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IN THE UTAH COURT OF APPEALS

MICAH RIGGS, ON BEHALF OF
DECEDENT, VICKIE WARREN,

*Plaintiff, Appellant,
and Cross-Appellee,*

v.

GEORGIA-PACIFIC LLC AND UNION
CARBIDE CORPORATION,

*Defendants,
Appellees, and
Cross-Appellants.*

Court of Appeals No. 20110544-CA

Third District Court No. 070911933 AS

**BRIEF OF APPELLEE AND CROSS-APPELLANT
UNION CARBIDE CORPORATION**

**ON APPEAL FROM THE THIRD JUDICIAL DISTRICT COURT FOR
SALT LAKE COUNTY, HONORABLE GLENN K. IWASAKI**

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Parties At Trial

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Hamilton Materials, Inc.

Micah Riggs, on behalf of Decedent Vickie Warren

Union Carbide Corporation

Vickie Warren

Parties Dismissed Before Trial Or Not Served

Allis-Chalmers Corporation Product Liability Trust

The Anchor Packing Company

Asbestos Corporation Limited

Brown Plumbing & Heating, Inc.

Bullough Abatement, Inc.

Certainteed Corporation

Connie's Creations & Ceramics

Cress Manufacturing Co.

Foster Wheeler LLC

Garlock Sealing Technologies, LLC

General Dynamics Corporation

General Electric Company

General Refractories

Geneva Steel LLC

The Goodyear Tire & Rubber Company

Grefco, Inc.

Heber Lumber and Hardware

Ingersoll-Rand Company

Interstate Ceramic Supply Incorporated

Kaiser Gypsum Company, Inc.

Kelly-Moore Paint Company, Inc.

MacArthur Company

Mountain States Insulation & Supply Co., Inc.

Owens-Illinois, Inc.

Provo Lumber
Provo Plumbing Supply
Rapid-American Corporation
Stock Building Supply West, Inc.
Thermal West Industrial, Inc.
Uniroyal Holding, Inc.
USX Corporation
Western Asbestos Company
Western MacArthur Company

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STATEMENT OF JURISDICTION¹

This Court has jurisdiction pursuant to Utah Code § 78A-3-102(3)(j) and the July 14, 2011 Order of the Utah Supreme Court, R11,904-05, transferring this case to the Court of Appeals under Utah Rule of Appellate Procedure 42(a).

STATEMENT OF THE ISSUES

1. Union Carbide did not manufacture tape joint compound, the purported source of Ms. Warren's asbestos exposure. It supplied only raw asbestos to manufacturers of tape joint compound. The Utah Supreme Court recently embraced the bulk-supplier rule, which provides that a company in Union Carbide's position cannot be held liable for injuries caused by a product that it did not design, manufacture, or distribute to end users. Did the district court err in concluding that Union Carbide could be held liable for personal injury to Ms. Warren as a result of her exposure to products manufactured and sold by others?

¹ This brief uses the following abbreviations: the consecutively paginated record on appeal ("R__"); the opening brief of plaintiff-appellant Micah Riggs ("OB"); and the Addendum filed with this brief ("Ad."). Pursuant to Rule 24(e) of the Utah Rules of Appellate Procedure, trial exhibits are cited according to the exhibit number (*e.g.*, "UCC11").

- a. Standard of Review: Whether Utah law recognizes a bulk-supplier rule is a question of law that this Court reviews for correctness. *Anderson v. Sharp*, 899 P.2d 1245, 1248 (Utah Ct. App. 1995).
- b. Preservation: See R3173-220 (motion for summary judgment); R11,938 at 4988-94, 5017-18 (motion for a directed verdict); R11,431-51 (motion for judgment notwithstanding the verdict).

2. It is undisputed that Union Carbide furnished only Calidria to the manufacturers of joint compound. It also is undisputed that the dominant view of the medical community is that Calidria—and chrysotile, the broader genus of asbestos of which it is a part—does not cause peritoneal mesothelioma. Ms. Warren’s own expert witness admitted that he had no evidence that Union Carbide’s Calidria asbestos causes peritoneal mesothelioma and “little proof” as to chrysotile asbestos generally. The most any expert said was that causation was “possible.” Did the district court err in concluding that there was sufficient evidence of medical causation to support the jury’s

finding that exposure to Calidria was a substantial factor in causing Ms. Warren's peritoneal mesothelioma?

- a. Standard of Review: This Court reviews the denial of a motion for a directed verdict or for judgment notwithstanding the verdict based on insufficiency of the evidence for correctness, applying the same standard as the trial court. *Hansen v. Stewart*, 761 P.2d 14, 17 (Utah 1988); *Merino v. Albertsons Inc.*, 1999 UT 14, ¶ 3, 975 P.2d 467.
- b. Preservation: R11,938 at 4988-94, 5017-18 (motion for a directed verdict); R11,431-51 (motion for judgment notwithstanding the verdict).

3. Although Ms. Warren's alleged exposure to asbestos occurred before 1986, she was not diagnosed with peritoneal mesothelioma until July 2007. The parties' long-standing Case Management Order and numerous Notices of Intent to Apportion Fault indicated that the Utah Liability Reform Act ("LRA"), a comparative fault statute, applied to this case. Was the district court correct in holding that the LRA applies because Ms. Warren's cause of action did not arise until after the Act's 1986 passage and because Ms. Warren

failed to seek an amendment to the Case Management Order or to object to the Notices of Intent to Apportion Fault?

- a. Standard of Review: This Court reviews questions of law, such as the application of the LRA, for correctness. *Bishop v. GenTec Inc.*, 2002 UT 36, ¶ 8, 48 P.3d 218. The district court's rejection of an argument as untimely is reviewed for an abuse of discretion. *Tschaggeny v. Milbank Ins. Co.*, 2007 UT 37, ¶ 16, 163 P.3d 615.
- b. Preservation: R8909-21 (memorandum of law asserting that the LRA applies to this case).

STATUTES INVOLVED

This appeal involves interpretation and application of the Utah Product Liability Act, Utah Code § 78B-6-701, *et seq.*, and the Utah Liability Reform Act, Utah Code § 78B-5-817, *et seq.* The pertinent provisions of the statutes are set forth in the Addendum to this brief.

STATEMENT OF THE CASE

Vickie Warren filed this personal injury action in Salt Lake County (Third Judicial District) against multiple defendants, including Union Carbide Corporation. R1-18. The case proceeded to trial in April 2010. R11,916. The jury returned a verdict in favor of

Ms. Warren, finding Union Carbide 20% at fault for her illness.

R10,920-32. It awarded her a total of \$5,256,818.61, of which \$1,106,698.65 (plus costs) was to come from Union Carbide. R10,929.

The court entered final judgment on August 5, 2011. R11,906-09.

Ms. Warren passed away shortly after the jury's verdict. R11,223. Her son-in-law, Micah Riggs, has assumed the role of Plaintiff. He appeals the district court's decision to require the jury to allocate fault among Defendants and non-parties according to the Utah Liability Reform Act, Utah Code § 78B-5-817 *et seq.* OB 1. Union Carbide cross-appeals as to liability.

STATEMENT OF FACTS

Vickie Warren suffered a devastating disease, peritoneal mesothelioma, which cut her life short. Her suffering and death were tragic. She and her surviving family already have received substantial payments from some of the dozens of defendants she sued for exposing her to asbestos in various ways over the course of her life. The central question in Union Carbide's cross-appeal is whether Union Carbide, too, can be held liable for causing Ms. Warren's disease. And the question in the appeal that Plaintiff (a surviving son-in-law) presses is, if so,

whether Union Carbide can be forced to bear the full liability, even though a jury allocated only partial fault.

Different Types of Asbestos And Their Differing Hazards

The “asbestos story” is “a poignant paradox.” James E. Alleman & Brooke T. Mossman, *Asbestos Revisited*, Scientific Am., July 1997, at 70. The dangers of asbestos are now so widely understood and thoroughly documented that it is hard to remember that until fairly recently asbestos was revered “as a guardian of human safety.” *Id.* Various forms of asbestos were popular for a variety of functions because of their tensile strength, flexibility, and fire resistance. “Over the centuries, people have woven asbestos cloaks, tablecloths, theater curtains and flameproof suits for protection against fiery dangers. Asbestos insulation products not only saved energy but also shielded workers from potential burns. Brake shoes and clutch facings improved safety on race cars and school buses; efficient asbestos air filters were used in hospital ventilators, cigarette tips and military gas masks.” *Id.*

The various forms of asbestos fibers are not equally dangerous. What laypersons generically call “asbestos” covers a family of naturally occurring silicate minerals with a fibrous structure. Asbestos fibers

come in several shapes and sizes—two in particular are relevant here. The first category is the serpentine class, which includes chrysotile fibers. The other is the amphibole class, which includes amosite, crocidolite and tremolite fibers. R2177-78. These two categories have different lengths and chemical compositions. The differences in structure lead to different commercial uses. *See infra* at 10-11. More importantly for present purposes, as the experts all agreed, the differences between these two types of asbestos translate into different hazards to human health. R11,921 at 1314 (plaintiff's expert); R11,928 at 2563-64 (plaintiff's expert); R11,927 at 2228-29 (defendants' expert); R11,932 at 3754, 3770 (defendants' expert); R11,933 at 3841-51, 3859-60 (defendants' expert).

Mesothelioma is a rare type of cancer, and the form of mesothelioma that struck Ms. Warren is generally more rare, at least in people who have not had significant exposure to amphibole asbestos. R11,927 at 2343; R11,928 at 2612-14. Although mesothelioma can develop without any known exposure to asbestos, R11,921 at 1327-28; R11,932 at 3766-77, incidence of the disease is linked to the inhalation of asbestos, R2178; R11,927 at 2210, 2212; R11,932 at 3754. Certain

asbestos fibers can cause the disease by interfering with cell division, leading to genetic mutations that can eventually trigger a malignant cell. R11,932 at 3763-66. Mesothelioma occurs most frequently in the thin membrane of mesothelial cells lining the chest wall and lungs, known as the pleura. R2178; R11,933 at 3978. Ms. Warren succumbed to a different form of the disease, called peritoneal mesothelioma because it strikes the membrane lining the abdominal cavity, known as the peritoneum. R2178; R11,928 at 2473-74; R11,933 at 3811, 3978. A leading explanation for the difference in incidence is that asbestos fibers have a clear and easy path to the lungs, whereas they have to navigate a more circuitous and treacherous route to make their way to the abdominal cavity. R11,927 at 2248-51; R11,933 at 3842-44, 3858-59, 3915-16.

Scientific evidence confirms that prolonged inhalation of amphibole asbestos fibers can cause either pleural or peritoneal mesothelioma, at least in men. R2178; R11,932 at 3754; R11,933 at 3841-45, 3849-50, 3859-60. Ms. Warren's own witnesses testified that she was exposed to amphibole asbestos in a sufficient quantity to cause

the disease. *See, e.g.*, R11,928 at 2597, 2659, 2664-65. Union Carbide never sold that type of asbestos. R11,930 at 3125-27, 3213.

Ms. Warren also alleged that she was exposed to chrysotile asbestos, which was mined by Union Carbide as well as others. *See infra* at 15-18. But as her own expert witness conceded, “the predominant position expressed in the [medical] literature” is that there is no reliable evidence that chrysotile fibers cause peritoneal mesothelioma. R11,928 at 2577. In fact, as Ms. Warren’s key expert also conceded, not a single epidemiological study supports the conclusion that chrysotile asbestos causes peritoneal mesothelioma. R11,928 at 2599-2600; *see also* R2181.

The leading explanation for why one form of asbestos would cause the disease and the other not has to do with size and durability. Asbestos fibers are unlikely to cause mesothelioma unless they cause repeated cell damage, and they will not keep causing cell damage unless they reach a sufficient concentration in the peritoneum and maintain that concentration for a long while. Because the chrysotile fibers typically used in joint compound are shorter and less durable than amphibole fibers, they are more likely to be cleared from the body or

dissolved en route to the peritoneum or while in the peritoneum. They do not maintain the critical concentration for a significant duration.

R11,927 at 2238-40, 2251-52; R11,933 at 3842-44, 3858-59, 3915-16.

