

CERTIFIED FOR PUBLICATION

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND APPELLATE DISTRICT

DIVISION FOUR

RICHARD F. MORAN III,

Plaintiff and Appellant,

v.

FOSTER WHEELER ENERGY
CORPORATION,

Defendant and Respondent.

B261682

(Los Angeles County
Super. Ct. No. JCCP 4674
BC466180)

APPEAL from a judgment of the Superior Court of Los Angeles County, H. Chester Horn, Judge. Reversed and remanded.

Law Offices of Anthony E. Vieira, Anthony E. Vieira, Campbell W. Filmer; Rose, Klein & Marias and David A. Rosen for Plaintiff and Appellant.

Hugo Parker, Edward R. Hugo, Shaghig D. Agopian; Sedgwick and Kirk C. Jenkins for Defendant and Respondent.

Plaintiff Richard Moran was a salesman for Kaiser Refractories (Kaiser) from 1968 to 1980. His clients were primarily large industrial facilities. About 25 percent of what he sold was asbestos-containing insulation, including “refractory” (heat-resistant material used to insulate the interior metal surface of industrial boilers and heaters). Moran was frequently involved in the removal and installation of insulation and refractory at his clients’ facilities. In 2011, he was diagnosed with mesothelioma, a cancer uniquely associated with exposure to asbestos.

Moran sued a number of manufacturers and suppliers of asbestos-containing products, including defendant Foster Wheeler Energy Corporation (Foster Wheeler), a manufacturer of industrial boilers insulated with refractory, alleging causes of action for, among other things, strict liability and negligence/failure to warn. At trial, the jury returned a verdict for Foster Wheeler (the sole remaining defendant by the time the verdict was reached), finding that Moran was a “sophisticated user” of refractory materials used in boilers and heaters, and that therefore Foster Wheeler had no duty to warn Moran of the danger associated with exposure to asbestos contained in refractory. (See *Johnson v. American Standard, Inc.* (2008) 43 Cal.4th 56 (*Johnson*) [adopting the sophisticated user defense for failure to warn claims based in negligence and strict liability].)

Moran appeals from the judgment, contending that the evidence is insufficient to support the verdict, because substantial evidence fails to prove, as required for the sophisticated user defense, that by virtue of his position, training, experience, knowledge, or skill, he knew or should have known of the health risks posed by working with or near the asbestos-containing products he sold and which were used in Foster Wheeler boilers from 1968 to 1980. We agree, and therefore reverse the judgment and remand for a new trial.

BACKGROUND

Because the issues on appeal revolve around the sophisticated user defense, we focus on the evidence relevant to those issues.

I. *Plaintiff's Case-in-Chief*

A. *Moran's Employment*

Moran began working for Kaiser in Detroit in 1966. From 1968 to 1980, he was a salesman for Kaiser, primarily in Southern California. He sold most of Kaiser's line of over 2,000 products, 25 percent of which were refractory and insulation products, including Kaiser's asbestos-containing Vee-Block insulation. Most of Moran's clients owned or operated very large industrial facilities, such as oil refineries, foundries, cement plants and steel mills.

Moran was Kaiser's top salesman for each of 12 years between 1968 and 1980, with average sales of \$8–10 million per year of refractory product. He tried to be indispensable to his clients and learn everything about their business needs, his competitors' products, and what was being said about Kaiser's products. To that end, Moran was personally present to supervise both the removal and installation of refractory lining at his clients' facilities. Although work crews did the actual removal and installation, he supervised from no further than 10 feet away.

Between 1968 and 1980, Moran spent 75 percent of his time overseeing the installation and removal of refractory at his clients' facilities. By the end of a work day, after supervising refractory removal and/or installations, Moran would be blowing the dust out of his nose, and the safety gear his client companies required

him to wear (safety glasses, boots, hot jacket and hard hat) would be “white as . . . paper.”

Moran considered himself “somewhat of an expert” in the processes of installing and removing refractory product in industrial boilers and heaters. But he was “certainly not” an expert regarding the material composition of refractory products or the health hazards of asbestos. For instance, Kaiser provided Moran information about the degree of heat its products could withstand and certain other characteristics, but did not reveal proprietary information about the products’ specific composition. As a result, when he worked for Kaiser, Moran did not know which refractory products he sold contained asbestos as a component.

B. Moran’s Asbestos Exposure From Foster Wheeler Boilers

Foster Wheeler manufactured about half of the industrial boilers at Moran’s clients’ facilities. The boilers were massive: about 40–50 feet tall and 25–45 feet wide, and contained tons of insulating material. Moran would supervise the removal and installation of refractory from inside the boilers themselves, in an enclosed environment. From 1968 to 1980, he did so once a week. Until 1973, the block insulation refractory installed in Foster Wheeler boilers contained asbestos; until about 1980, the block insulation refractory removed from such boilers contained asbestos.

A complete removal of refractory from a Foster Wheeler boiler took about three days for a crew of several workers. Working inside the boiler, the workers used pneumatic jackhammers and shovels to break the refractory (typically 15–18 inches thick) into small chunks, which released large amounts of visible dust into an enclosed area. Moran inhaled that dust as it was created and was unable to see further than six-to-eight feet ahead when refractory was being removed. A

complete installation of refractory took about five days. During that process workers cut bricks of asbestos-laden block insulation with hacksaws, generating asbestos dust which Moran inhaled.

According to Philip Templin, an industrial hygienist and certified asbestos consultant who is a frequent expert witness in asbestos cases, Moran's level of asbestos exposure was "the most severe that [Templin had] ever encountered."

