf of appellee. He was accepted as an expert in the areas of "industrial hygiene, including air sampling, epidemiology, the health hazards of asbestos, the history of knowledge of the health hazards of asbestos, the history of knowledge of the health hazards of asbestos exposure, the knowledge of the different types of asbestos and their ability to cause the various asbestos-related diseases, and epidemiology regarding asbestos exposure, including the ambient air . . . ." The witness testified that asbestos fibers are small and individual fibers cannot be seen with the naked eye. He explained that when one sees a dust cloud, it is because light is reflected off the cloud so the concentration has to be high enough to produce that effect. He opined that asbestos containing dust becomes visible to the naked eye when concentration is in the area of fifteen to twenty billion particles per cubic foot, or 45 to 90 million fibers per cubic meter. The witness discussed the state of general knowledge at various times with respect to the relationship between asbestos exposure and disease, including mesothelioma. He opined that there is no level of exposure below which there is no increased risk of disease.

On cross examination, the following exchange occurred.

Q. If using a product, manipulating a product such as asbestos-containing rope, results in measured fiber per cc levels of between 1.3 and 1.6, would you expect that to be visible?

A. Not necessarily. I mean, what you may see, if you are manipulating the product, you may see an instantaneous visible dust cloud. It disperses out and it is no longer visible. So the period of time that you actually see the visible dust is going to be short.

So it disperses out and you cut your sample, you generally have to cut samples to measure it over a longer period of time, you will see that you may have been high at first but it integrates over that time. So you will see that number one to two fibers per cc.

Q. One to two fibers per cc, will that make you look like a snowman?

A. Not you, but again if you are using it and getting it on your clothes, you can get it on your clothes and yourself from direct contact, not just the airborne dust.

Q. Well, you testified on direct that it takes between 45 to 90 fibers per cc in the air before it is visible and let's assume in the situation I've got a prior release of 1.3 to 1.6, and I actually see something, and that person is also working with thermal insulation.

Would you expect the thermal insulation product to also contribute to that dust?

A. Absolutely.

Dr. James Douglas Crapo testified on behalf of appellant as an expert in the areas of pulmonary medicine, "the propensity of different types of asbestos fibers to cause disease, dose response and the effect of low-dose exposures on animals and humans." Dr. Crapo testified that there is a dose response relationship between exposure to any substance and its effect, meaning that a very low exposure causes no injury and a higher

exposure causes injury and a still higher exposure causes greater injury. Dr. Crapo stated that the relationship exists for asbestos exposure; thus, there is a threshold for the development of mesothelioma from exposure to asbestos. He explained that ambient air contains asbestos fibers and the concentration varies by region, but there is no correlation between mesothelioma risk and the concentration in the ambient air. Thus, there is a safe threshold of exposure.

On cross examination, appellee's counsel asked Dr. Crapo whether he had ever reviewed a study showing the level of fiber release from the use of appellant's dry, unencapsulated rope. He replied that he had seen studies done by the United States Consumer Products Safety Commission on similar rope. He did not know the identity of the manufacturer(s) of the rope but believed it was the "same class and type of product."

On redirect examination, the witness testified that he reviewed a test performed on asbestos containing rope by the Consumer Products Safety Commission and recalled that the result from cutting and manipulating the rope was the release of 0.0006 asbestos fibers per cubic centimeter.

On recross examination, the witness testified that he "believe[d]" the product tested was nonlubricated but also stated "there may have been some silicone as part of the rope because they used some binding materials to put the rope together." There was no testimony as to the effect of silicone, assuming it was present.

Discussion

A. *Denial of motion for judgment and motion for judgment notwithstanding the verdict*

Appellant contends that its motions should have been granted because appellee's evidence was legally insufficient to prove causation in that expert testimony was required to establish that appellant's rope and wicking emitted respirable asbestos fibers in sufficient quantities to cause mesothelioma. Appellant observes correctly that for an injured plaintiff to prevail against a particular manufacturer or seller of asbestos containing products the plaintiff must prove that exposure to the products made or sold by that defendant was a substantial factor in causing the injury. Eagle-Pitcher Indus., Inc. v. Balbos, 326 Md. 179, 210 (1992). In Balbos, the Court adopted a multiple factor test for asbestos exposure, which had been utilized by other courts, and in its various iterations from jurisdiction to jurisdiction, is generally known as the "frequency, proximity, and regularity" test. Id. at 210-213. Relevant factors include the nature of the product, the plaintiff's proximity to the product, and the frequency and regularity of plaintiff's exposure to respirable asbestos fibers. Id. The analysis, which is case specific, includes the evidence of medical causation admitted in a given case. Id.