Union Carbide Supplied A Unique Form of Chrysotile Asbestos to Manufacturers of Tape Joint Compound

From 1963 to 1985, Union Carbide mined a unique form of chrysotile asbestos known as “Calidria.” R11,933 at 3827; R11,936 at 4541-42. The fiber got its name from the New Idria area of California, where it was mined. R11,936 at 4542. Calidria fibers are different from other forms of chrysotile in two key respects. First, the fibers are generally even shorter than other forms of chrysotile, R11,932 at 3753-54, 3770; R11,933 at 3827, which would make them far less likely to reach and be retained in the abdominal cavity, R11,932 at 3770. Second, Calidria is an especially pure version of chrysotile; unlike some chrysotile mined elsewhere, Calidria is uncontaminated by amphibole fibers (which have been linked to peritoneal mesothelioma). R11,933 at 3931; R11,936 at 4541-42.

Union Carbide and its distributors did not sell Calidria to individual consumers. Rather, it sold the raw fiber in bulk to other companies, which in turn used the fiber in manufacturing products with

various commercial applications. R3348; R11,936 at 4542-43. Although Calidria was not suitable for certain traditional uses of asbestos, R3349, it could be used effectively in tape joint compound, R11,936 at 4542. Joint compound is an adhesive that performs several functions in construction work, including attaching the joint tape placed over seams between sheets of drywall and concealing nail heads.

Union Carbide sold Calidria to several manufacturers of joint compound. Relevant to this appeal, Union Carbide sold varying quantities of Calidria asbestos to Georgia-Pacific LLC (also an Appellee and Cross-Appellant here) off and on from 1970 until 1977. R3349; *see* R11,936 at 4529. Union Carbide also sold Calidria to Hamilton Materials, Inc. (a co-defendant below) for use in tape joint compound from 1974 until no later than 1977. R3563; R3568; *see* R11,936 at 4542. Throughout these same time periods, both manufacturers also bought chrysotile asbestos for use in tape joint compounds from other suppliers. R11,935 at 4264; R11,936 at 4527-28.

Union Carbide Warned Its Customers About The Dangers of Asbestos

Union Carbide was careful to warn all of its customers, including Georgia-Pacific and Hamilton, about the dangers of asbestos inhalation.

The company began placing warnings on bags of Calidria asbestos in June 1968, years before the Occupational Safety and Health Administration (“OSHA”) mandated them and years before the company began supplying asbestos to either manufacturer. R3350; R11,936 at 4547-48, 4629-30. That warning blared:

**WARNING: BREATHING DUST MAY BE HARMFUL
DO NOT BREATHE DUST**

UCC71; R11,936 at 4631. In 1972, when OSHA established the standards governing asbestos exposure and warnings, Union Carbide began providing the precise warning set out in the new regulations. R3351; R11,936 at 4545; UCC17 (Standard for Exposure to Asbestos Dust, 37 Fed. Reg. 11318, 11321 (June 7, 1972) (to be codified at 29 C.F.R. § 1910.93a(g)(2))). It read as follows:

**CAUTION
Contains Asbestos Fibers
Avoid Creating Dust
Breathing Asbestos Dust May Cause
Serious Bodily Harm**

UCC16; *see also* UCC17 at 4.

Union Carbide was not satisfied just to place warnings on bags of raw asbestos. Although no regulation required it, Union Carbide affirmatively drew its customers’ attention to the dangers of asbestos

and cautioned them about precautions that users must take to stay safe. In 1964, for example, the company prepared an Asbestos Toxicology Report (“Report”), which set out comprehensive information about the potential health risks of asbestos inhalation. R3351; R11,936 at 4564-65; UCC54. The company’s salespeople would distribute the Report during sales visits and the company provided the Report to anyone who requested it—including customers, government agencies, and universities. R3351; R11,930 at 3123-24, 3140-44.

The original Report noted that workers exposed to high concentrations of asbestos dust “were prone to develop a disabling lung disease ... known as asbestosis,” and that “[s]everal years ago, it was reported that there was an increase in the incidence of cancerous tumors, especially of the lung, associated with asbestosis.” UCC54 at 1. The Report further stated that “[c]ontrol of asbestos dust exposure is therefore necessary.” *Id.* Union Carbide recommended several “control methods,” as well as the use of “[p]re-employment and periodic physical examinations,” including chest x-rays, of workers who might be exposed to asbestos dust. *Id.* at 1-2.

Union Carbide incorporated a revised version of the Asbestos Toxicology Report in an October 1968 brochure about Calidria asbestos that the company also provided to manufacturers of tape joint compounds. R3351; UCC280. The brochure included warnings about asbestos-related cancer and warned that “[e]mployees should wear respirators where dusting occurs in finishing products such as sanding taped joints.” UCC280 at 4. The following year, Union Carbide further revised the Report to discuss specifically the possible risk of mesothelioma, stating “mesothelioma has been noted to be associated with asbestos exposure in recent years.” UCC11 at 1; *see also* R3351.

The company continued to revise the Report during the 1970s, distributing it to customers by mail and in face-to-face meetings. R3351-52; *see* R11,930 at 3123-24, 3140-44. During the same period, Union Carbide also maintained for customer distribution a list of published governmental regulations, reports, and objective scientific and medical literature regarding the potential health risks associated with asbestos. R3352; UCC178. As with its own Asbestos Toxicology Report, the company provided these materials to customers by mail and in person. R3352; R11,936 at 4623-25.

Although Union Carbide could warn its own customers about the health risks associated with asbestos use—and issued such warnings—it had no control over the downstream manufacturers’ practices. It could not control how much asbestos manufacturers of tape joint compound used in their products or what warnings those manufacturers provided to end users. R3349. Georgia-Pacific and Hamilton, for example, unilaterally made all decisions concerning their finished products, including whether and how they would use asbestos fibers, whether to warn end users about the hazards of asbestos, and the contents of such warnings. R3348-50.

Ms. Warren’s Alleged Exposure to Asbestos Contained in Tape Joint Compound

Ms. Warren was born in Provo in 1950. R11,919 at 782. Throughout her childhood, her father had a full-time job at a steel plant. R11,919 at 785-86. He also was a residential construction contractor on the side. *Id.* at 785. Ms. Warren lived with her parents until 1972. R11,919 at 808-10. She claimed that over the course of 40 years (from approximately 1950 to 1990), she was exposed to a variety of asbestos-containing products, including various products her father

worked with at the steel plant and the construction company. R363-68; R11,919 at 822-23, 844-49, 906-09; R11,920 at 1000-01, 1034-35.

Relevant to her allegations against Union Carbide in particular, from about 1958 through 1977, Ms. Warren occasionally helped out on her father's residential construction sites—collecting and disposing of pieces of discarded insulation, nails, roofing felts, wallboard, and other building materials. R11,919 at 789-91. Ms. Warren recalled seeing subcontractors apply tape joint compound to walls and sand it smooth. R11,919 at 793-98. She and her siblings would sweep up dust residue or other small pieces to be dumped into a truck. *Id.* Throughout the entire period that her father built homes, however, she cleaned up tape joint compound residue maybe two to four times a year. R11,926 at 2071-72.

Ms. Warren had no recollection of who made the tape joint compound that was on the work sites. R3283-84; *see* R11,919 at 793-97, 830-31, 837 (describing work with joint compound without identifying particular products). Her brother, however, recalled seeing tape joint compounds manufactured by Georgia-Pacific and Hamilton on various work sites from 1970 to 1974 and 1976 to 1977. R11,920 at 1146-47;

R11,926 at 2064. He never examined any purchasing records to confirm his recollection from three or four decades ago. R11,926 at 2057-58.

Ms. Warren Sues Union Carbide And Others

The first sign that something was wrong came three decades after Ms. Warren's last stint assisting her father at a worksite. In April 2007, Ms. Warren began experiencing shortness of breath and weight loss. R3237. She was diagnosed with peritoneal mesothelioma in July 2007. R368. Shortly after her diagnosis, in August 2007, Ms. Warren filed this personal injury action against multiple Defendants who manufactured, sold, distributed, or installed asbestos or asbestos-containing products. *See generally* R1-18 (complaint). She asserted both strict products liability and negligence claims. *Id.* Ms. Warren amended her complaint three times, each time adding defendants and greater detail about the circumstances of her alleged exposures. R88-102; R153-80; R351-68. By the final version of the complaint, she had accused 32 defendants in all, with alleged relationships to dozens of asbestos-containing products. R365-67; *see* R3256-71. Ms. Warren's claim against Union Carbide revolved entirely around exposure to tape

joint compound manufactured by other defendants, including Georgia-Pacific and Hamilton. R4810-15; R11,919 at 789-91.

Over the course of pretrial proceedings, Ms. Warren voluntarily dismissed numerous defendants, *see, e.g.*, R427-32; R443-48; R500-07, leaving only Union Carbide, Georgia-Pacific, and Hamilton as defendants at trial.

The District Court Denies Summary Judgment

Defendants moved for summary judgment on multiple grounds, most notably relating to causation and the bulk-supplier defense.

Medical causation. Everyone agreed that Ms. Warren was exposed to enough amphibole asbestos to cause her peritoneal mesothelioma. Union Carbide argued, however, that there was no evidence that Calidria could, as a matter of medical science, cause Ms. Warren's disease. R3192-97. In a motion joined by Union Carbide and Hamilton, R3665-88; R6070-72; R6075-77, Georgia-Pacific also moved to exclude the causation-related testimony of Ms. Warren's experts, Drs. Samuel Hammar and Arnold Brody, for failing to satisfy the requirement of scientific reliability. R2141-44; R2154-647; R5282-88; R5437-877.

Dr. Hammar, a pathologist, intended to opine that exposure to chrysotile asbestos could also cause peritoneal mesothelioma, and that Ms. Warren's disease, in particular, was caused by her total exposure to asbestos, including chrysotile asbestos. R4503-04; R4516-17; R5446.

Dr. Brody, a cell biologist, intended to opine that, as a general matter, exposure to chrysotile asbestos can cause peritoneal mesothelioma. R4547-48; R5445.

Defendants argued that both experts improperly based their conclusions that exposure to *chrysotile* asbestos can cause *peritoneal* mesothelioma on evidence that asbestos, generally, can cause mesothelioma. R5439. They also emphasized that epidemiological studies are "the best evidence of general causation" by courts and the relevant scientific community, yet both of Ms. Warren's experts admitted that there was no epidemiological evidence linking chrysotile asbestos to peritoneal mesothelioma. R5449. For those reasons, among others, Dr. Douglas Weed, an epidemiologist and expert in scientific methodology, opined that the conclusion that exposure to chrysotile asbestos causes peritoneal mesothelioma "lacks sufficient scientific

support to be considered reliable by the scientific and medical research communities.” R5444.

Defendants also argued that unlike Ms. Warren’s experts, defendants’ expert, Dr. James Crapo (a pulmonary specialist and expert in diseases related to asbestos inhalation) performed a proper evaluation of epidemiological studies involving patients exposed exclusively (or almost exclusively) to chrysotile asbestos. That study revealed “no association of chrysotile exposure with risk for peritoneal mesothelioma.” R5449.

The court denied the motion to exclude Ms. Warren’s causation-related expert testimony, without extensive explanation. R6788-94. Having deemed Ms. Warren’s expert testimony admissible, the district court denied the motions for summary judgment on medical causation. R6829-35. It held that for reasons “discussed in more detail” in its “prior ruling with respect to the Rule 702 hearing” (which contained no extensive “reasons”), Ms. Warren had “met her burden of establishing that Union Carbide chrysotile asbestos causes peritoneal mesothelioma.” R6833.

Bulk-supplier rule. Union Carbide also moved for summary judgment on the basis of the bulk-supplier rule. Specifically, it argued that, as a matter of law, the company had no duty to warn end users (like Ms. Warren or her father) about finished tape joint compounds. It sold asbestos as a raw material in bulk to sophisticated manufacturers and had no interaction with the end users. R3209-18. Union Carbide invoked the *Restatement (Third) of Torts*, which declares that “a basic raw material, such as sand, gravel, or kerosene cannot be defectively designed.” R3212 (quoting *Restatement (Third) of Torts: Products Liability* § 5, cmt. c (1998)). The *Restatement* likewise asserts that “[t]o impose a duty to warn would require the [raw material] seller to develop expertise regarding a multitude of different end-products and to investigate the actual use of raw materials by manufacturers over whom the supplier has no control.” R3212-13 (quoting *Restatement (Third)* § 5, cmt. c).