C. Industry Standards

Templin testified that by 1968, Moran's clients (on whose premises Moran worked), his employer (Kaiser), and Foster Wheeler (who manufactured boilers on which he worked) knew or should have known that inhaling asbestos dust is a health hazard, and should have warned Moran. As Templin explained, in scientific, medical and industrial communities, it was well known by 1930 that inhaling asbestos dust could cause asbestosis (a scarring of the lungs), by 1955 that inhaling asbestos dust could cause lung cancer, and by 1960 that inhaling asbestos dust could cause mesothelioma. Early on, the American Conference of Governmental Industrial Hygienists issued standards on the acceptable level of asbestos exposure to prevent asbestosis, and later cancer, expressed as a "Threshold Limit Value," or "TLV."¹ However, the occurrence of asbestos related illnesses in the workplace continued to rise.

To deal with this rising danger, beginning in 1971, the federal Occupational Safety and Health Administration (OSHA) promulgated national limits on industrial exposure to asbestos, expressed as a "PEL", or "permissible exposure

¹ The TLV was expressed in terms of particles per cubic foot of air. The level first promulgated to protect against asbestosis was 5 million particles per cubic foot of air. It was later reduced significantly.

limit.”² Similarly, in 1972, and again in 1976, the National Institute of Occupational Safety and Health (NIOSH), an organization of scientists, issued “criteria documents” recommending limits on exposure. According to Templin, the goal of these standards is to keep industrial exposure to asbestos “as low as reasonably achievable.” The required preventative measures for all diseases caused by asbestos exposure are the same: eliminate asbestos from the breathing air either by protective measures in the workplace such as using a product that does not contain asbestos, or, as a last resort, by using breathing protection for the people working in the asbestos-laden environment.

There is no known safe level of occupational exposure to prevent asbestos-related cancer, particularly mesothelioma. In Templin’s opinion, the risk of Moran developing mesothelioma could have been sharply diminished by sharply reducing his exposure to asbestos, using control technologies in the workplace and providing personal protective equipment. However, in any given case, the level of risk of contracting mesothelioma “is almost impossible to define because . . . it depends a lot on the concentration of exposure, the duration of the exposure, and just almost infinite number of interpersonal [*sic*] variables . . . , our health status changes as we age, for instance. [¶] So all we can really say as industrial hygienists, or medical people even, is that with increasing quantities [of asbestos exposure] and times of exposure, the risk of disease increases.”

² A “PEL” is measured in fibers per cubic centimeter of air. It is expressed in two ways: a time-weighted, eight-hour average exposure level not to be exceeded over that period, and a ceiling limit exposure level that is not to be exceeded by any exposure at any time. The initial standard was five fibers per cubic centimeter of air as the eight-hour time-weighted average, and a ceiling limit of ten fibers per cubic centimeters of air. Over time, the PEL has consistently been reduced.

D. Foster Wheeler's Failure to Warn

Moran introduced prior testimony by Foster Wheeler's corporate representative, Richard Johnson. Johnson testified that in 1940, Foster Wheeler knew asbestos products were being used in products it manufactured. From 1963 to at least 1971, Foster Wheeler's Insulation Standard Catalogue (Catalogue) specified products to be used in its boilers which contained asbestos, including insulation and refractory.

In 1968, Foster Wheeler became aware that exposure to insulation materials containing asbestos was hazardous to human health. That year, Johnson and many other executives from the insulation industry (as well representatives from labor unions, government agencies and academic institutions) attended a conference regarding asbestos hazards at the New York Academy of Scientists. Afterwards, Johnson sent a memorandum to Foster Wheeler's management and construction division summarizing what he learned, including the lengthy latency period of at least 20 years for disease related to asbestos inhalation. Johnson's memo also notified Foster Wheeler management that "mounting clinical evidence and public health pressures [had] culminated in the conclusion that insulation dusts are a contributing factor to current increases in deaths due to mesothelioma." Johnson recommended that the specifications for fibrous insulation in Foster Wheeler's Catalogue include the TLV recommended at the conference (a maximum of 5 million particles of dust per cubic foot).

Foster Wheeler never responded to Johnson's memorandum. It did not include a recommended TLV or any other warning in its Catalogue about the health risks posed by exposure to asbestos dust. Indeed, even though as early as 1964 such a warning appeared on the packaging for Johns-Manville's "thermobestos" pipe covering, a product recommended in the Catalogue for use in

Foster Wheeler boilers, Foster Wheeler was still recommending the product six years later, in late 1971, without any warning in its specifications.

E. Evidence As To Moran's Knowledge

According to Templin, there was a disparity between what the scientific, medical and industrial communities knew about the dangers of asbestos, and what the people actually working with it knew. Moran testified that it was not until 1989 that he learned breathing asbestos fibers was hazardous to his health and could cause him to develop mesothelioma. Before then, although he spoke with many people whose work involved using asbestos, including clients, the hazards of working with asbestos were never discussed. He never saw a warning posted on any Foster Wheeler boiler stating that asbestos products were dangerous. Between 1968 and 1980, he received no instruction or training on how to identify asbestos or how to avoid inhaling asbestos dust, and no information about the risk to his health posed by working around asbestos products.

Moran testified that he had been required to attend safety courses before being allowed on the premises of any plant at which he supervised refractory rip-outs or installations. In those courses, he was instructed to wear certain safety gear (a specific type of boot, hard hat, safety glasses and hot jacket). But he was not instructed on the risks posed by exposure to asbestos, and was not instructed to wear a respirator. Also, the crews that performed refractory removal and installations did not wear respirators. Not until 1989, when Moran first learned that exposure to asbestos was dangerous, did he begin wearing a respirator.

Each Foster Wheeler boiler on which Moran worked had its own set of blueprints and manufacturing specifications, which Moran obtained from the client's facility. The materials approved for use in the boiler were listed in the

Foster Wheeler's Catalogue, known colloquially as the "Bible of Boilers." Moran was required to refer to the Catalogue to identify the refractory and insulation products Foster Wheeler approved for use in its boilers. Although the Catalogue specified which products were approved, it did not provide instructions on how to use particular refractory products, and did not contain warnings against breathing the asbestos dust created during a refractory rip-out or installation. Further, although Moran saw the word "asbestos" in Foster Wheeler's manufacturing specifications and Catalogue, the word by itself meant nothing to him regarding a potential health hazard.