It is clear, however, that substantial factor causation does not turn on comparative faults. The question is whether each contributing cause, standing alone, is a substantial factor. AC and S, Inc. v. Asner, 344 Md. 155, 174-75 (1996). Nevertheless, an exposure cannot be a substantial factor in causing a disease if it had no effect on the person or had a negligible effect on the person. Id. At 176. In Asner, in the context of deciding whether a defendant is permitted to introduce evidence that a plaintiff was exposed to asbestos containing products manufactured or sold by non-parties, the Court stated:

> A factual defense may be based on the negligible effect of a claimant's exposure to the defendant's product, or on the negligible effect of the asbestos content of a defendant's product, or both. In such a case the degree of exposure to a non-party's product and the extent of the asbestos content of the non-party's product may be relevant to demonstrating the non-substantial nature of the exposure to, or of the asbestos content of, the defendant's product.[4][3] But, a defendant would not ordinarily generate a jury issue on lack of substantial factor causation only by showing the dangerousness of a non-party's product to which the claimant was exposed. Ordinarily a defendant would have to follow up the evidence of exposure to the products of non-parties with evidence tending to prove that the defendant's product was not unreasonably dangerous or was not a substantial causal factor. Under these circumstances the proposition that the defendant's product is not a substantial factor may be made more probable by evidence tending to prove that the claimant's disease was caused by the products of one or more non-parties.

Appellant also observes correctly that expert testimony is required to establish causation when the "subject of the inference is so particularly related to some science or profession that it is beyond the ken of the average layman." Wood v. Toyota Motor Corp, 134 Md. App. 512, 518 (2000) (quoting Hartford Accident & Indemnity Co. v. Scarlett Harbor Assoc. Ltd. Partnership, 109 Md. App. 217 (1996), *aff'd*, 346 Md. 122 (1997)).

Appellant points out that, during pre-trial discovery, appellee identified experts who he could have called to testify that appellant's products emitted respirable fibers in sufficient quantities to cause mesothelioma but failed to call them. Appellant relies on the testimony of appellee's experts, Drs. Hammar and Gabrielson, for the proposition that

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[3]By "demonstrating" we refer to defense trial tactics and not to the plaintiff's burden of producing evidence and persuading the jury that particular defendant's product, in a multiple, concurrent, substantial causes case, is one of the concurrent substantial causes.

asbestos fibers must be inhaled to initiate a carcinogenic process. Appellant argues that the distinction between high dose and low dose cases is critical, citing ACandS v. Asner, 344 Md. 155, 176-77 (1996), and that this is a "low dose" case. Appellant further argues that the product in question is not like pipe insulation, block insulation, and cement, products which clearly release respirable asbestos fibers. Appellant explains that plaintiffs have heretofore used expert witnesses to establish fiber release in cases against appellant but here appellee "employed an audacious trial strategy they had never before attempted in any case tried against [appellant] in the State of Maryland . . . ."

Appellant points to the testimony by Drs. Gabrielson, Hammar, and Dement for the proposition that respirable asbestos fibers are not visible to the naked eye; thus, one cannot determine the composition of dust without testing. Moreover, according to appellant, its position is bolstered by the fact that the only expert testimony on the issue of fiber release, the testimony by Dr. Crapo, was that a test performed on rope similar to appellant's product showed a release of 0.0006 fibers per cubic centimeter of air, a level below levels in the ambient air.

Finally, appellant argues that recently, courts have recognized that "generalized expert opinions declaring that any exposure to asbestos, however minimal, is a substantial factor in the development of asbestos disease, are insufficient to establish causation." Appellant cites several cases in support of this proposition, which we shall discuss below.