The court denied summary judgment because Utah had not, at that point, “considered ... adopting the *Restatement (Third) of Torts: Products Liability* § 5.” R6832.

The Jury Returns A Verdict in Favor of Ms. Warren And Apportions Fault

The case went to trial in April 2010. R11,916. At the close of Ms. Warren's case, Defendants moved for directed verdicts on the same bases asserted in their summary judgment motions. R11,938 at 4988-94, 5017-18. The court denied the motions with little analysis. R11,938 at 5018-19.

The jury returned a special verdict in favor of Ms. Warren, finding all three defendants responsible for causing her peritoneal mesothelioma. R10,920-32. Applying the Liability Reform Act, Utah Code § 78B-5-817 *et seq.*, the jury apportioned fault among Defendants and non-parties as follows: Georgia-Pacific (5%); Hamilton (12%); Union Carbide (20%); non-party Utah State Developmental Center (5%); and other non-parties (58%). R10,930. The jury awarded Ms. Warren nearly \$5,257,000 in damages—about \$1,461,000 economic and \$3,796,000 non-economic. R10,929. Applying the jury's fault allocation, the district court awarded Ms. Warren about \$1,107,000 from Union Carbide, \$277,000 from Georgia-Pacific, and \$664,000 from Hamilton (plus costs for each Defendant). R11,906-09.

Sadly, Ms. Warren passed away shortly after the jury reached its verdict. R11,223. The court substituted her son-in-law, Micah Riggs, as Plaintiff. R11,272.

The Court Denies Union Carbide's Motion for Judgment Notwithstanding the Verdict

Union Carbide moved for judgment notwithstanding the verdict, reasserting the arguments it had made in favor of summary judgment and a directed verdict. *See generally* R11,431-51. In support of its position on the bulk-supplier defense, Union Carbide pointed out that on the very day the jury reached its verdict, the Utah Supreme Court had issued its decision in *Gudmundson v. Del Ozone*, adopting the *Restatement's* bulk-supplier rule. 2010 UT 33, ¶¶ 55-61, 232 P.3d 1059.

The district court denied the motion. R11,861-66. It entered final judgment on August 5, 2011. R11,906-09. Hamilton chose to satisfy the judgment against it, R11,428-30, leaving only Union Carbide and Georgia-Pacific as Defendants (now Cross-Appellants).

SUMMARY OF ARGUMENT

Defendants appeal the various decisions regarding liability described above. Plaintiff appeals the application of the Liability Reform Act to apportion fault among Defendants. OB 1.

I. Union Carbide cannot be held liable for Ms. Warren's injuries under the bulk-supplier rule—codified in the *Restatement (Third) of Torts* and recently adopted by the Utah Supreme Court in *Gudmundson v. Del Ozone*, 2010 UT 33, ¶ 55, 232 P.3d 1059. The rule holds that so long as its asbestos was not itself defective, Union Carbide cannot be held liable for injuries caused when manufacturers downstream incorporated the asbestos into their products, such as tape joint compound.

Under the *Restatement* and Utah law, Union Carbide's raw asbestos was not defective. Since Union Carbide obviously did not design natural asbestos, it cannot be held liable for defective *design*. And Ms. Warren never alleged that the raw asbestos Union Carbide sold was somehow defectively *manufactured*.

The only possible basis of liability against Union Carbide is the asserted failure to satisfy a duty to warn. But Union Carbide had no duty to warn end users with whom it had no contact. Nor can the company be held liable for failing to warn the sophisticated manufacturers who incorporated the raw material into their tape joint

compound. Even if there were such a duty, Union Carbide satisfied it by taking reasonable steps to warn tape joint compound manufacturers.

Accordingly, as a matter of law, Union Carbide cannot be held liable for any injury caused by Ms. Warren's exposure to tape joint compound.

II. Union Carbide also cannot be held liable because Ms. Warren failed to meet her burden of proving to a reasonable degree of medical certainty that Union Carbide's product, Calidria, more probably than not was a substantial factor in causing her peritoneal mesothelioma. Ms. Warren's experts did not provide the medical testimony necessary to support the conclusion that Calidria probably caused her disease, or even that chrysotile generally could have caused it.

Indeed, no expert was able to establish a link between Calidria—which is materially different from other varieties of chrysotile asbestos—and peritoneal mesothelioma. The absence of such evidence is fatal to Ms. Warren's claims against Union Carbide.

But even considering chrysotile asbestos more generally, the evidence Ms. Warren proffered was insufficient to establish causation. Drs. Samuel Hammar and Arnold Brody were the only two of Ms.

Warren’s experts to offer testimony relevant to the general causation question—whether that class of fiber is capable of causing peritoneal mesothelioma. And only Dr. Hammar testified regarding specific causation—whether chrysotile caused *Ms. Warren’s* disease.

Dr. Hammar built his opinion regarding chrysotile on a quicksand foundation of unproven hypotheses, conceding that there is “little proof” that chrysotile asbestos causes peritoneal mesothelioma, R11,928 at 2596-97, and agreeing that because of this paucity of proof, “the predominant position expressed in the literature is that chrysotile **has not been established as a cause** of peritoneal mesothelioma.” *Id.* at 2577 (emphasis added). In the end, he offered nothing more than an assertion that one cannot rule out the “possibility” that chrysotile causes peritoneal mesothelioma. *Id.* at 2590. That is nowhere near the requisite level of medical certainty needed to establish that chrysotile asbestos *probably* causes the disease.

Dr. Hammar admitted that his opinion as to specific causation rested on similarly flimsy support. He based his conclusion that exposure to chrysotile asbestos in tape joint compound caused *Ms. Warren’s* peritoneal mesothelioma solely on the notion that “each

and every exposure to asbestos,” no matter how small, “contributes [to] the development of mesothelioma.” *Id.* at 2655. But he conceded that his “every exposure” theory is an “unproven hypothesis” that is “not something that’s written in any textbook.” *Id.*

Dr. Brody’s testimony, which established only “biological plausibility”—the notion that “in terms of cell biology, all forms of asbestos can cause all forms of ... mesothelioma,” R11,921 at 1372—did not fill in the significant gaps left by Dr. Hammar. Nor did the testimony of Ms. Warren’s treating physician, who offered only a one-sentence opinion that exposure to “asbestos,” generally, caused Ms. Warren’s illness. R11,929 at 2762-63.

III. The district court correctly rejected Ms. Warren’s argument, made for the first time on the eve of trial, that the Liability Reform Act (“LRA”) does not apply to this case.

First, the district court acted well within its ample discretion in concluding that Ms. Warren raised the argument far too late. The district court correctly understood that the time to contest the applicability of the LRA was at the start of the case. By the eve of trial, Defendants had long since coordinated and conducted their defense

based on the open and uncontested understanding that the LRA would apply. It was too late for them to adjust their strategy and far too late to make such a radical change in the rules governing the case.

The district court also correctly rejected Plaintiff’s position on the merits. The Utah Supreme Court has held that the application of the LRA has impermissible retroactive effect only if it “changes the substantive law in effect **when plaintiff’s cause of action arose.**” *Stephens v. Henderson*, 741 P.2d 952, 954 (Utah 1987) (emphasis added). And under Utah law, Ms. Warren had no cause of action until she was diagnosed with peritoneal mesothelioma in 2007. Because the LRA had been in effect for decades prior to that point, the district court was correct to apportion liability under it.

ARGUMENT

I. AS A RAW MATERIAL SUPPLIER, UNION CARBIDE CANNOT BE HELD LIABLE FOR INJURIES TO END USERS OF TAPE JOINT COMPOUND.

Union Carbide’s appeal can be resolved on the basis of a straightforward legal principle—the bulk-supplier rule—that is codified in the *Restatement (Third)* and that the Utah Supreme Court recently embraced in *Gudmundson v. Del Ozone*, 2010 UT 33, ¶ 55, 232 P.3d 1059. *See infra* Section I.A. The rule blocks liability for Union Carbide

because its asbestos was not defectively *designed* or *manufactured*. *See infra* Section I.B. Nor was it defective for failure to warn. *See infra* Section I.C.

Accordingly, as a matter of law, Union Carbide cannot be held liable for any personal injury caused by Ms. Warren’s exposure to tape joint compound.

A. As a Supplier of Raw Materials, Union Carbide Cannot Be Held Liable for Injuries Caused to End Users, So Long as the Raw Asbestos Was Itself Not Defective.

This is a products liability case. That means that Plaintiff cannot sustain liability under any theory—whether strict liability or negligence—without proving a product defect. *See Bishop v. GenTec Inc.*, 2002 UT 36, ¶ 25, 48 P.3d 218 (“Whatever the theory”—whether strict liability or negligence—“the defendant’s liability is for the defective product, and not merely for any underlying negligence.” (citing *Restatement (Third) of Torts: Products Liability* § 2 cmt. n)). More specifically, Union Carbide cannot be held liable under any theory unless, at a minimum, *it was responsible* for a defect in a product that came into contact with Ms. Warren.

It is undisputed that Ms. Warren had no direct contact with the raw asbestos Union Carbide mined and sold. She came in direct contact only with asbestos-*containing* products, such as tape joint compounds. R11,918 at 517, 522-23. If the asbestos Union Carbide provided to the manufacturers was not itself a defective product—and as we demonstrate below, it was not—Union Carbide cannot be held liable for any injury the asbestos caused once incorporated into tape joint compound. The Utah Supreme Court recently confirmed that a bulk supplier, like Union Carbide, has very limited liability for the raw products it supplies when those nondefective products are incorporated into other products. Adopting the bulk-supplier rule articulated in the *Restatement (Third)*, the Court held that a supplier of a nondefective component (including a raw material) is not “subject to liability for harm to persons or property caused by a product into which the component is integrated” unless two conditions are established: (1) “the seller or distributor of the component *substantially participates* in the integration of the component into the design of the product” and (2) “the integration of the component causes the product to be

defective.” *Gudmundson*, 2010 UT 33, ¶ 55 (quoting the *Restatement*) (emphasis added).

Outside this very limited circumstance, “it would be unjust and inefficient to impose liability” on a component supplier. *Restatement (Third)* § 5, cmt. a. To do so would be to impose on the supplier an obligation that would be impossible to fulfill: For every purchaser, such a rule “would require the component seller to scrutinize another’s product which [it] had no role in developing” and “to develop sufficient sophistication to review the decisions of the business entity that is already charged with responsibility for the integrated product.” *Id.* With respect to, say, a drum of sulfuric acid, the manufacturer would have to audit every purchaser and monitor all uses to ensure that the acid is not used in a dangerous way. *See Walker v. Stauffer Chem. Corp.*, 19 Cal. App. 3d 669, 674 (Cal. App. 1971) (“We do not believe it realistically feasible or necessary ... to require the ... supplier of a standard chemical ingredient such as bulk sulfuric acid, not having control over the subsequent compounding, packaging or marketing of an item eventually causing injury to the ultimate consumer, to bear the responsibility for that injury.”).

Similarly, with respect to asbestos, such a rule would require Union Carbide to determine whether its asbestos would be incorporated into floor tiles, which are unlikely to produce any inhalation hazards, or other uses that are likely to produce dust, and if the latter, how exactly the product is used and what warnings the intermediary issues to end users. As the Utah Supreme Court explained, any such obligation is intolerable: “The requirement that a component manufacturer have some control over the design of the integrated product [before liability is imposed] prevents the imposition of a duty to ‘foresee all the dangers that may result from the use of a final product which contains [the] component part or materials.’” *Gudmundson*, 2010 UT 33, ¶ 58 (citation omitted).

Under this standard, it is improper to impose any liability on Union Carbide. Union Carbide mined a naturally occurring mineral, placed it in bags, and sent it to manufacturers who bought it. Neither Georgia-Pacific nor Hamilton invited Union Carbide to participate in any way (let alone “substantially”) in the design of tape joint compounds they manufactured. “To substantially participate, the [component] manufacturer must have had some control over the decision-making

process of the final product or system.” *Id.* Union Carbide indisputably had no such control. R3348-50.