F. Warnings On Refractory Product Packaging

Three of the products approved by the Catalogue for use in Foster Wheeler boilers were Johns-Manville's "thermobestos," Owens-Corning's "KAYLO" and Kaiser's "Vee-block." Beginning in 1964, Johns-Manville began placing a warning label on the side of cartons containing its "thermobestos" pipe covering.³ Beginning in 1966, Owens-Corning put similar labels on its cartons of "KAYLO." Until 1973, these were the only two products Moran might have been exposed to whose packaging contained warnings. In June of 1972, OSHA enacted a federal regulation requiring manufacturers of friable asbestos-containing products to use a

³ The label stated: "Caution: This product contains asbestos fiber. Inhalation of asbestos in excessive quantities over long periods of time may be harmful. If dust is created when this product is handled, avoid breathing the dust. If adequate ventilation control is not possible, wear respirators approved by the U.S. Bureau of Mines for pneumoconiosis-producing dusts." The term "pneumoconiosis" means dust present in the lungs.

caution label.⁴ Beginning in 1973, Kaiser placed a warning on packaging for some of its refractory products.

Moran's testimony suggested that he never observed these warnings on the packaging of these products. When his clients placed orders for refractory products, Moran did not deliver those orders himself. Rather, the products were shipped directly to a client's plant. By the time Moran arrived at the jobsite and saw the product, it was covered only in shrink-wrap; all boxes and other packaging material had been removed.

Templin did not find it "surprising," that Moran had never seen the warnings given that Moran testified at his deposition the insulation products were removed from their boxes before installation and, apparently, he was not asked if he saw the packaging itself.

G. OSHA Workplace Regulations

Templin testified that in June 1972, OSHA regulations required employers to protect employees from asbestos exposure. The regulations mandated that employers attempt to reduce asbestos levels by using engineering controls and better work practices. Employees' exposure was to be limited to specified levels, and respiratory protection had to be provided if those levels could not be achieved. The regulations required that employers monitor asbestos levels in the air at six-month intervals. The monitoring was to be performed by placing a PEL device in the employees' breathing zone that would suck air into a cartridge, which would then be examined to calculate the level of asbestos exposure. The regulations also required that warning signs be posted on the premises, that training be provided on

⁴ The required label stated: "Caution: contains asbestos. Avoid creating dust. Breathing asbestos dust can cause serious bodily harm."

the hazards of asbestos, that separate lockers be provided for work and street clothing, that employees shower before going home, and that employees' health be monitored.

According to Templin, from 1972 onward, these mandatory regulations applied to all of Moran's clients. Moran claimed to have been unaware of any air monitoring conducted by any client or other precautionary measures. Templin conceded that from Moran's testimony, it might appear that none of his clients complied with the OSHA regulations. However, Templin agreed that it was unlikely that all of Moran's clients – large companies like Kaiser Steel, Texaco, Mobil and Chevron failed to comply. Nonetheless, Templin did not find Moran's testimony surprising. As he explained, Moran's clients' facilities were vast in size, with many employees and a great deal of activity. Templin had visited several of the facilities; some steel mills Moran serviced exceeded a mile in length, and an oil refinery might occupy several square miles. Thus, the air sampling (as well as other precautions) might be taking place at locations other than where Moran was working. It was also unlikely Moran would recognize the PEL cassette-size, air testing devices, which "are not really that . . . conspicuous." Further, as Templin noted, Moran testified in his deposition that after a work day supervising a refractory rip-out or installation, he would have to use compressed air to remove all the dust from his clothing so he did not bring it into his car, thus suggesting that Moran was not required to shower or change clothes before leaving the facility.

II. *Foster Wheeler's Defense*

Foster Wheeler cross-examined the witnesses Moran called during his case-in-chief, but did not put on any witnesses of its own. Foster Wheeler rested its case immediately after Moran rested his.

III. *Jury Instructions*

Before closing arguments, the trial court met with counsel to discuss jury instructions and a special verdict form. Over Moran's objection, the court determined the jury would be instructed with the following modified version of pattern jury instruction CACI No. 1244, regarding Foster Wheeler's affirmative defense that Moran was a "sophisticated user":⁵

"[Foster Wheeler] claims that they are not responsible for any harm to [Moran] based on the failure to warn because [Moran] is a sophisticated user of refractory materials used in boilers and heaters.

"To succeed on this defense, [Foster Wheeler] must prove that at the time of the exposure to Mr. Moran, because of his particular position, training, experience, knowledge, or skill, he knew or should have known of the risk, harm, or danger posed by the asbestos in the refractory materials used in the boilers and heaters."⁶

The same modification to CACI No. 1244 was reflected in a parallel question on the Special Verdict Form. In returning its verdict in favor of Foster

⁵ In its then (and current) unmodified form, the pattern instruction read as follows: "[Name of defendant] claims that [he/she/it] is not responsible for any harm to [name of plaintiff] based on a failure to warn because [name of plaintiff] is a sophisticated user of the [product]. To succeed on this defense, [name of defendant] must prove that, at the time of the injury, [name of plaintiff], because of [his/her] particular position, training, experience, knowledge, or skill, knew or should have known of the [product]'s risk, harm, or danger."

⁶ The court appears inadvertently to have used the phrase "at the time of the exposure to Mr. Moran," rather than "at the time of his exposure to asbestos," a mistake with which Moran does not take issue.

Wheeler, the jury answered that question by finding that Moran was a sophisticated user.

DISCUSSION

I. *Sufficiency of the Evidence*

Moran contends that the evidence was insufficient to support the jury's finding that he was a sophisticated user. As we explain, we agree.