Appellee, to state the obvious, disagrees. Appellee distinguishes the cases cited by appellant and relies on Abate II, 121 Md. App. at 671, for the proposition that expert

testimony is not required to prove fiber release. Appellee argues that, unlike prior cases against appellant in which the relevant products were gaskets and packing that were encapsulated or lubricated and the defense was that respirable asbestos fibers could not be released from the product for that reason, this is the first case tried in Maryland, against appellant, in which appellant's product was dry and untreated rope and wicking. Appellee argues that fiber release in sufficient quantities can be inferred circumstantially from the lay testimony by appellee and Mr. Nichols, supported by appellee's expert witnesses, who together established that appellee met the frequency, proximity, and regularity test with respect to exposure to appellant's product and that the exposure was a substantial contributing cause of appellee's mesothelioma.

Appellant responds that the issue presented here was not before this Court in Abate II because the plaintiffs produced expert testimony of respirable fiber release by products similar to appellant's, and thus, language supporting appellee's position was unsupported dicta.

Analysis

The issue before us is narrow. Appellee did produce experts who testified on various matters; appellant admits that its rope and wicking contained asbestos and that the products emitted dust when handled. Appellant contends that expert testimony was required to establish that the number of asbestos fibers released exceeded ambient air levels, a level necessary to support a finding of causation, particularly in light of appellee's exposure to asbestos containing products manufactured by others, most of

which released high quantities of fibers. Appellee does not dispute that he needed to prove that appellant's products emitted asbestos fibers in excess of ambient air levels but contends that the circumstantial evidence was sufficient to sustain the finding.

The narrow question is whether there was sufficient evidence to permit the jury to infer that appellant's products emitted asbestos fibers in quantities which exceeded ambient air levels. Appellee introduced evidence that was typical in a traditional case involving products known to be capable of emitting fibers in relatively large quantities which, according to experts, were sufficient to substantially contribute to an asbestos related disease. Appellee explains that in prior cases in which a plaintiff produced expert testimony that appellant's products were capable of fiber release, the products were encapsulated gaskets and packing.[4]

Appellant has taken the position in cases in addition to this one that fibers in certain of its products were encapsulated and not capable of being emitted in sufficient quantities to be a substantial contributing cause to a disease. In those other cases, the plaintiffs typically produced expert testimony that such products, when cut or otherwise altered, did emit fibers in sufficient quantities. We are unaware of a reported decision in this State, ruling on the causation question, in which appellant took that position with respect to unencapsulated products and the plaintiffs did not produce expert testimony of fiber release.

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[4]Appellee does not concede and we do not address whether such expert testimony was required in those cases.

We conclude that lay testimony describing the amount of dust created by handling the products in question, coupled with expert testimony describing the dose response relationship and the lack of a safe threshold of exposure (above ambient air levels), was sufficient to create a jury question. There was lay testimony that appellee worked with appellant's products regularly and frequently and the products produced considerable visible dust. Given the testimony as to the relatively high asbestos content of appellant's rope and wicking, and the fact that it was unencapsulated or otherwise treated, the jury could reasonably infer that the products emitted asbestos fibers in sufficient quantities to cause mesothelioma. Appellee produced expert testimony that, assuming that appellee worked with appellant's products, and assuming that the products emitted respirable fibers, the exposure was a substantial factor, not dependent on a comparative analysis of other products.

Appellant was free to put on evidence of lack of regular and frequent exposure to its products, and/or that a particular product did not release fibers even though it contained asbestos and, therefore, even though exposure may have been frequent, fibers released, if any, were within a safe level of exposure and were not a contributing cause of a disease. The jury properly was permitted to resolve the issue.[5]

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[5]In closing argument, appellant argued that its products did not release respirable asbestos fibers in sufficient quantities to cause appellee's mesothelioma, and in addition, if they did release fibers, the size of the fibers and the nature of the fibers, *i.e.*, chrysotile, minimized the danger. This argument was made both in the context of causation and the state of the art, *i.e.*, what appellant knew or should have known of the dangers of asbestos exposure during the relevant time periods. On appeal, appellant's argument as to

The parties herein argue Abate II. In that case, common issues were tried in consolidated cases, and all issues were tried in five individual cases. 121 Md. App. at 603. A jury returned a verdict in favor of the plaintiffs. Id. at 606. The defendants argued that Abate I, the first common issues trial of consolidated cases, involved traditional asbestos containing insulation products and that Abate II involved more diverse products. Therefore, according to the defendants, some of the adverse rulings in Abate I were distinguishable and not applicable to certain products in Abate II. Id. at 618. For example, as to the common issues, the defendants argued that the circuit court erred in listing product types on the verdict sheet as opposed to brand names. We concluded the court did not err. Id. at 630.