The district court in this case rejected the bulk-supplier defense only because the Utah Supreme Court had not, at that point, “considered ... adopting the Restatement (Third) of Torts: Products Liability § 5.” R6832. Now that the Court has done exactly that, this Court should reverse.

B. The Raw Asbestos Union Carbide Supplied Was Not Defective, So Long as the Company Satisfied Any Duty to Warn.

The consequence of applying the bulk-supplier rule is that Union Carbide cannot be held liable for injuries allegedly caused by Ms. Warren’s exposure to tape joint compound, at least so long as Calidria is not itself a defective product. It is not. Like the *Restatement (Third)*, “Utah law recognizes three types of product defects: design defects, manufacturing flaws, and inadequate warnings regarding use.” *House v. Armour of Am., Inc.*, 886 P.2d 542, 547 (Utah Ct. App. 1994) (“*House I*”) (citing *Grundberg v. Upjohn Co.*, 813 P.2d 89, 92 (Utah 1991)), *aff’d*, 929 P.2d 340 (Utah 1996); *see also Restatement (Third) § 2*. To give rise to liability, the “defect or defective condition”—whether

design, manufacturing, or inadequate warnings—must make the product “unreasonably dangerous to the user or consumer.” Utah Code § 78B-6-703; see *Brown v. Sears, Roebuck & Co.*, 328 F.3d 1274, 1279 (10th Cir. 2003) (Utah’s “unreasonably dangerous” requirement is “[a] limitation[] on [plaintiff’s] cause of action that may exceed those imposed under the common law”). A defect renders a product “unreasonably dangerous” if it makes the product “dangerous to an extent beyond which would be contemplated by the ordinary and prudent buyer, consumer, or user of that product.” Utah Code § 78B-6-702.²

² Subpart (a) of *Restatement (Third)* § 5 states that a component supplier can be held liable if “the component is defective in itself, as defined in this Chapter, and the defect causes the harm.” In *Gudmundson*, the Supreme Court noted “[w]e do not quote section (a) of the Restatement because it only addresses situations in which the component part itself is defective. Because this situation is adequately addressed in our case law, we do not wish to create confusion by applying the Restatement to those situations.” 2010 UT 33, ¶ 55 n.14. Notably, the *Gudmundson* court did not suggest any tension between Utah case law and the *Restatement (Third)*’s treatment of defective components. As noted in the text, Utah law recognizes the same three classes of product defect as the *Restatement (Third)*. No decision of this Court or the Utah Supreme Court holds that a raw material can be defectively designed or manufactured, or that raw asbestos is unreasonably dangerous or defective. Nor does any Utah appellate

To start with the first, as a matter of simple logic, “a basic raw material such as sand, gravel, or kerosene”—or raw asbestos—“cannot be defectively designed.” *Restatement (Third)* § 5, cmt. c. It is not “designed” at all—except by Mother Nature. *See Cimino v. Raymark Indus., Inc.*, 151 F.3d 297, 334 (5th Cir. 1998) (“design defect ... [does not] apply to ACL and its raw asbestos”). To be sure, a supplier of a raw material can be held liable if the material contained an unexpected contaminant that caused harm—such as “raw [coffee] beans ... contaminated with arsenic, or some other poison.” *Restatement (Second) of Torts* § 402a, cmt. p (1965); *see also Restatement (Third)* § 5, cmt. c. But Ms. Warren never alleged that Union Carbide’s asbestos was contaminated—only that the raw product is itself dangerous. Bulk-suppliers of raw materials supply all sorts of products that are inherently dangerous—kerosene, acids, lye, glass, and toxic chemicals, to name a few—and the supplier is not held liable for the manner in which the manufacturer incorporates that raw material into its product. *See, e.g., Shell Oil Co. v. Harrison*, 425 So. 2d 67, 70 (Fla. Ct. App. 1982)

decision hold that a component supplier’s duty to warn runs to the end user, as opposed to the manufacturer of the integrated product.

(supplier of a “dangerous toxic component” did not “have a nondelegable duty to warn ultimate users of the hazards of commodities containing the toxic component” where the “commodities were formulated, packaged, labeled, and distributed by others”);³ *Whitehead v. Dycho Co., Inc.*, 775 S.W.2d 593, 599 (Tenn. 1989) (“[T]he independent intervening act of Magnavox in placing” a “solvent ... use[d] only in an industrial setting as a result of its dangerous properties” “in small, pump-type containers with no label ... was the proximate cause of the accident.”); *cf. Grundberg*, 813 P.2d at 95 (rejecting a design-defect claim involving a prescription drug on the ground “that manufacturers of unavoidably dangerous products should not be liable for a claim of design defect”).

As to “manufacturing flaws,” Ms. Warren claimed none. R10,877 (Jury Instruction No. 19); R11,939 at 5219-20. Nor could she have, at least with respect to Union Carbide’s raw asbestos. A “manufacturing defect is a departure from a product unit’s design specifications.”

Restatement (Third) § 2, cmt c. “As there is no intended design of a raw

³ *But see McConnell v. Union Carbide Corp.*, 937 So. 2d 148, 150-51 (Fla. Ct. App. 2006) (holding that “even if it were true that the Calidria Asbestos marketed by Carbide had been in its ‘raw’ form, that fact would be meaningless in Florida,” because “asbestos is intrinsically dangerous”).

material, there can be no departure from it.” M. Stuart Madden, *Liability of Suppliers of Natural Raw Materials and the Restatement (Third) of Torts: Products Liability—A First Step Toward Sound Public Policy*, 30 U. Mich. J. L. Ref. 281, 285 n.15 (1997); *see also Cimino*, 151 F.3d at 334 (no manufacturing defect in raw asbestos because it “was not adulterated or other than normal chrysotile asbestos”).

C. Union Carbide Had No Duty to Warn End Users Directly or the Sophisticated Users Who Bought Its Raw Asbestos, But in Any Event Did Issue Warnings that Were More than Adequate.

That leaves “inadequate warnings regarding use” as the only possible defect the raw asbestos could have. No such theory applies here, because (1) Union Carbide had no duty—and indeed, no ability—to warn end users of tape joint compound; and (2) Union Carbide satisfied any obligation it might have had to its own customers. We address each in turn.

Duty to warn end users. Union Carbide sold raw asbestos in big sacks only to manufacturers. The manufacturers ripped open the sacks and mixed the contents with other materials to yield tape joint compound according to their own recipes. The manufacturers then poured the compound into their own containers, which they sent to

retailers, who in turn sold them to end users. Once Union Carbide sent the sacks to the manufacturers, it did not even know who the end users were. It had no practical way to warn them and no responsibility to do so.

To impose on raw material suppliers a duty to warn end users, raises the same problems as imposing any other liability on them for decisions that were not their own. *See supra* at 30-33. It “would require the seller to develop expertise regarding a multitude of different end-products and to investigate the actual use of raw materials by manufacturers over whom the supplier has no control.” *Restatement (Third)* § 5, cmt. c. “Courts,” including this one, have “uniformly refuse[d] to impose such an onerous duty.” *Id.*

The Supreme Judicial Court of Massachusetts has explained more fully why: “The goal of products liability law is ‘to induce conduct that is capable of being performed.’” *Hoffman v. Houghton Chem. Corp.*, 751 N.E.2d 848, 857 (Mass. 2001) (citation omitted). A bulk supplier of a raw material like asbestos simply is not capable of providing warnings to end users of products that incorporate those materials. Unlike many machine parts, for example, “[b]ulk products often are delivered in tank

trucks, box cars, or large industrial drums”—or, in this case, bags—
“and stored in bulk by the intermediary, who generally repackages or reformulates the bulk product.” *Id.* at 856. Thus, “[e]ven if the [bulk] product *could* be labeled by the supplier, any label warnings provided to the intermediary would be unlikely to reach the end user.” *Id.* (emphasis in original). “To impose on bulk suppliers a duty to warn all foreseeable end users *directly* where the product cannot readily be labeled for such users (if it can be labeled at all); where the intermediary is often in a different industry from that of the supplier, with different means of production; and where the end users themselves are a remote and varied lot would be unduly, indeed crushingly, burdensome.” *Id.* at 856-57 (emphasis in original).

This Court has applied those principles to a fact pattern that is analytically identical to this case. In *House I*, DuPont supplied KEVLAR fibers to a manufacturer, which incorporated the fibers into the fabric of bullet-proof vests. 886 P.2d at 545. When a bullet penetrated a vest and killed a law enforcement officer, the officer’s wife sued DuPont for strict liability based on inadequate warnings. This Court rejected the claim because “DuPont had no duty *nor opportunity*

to warn the ultimate vest user about the levels of protection afforded by vests woven from KEVLAR.” *Id.* at 554 (emphasis added).

This principle applies regardless of how dangerous the component material may be. After all, the supplier of a toxic, flammable, or otherwise dangerous commodity is no more capable of warning the end user than a supplier of an inert commodity. A raw material’s inherent dangers may require the bulk supplier to provide a warning to its customers—the manufacturers. *See Shell Oil Co.*, 425 So. 2d at 70 (“dangerous toxic component”); *Walker*, 19 Cal. App. 3d at 674 (sulfuric acid);⁴ *Whitehead*, 775 S.W.2d at 593 n.1, 598-99 (solvent with “dangerous properties”); *cf. Grundberg*, 813 P.2d at 92 (“[T]here are some products that have dangers associated with their use even though they are used as intended,” requiring “appropriate warnings” to avoid “strict liab[ility] for the ‘unfortunate consequences’ attending their use.”). But it does not create an obligation to issue warnings to the same end users who will never be in a position to see its warning labels. *Cf. Smith v. Frandsen*, 2004 UT 55, ¶ 17 n.6, 94 P.3d 919 (even where

⁴ *But see Stewart v. Union Carbide Corp.*, 190 Cal. App. 4th 23 (Cal. App. 2010).

there is an “*inherent danger*” associated with a product,” the “manufacturer of a product is relieved of [any] duty to warn”—including a duty to warn the end user—where the immediate “purchaser is a sophisticated user and is charged with knowledge of the product” (emphasis added); *Adams v. Union Carbide Corp.*, 737 F.2d 1453, 1457 (6th Cir. 1984) (holding that it was “reasonable for Union Carbide to rely upon GMC to convey the information about the hazardous propensities of TDI to its employees”).

Duty to warn sophisticated manufacturers. In contrast, suppliers of raw materials like asbestos *are* capable of warning their own customers—intermediate purchasers like Georgia-Pacific and Hamilton—of the dangers associated with the raw material. Accordingly, that is the most they are required to do to render their materials nondefective and avoid liability. “The bulk supplier doctrine advances [the] goal [of inducing conduct that is capable of being performed] by permitting a ... supplier to satisfy its duty to warn by reasonable reliance on an intermediary who understands the product’s risks and is able to pass on to end users warnings about the product’s hazards.” *Hoffman*, 751 N.E.2d at 857. The *Restatement (Third)* and

numerous courts have adopted this bedrock rule. *Restatement (Third)* § 5, cmt. b (the “component seller’s duty” is “to supply reasonable instructions and warnings to the component buyer”); *see, e.g., Coffey v. Chem. Specialties, Inc.*, 4 F.3d 984 (Table), 1993 WL 318886, at *3 (4th Cir. Aug. 20, 1993) (“[I]n certain circumstances, a bulk supplier of a dangerous product may satisfy its reasonable care requirements by notifying the purchaser ... of the dangers of the product rather than directly notifying the ultimate users ... of the product.” (citing *Restatement (Second) of Torts* § 388, cmt. n)).

Here, however, Union Carbide had no duty to warn the manufacturers, and if it did have such an obligation, its warnings were more than adequate. To take the latter point first, Union Carbide supplied tape joint compound manufacturers like Georgia-Pacific and Hamilton with all known information about the dangers associated with asbestos by distributing and otherwise making available its own Asbestos Toxicology Report, as well as other relevant reports and scientific literature. *See supra* 12-14. It also included warnings on bags of Calidria years before it had to, and adopted the OSHA-mandated warning as soon as it came out. *See supra* 11-12. Because Union

Carbide disclosed “all the risks involved, as well as the extent of those risks,” *House I*, 886 P.2d at 551, it satisfied whatever obligation it might have to provide warnings to manufacturers who used Calidria in their products.