A. *The Sophisticated User Defense*

Under the sophisticated user defense adopted by our Supreme Court in *Johnson, supra*, 43 Cal.4th 56, a manufacturer is exempt from its general duty to warn users of its product's dangerous propensities if the plaintiff, by virtue of his or her specialized training or profession, knows or should know about the product's inherent hazards. (*Id.* at pp. 65–67, 71; *Collin v. CalPortland Co.* (2014) 228 Cal.App.4th 582, 601 (*Collin*)). “Because . . . sophisticated users are charged with knowing the particular product's dangers, the failure to warn about those dangers is not the legal cause of any harm that product may cause. [Citation.] The rationale supporting the defense is that ‘the failure to provide warnings about risks already known to a sophisticated purchaser usually is not a proximate cause of harm resulting from those risks suffered by the buyer's employees or downstream purchasers.’ [Citation.] This is because the user's knowledge of the dangers is the equivalent of prior notice. [Citation.]” (*Johnson, supra*, 43 Cal.4th at p. 65.)

As explained in *Johnson*, the determination whether the sophisticated user defense applies is objective, and operates as follows:

“A manufacturer is not liable to a sophisticated user of its product for failure to warn of a risk, harm, or danger, if the sophisticated user knew or should have known of that risk, harm, or danger. It would be nearly impossible for

a manufacturer to predict or determine whether a given user or member of the sophisticated group actually has knowledge of the dangers because of the infinite number of user idiosyncrasies. For example, given users may have misread their training manuals, failed to study the information in those manuals, or simply have forgotten what they were taught. However, individuals who represent that they are trained or are members of a sophisticated group of users are saying to the world that they possess the level of knowledge and skill associated with that class. If they do not actually possess that knowledge and skill, that fact should not give rise to liability on the part of the manufacturer.

“Under the ‘should have known’ standard there will be some users who were actually unaware of the dangers. However, the same could be said of the currently accepted obvious danger rule; obvious dangers are obvious to most, but are not obvious to absolutely everyone. The obvious danger rule is an objective test, and the courts do not inquire into the user’s subjective knowledge in such a case. In other words, even if a user was truly unaware of a product’s hazards, that fact is irrelevant if the danger was objectively obvious. [Citations.] Thus, under the sophisticated user defense, the inquiry focuses on whether the plaintiff knew, or should have known, of the particular risk of harm from the product giving rise to the injury.” (*Johnson, supra*, 43 Cal.4th at p. 71.)

The sophisticated user defense applies to all failure to warn claims, whether rooted in negligence or strict liability. (*Johnson, supra*, 43 Cal.4th at pp. 71–72; *Chavez v. Glock, Inc.* (2012) 207 Cal.App.4th 1283, 1313–1314, 1323 (*Chavez*)). A user’s sophistication is determined at the time of his or her injury. (*Johnson, supra*, 43 Cal.4th at pp. 73–74.) “The timeline focuses on the general population of sophisticated users and conforms to the defense’s purpose to eliminate any duty to warn when the expected user population is generally aware of the risk at issue.” (*Id.* at p. 74.)

B. *Evolution of the Sophisticated User Defense*

Key aspects of the sophisticated user defense are evolving in varying fact situations, in particular, the precise nature and extent of the risk that must be known by or is imputed to the sophisticated user. To understand that evolution, as relevant to the issue whether the evidence was sufficient to support the defense here, it is instructive to consider the discussion of the defense as applied to the evidence in the leading cases: *Johnson*, which is the seminal decision, and certain court of appeal decisions rendered in its wake: *Chavez, supra*, 207 Cal.App.4th 1283, *Scott v. Ford Motor Co.* (2014) 224 Cal.App.4th 1492 (*Scott*), *Collin, supra*, 228 Cal.App.4th 582, and *Buckner v. Milwaukee Electric Tool Corp.* (2013) 222 Cal.App.4th 522 (*Buckner*).

1. *Johnson*

In *Johnson, supra*, 43 Cal.4th 56, the Supreme Court affirmed the trial court's grant of summary judgment based on the sophisticated user defense. The plaintiff was a heating, ventilation, and air conditioning (HVAC) technician who alleged that he suffered pulmonary fibrosis caused by exposure to phosgene gas, created by decomposition of R-22 (a refrigerant commonly used in large air conditioning systems) when exposed to high heat. As here relevant, the plaintiff sued the defendant manufacturer of an evaporator on which he worked in 2002 for failure to warn of the risks of exposure to R-22, alleging that the evaporator contained R-22, and that he was exposed to phosgene gas when he "brazed" (welded) the evaporator's refrigerator lines. (*Id.* at pp. 61-62.)

The evidence showed that the plaintiff had completed a formal, year-long course on HVAC systems, and had received the highest certification an HVAC technician can receive from the California Environmental Protection Agency.

(*Johnson, supra*, 43 Cal.4th at pp. 61–62.) Only technicians with that certification could purchase R-22, the danger of which was stated on material safety data sheets (MSDS) provided to plaintiff whenever he bought R-22. Plaintiff admitted receiving and sometimes reading the data sheets. (*Ibid.*) A defense expert declared it was widely known among HVAC technicians that phosgene gas was a toxic byproduct of heating R-22. Plaintiff’s expert opined that as of 1965, when defendant manufactured the evaporator at issue, HVAC technicians knew or should have known about the risks of phosgene gas. (*Id.* at p. 74.)

On this undisputed evidence, the court concluded that defendant established the sophisticated user defense as a matter of law. (*Johnson, supra*, 43 Cal.4th at p. 75.) According to the court, the evidence showed that the danger created by exposing R-22 to high heat was well known within the community of HVAC technicians to which plaintiff belonged, and he could reasonably be expected to know of such hazard. (*Id.* at pp. 73–74.)