In reaching that conclusion, we noted the following. The plaintiffs presented lay evidence that appellant's products emitted visible dust when handled. Dr. Dement testified that the presence of visible dust indicated excessive exposure because the fact that it was visible meant it was at a dangerous level. Id. at 629-30. The defendants argued that the form of the verdict sheet prevented the jury from considering that products differed in the amounts of asbestos contained and in the amount of fiber release. Id. In concluding that evidence supported not differing by brand on the verdict sheet, we noted the absence of evidence indicating that visible dust from a product did not imply a

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causation turns on whether there was evidence that its products emitted sufficient fibers to cause disease. Appellant does not argue that, because of the nature and size of the fibers, they could not have caused mesothelioma.

dangerous level of asbestos. Id. We further explained that in future mini trials, plaintiffs would have to prove actual exposure to dust and injury caused by the exposure. Id.

We acknowledged that although a

> "product containing fully encapsulated asbestos will not ordinarily produce dust and, therefore, will not ordinarily cause harm, there is no dispute that such a product can be altered–by sawing, cutting, or grinding, for example–and that asbestos fibers in the form of dust can then be released. In order to prevail in a claim involving an encapsulated product, future mini-trial plaintiffs will have to prove sufficient exposure to such dust."

Id. at 630.

In a footnote, we stated:

> We do not suggest that there is no chance that a specific product exists that cannot possibly emit respirable asbestos fibers but which is nevertheless included in a product category that has been found to be defective. We merely indicate that we know of no such product and that the appellants have not directed us to any evidence in the record regarding any such product. It does not appear that any such product is implicated in this appeal.

Id. at 631 n.27. We concluded that the form of the verdict sheet, which permitted the jury to determine whether a defendant could be strictly liable for that defendant's products of a particular type, was not error. While recognizing that asbestos containing products may differ in degree of potential harm, we were

> "satisfied that where evidence is presented to the effect that exposure to visible dust from any asbestos-containing product constitutes exposure to an excessive amount of asbestos, and that evidence is not controverted, asbestos-containing products that create visible dust may be "'lumped together.'"

Id. at 631 n.28. To repeat, the context of the discussion was the fact that the products

involved contained different amounts of asbestos, and the question was the effect of those differences on causation. There was expert testimony that the encapsulated products involved were capable of emitting fibers and contributing to the visible dust when the products were handled. Appellant did not assert that the evidence as to the amount of fibers released could not be found to be in excess of background levels. We concluded that there was no basis on which to differentiate between products based on the amount of asbestos content. Id. at 630

In Abate II, appellant's products at issue were gaskets and packing.[6] The jury found appellant's packing was defective and that appellant was negligent but found that appellant was not liable with respect to its gaskets. Id. at 638. It also found appellant was liable to two of the individual all issue plaintiffs. Id. In addressing issues raised by individual defendants in Abate II, we addressed appellant's argument that the plaintiffs "failed to present expert testimony that Crane products, in particular, emitted respirable asbestos fibers." Id. at 670. In other words, appellant argued that, while there was expert testimony that handling encapsulated products would produce asbestos fibers, there was no such testimony relating to appellant's products. We stated that "[w]e shall not hold that a plaintiff in any asbestos case must present expert testimony as to the amount of respirable asbestos fibers emitted by a particular product." Id. at 671. Again, that was in the context of an underlying assumption that fibers were emitted from each product in

[6]It appears that components in these products were lubricated and/or encapsulated.

some minimal amount sufficient to be a cause, and we were merely stating that comparative analysis is not required. We pointed to testimony by Dr. Millette to the effect that gaskets and packing, while not generally friable, become so when cut and otherwise altered and the testimony by Dr. Dement that visible dust is a health hazard.

Appellant points out that there was no such expert testimony presented by appellee in this case, and that it was required. We see no basis, however, on which to differentiate appellant's rope and wicking from other forms of unencapsulated, untreated asbestos containing products. Appellee testified that he worked with and around appellant's rope and wicking and that it emitted visible dust. Mr. Nichols testified to the same effect. The rope and wicking contained 60 to 90 % asbestos. The evidence was sufficient for the jury to reasonably infer that the visible dust contained asbestos fibers in quantities above background levels. There is nothing in the evidence to establish that such fibers were by virtue of some unique characteristic not respirable. Thus, expert testimony that handling of the rope and wicking produced fibers in sufficient quantities to cause disease was not required.