But Union Carbide had no obligation to warn its customers, Georgia-Pacific and Hamilton, for the simple reason that they were already fully acquainted with the dangers associated with chrysotile asbestos. This state “recognize[s] the ‘sophisticated user doctrine’ whereby the manufacturer of a product is relieved of a duty to warn of the inherent dangers associated with a product if the purchaser is a sophisticated user and is charged with knowledge of the product.” *Smith*, 2004 UT 55, ¶ 17 n.6 (citing *House I*, 886 P.2d at 550); *see also Goodbar v. Whitehead Bros.*, 591 F. Supp. 552, 560-61 (W.D. Va. 1984) (“[I]f the danger related to the particular product is clearly known to the purchaser/employer, then there will be no obligation to warn placed on the supplier.”); *Restatement (Second)* § 388, cmt. k (warnings required “only if” a chattel supplier “has no reason to expect that those for whose use the chattel is supplied will discover its condition and realize the danger involved”).

Georgia-Pacific and Hamilton manufactured and sold asbestos-containing products for years before purchasing Calidria from Union Carbide. They had to have been familiar with chrysotile’s known properties—both good and bad. *See Borel v. Fibreboard Paper Prods. Corp.*, 493 F.2d 1076, 1089 (5th Cir. 1973) (manufacturers are “held to the knowledge and skill of an expert” and must “at a minimum ... keep abreast of scientific knowledge, discoveries, and advances and [are] presumed to know what is imparted thereby”). Indeed, it is undisputed that the hazards associated with the inhalation of asbestos fibers were *public* knowledge by the 1960s, leading to the passage of both federal and state regulations governing the use of the mineral in the 1960s and 70s. R11,924 at 1754-61. Ms. Warren herself asserted as much, declaring in her complaint that Georgia-Pacific and Hamilton had been aware for decades “that there was a substantial risk of injury or death resulting from exposure to asbestos or asbestos-containing products, including but not limited to asbestosis, other lung damages, and cancer.” First Amended Master Complaint at 55, *In re Asbestos Litig.*, Case No. 010900863 AS (Utah 3d Dist. Aug. 23, 2001) (incorporated by reference in Ms. Warren’s complaint, R351-52) (Ad. P).

Even if there had been a factual dispute as to whether Georgia-Pacific and Hamilton qualified as “sophisticated users” of asbestos, the district court at the very least was required to instruct the jury that if it “[found] that the user to whom a defendant owed a duty to warn was a sophisticated user,” it “[could] not find that defendant liable for failure to give an adequate warning.” R9013 (proposed instruction). At a minimum, then, this Court must order a new trial to afford Union Carbide the opportunity to have a jury address any such factual dispute.

II. MS. WARREN PRESENTED INSUFFICIENT EVIDENCE THAT UNION CARBIDE’S CALIDRIA CAUSED HER ILLNESS.⁵

Ms. Warren’s liability case against Union Carbide was unconventional. There was no dispute that she had been exposed to amphibole asbestos, which unquestionably causes peritoneal mesothelioma. Her own expert testified that her exposure to amphibole asbestos alone was high enough to cause the disease. R11,928 at 2659, 2664-65. Ms. Warren’s case against Union Carbide revolved around

⁵ For the Court’s convenience, excerpts from the expert testimony discussed in this Section are included in the Addendum filed with this brief (Ad. C-G, L).

proving that Calidria *also* caused her peritoneal mesothelioma. This was a tall order particularly in light of the prevailing medical opinion—acknowledged by Ms. Warren’s experts and based on overwhelming epidemiological and other studies—that chrysotile asbestos *does not* cause peritoneal mesothelioma.

In the face of this overwhelming evidence, Ms. Warren had the burden of proving to a “reasonable medical certainty” that Calidria more probably than not *also* was a substantial factor in causing her peritoneal mesothelioma. *Alder v. Bayer Corp., AGFA Div.*, 2002 UT 115, ¶ 73, 61 P.3d 1068 (plaintiffs must prove to a “reasonable medical certainty” that exposure to toxic levels of a chemical “probably caused” their injuries); *Devine v. Cook*, 279 P.2d 1073, 1080 (Utah 1955) (“substantial factor”). The burden was further compounded along several dimensions. First, Ms. Warren had to prove not only general causation (that Calidria probably causes peritoneal mesothelioma) but specific causation (that exposure to Calidria is what probably *did* cause her illness). *See Logan v. Peterson*, 604 P.2d 488, 490 (Utah 1979); *Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 881 (10th Cir. 2005). Second, Ms. Warren was required to present a “medical expert” to

establish causation. *Fitz v. Synthes (USA)*, 1999 UT 103, ¶¶ 11, 16, 990 P.2d 391.

Most important, the threshold on the causation requirement is high. Testimony that a causal link is possible, or “not impossible,” is insufficient. *Moore v. Denver & R.G.W.R. Co.*, 292 P.2d 849, 851 (Utah 1956) (new trial required where doctor testified that “a disc injury was not impossible”). Ms. Warren had to prove that exposure to Calidria was *probably* a substantial factor in causing her peritoneal mesothelioma. *Id.* Even where the probabilities are “evenly balanced,” “it becomes the duty of the court to direct the jury that the burden of proof has not been sustained.” *Walker v. Parish Chem. Co.*, 914 P.2d 1157, 1163 (Utah Ct. App. 1996) (citation omitted); *see Weber v. Springville City*, 725 P.2d 1360, 1367 (Utah 1986) (“A mere possibility of ... causation is not enough; and when the matter remains one of pure speculation or conjecture, or the probabilities are at best evenly balanced, it becomes the duty of the court to direct a verdict for the defendant.” (citation omitted)).

Ms. Warren’s proof failed along every dimension. No expert was able to establish a link between Calidria—which is materially different

from other sorts of chrysotile asbestos—and peritoneal mesothelioma.

“I don’t know” was the lead experts’ most substantive response to the question whether there is any evidence that Calidria could have caused Ms. Warren’s disease. R11,928 at 2642-43.

Even considering chrysotile asbestos more generally, the evidence Ms. Warren proffered was insufficient to establish causation. Drs. Samuel Hammar and Arnold Brody were the only two of her experts to offer testimony relevant to the general causation question—whether chrysotile is capable of causing peritoneal mesothelioma. And only Dr. Hammar testified regarding specific causation—whether chrysotile caused *Ms. Warren’s* disease.

The most either expert tried to assert is that chrysotile could not be ruled out as a *possible* additional cause of this sort of mesothelioma. R11,928 at 2590. As to specific causation, Dr. Hammar conceded that the theory on which he based his conclusion about the cause of Ms. Warren’s disease is an “unproven hypothesis” that is “not something that’s written in any textbook.” *Id.* at 2655.

This “shaky” proof was “insufficient to allow a reasonable juror to conclude that” Calidria “more likely than not” injured Ms. Warren.

Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 596 (1993). The district court erred in denying Union Carbide judgment as a matter of law.

A. Ms. Warren’s Expert Medical Causation Evidence.

Pursuant to the requirement that parties challenging the sufficiency of the evidence first “marshal all the evidence in support of the [jury’s] finding,” *Ostermiller v. Ostermiller*, 2010 UT 43, ¶ 20, 233 P.3d 489, we begin with a summary of the expert medical evidence presented in the light most favorable to Ms. Warren.

Dr. Hammar. Dr. Hammar, a pathologist specializing in the study of disease, was Ms. Warren’s primary medical expert on causation. R11,928 at 2468; *see generally id.* at 2467-574 (direct testimony). He testified that while “amphiboles show[] greater carcinogenic potency than chrysotile,” “[a]ll types of asbestos can cause mesothelioma.” *Id.* at 2563-64. He agreed that “exposures to asbestos from joint compounds ... present[] an increased risk ... to develop ... mesothelioma.” *Id.* at 2519. He testified that there is no difference “other than anatomy and location” between pleural and peritoneal mesothelioma, *id.* at 2549, that chrysotile asbestos “[has] a propensity

to go from the lung into the pleural or serosal membranes,” *id.* at 2561, and therefore that “there’s no reason why” “chrysotile asbestos that you find in joint compound” could not “cause peritoneal mesothelioma in women,” *id.* at 2564.

In support of this view, Dr. Hammar offered a three-step analysis: Step 1: Chrysotile has been linked to the development of *pleural* mesothelioma. *Id.* at 2581-82, 2590-92. Step 2: “[C]hrysotile does get to the peritoneal cavity and it gets there in [a] high dose.” *Id.* at 2596. Step 3: There is no difference between pleural and peritoneal mesothelioma “other than anatomy and location.” *Id.* at 2549.

Dr. Hammar also opined that “each and every exposure to asbestos,” no matter how small, “contributes [to] the development of mesothelioma,” *id.* at 2655, that no portion of Ms. Warren’s alleged exposure to asbestos could be excluded as a “substantial factor” in causing her disease, *id.* at 2528, and that her total exposure, including to chrysotile asbestos contained in tape joint compound, caused her disease, *id.* at 2519-20, 2538.

Dr. Brody. Dr. Brody, a cell biologist, R11,921 at 1177, testified that in in vitro studies, chrysotile fibers cause the same type of damage

to mesothelial cells as amphibole fibers, *id.* at 1270-71; *see generally id.* at 1177-1308 (direct testimony). He testified that mesothelial cells are the same regardless of where they are located in the body, *id.* at 1183, and that “asbestos fibers can reach” “[w]herever there is lymphatic flow,” including the abdominal cavity, *id.* at 1207. He concluded that “exposure to chrysotile, amosite, and crocidolite, or mixed combinations of those fibers” “can cause [peritoneal mesothelioma] in some exposed people,” *id.* at 1266, and he testified that Calidria, specifically, is a “type of asbestos that can cause” the cell damage that leads to mesothelioma. *Id.* at 1307. He also opined that “[y]ou cannot go back and pick out portions of ... [asbestos] exposure” that do not “contribut[e] causally” to the development of mesothelioma. *Id.* at 1306-07. Dr. Brody did not, however, offer an opinion as to what caused Ms. Warren’s disease. *Id.* at 1311.

Dr. Kindler. Dr. Hedy Kindler, one of Ms. Warren’s treating physicians, was designated as a fact witness. R11,929 at 2722. Having found that cross-examination opened the door, however, the district court allowed her to offer her opinion as to what caused Ms. Warren’s disease. She stated: “It is my firm belief that Mrs. Warren’s

mesothelioma was caused by her extensive asbestos exposure.” R11,929 at 2762-63.

B. Dr. Hammar’s Testimony Was Insufficient to Support a Finding that Calidria Caused Ms. Warren’s Illness.

As noted above, Dr. Hammar testified to the undisputed fact that Ms. Warren was exposed to *amphibole* asbestos in sufficient quantities to cause her disease. R11,928 at 2659, 2664-65. In keeping with the scientific literature, he testified that “even one day’s exposure” to either amosite or crocidolite (both amphibole fibers) “could be sufficient to produce ... a peritoneal mesothelioma.” *Id.* at 2597. His speculation that Union Carbide’s very different Calidria *also* caused her peritoneal mesothelioma fell short of the requisite standard for proving medical causation because he admitted that he had *no evidence* that Calidria causes peritoneal mesothelioma and that his every-fiber-hurts theory was merely an *unproven hypothesis*, and he established only that it was a scientific *possibility* that chrysotile asbestos causes peritoneal mesothelioma. Any of these deficiencies would suffice to invalidate a verdict based on his testimony.