2. *Chavez*

In *Chavez, supra*, 207 Cal.App.4th 1283, the court affirmed a grant of summary adjudication to a gun manufacturer on negligence and failure to warn claims, concluding that, as a matter of law, the plaintiff, a police officer and former Marine who was injured when his child shot him with plaintiff’s service revolver, was a sophisticated user of the firearm. (*Id.* at pp. 1292-1293, 1313–1314, 1323.) Plaintiff acknowledged having received extensive training and experience in the correct use of the pistol, a Glock 21, during his four years as a Marine, and 10 years as a police officer. (*Id.* at p. 1313.) He had undergone firearms training in both positions, began carrying a Glock 21 as a service weapon several years before the accident after passing a transition course, and had read the gun’s instruction

manual. (*Ibid.*) Plaintiff had used holsters since 1996, always used an inside-the-belt holster, and carried the Glock 21 in such a holster hundreds of times before the incident. (*Ibid.*)

Plaintiff argued the manufacturer was liable for failure to warn about the Glock 21's light trigger pull and that the pistol "should only be used with specific holsters that restrict access to the trigger guard." (*Chavez, supra*, 207 Cal.App.4th at p. 1299.) The court disagreed, concluding that in light of plaintiff's extensive training and use of firearms generally, and his several years' experience with the Glock 21 specifically and the holster in which he chose to carry it, plaintiff was "fully familiar" with the risks associated with using the pistol and holster, specifically the light trigger pull of the Glock 21 and its lack of safety devices. (*Id.* at pp. 1312-1314.)

3. *Scott*

In *Scott, supra*, 224 Cal.App.4th 1492, the court affirmed the trial court's denial of defendant Ford's JNOV motion, concluding that substantial evidence supported the jury's rejection of the sophisticated user defense. For over 40 years, beginning in the mid-1960's, the plaintiff in *Scott* worked as an auto mechanic and was exposed to asbestos in clutch and brake repair. After he developed mesothelioma, he sued Ford, alleging that he contracted the disease from exposure to asbestos in Ford products and that Ford failed to warn of the dangers of such exposure. (*Id.* at pp. 1496-1497.)

In finding substantial evidence supported the jury's refusal to apply the sophisticated user defense, the court explained that under *Johnson*, "the constructive knowledge of sophisticated users is to be measured at 'the time of the plaintiff's injury.' [Citation.] Because of the cumulative effects of asbestos

exposure, it is impossible to pinpoint a single time at which Scott was ‘injured’ by asbestos. As plaintiffs’ expert testified, the time between exposure to asbestos and the appearance of the disease can be many decades, and earlier exposure is more likely to contribute to disease than later exposure. In the absence of evidence suggesting otherwise, Scott must be presumed to have been in the process of being injured by asbestos throughout his career, and the exposure that occurred earlier in his career weighs more heavily. As a result, in order for the sophisticated user doctrine to provide a complete defense to plaintiffs’ claims, Ford was required to show that service station owners knew or should have known of the risks of vehicle repair exposure to asbestos from the mid-1960’s on.” (*Scott, supra*, 224 Cal.App.4th at pp. 1500-1501, fn. omitted.)

However, the court found Ford’s proof deficient to make such a showing. First, the trial evidence showed that the plaintiff owned service stations for many years, belonged to an automotive trade association, had undergone professional training, and was certified to repair various automotive systems. (*Scott, supra*, 224 Cal.App.4th at pp. 1500-1501.) But, unlike *Johnson*, “[t]here was no evidence that [plaintiff], or others like him, were instructed in the claimed risks” “associated with professional asbestos exposure throughout the period of [plaintiff’s] exposure.” (*Id.* at p. 1500.) Second, based on the trial evidence, “the earliest possible dates from which constructive knowledge of [the risks of exposure to automotive asbestos] could be attributed to the general community of service station owners are 1973, when the first brake manufacturer placed a warning on its cartons and Chrysler warned in its service manual, or 1975, at the time of the NIOSH publications.” (*Ibid.*) Yet, the court suggested, even this evidence was insufficient: “it could easily be argued that these scattered examples of notice are

not evidence of the type of industry recognition necessary to impute knowledge to individual participants under the sophisticated user doctrine.” (*Ibid.*)

Third, Ford argued ““that, throughout the relevant time period, there was widely disseminated publicly available information that brakes contained asbestos, that asbestos presented health risks, and that brakes therefore might present a potential risk.”” (*Scott, supra*, 224 Cal.App.4th at p. 1501.) The court noted, however, that Ford’s argument imputed constructive knowledge of a speculative risk – a risk that “might” exist. The argument was faulty on the evidence: while there may have been a scientific consensus as of 1966 that exposure to asbestos in insulation was dangerous, there was no such consensus regarding exposure to automotive asbestos. More important, the argument was based on a misunderstanding of *Johnson*. “Ford bases its argument that sophisticated users should be deemed to have constructive knowledge of speculative dangers on the Supreme Court’s references . . . to users’ knowledge of the ‘potential’ dangers of a product. [Citation.] Most industrial dangers are, of course, ‘potential.’ Explosives are dangerous, but the danger is not realized—i.e., is ‘potential’—unless they are mishandled. The [Supreme Court’s] references to ‘potential’ dangers throughout the decision demonstrate it was referring to this type of known but contingent danger, rather than the unproven and merely speculative dangers to which Ford refers. For example, the court referred to the ‘potential hazards of [welding chemical] exposure,’ which were well known within the industry at the relevant time, and the ‘potential harms associated with firing a pellet gun,’ which the court deemed to be ‘obvious.’ [Citation.]” (*Id.* at p. 1501.)

4. *Collin*

In *Collin, supra*, 228 Cal.App.4th 582, the plaintiff alleged that he developed mesothelioma from exposure to asbestos in his construction work. He sued (among many other companies) the manufacturer of Transite, a type of asbestos cement pipe, as well as the manufacturer's alter ego, alleging various causes of action, including negligence and strict liability. (*Id.* at pp. 585, 586, 603.) On appeal from a grant of summary judgment, the court of appeal held that the defendants were not entitled to summary adjudication of the plaintiff's failure to warn claims based on the sophisticated user defense.