With respect to appellant's argument on its motion for judgment notwithstanding the verdict, premised on Dr. Crapo's testimony, we are not persuaded that the court erred. First, the jury could have disbelieved his testimony. In addition, as set forth above, his testimony did not relate to appellant's products specifically and it was vague as to the similarity of the products involved. It appears that the products involved in the referenced study were or may have been encapsulated or treated. The products in the case

before us were not encapsulated or treated. Thus, the question of causation was properly left to the jury.

Appellant's final argument is that "courts are increasingly rejecting sloppy reliance upon generalized expert opinions based on an 'every fiber counts' theory of causation . . . . ," and cites several cases.

Before discussing the cases, we note that appellee's position is not that every fiber counts, however; it is that every fiber above a minimum level counts, *i.e.*, above ambient air levels. The cases relied upon by appellant do not advance its cause. In Bartel v. John Crane, Inc, 316 F. Supp. 2d 603 (D. Ohio 2004), the court tried the case non-jury. The products were encapsulated gaskets and packing. Id. at 605. The court found as a fact that the plaintiff had failed to prove that more than ambient air levels of asbestos was released when working on gaskets and packing. Id. at 604, 608.

In Gregg v. V-J Auto Parts Company, 943 A. 2d 216 (Pa. 2007), as a result of a complicated procedural history, the issue in the Supreme Court was a very narrow one, specifically, whether the frequency, regularity, and proximity test applied if there was any direct, as distinguished from circumstantial, evidence of exposure to asbestos. The plaintiff's decedent claimed that he worked with asbestos containing products in his occupations over a 47 year period. Id. at 277. He also claimed that the decedent, from time to time and not as part of his occupation, worked with asbestos containing brake linings and clutches, sold by the defendant. Id. Much of the discussion in this case related to the frequency, regularity, and proximity test and whether the test applied if

there was any direct evidence of exposure. There was direct evidence that the decedent was non-occupationally exposed on two or three occasions to products sold by the defendant. Id. at 289. The court held that the direct evidence of exposure was de minimus and insufficient but remanded for a determination as to whether there was sufficient evidence to show frequency, regularity, and proximity to products sold by the defendant. Id. at 292.

In In Re W. R. Grace & Co., 355 B.R. 462 (D. Del. 2006), the court had before it cross motions for summary judgment by W. R. Grace & Co, debtor, and a group of property damage claimants regarding whether the presence of asbestos containing insulation in attics presented an unreasonable risk of harm. Id. at 464-465. The court found that the product did emit a small quantity of asbestos fibers when disturbed but otherwise did not release fibers into the living area at a medically significant level. Id. at 467, 476-47. The court held that the mere presence of asbestos containing insulation in the attic, without epidemiological or risk assessment evidence did not establish an unreasonable risk of harm. Id. at 493. The evidence established that the risk of exposure from the attic insulation was "less than that of dying in a bicycle accident, by drowning, or from food poisoning." Id.

Borg-Warner Corporation v. Flores, 232 S.W. 3d 765 (Tex. 2007), involved occupational exposure to brake linings containing embedded asbestos fibers. Id. at 773-774. Noting that there must be evidence that the exposure was sufficient to exceed some threshold, referencing the ambient air level but without adopting it as the threshold, the

court held as a matter of law that the evidence was insufficient to establish causation because it failed to demonstrate that the exposure to asbestos fibers emitted by the defendant's products was more than de minimus. Id.[7]

As can be seen from the above, the cases do not support the proposition that a plaintiff is required to produce expert testimony that an unencapsulated asbestos containing product emits asbestos fibers when handled, and that it can not be proved by other evidence, assuming adequate exposure to the product is otherwise shown.

B. *Denial of Motion for New Trial and Remittitur*

Appellant contends the court erred in not ordering a remittitur or granting a new trial on the ground that the verdict was excessive. Appellant points out that the jury awarded $335,274.00 in past medical expenses and the remainder was for pain and suffering. There were no claims for lost wages, loss of consortium, or punitive damages.