1. Dr. Hammar did not opine to a reasonable degree of medical certainty that Calidria causes peritoneal mesothelioma.

It seems axiomatic: Since Calidria is the only Union Carbide product that is alleged to have caused Ms. Warren's disease, her case against Union Carbide depends on proof that *Calidria* caused her disease. Proof that *other* sorts of chrysotile can cause the disease simply will not do, for Calidria is different from chrysotile in two ways that are directly relevant to causation.⁶

The first difference is size. While chrysotile fibers are shorter than amphibole fibers, Calidria fibers are especially small. R11,932 at 3753-54. Calidria fibers are typically just 5 microns in length, even smaller than a red blood cell. R11,933 at 3827. In comparison, other forms of chrysotile fibers not typically used in joint compound "are quite long. They have 30-, 40-, 50-, hundred-micron-length fibers in there that are respirable and go all the way down." *Id.* at 3844. The difference matters, because macrophages, the agents that clean alien objects out of the body can "eat" the average Calidria fiber, but not

⁶This particular point applies to Union Carbide alone, for Georgia-Pacific and Hamilton both made tape joint compound with other forms of chrysotile, R11,935 at 4264; R11,936 at 4527-28, whereas Union Carbide supplied those manufacturers with nothing but Calidria.

longer fibers. *Id.* at 3828. The average macrophage is 10 microns long. *Id.* Thus, a macrophage is big enough to devour a Calidria fiber, but may not be able to eat other types of chrysotile fibers. As one defense expert explained, “[t]he length of the fiber that carries risk for disease is the long fibers, ten, 20, 30 microns or longer.” *Id.* at 3862. Given these realities Ms. Warren could not prove that tiny Calidria fibers caused her disease by presenting proof about larger types of chrysotile, any more than one could prove that cats kill by presenting proof about lions and other felines.

Second, other forms of chrysotile are sometimes contaminated by (even larger) amphibole fibers—which *have* been reliably linked to peritoneal mesothelioma—whereas Calidria is not. R11,933 at 3931; R11,936 at 4541-42. In this regard, trying to prove that Calidria caused Ms. Warren’s peritoneal mesothelioma by referring only to evidence relating to chrysotile generally is like trying to prove that Diet Coke caused a patient’s obesity when the patient always spiked the Coke with molasses.

Given these two differences, Union Carbide cannot be held liable unless a medical expert provided evidence that Calidria specifically

caused Ms. Warren’s peritoneal mesothelioma. Dr. Hammar did not even try.

Dr. Hammar was unable to identify any “documented case” of mesothelioma where “the only asbestos [the person] [was] exposed to was the Calidria chrysotile asbestos.” R11,928 at 2645. He agreed that he in fact “d[id] not have *any* evidence [he] could rely on to say that exposure to Calidria asbestos causes mesothelioma in humans.” *Id.* at 2644 (emphasis added). When asked whether he could “testify to a reasonable degree of medical certainty at this point that [asbestos] fibers less than five microns in length”—the typical length of a Calidria fiber—can “cause mesothelioma in humans,” he responded, “I don’t know.” *Id.* at 2642-43.

“I don’t know” falls far short of the level of evidence necessary to prove to a medical certainty that Calidria probably caused Ms. Warren’s disease.

2. Dr. Hammar had insufficient evidence to support his conclusion that chrysotile asbestos caused Ms. Warren’s disease.

Regarding chrysotile asbestos more generally, Dr. Hammar built his opinion on a quicksand foundation of unproven hypotheses. In a

feat of understatement, he conceded that there is “little proof” that chrysotile asbestos causes peritoneal mesothelioma. R11,928 at 2596-97; *see also id.* at 2589-90. He agreed that “epidemiology studies”—which compare the incidence of the disease among people exposed to an alleged causal agent to the incidence of disease among those not exposed—“are the best way to establish causation.” *Id.* at 2599. He acknowledged, however, that there are no such studies “that have shown that chrysotile by itself causes peritoneal mesothelioma.” *Id.* Dr. Hammar agreed that because of this paucity of proof, “the predominant position expressed in the literature is that chrysotile **has not been established as a cause** of peritoneal mesothelioma.” *Id.* at 2577 (emphasis added).

Dr. Hammar had no choice but to make these concessions in light of the overwhelming evidence that chrysotile does *not* cause peritoneal mesothelioma. As one defense expert confirmed—without contradiction from Dr. Hammar or any other witness—the “common view” in the literature is that chrysotile asbestos “has a low potency for causation of pleural mesothelioma and apparently ... does not cause peritoneal mesothelioma.” R11,932 at 3749. The epidemiological studies on people

who were exposed primarily to chrysotile asbestos differ vastly from the studies of those who were exposed primarily to amphibole asbestos. In the single largest epidemiological study involving people who were exposed primarily to chrysotile asbestos—36,000 people in all—there was only one case of peritoneal mesothelioma. R11,933 at 3801, 3805. As a defense witness explained—again, without contradiction from Dr. Hammar or anyone else—that “[o]ne [case] doesn’t prove any kind of fact. It could be a random event, particularly for a tumor that has a significant background incidence or idiopathic or spontaneous rate.... One [incident] does not create strength of association.” *Id.* at 3805-06. In another study of “11,000 chrysotile miners and millers from Canada, no peritoneal mesotheliomas have been reported.” R11,927 at 2220.

On the basis of this overwhelming evidence, two defense experts testified definitively that the smaller chrysotile fiber “carries no risk for causing mesothelioma, and, in fact, it doesn’t really carry risk for causing any asbestos-related diseases.” R11,932 at 3753-54. One was Dr. James Crapo, a medical doctor specializing in lung disease, R11,932 at 3732, who had spent 10 to 15 years studying whether chrysotile asbestos generally, and Calidria specifically, is as dangerous to human

health as various types of amphibole asbestos, *id.* at 3734-36. The other was Dr. Victor Roggli, a medical doctor specializing in pathology, with a particular focus on lung and asbestos-related diseases. R11,927 at 2202-03. He testified that “if you look at the scientific literature overall, ... there’s no convincing evidence that chrysotile causes or contributes to peritoneal mesothelioma.” *Id.* at 2209. As Dr. Crapo explained:

[C]hrysotile is not very durable. Its half life in the body is about ... 90 days ... which would mean if a hundred ... fibers get to the lower lung, 50 are gone in 90 days Four or five years later, they’re gone [T]he chrysotile fiber structure is one that lets the cells of the body attack it and weaken its structure and then pull it apart and make it break up [C]hrysotile simply doesn’t have the durability to migrate into the pleura and remain there as a long fiber, or to the peritoneum When you look at those two surfaces, people who have studied that ... only rarely find a long [chrysotile] fiber [W]hat they really find is a lot of little teeny short fibers, the ones that don’t cause disease.

R11,933 at 3844-45.

Dr. Hammar was, of course, free to contradict the established medical wisdom—but only based upon evidence. Lacking epidemiological evidence of causation—or any other reliable evidence—Dr. Hammar offered nothing but a series of pronouncements, all of which contained the seeds of their own destruction. He observed that “there ha[ve] now been 20 cases of peritoneal mesothelioma where the

statement has been that chrysotile only was the type of exposure to asbestos they had.” R11,928 at 2586. But he conceded that 20 isolated cases proved nothing: “[Y]ou would have to know more information”—information that neither he nor any other witness furnished—to draw conclusions about probable causation from those case reports. *Id.* at 2630. The reason, he explained, was that every single one of those cases involved “possible to probable amphibole exposure,” because, among other possible sources of amphibole exposure, some types of chrysotile asbestos (unlike Calidria) are contaminated by amphibole fibers. *Id.* at 2630-31; *see also id.* at 2601. As he understood, these isolated cases are infected by the same Diet Coke fallacy.

Dr. Hammar’s three-step hypothesis as to why chrysotile might cause peritoneal mesothelioma, *supra* at 50, was similarly insufficient. The analysis culminated with the question, “why would you think that you could exclude [chrysotile] as a *possibility*?” *Id.* at 2590 (emphasis added). Giving this rhetorical question the most generous spin, it amounts to nothing more than an assertion that one cannot rule out the “possibility” that chrysotile causes peritoneal mesothelioma. That is nowhere near the requisite level of medical certainty needed to

establish that chrysotile asbestos *probably* causes the disease. *See supra* at 46-47 (citing cases).

Dr. Hammar admitted that his opinion as to specific causation rested on similarly flimsy support. He based his conclusion that exposure to chrysotile asbestos in tape joint compound caused Ms. Warren's peritoneal mesothelioma solely on the notion that "each and every exposure to asbestos," no matter how small, "contributes [to] the development of mesothelioma." *Id.* at 2655; *see also id.* at 2527. But he conceded that exposure to chrysotile poses, at best, a "low" risk of disease. *Id.* at 2583. He also conceded that his "every exposure" theory is an "unproven hypothesis" that is "not something that's written in any textbook." *Id.* at 2655.

In the end, Dr. Hammar's conclusions were utterly unreliable for reasons that were well summarized by a defense expert: He "ignore[d] the epidemiology studies that examine the occurrence of peritoneal mesothelioma in populations exposed to chrysotile asbestos," and based his opinion instead on "a few [nonepidemiological] studies ... from the extensive literature" that "agree with his views on highly selective aspects of the purported relationship between chrysotile asbestos and

peritoneal mesothelioma.” R5473. In short, “Dr. Hammar’s assertion that he agrees with some other authors and disagrees with others is not a scientifically acceptable way to settle such a scientific controversy or to provide the court with [a] methodologically validated opinion.”

R5470. Similarly, while case reports “may be used ... to suggest a hypothetical link between an exposure and a disease,” they “provide no scientific test of a causal hypothesis” and therefore “cannot be the methodological basis for making claims about general causation.”

R5465; *see also* R5470.

In light of the paucity of evidence supporting his conclusion, Dr. Hammar’s testimony was not even admissible under Rule 702, which prohibits expert testimony unless “the scientific, technical, or other principles or methods underlying the testimony meet a threshold showing that they (i) are reliable, (ii) are based upon sufficient facts or data, and (iii) have been reliably applied to the facts of the case.” Utah R. Evid. 702; *see State v. Rimmasch*, 775 P.2d 388, 397 (Utah 1989); *Norris*, 397 F.3d at 882 (noting that “epidemiology is the best evidence of general causation,” court holds that the challenged expert testimony was inadmissible because it conflicted with “the body of epidemiology

largely find[ing] no association between” the relevant disease and its alleged cause); *Raynor v. Merrell Pharm. Inc.*, 104 F.3d 1371, 1375 (D.C. Cir. 1997) (it is not “methodologically sound to draw an inference” regarding causation “from chemical structure, *in vivo* animal studies, and *in vitro* studies, when epidemiological evidence is to the contrary”); *Butler v. Union Carbide Corp.*, 712 S.E.2d 537, 540 (Ga. Ct. App. 2011) (affirming exclusion of pathologist’s testimony because his “any exposure” theory was “essentially untestable and had not been tested”).

But even if the testimony was admissible, it was insufficient to support a jury verdict on causation. Appellate courts have vacated verdicts based on similar testimony. The Sixth Circuit, for example, confronted a case where an expert opined, like Dr. Hammar, that “[e]ach of [plaintiff’s] exposures to asbestos ... to a reasonable degree of medical certainty [was] a substantial factor to his development of mesothelioma” because “[t]he medical and scientific community cannot exclude any specific asbestos exposure as to [plaintiff’s] mesothelioma.” *Bartel v. John Crane, Inc.*, 316 F. Supp. 2d 603, 611 (N.D. Ohio 2004). The Sixth Circuit held that this every-fiber-hurts testimony could not support medical causation, noting that “[t]he requirement ... is that the

plaintiff make a showing with respect to *each* defendant that the defendant’s product was a substantial factor in plaintiff’s injury.” *Lindstrom v. A-C Prod. Liability Trust*, 424 F.3d 488, 493 (6th Cir. 2005) (emphasis in original). The court reasoned that “where a plaintiff relies on proof of exposure to establish that a product was a substantial factor in causing injury, the plaintiff must show ‘a high enough level of exposure that an inference that the asbestos was a substantial factor in the injury is more than conjectural.’” *Id.* at 492. In other words, proof of “substantial exposure is required for a finding that a product was a substantial factor in causing injury.” *Id.*

The Texas Supreme Court reached the same conclusion in a case where an expert, like Dr. Hammar, “testified that every asbestos exposure contributes to asbestosis.” *Borg-Warner Corp. v. Flores*, 232 S.W.3d 765, 771 (Tex. 2007). The court held that “without more, this testimony is insufficient to establish that the [defendant’s] brake pads were a substantial factor in causing [the plaintiff’s] disease.” *Id.*

That is particularly true here, given Dr. Hammar’s concession that Ms. Warren was exposed to amphibole asbestos—which indisputably can cause peritoneal mesothelioma, even at low doses—in

an amount that was more than sufficient to cause her disease by itself. R11,928 at 2597, 2659, 2664-65. Under these facts, the jury was not free to assume, based on Dr. Hammar's unsupported assertion, that every exposure, no matter how small, was a substantial factor in causing her disease.