As the court explained, the defendants presented evidence that the plaintiff "worked in the construction trades beginning in 1954, and owned two construction businesses," that he "completed an apprenticeship in carpentry in 1963," that he "obtained a contractor's license from the California Contractors' State License Board in 1976," that he "received information from the contractors' board beginning in 1976 that working with or around asbestos-containing materials could be hazardous to one's health," and that "[d]uring the 1976 to 1980 period, [he] saw notices specific to asbestos posted at jobsites." (*Collin, supra*, 228 Cal.App.4th at p. 603.) However, this showing was insufficient to prove, as a matter of law, that the plaintiff was a sophisticated user. As the court explained: "[T]here is no evidence that [plaintiff] had specialized knowledge or training with regard to [defendants'] product, Transite. Unlike the certified HVAC technician in [*Johnson, supra*], there is no evidence that Loren ever received training or ever read an MSDS concerning Transite. There is also no expert testimony that Loren should have known of the risks or dangers associated with Transite because of his training or work experience. Loren did not recall ever seeing any warnings about the dangers of asbestos on any Transite. He said in response to a special

interrogatory asking when he first became aware that defendants' products contained asbestos that he was unaware of the dangers of asbestos associated with defendants' products. We cannot say from the evidence presented that the dangers of working with Transite were obvious at the time. [Citation.] [¶] [Defendants] fail to persuade us that they are entitled to summary adjudication as a matter of law based on the sophisticated user defense." (*Id.* at pp. 603-604.)

5. *Buckner*

The issue in *Buckner, supra*, 222 Cal.App.4th 522, was whether the trial court abused its discretion in granting a new trial based on the insufficiency of the evidence to prove the sophisticated user defense. The plaintiff was a maintenance worker who was injured when the bit on a power drill he was using bound in a piece of iron, causing the drill to counter rotate and twist his arm. (*Id.* at p. 527.) He sued the manufacturer for negligence and strict liability, alleging the tool could not safely be used without a side-handle, and that the manufacturer failed to adequately warn of that risk, either by placing a warning on the drill itself or in the operator's manual. (*Id.* at pp. 527–528.)⁷ The defendant contended, however, that the relevant risk was not that the drill could not be used safely without a side handle, but simply the general danger a drill bit might bind, causing the drill to counter rotate and twist the user's arm.

⁷ The drill came with a side handle, and its operating manual advised users to “[a]lways use a side handle for best control.” A label on the drill read: “WARNING / HIGH ROTATING FORCE / HOLD OR BRACE SECURELY TO PREVENT PERSONAL INJURY . . . READ SAFETY INSTRUCTIONS BEFORE OPERATING.” (*Buckner, supra*, 222 Cal.App.4th at p. 528.) Both the side handle and manual were lost before the incident. (*Ibid.*)

The court of appeal reasoned that “[b]ecause the sophisticated user's knowledge is essentially a substitute for a warning from the supplier of the product, in order for the defense to apply, the scope of knowledge of the sophisticated user must parallel the scope of the warning that would otherwise be required.” (*Buckner, supra*, 222 Cal.App.4th at p. 535.) Relying on decisions discussing the scope of warnings required of suppliers or manufacturers of dangerous products, the court “conclud[ed] the danger of which the sophisticated user must be aware in order to establish the defense is broader than that suggested by defendant. It is not enough that the user be aware of the danger that the drill may bind and counter rotate when it is used improperly or when the drill bit strikes an obstacle. In order to establish the defense, a manufacturer must demonstrate that sophisticated users of the product know what the risks are, including the degree of danger involved (i.e., the severity of the potential injury), and how to use the product to reduce or avoid the risks, to the extent that information is known to the manufacturer. Thus, in this case, defendant was required to prove sophisticated users know there is a danger the drill may bind and counter rotate, this may cause serious injury to the user, and the risk may be reduced or eliminated by proper use of a side handle.” (*Id.* at p. 536.)

The court agreed with trial court’s reasoning: “The trial court correctly determined the scope of knowledge a sophisticated user must have or be deemed to have in order for the defense to apply and the defendant to be excused from warning the user of the danger. The sophisticated user must know or be deemed to know not only the bare hazard posed by the product, but also the severity of the potential consequences, and any mitigation techniques of which the manufacturer is aware. All are necessary in order for the potential user to make an informed decision regarding whether and how to use the product. [¶] We conclude the trial

court did not abuse its discretion by granting a new trial. Defendant has not demonstrated that no reasonable finder of fact could have found that plaintiff was not a sophisticated user of the drill. [Citation.]” (*Buckner, supra*, 222 Cal.App.4th at p. 537.)

C. *In the Present Case, the Evidence Was Insufficient*

The foregoing decisions discussing the sophisticated user defense arise in varying procedural contexts of appellate review – affirmance of summary judgment (*Johnson*) and summary adjudication (*Chavez*), affirmance of a denial of summary adjudication (*Collin*), affirmance of a denial of JNOV (*Scott*), and affirmance of a grant of new trial (*Buckner*). None involved, as does the instant case, the issue whether a jury finding that the plaintiff was a sophisticated user was supported by substantial evidence. Of course, the standard of review in our procedural posture (as compared to these prior decisions) is more deferential to proof of the defense, and thus the criticisms of the evidence offered in the prior cases must be viewed in context of the issue raised, and do not necessarily establish the insufficiency of the evidence to support the jury’s finding that Moran was a sophisticated user. That said, the principles developed in these decisions are helpful in defining the parameters of the defense, and in fleshing out the deficiencies in Foster Wheeler’s proof. Mindful of the prior decisions, and aware of the procedural differences, we conclude that the evidence was insufficient to prove that Moran was a sophisticated user.