Appellant acknowledges that the court's ruling was not only discretionary but was within an area in which the discretion is "virtually boundless." Crane v. Puller, 169 Md. App. 1, 52 (2006). See Buck v. Cam's Rugs, 328 Md. 51, 59 (1992) ("Because the exercise of discretion under these circumstances depends so heavily upon the unique opportunity the trial judge has to closely observe the entire trial, complete with nuances, inflections, and impressions never to be gained from a cold record, it is a discretion that

[7]The court noted that it had not adopted the frequency, regularity, and proximity test to determine substantial factor causation, and did not state how it differed, if at all, from Texas law, but appeared to conclude that the result would be the same under either that test or Texas law. Id. at 770, 773-774.

will rarely, if ever, be disturbed on appeal."). Appellant argues that the court had to admonish the jurors to keep their eyes open and not to sleep and that the jurors spent only 34 minutes deliberating before reaching their verdict. Appellant concludes that the jury must have based its award on "passion and prejudice," and the amount was "punitive."

Because of the breadth of a trial court's discretion when ruling on the issues presented, based on the fact the trial judge was present and in the best position to assess the factors argued, we shall quote at length from the court's comments.

> With respect to the question . . . that . . . the noneconomic damages award in this case, 15 million dollars was excessive and shocks the conscience, I would certainly say I have a concern that the jury was out for 34 minutes, but I have no evidence as to what that means. I have only from the defense speculation is that they weren't careful and considerate from the plaintiff's point of view in addressing the issues, the many uncontested issues in this case by implication. There was not a whole lot for them to have sorted through as to many of the uncontested issues.
>
> You know, perhaps there was something untoward or inappropriate, but honestly, I don't have really any insight into this. I do have a concern. This case lasted for several weeks of trial and 34 minutes was somewhat surprising, but considering the amount and the nature of evidence and considering the fact that they apparently were able to distinguish the issues on the cross-claims as to who of the various defendants were liable with respect to negligence or strict liability and such–they may have thrown darts at a board for all I know–but it appears that they did make distinctions and one hopes that that was on some reasonable basis.
>
> As to the admonishing the jury about sleeping, let me say, you know, one of my concerns always in presiding over any trial, and particularly one that has any length and duration, relates to the fact that we are not a generation or a society that sits quietly for long periods of time without a lot of movement and without a lot of stimulation . . . . But, you know, it's pretty, pretty slow-moving stuff and here, it's pretty ponderous stuff. So I don't think the defense can take a great deal of consolation out of my admonitions to the jury because I perceive it to be my responsibility.

If I see them starting, one of them alone starting to nod off or to close eyes, to make the comments that I do. I try to be somewhat gentle and suggest things. If your eyes are closed, you know, I can't tell if you're deep in thought or you're sleeping.

And even in a shorter, simpler case, it frequently is necessary to give such admonitions to make sure that as best you can, all the important information that's being presented and the arguments and points that are being made by the lawyers are at least fairly aired and due process insofar as it involves an opportunity to be heard that there is actually a hearing of what you people are saying and doing.

So I don't, I certainly have had cases where I thought it appropriate to dismiss jurors because of their inattention or their, you know, sleeping so loudly that the only thing that would awaken them was their own snoring. That didn't happen in this case so I'm not particularly concerned about that aspect.

As to the 15 million dollars, I haven't done an exhaustive study of what the jury verdicts have been in all of the many asbestos cases. Counsel have talked about the various ones. I do–it's my best understanding, however, is at least with respect to the remittiturs that have been granted, they have occurred in those situations involving the consortium claims. There are no such here because Mrs. Linkus had predeceased her husband, according to the evidence presented.

And I certainly wasn't there and I don't know all of the evidence that was presented in any or all of those other cases. What I do know is that Mr. Linkus is a living mesothelioma plaintiff who has already endured much longer than anyone would have expected given what is the likely progression of this disease from the point of diagnosis. What I know is that he himself testified about all that he has been through and described that in enough detail and I think even in the somewhat understated fashion, quite honestly, he's a big, strapping guy. You know, he seemed like a, you know, here's an incredibly sexist comment, but many men are, you know, reluctant to talk completely openly, but I think he was sufficiently detailed even in his way of characterizing things to show what he has been through and what he is going to go through.

I think that the various procedures that he had to undergo, as [appellee's counsel] commented, the thoracentesis, which, as I understand

it, he's had those twice and involves putting, you know, a hypodermic type needle that looks like it ought to be used on an elephant or a race horse than a human being and withdrawing fluid. It's a very painful process. He had the thoracostomy. I'm sure I've got that pronounced correctly. He's had part of his lung removed. He has had disease, a literally kind of stripping process, taking away as much as can be removed from his, from the pleura.