Regarding general causation, the Fifth Circuit, too, found that testimony was insufficient as a matter of law where the plaintiff's expert, like Dr. Hammar, "conceded that he was not aware of any [epidemiological] studies" that "found a statistically significant increased risk between exposure to [defendant's product] and [plaintiff's injury]." *Brock v. Merrell Dow Pharm. Inc.*, 874 F.2d 307, 312 (5th Cir. 1989) ("*Brock I*"). The court noted that "we do not hold that epidemiologic proof is a necessary element in all toxic tort cases," but found that "it is certainly a very important element." *Id.* at 313. It held that "the [plaintiffs'] failure to present statistically significant epidemiological proof" was "fatal" in that case because "the only other evidence [was] in the form of animal studies of questionable applicability to humans." *Id.* (as modified by *Brock v. Merrell Dow Pharm. Inc.*, 884 F.2d 166, 167 (5th Cir. 1989) ("*Brock II*")); *see also*

Raynor, 104 F.3d at 1376 (holding that because it was contrary to the relevant epidemiological evidence, “even if the expert testimony were admissible ... it is unlikely that a jury could reasonably find it sufficient to show causation”). The same conclusion applies with even greater force here, because (as discussed immediately below) the only other testimony linking chrysotile to peritoneal mesothelioma was based not even on animals, but on petri dishes.

C. Dr. Brody and Dr. Kindler Did Not Fill Any of the Gaps.

Dr. Brody and Dr. Kindler did not fill in the gaps that Dr. Hammar left.

Dr. Brody. Dr. Brody is not a medical doctor and did not “offer medical opinions about causation from that perspective.” R11,921 at 1311. As important, he did not opine on the specific cause of Ms. Warren’s peritoneal mesothelioma—which is an essential part of Plaintiff’s claim. *Id.* His conclusions regarding *general* causation, drawn from petri dish studies, suffered from the same two flaws as Dr. Hammar’s.

First, Dr. Brody acknowledged that Calidria-specific animal inhalation studies he performed with Defendants’ expert, Dr. Crapo, did

not result in any cases of mesothelioma and in fact indicated that the fiber produces less “fibrosis” (scarring) in the lungs than other forms of chrysotile. *Id.* at 1321-22. Nevertheless, when asked whether Calidria could “cause mesothelioma in certain people who get that disease if they have exposure to it, with or without other exposure,” he responded “I don’t see why not. Let’s put it that way.” *Id.* at 1308. His only stated basis for that comment was the idea that “it’s chrysotile, and it can do all the things chrysotile asbestos can do.” *Id.*

In other words, Dr. Brody simply assumed, contrary to available data and without employing any scientific methodology whatsoever, that Calidria’s effect on the human body would be the same as all other forms of chrysotile asbestos. His testimony regarding Calidria accordingly was unreliable and inadmissible, *see supra* 61-62, and in any event insufficient to support a finding, to a reasonable degree of medical certainty, that Calidria causes peritoneal mesothelioma. On this basis, alone, his opinion must be rejected as proof of causation against Union Carbide.

Second, even as to chrysotile fibers generally, Dr. Brody did not fill in Dr. Hammar’s gaps. Dr. Brody agreed that the *in vitro* analysis

on which he based his conclusions ranks at the very bottom of the hierarchy of studies used to evaluate the causes of human disease. R11,921 at 1316-17. He acknowledged that fibers known to be noncarcinogenic, such as fiberglass and rock wool, produce the same “cancer in a dish” response as various asbestos fibers. *Id.* at 1326. He made Union Carbide’s point, when he conceded: “[T]hat’s why you have to do the other studies [T]his is the way you get to see what happens at the molecular level, and then you have to do the other levels of studies [epidemiological and animal inhalation] to know if these changes actually go on and correlate with the development of cancer” in actual human beings. *Id.*; *see also id.* at 1359.

By his own admission, then, Dr. Brody did not have sufficient evidence to reliably opine that exposure to chrysotile asbestos causes peritoneal mesothelioma not just in petri dishes, but in people. The district court should not have allowed him to testify to that conclusion at all. *See Raynor*, 104 F.3d at 1375-76. But even if the evidence was barely admissible, it does not come close to establishing that chrysotile asbestos probably causes peritoneal mesothelioma.

Dr. Brody offered the naked assertion that exposure to chrysotile asbestos “can cause peritoneal mesothelioma in some exposed people.” R11,921 at 1266. But his testimony established only “biological plausibility”—the notion that “in terms of cell biology, all forms of asbestos can cause all forms of ... mesothelioma.” *Id.* at 1372. He agreed “absolutely” that “the jury ... can safely assume that unless the other types of scientific evidence match up with the results of [the] asbestos fiber in the dish, they can ... say ‘Okay. That’s not correct.’” *Id.* at 1326. No such evidence was ever presented. Accordingly, it was incumbent on the court to say, in the first instance, “Okay. That’s not correct.”

Dr. Kindler. This accidental expert did not fill in any of the gaps left by Drs. Hammer and Brody, because a “belief,” however “firm,” is no substitute for scientific evidence. And particularly in light of Dr. Hammar’s testimony that Ms. Warren was exposed to enough amphibole for that type of asbestos to be the sole cause of her disease, R11,928 at 2597, 2659, 2664-65, Dr. Kindler’s generic testimony about “asbestos” is irrelevant to the causation questions at issue here.

* * *

In sum, even putting them all together, Ms. Warren’s experts did not provide the medical testimony necessary to support the conclusion that Calidria caused Ms. Warren’s peritoneal mesothelioma, or even that any sort of chrysotile asbestos could have caused it. Union Carbide is entitled to judgment as a matter of law.

III. THE DISTRICT COURT CORRECTLY ALLOWED THE JURY TO APPORTION FAULT UNDER THE LIABILITY REFORM ACT.

Since Plaintiff’s appeal relates only to damages, this Court need not reach that appeal if it reverses the liability judgment. Plaintiff’s appeal seeks to set the clock back on Utah law by 25 years. Until 1986, tort defendants in this state confronted radically different liability rules. Defendants were subject to joint and several liability, which meant that “each defendant was liable to the plaintiff for the full amount of the plaintiff’s damages” no matter how little fault was attributable to that defendant. *Stephens v. Henderson*, 741 P.2d 952, 953 (Utah 1987). Concluding that joint and several liability was unfair, the legislature enacted “Liability Reform” in 1986. The Liability Reform Act (“LRA”), now codified at Utah Code § 78B-5-817 *et seq.*, replaced joint and several liability with a comparative fault regime:

“No defendant is liable to any person seeking recovery for any amount in excess of the proportion of fault attributed to that defendant.” Utah Code § 78B-5-818(3). Under the LRA, “[t]he trial court ... shall ... direct the jury ... to find separate special verdicts determining the total amount of damages sustained and the percentage or proportion of fault attributable to each person seeking recovery, to each defendant, to any person immune from suit, and to any other person ... for whom there is a factual and legal basis to allocate fault.” *Id.* § 78B-5-819(1).

On the eve of trial, three years after this case was filed, Ms. Warren argued for the first time that the LRA did not apply to this case—that Defendants were subject to long-rejected joint and several liability—because she was exposed to asbestos before 1986. R8910-11; R9431-32. The district court rejected that argument both on the ground that Ms. Warren had waived it and on the merits. These rulings were correct.

A. The District Court Correctly Held that Ms. Warren Waived Her Challenge by Waiting Until the Eve of Trial to Raise It.

A case where liability will be apportioned is a different animal from a case where the defendant may have to pay the entire judgment

regardless of its degree of fault. A defendant, of course, usually seeks to defeat liability entirely. But the typical defendant pursues a different strategy depending upon whether or not it can shift liability—here, drastically—by demonstrating that others are more blameworthy. The defendant develops different facts, employs different deposition strategies, presents different witnesses, engages different experts to offer different opinions, coordinates differently with codefendants, and confronts a different settlement calculus. The district court understood that it would have been horribly unfair to allow plaintiff to shift the playing field so seismically on the eve of trial.

Since the legislature enacted the LRA, litigants in asbestos lawsuits—plaintiffs and defendants, alike—have taken it as a given that the LRA’s apportionment rules apply to anyone whose disease manifested itself after 1986. That includes cases like this one—and like virtually every asbestos case—where the plaintiff’s alleged exposure occurred long before 1986.

This understanding is captured in a Case Management Order (“CMO”) that has governed the procedure in all asbestos cases filed in the Third Judicial District for over a decade. The CMO, first adopted in

2001, specifically cites “§ 78-37-41, Utah Code Ann.,” which is a provision of the LRA, and directs that “consistent with” that provision, “defendant will notify plaintiffs’ counsel ... of the identity of those non-party defendants it intends to place on the jury verdict form for purposes of the allocation of fault.” CMO No. 1 at 3-4, *In re Asbestos Litig.*, No. 010900863 AS (Utah 3rd Dist. May 7, 2001) (Ad. S).

Nowhere does the CMO so much as suggest that there could be a scenario in which a plaintiff could claim that a disease arising after 1986 would nevertheless be subject to the old—and long-since abandoned—rule of joint and several liability.

Notably, the CMO was “the product of negotiation among all interested parties,” including Plaintiff’s counsel, Eisenberg & Gilchrist, also known as Brayton Purcell—“one of the primary law firms handling asbestos-related litigation in Utah.” *Kilpatrick v. Bullough Abatement, Inc.*, 2008 UT 82, ¶¶ 2, 4, 199 P.3d 957. The Second Amended CMO, entered in September 2003, expressly declares that the provisions apply to “*all* cases filed by Brayton Purcell ... in which a claim for money damages is based upon allegations of exposure to products containing

asbestos.” Second Am. CMO No. 1 at 1, *In re Asbestos Litig.*, No. 010900863 AS (Utah 3rd Dist. Sept. 30, 2003) (emphasis added) (Ad. T).

Pursuant to the CMO requirement, the joint Attorneys’ Planning Report in this case indicated that “Defendants shall identify non-party defendants to whom they shall seek to allocate fault on or before 90 days before trial.” R149. Defendants, including Union Carbide, subsequently filed eighteen Notices of Intent to Apportion Fault to Non-Parties. R226-28; R508-12; R521-23; R524-28; R564-69; R576-79; R649-51; R661-64; R892-901; R905-10; R911-18; R929-38; R972-74; R1496-504; R6884-95; 6896-907; R6908-14; R7254-56. Fourteen of the eighteen were filed in 2008, when the case was still in discovery. Yet, Ms. Warren never objected to any of the numerous notices, nor so much as hinted that the various Defendants should prepare a defense based on a theory of joint and several liability. Indeed, in a motion to exclude certain evidence related to causation filed several months prior to trial, Ms. Warren specifically asserted that “the principles of comparative negligence, under which a party is responsible for his or her share of negligence and the harm caused thereby,” applied to this case. R7292.

As the district court understood, the time to contest the universal understanding of the applicability of the LRA was at the start of the case. R9520. To ensure the orderly progress of the case, Ms. Warren should have “attempt[ed] to amend” the CMO for this case. *Id.* She should have objected to any of those eighteen apportionment notices. *Id.* At a minimum, she should have raised the objection to apportionment while discovery was still ongoing. Lying in wait for nearly three years and then springing the vastly greater liability on Defendants on the eve of trial was nothing short of an ambush. By then, Defendants had long since coordinated and conducted their defense based on the uncontested understanding that the LRA would apply. It was too late for them to adjust their strategy and far too late to make such a radical change in the rules governing the case. The district court acted well within its ample discretion in refusing to countenance such a blatant ambush.