Our review of the evidence “begins and ends with the determination as to whether, on the entire record, there is substantial evidence, contradicted or uncontradicted, which will support the [jury’s] determination.” (*Bowers v. Bernards* (1984) 150 Cal.App.3d 870, 873-874, italics omitted (*Bowers*)). In

making that determination, we “view the evidence in the light most favorable to the prevailing party, giving it the benefit of every reasonable inference and resolving all conflicts in its favor.” (*Wilson v. County of Orange* (2009) 169 Cal.App.4th 1185, 1188.) However, substantial evidence is not “synonymous with ‘any’ evidence.” (*DiMartino v. City of Orinda* (2000) 80 Cal.App.4th 329, 336.) Rather, “substantial evidence” is evidence “of ponderable legal significance, . . . reasonable in nature, credible, and of solid value.” (*Bowers, supra*, 150 Cal.App.3d at p. 873, italics omitted.) Substantial evidence “may consist of inferences,” but the “inferences must be ‘a product of logic and reason’ and ‘must rest on the evidence.’” (*Kuhn v. Department of General Services* (1994) 22 Cal.App.4th 1627, 1633.) An inference based on “mere speculation or conjecture cannot support a finding” of substantial evidence. (*Ibid.*)

It is the jury’s duty to assess witness credibility and, so long as it has “reasonable” grounds to do so the jury may reject even uncontradicted testimony by a witness it does not find credible. (*Beck Development Co. v. Southern Pacific Transportation Co.* (1996) 44 Cal.App.4th 1160, 1204 (*Beck*)). That rejection, however, has the effect only “of removing that testimony from the evidentiary mix. Without more, the disregard or disbelief of the testimony of a witness is not affirmative evidence of a contrary conclusion.” (*Id.* at p. 1205.)

Here, viewing the entire record under this standard of review, it is apparent that substantial evidence does not support a finding that Moran was a sophisticated user. First, the evidence was undisputed concerning the relevant risk which Foster Wheeler had to prove Moran knew or reasonably should have known: the risk of developing cancer from exposure to asbestos dust while supervising the removal or installation of refractory in Foster Wheeler boilers beginning in 1968 onward. (*Scott, supra*, 224 Cal.App.4th at pp. 1500-1501 [given latency of asbestos-related

disease, sophisticated user defense requires defendant to prove that plaintiff's peer group knew or should have known of the risks of exposure from defendant's product beginning with the inception of exposure onward].)

However, Foster Wheeler presented no expert testimony tending to show that in the relevant time period persons in Moran's peer group – salesmen of industrial insulation, including those who supervised the removal and installation of refractory – were generally aware of that risk. (Cf. *Johnson, supra*, 43 Cal.4th at p. 74 [expert testimony established that HVAC technicians like plaintiff knew or should have known about the risks of phosgene gas].) Although expert testimony of peer group knowledge may not always be required to prove the sophisticated user defense, its absence here is notable. Moran testified that he did not hold himself out as an expert in the composition of the products he sold, that he had no actual knowledge regarding the risk of developing cancer from asbestos exposure, and that he had no training, experience, knowledge, or skill regarding that risk. That Moran had expertise regarding products to recommend to his clients in servicing Foster Wheeler boilers, and that he supervised the removal and installation of refractory in those boilers, does not, without more, mean that he or his peer group knew or should have known of the cancer risk from asbestos exposure. Without some evidence establishing the state of his peer group's knowledge, Moran's level of expertise in his profession did not create a reasonable inference that he knew or should have know about the risk of contracting cancer from exposure to asbestos dust in servicing Foster Wheeler boilers. (See *Collin, supra*, 228 Cal.App.4th at pp. 603-604 [noting defendant's failure establish, for summary adjudication, the "should have known" criterion of sophisticated user defense absent expert testimony regarding what persons similarly situated to plaintiff knew about the risk of working with defendant's product].)

Second, the general state of knowledge in science, medicine, and industry cannot be constructively imputed to Moran, without some explanation of how that knowledge (or relevant portions of it) was personally conveyed to him or generally conveyed to his peer group. (Cf. *Johnson, supra*, 47 Cal.4th at pp. 73-74 [danger of R-22 was stated on material safety data sheets provided when plaintiff bought R-22, and he admitted receiving and sometimes reading the data sheets]; *Chavez, supra*, 207 Cal.App.4th at pp. 1312-1314 [plaintiff had extensive training and experience in use of firearms generally, and several years' experience with the Glock 21 and its holster].)

Indeed, to the extent the evidence addressed the point, it suggested that the general state of knowledge – certainly the knowledge possessed by Foster Wheeler – did not filter down to persons in Moran's position. Templin testified that there was a disparity between what the scientific, medical and industrial communities knew about the dangers of asbestos, and what the people actually working with it, like Moran, knew. Foster Wheeler's conduct illustrated that disparity. As early as 1964, an asbestos warning appeared on the packaging for a product recommended by Foster Wheeler's Catalogue for use in its boilers (Johns-Manville's "thermobestos" pipe covering). By 1968, Foster Wheeler knew that inhaling dust from working with asbestos-containing products caused mesothelioma, and that the latency period of asbestos-related disease was at least 20 years. Yet, despite these developments, it failed to act on an internal 1968 recommendation to include in its Catalogue a warning that exposure to dust from working with its recommended products not exceed the then-accepted TLV, and, until 1971, continued to recommend use of thermobestos in its Catalogue with any warning whatsoever.

Third, Foster Wheeler relies on Templin's testimony regarding the June 1972 OSHA regulations, which required employers to engage in various

precautionary measures to protect employees from asbestos exposure. But the existence of the regulations, and inferences regarding industry compliance with them, were of little help in meeting Foster Wheeler's burden of proof. As we have explained, to establish the sophisticated user defense (given the latency of asbestos-related disease), Foster Wheeler was required to show that Moran knew or should have known of the cancer risk from exposure to asbestos in working with Foster Wheeler boilers at the inception of that exposure, in 1968 onward. Thus, the regulations enacted in 1972, three years after the inception of Moran's relevant exposure, and whatever level of knowledge that might be imputed to Moran or his peer group from them, could not establish that Moran knew, or should have known, of the relevant risk at the time of his injury. (*Collin, supra*, 228 Cal.App.4th at pp. 603-604; *Scott, supra*, 224 Cal.App.4th at pp. 1500-1501.)