He's been through the procedures where talc is inserted in the area to try and bind the fluid. He's been through two extensive rounds of chemotherapy, six months each, and 20-some treatments. He's a big guy here in court. I would, you know, judge his height, he's probably about six-foot-five, big, strapping fellow who lost 50 pounds and was so weak, according to his testimony, and after going through at least the first round, as [appellee's counsel] commented, he did find out there were additional nodules, four so, and had to go back through and get another round of these chemotherapy treatments.

He talked about the, I guess the impact and residual effects that all of that has on you. The kidney issues, the severe constipation issues and others. He's a man who has persisted. Whatever the balance of his life will be, he will be affected by the shortness of breath. There's a constant anxiety, borrowed time. He clearly was concerned. Part of his, I guess, anguish and pain and suffering was evident with respect to his concerns for his family and his granddaughters, I believe, were here. His son was here.

But I think that certainly he gave an enormous amount of detail about how this has affected him. He also knows that he's going to die. He also knows that he is going to die a very slow and painful death. He knows that his life expectancy was, again, as anyone would know, an average that has been appreciably reduced. He knows how long he's lived with mesothelioma at the point of trial. You know, three years or so. And taking all of that into account as to his particular circumstances and how this has affected him and the fact that he has survived, you know, for–perhaps treatments are improving. I don't know.

Perhaps he is someone who has, you know, his particular constitution is such that he's been able to endure longer. I don't know. But what I do know is that once the final stages begin for him as the medical experts have explained, there's not a whole lot more that can be done and he will endure considerable, considerable chest pain. He will be, go through this cataxia, the general wasting, et cetera.

> So I think that there is, was significant and really compelling testimony to explain the noneconomic damages aspect of this case for this particular individual and while the amount is substantial, particularly in today's economy, I'm not shocked by the amount of the verdict considering all of the particulars as to Mr. Linkus.

There was evidence that appellee's mesothelioma produced considerable physical and mental pain and suffering, that it would continue to produce pain and suffering for an undetermined period of time, and that it would cause appellee's death. While we, had we been sitting as the trial court, might have granted a new trial or ordered a remittitur, we cannot second guess the trial court, given its very wide discretion. We also point out that, as a function of that wide discretion, we would have affirmed a ruling to the contrary, were the issue before us.

C. *Denial of Motion to Reduce Judgment by Amount of Payments by Bankrupt Entities*

Appellant contends that the circuit court improperly refused to credit the judgment with amounts received by appellee from several bankrupt entities. The court credited monies received from the bankrupt entities Manville Personal Injury Settlement Trust, Celotex Asbestos Settlement Trust, and the H. K. Porter Co. Inc. Asbestos Settlement Trust but did not credit monies received from or on behalf of Eagle Picher, Keene, UNR, National Gypsum, Babcock & Wilcox, Halliburton/Harbison Walker, and USG.

With respect to the trusts which the court credited, the trust documents provide that a judgment defendant is entitled to a reduction equal to the amount paid by the trust. Appellant points to no evidence that the documents pertaining to the trusts in question contain similar language, and it points to no evidence of any other basis on which to

determine that the entities in question are or should be treated as tortfeasors. Absent such proof, such as an adjudication of tortfeasor status, a default judgment against the entity in question, some other form of court acceptance of tortfeasor status, or a settlement agreement in which the parties agree that the entity is or shall be treated as a tortfeasor, we perceive no legal basis on which to grant appellant's request. *See* the Uniform Contribution Among Joint Tort-Feasors Act, Maryland Code (1974, 2006 Repl. Vol.), §3-1401 *et seq*. of the Courts and Judicial Proceedings Article ("CJP") . Joint tortfeasors are "two or more persons jointly or severally liable in tort for the same injury to person or property, whether or not judgment has been recovered against all or some of them." CJP §3-1401 (c). We recently discussed this credit for settlement monies issue in Scapa Dryer Fabrics, Inc. v. Saville, ___ Md. App. ___ , No. 540, Sept. Term, 2008 (filed Dec. 29, 2009), and we see no need to repeat that discussion here in full.

JUDGMENT AFFIRMED.
APPELLANT TO PAY THE COSTS.