Plaintiff contends, without citation to authority, that there was no obligation to speak up any earlier because “[t]he law imposes no time limit for requesting a court to apply the correct law.” OB 21. By that logic, Plaintiff could have waited until after the verdict to seek to

change the long-standing practice. Courts always have the authority to prevent a party from disrupting the orderly course of litigation and to “manage their own affairs so as to achieve the orderly and expeditious disposition of cases.” *Link v. Wabash R.R. Co.*, 370 U.S. 626, 630-31 (1962); *see also, e.g., Stevens v. Kirk*, No. 85 Civ. 3372, 1987 WL 12840, at *4 (S.D.N.Y. June 17, 1987) (“In the interest of promoting the orderly process of litigation and judicial economy, the Court declines to consider this belated attempt by plaintiff to remedy his initial failure to challenge the evidence presented by defendants.”); *Galaxy Ventures, LLC v. Rosenblum*, No. CIV 03-1236, 2005 WL 5988690, at *7 (D.N.M. July 21, 2005) (“exercis[ing] ... discretion” to grant defendants’ motion to exclude a supplemental expert report because of the “evident prejudice ... and disruption of the orderly process of litigation,” especially given that “the information included in [the] supplemental report could have been disclosed initially”).

Plaintiff also asserts “it would have been futile for plaintiff to have raised the issue at any earlier time in the proceedings.” OB 21.

Plaintiff almost certainly is correct that the district court would have rejected the argument on the merits (as it ended up doing), because it is

so clearly wrong. But the likelihood that a court will reject an objection is no excuse for failing to raise it, affording the opposing parties and the court an opportunity to address it and to adjust their strategy, if need be, in light of the objection. *See O’Dea v. Olea*, 2009 UT 46, ¶ 19, 217 P.3d 704 (“[T]o properly preserve an issue at the district court ... the issue must be raised in a *timely* fashion” (emphasis added) (citation omitted)); *Warne v. Warne*, 2011 UT 69, ¶ 20 (argument “intentionally withheld ... to gain a tactical advantage” could be considered untimely).

B. The LRA Applies to Plaintiff’s Claims Because the Cause of Action Arose When Ms. Warren Was Diagnosed in 2007.

The district court also was correct in rejecting Plaintiff’s position on the merits. The parties agree that the LRA’s limitation on liability may be applied only prospectively, not retroactively. OB 10. The dispute here is over what it means to apply a limitation on liability retroactively. For 25 years, litigants and courts have assumed that the LRA applies to any case where the injury (here, the disease) manifests itself after the statute’s 1986 passage. Plaintiff has not cited a single case where a court or litigant suggested otherwise. In keeping with this settled practice, the district court correctly held that the determinative

event for retroactivity is when the “cause of action arose,” and that it is perfectly permissible for a legislature to limit liability right up until an injury manifests itself as symptoms of a disease or condition. R9520.

The Utah Supreme Court has spoken directly to the question, holding that the application of the LRA would have impermissible retroactive effect only if it “change[d] the substantive law in effect **when plaintiff’s cause of action arose.**” *Stephens*, 741 P.2d at 954 (emphasis added); *see also Carlucci v. Utah State Indus. Comm’n*, 725 P.2d 1335, 1336 (Utah 1986) (“The general rule is that the law establishing substantive rights and liabilities **when a cause of action arises** ... governs the resolution of the dispute.” (emphasis added)); *Russell v. Superior Court*, 185 Cal. App. 3d 810, 820-21 (Cal. App. 1986) (defining retroactivity as the “application of [a tort reform statute] to **causes of action which accrued** prior to its effective date” (emphasis added) (cited by *Stephens*, 741 P.2d at 954)). There is no dispute that “Plaintiff’s cause of action arose” in 2007—when Ms. Warren was diagnosed with peritoneal mesothelioma. OB 13. That was more than two decades after the 1986 passage of the LRA, R9520, which means that applying the LRA here is not a retroactive constraint on liability.

Plaintiff runs headlong into *Stephens* in arguing that it does not matter when the cause of action accrued. What matters, according to Plaintiff, is when Ms. Warren claims to have first been *exposed* to asbestos, which was at birth. OB 12-14. In support of that position, Plaintiff invokes a stray line in *Stephens* noting that “the [precursor] Comparative Negligence Act was the substantive law defining, in part, the relationship between the parties at the time of the accident.” OB 12 (quoting *Stephens*, 741 P.2d at 954). Plaintiff argues that this reference to “the time of the accident” means that the relevant question is not (as the *Stephens* Court consistently says) when “the cause of action arose,” but rather when the events eventually leading up to the ultimate injury occurred.

The Utah Supreme Court did not, however, contradict itself. *Stephens* involved a trip-and-fall at a roller rink in 1984. As Plaintiff acknowledges, “the ‘accident’ and the date the ‘cause of action arose’ were the same in *Stephens*.” OB 12. That being the case, the reference to the “accident” was obviously not intended to override the holding that the relevant question for purposes of determining whether to apply a limitation on liability is when the “cause of action arose.” The same

was true in the one out-of-state district court decision on which Plaintiff also relies. OB 13 (citing *United States Fid. & Guar. Co. v. Park City Corp.*, 397 F. Supp. 411 (D. Or. 1973)).

In focusing on the date of the exposure, Plaintiff asks this Court to repeal the LRA for just about any asbestos claim (which will almost never allege a recent exposure) and large swaths of torts, particularly toxic torts, in defiance of the legislature's plain intention. In so doing, Plaintiff overlooks the whole point behind the rule against retroactive application of a statute like the LRA. Retroactive application of a statute is problematic because it alters the substantive legal framework under which litigants' rights accrued and on which litigants previously had relied in determining *litigation* strategy—including the decision whether to file suit in the first place. *See Stephens*, 741 P.2d at 954 (“To allow the substantive law in a case to be changed at any time up until entry of final judgment would allow a plaintiff to be effectively **deprived of a cause of action.**” (emphasis added)). But as the *Stephens* Court recognized, there are no such reliance interests at stake in a case until a cause of action actually arises—until the plaintiff is able to file suit and, in latent disease cases like this one, knows it. No

one can complain that a legislature pulled the rug out from under him when it makes a change at a time when the plaintiff does not even imagine that he may one day have a cause of action. “Diagnosis or discovery of actual injury or symptoms is the earliest point at which ... plaintiff has been placed on actual notice of his injuries such that he might contemplate suit and place reasonable reliance on the rules and laws governing recovery of damages for his compensable injuries.” *Buttram v. Owens-Corning Fiberglas Corp.*, 941 P.2d 71, 82 (Cal. 1997).

Plaintiff’s position also runs headlong into the Utah Supreme Court’s holding that asbestos exposure, by itself, does *not* constitute a legally cognizable injury. That is because the risk of developing an injury is not itself an actionable injury. “[E]ven though there exists a possibility, even a probability, of future harm, it is not enough to sustain a claim.” *Seale v. Gowans*, 923 P.2d 1361, 1364 (Utah 1996) (latent cancer case). Rather, “a plaintiff must wait until some harm manifests itself” in the form of a diagnosed illness. *Id.*; *see also Hansen v. Mountain Fuel Supply Co.*, 858 P.2d 970, 979 (Utah 1993) (“[T]he potential plaintiff is not harmed until the onset of the actual illness [and a]t that time, he or she can bring an action for actual injury.”)

(asbestos case). Indeed, even where, unlike here, a plaintiff seeks medical monitoring costs only, “[m]ere exposure to an allegedly harmful substance ... is not enough for recovery.” *Hansen*, 858 P.2d at 978; see *Payne v. Myers*, 743 P.2d 186, 189-90 (Utah 1987) (law in effect at the time of birth, rather than at the time of removal of an IUD, applied because even though “conception enhances the *possibility* of injury,” “had Mrs. Payne miscarried or had Michael been born with no genetic defect, there would still have been no cause of action for wrongful birth”) (emphasis added)).

For this reason, contrary to Plaintiff’s assertion (at 11-12), the Utah Supreme Court’s statement that it must apply “the law as it existed at the time of the injury,” *Klatt v. Thomas*, 788 P.2d 510, 511 n.1 (Utah 1990), supports, rather than contradicts, the *Stephens* Court’s holding that the line between retroactive and prospective application of the LRA is drawn based on when a plaintiff’s cause of action arose. By definition, the law recognizes no injury other than a legally cognizable injury. And it is on the occurrence of an injury cognizable under Utah law—which mere exposure to asbestos is not—that a cause of action arises.

The evidence in this case confirms the wisdom of the rule that mere exposure is not a legally cognizable injury. Ms. Warren’s own expert confirmed that the vast majority of people who inhale asbestos, even in large doses, will *never* develop mesothelioma. R11,921 at 1284-85. That is true even for those people whose cells are “damaged” in some way by asbestos fibers, because of the human body’s natural defense mechanisms. R11,921 at 1275-76 (“[M]ost aneuploid cells with DNA damage ... die ... because we have a set of genes that sends cells with genetic damage down a death pathway.”). There is no actual injury until the disease manifests itself.

Accordingly, in this case, while Plaintiff sues to hold Defendants accountable for their actions before 1986—and Defendants’ conduct is to be judged, as Plaintiff notes (at 14-16), pursuant to contemporaneous legal standards—no remediable injury occurred until Ms. Warren was diagnosed with peritoneal mesothelioma in 2007. *See Landgraf v. USI Film Prods.*, 511 U.S. 244, 269 (1994) (“A statute does not operate ‘retrospectively’ merely because it is applied in a case arising from conduct antedating the statute’s enactment.”). The parties to this lawsuit had no substantive legal rights and relationships between

them—and certainly had no litigation-related reliance interests—until then. The LRA was indisputably in effect by the time the action arose. The district court’s application of the LRA therefore was entirely proper.

Finding no support in Utah, Plaintiff resorts to Washington law. OB 17-20. The district court recognized that Washington’s stance is entirely irrelevant here, because Washington law contradicts Utah law on this very question. R9520. In *Mavroudis v. Pittsburgh-Corning Corp.*, 935 P.2d 684 (Wash. Ct. App. 1997), on which Plaintiff relies heavily, the court stated that under Washington law “a cause of action ‘arose’ when the plaintiff was exposed to asbestos, not when he discovered his injury.” *Id.* at 690. That is the exact opposite of Utah law holding that “a cause of action arises or accrues ... when the plaintiff could have first maintained the action to a successful conclusion.” *Valley Colour, Inc. v. Beuchert Builders, Inc.*, 944 P.2d 361, 364 (Utah 1997).

Much more relevant, then, are the cases from numerous other states that subscribe to Utah’s view that a law limiting liability is properly applied if it was in effect at the time the plaintiff’s cause of

action arose, and that a cause of action based on an asbestos-related latent disease arises when the plaintiff is diagnosed or otherwise becomes aware of her illness. *See, e.g., Bernier v. Raymark Indus., Inc.*, 516 A.2d 534, 543 (Maine 1986); *Buttram*, 941 P.2d at 73; *In re Johns-Manville Asbestos Litig.*, Nos. 84 C 5526 et al., 1987 WL 11334, at *1 (N.D. Ill. May 22, 1987).

* * *

For both these reasons, the district court was correct to apportion liability in keeping with fault. If this Court were to rule otherwise, however, it should reverse the judgment and order a new trial. Union Carbide would have pursued a different trial strategy had it known that the liability rules would be so drastically altered. It is entitled an opportunity to adapt its trial strategy to this new and drastically different set of rules.

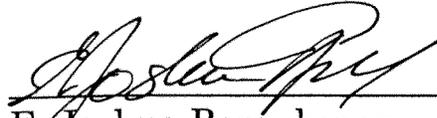
CONCLUSION

This court should reverse the district court's judgment in favor of Plaintiff and render judgment in favor of Union Carbide, or at a minimum reverse and remand for a new trial. If this Court affirms as to liability, however, it should also affirm the district court's application of the Liability Reform Act.

Dated: February 29, 2012

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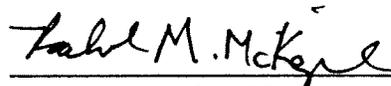
CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitation of Utah R. App. P. 24(g)(5)(B) because it contains 16,404 words, excluding the parts of the brief exempted by Utah R. App. P. 24(f)(1)(B).

2. This brief complies with the typeface requirements of Utah R. App. P. 27(b) because it has been prepared in a proportionally spaced typeface using Microsoft Office Word 2007 in 14-point Century Schoolbook.

Dated: February 29, 2012

Respectfully submitted,



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CERTIFICATE OF SERVICE

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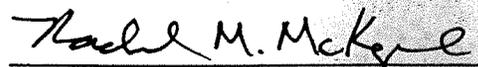
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