Moreover, even considering the 1972 regulations as potential evidence supporting the sophisticated user defense, that evidence was quite weak. Moran testified, in substance, that he was not aware of any precautionary measures taken by his clients. As conceded by Templin, it was not likely that all of Moran's clients, including large ones like Kaiser Steel, Texaco, Mobil and Chevron, failed to comply. Nonetheless, Templin did not find Moran's testimony surprising, given the size of the facilities and the unobtrusiveness of air testing apparatus. This testimony was undisputed, and Foster Wheeler introduced no evidence concerning the timing and extent of industrial compliance with the regulations.

As we understand Foster Wheeler's argument, the chain of logic is as follows. Moran's clients (or at least the larger ones) *must* have complied with the OSHA regulations at some point after their 1972 implementation. Therefore, they *must* have implemented precautionary measures, such as air monitoring at six-month intervals, providing respiratory protection if specified air levels of asbestos

particles could not be achieved, posting warning signs on their premises, providing training on the hazards of asbestos, providing separate lockers for work and street clothes, and requiring that employees shower before going home. Further, given that Moran's clients (or some of them) *must* have implemented such measures, Moran and his peer group (salesmen of insulation products, including those who supervised removal and installation) *must* have been aware of the measures, and thus *must* have known (or at least should have known) that exposure to asbestos dust causes cancer.

But the chain of inferences falls under its own weight. Even if the jury disbelieved Moran's testimony that he was unaware of any precautionary measures taken by his clients, that disbelief did not reasonably suggest that he (or his peer group) knew or should have known of the cancer risk from asbestos exposure. (*Beck, supra*, 44 Cal.App.4th at p. 1205 [“[w]ithout more, the disregard or disbelief of the testimony of a witness is not affirmative evidence of a contrary conclusion”].) The only evidence regarding the state of compliance with the regulations was Templin's testimony that it was unlikely that all of Moran's clients, especially the larger ones, failed to comply. But this is not enough to establish the kind of specific, industry-wide knowledge sufficient to infer that those involved in the industry knew or should have known of the relevant risk. The sophisticated user defense “focuses on the general population of sophisticated users and conforms to the defense's purpose to eliminate any duty to warn when the expected user population is generally aware of the risk at issue.” (*Johnson, supra*, 43 Cal.4th at p. 74.) Absent some additional evidence tying the existence of the regulations and the extent of compliance to the general awareness of Moran and his peer group, the inferences Foster Wheeler seeks to make are entirely speculative.

Fourth, Foster Wheeler relies on the evidence that warnings appeared on the exterior packaging of certain products listed in Foster Wheeler's Catalogue for use in Foster Wheeler boilers: Johns-Manville's thermobestos pipe covering (beginning in 1964), Owens-Corning's KAYLO (beginning in 1966), and certain Kaiser products (beginning in 1973). Because Foster Wheeler had to prove Moran knew or should have known of the cancer risk from asbestos exposure beginning in 1968 onward (*Scott, supra*, 224 Cal.App.4th at pp. 1500-1501), the only relevant warnings to that issue are those on thermobestos pipe covering beginning in 1964, and Owens-Corning's KAYLO beginning in 1966. Moran denied seeing these (or any other warnings), and had a rational explanation for why: the exterior packaging was removed before he encountered the products at the site of the boiler in which they were to be installed.

As we have noted, disbelief of a witness's testimony does not, without more, prove facts denied by the witness. (*Beck, supra*, 44 Cal.App.4th at p. 1206.) Thus, even if Moran's testimony were disbelieved, that disbelief does not constitute evidence that Moran read the warnings, and thus had actual knowledge of them. More significantly, the warnings appeared on only two of the many products involved in Moran's work. Whether considered by themselves or in the context of all the other evidence, the warnings do not permit a reasonable inference that from 1968 onward, Moran's peer group knew or should have known the content of the warnings. (*Scott, supra*, 224 Cal.App.4th at p. 1500 [suggesting that such "scattered examples of notice are not evidence of the type of industry recognition necessary to impute knowledge to individual participants".]) Indeed, that such warnings were not more widespread indicates that "the industry consensus continued to form" regarding the level of risk and the need to warn persons like Moran and his peer group. (*Ibid.*) Thus, the paucity of warnings tends to prove

that constructive knowledge of the risk of cancer from asbestos dust cannot be imputed to Moran and his peer group. (See *Buckner, supra*, 222 Cal.App.4th at p. 534 [“focus of the defense . . . is whether the danger in question was so generally known within the trade or profession that a manufacturer should not have been expected to provide a warning specific to the group to which plaintiff belonged”].)

In short, Foster Wheeler relied largely on negative inferences from disbelief of Moran’s testimony to prove that Moran was a sophisticated user, and presented no affirmative evidence to prove that the cancer risk from exposure to asbestos dust was so generally known in Moran’s peer group that he knew or should have known that risk. Thus, the evidence was insufficient to support the sophisticated user defense.

DISPOSITION

The judgment is reversed. The matter is remanded for retrial. Moran shall recover his costs on appeal.⁸

CERTIFIED FOR PUBLICATION

WILLHITE, Acting P. J.

We concur:

MANELLA, J.

COLLINS, J.

⁸ Because we reverse the judgment on this ground, we do not discuss Moran's remaining contentions. However, any finding that the evidence was insufficient does not mean that Foster Wheeler may not rely on the sophisticated user defense on retrial, assuming it presents sufficient additional evidence to warrant an instruction on the defense.