Is Silica the Next Asbestos? An Analysis of Silica Litigation and the Sudden Resurgence of Silica Lawsuit Filings

Melissa Shapiro

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I. INTRODUCTION

During the Depression era, it was difficult to find work. With a nation in shambles, numerous Americans lost their jobs. Then, just as so many began to lose hope, the Union Carbide Corporation decided to drill a tunnel through Hawk's Nest Mountain in West Virginia, employing over 1,500 men to complete the project.1 Men were overjoyed at the opportunity to work so that they could feed their starving families. As the men began to drill, many began to experience severe shortness of breath. They acknowledged that the work environment was dusty, but their coughing and difficulty breathing seemed quite extreme. As the project continued, more and more men began to have trouble breathing, so much so that some stopped breathing all together. Men were dying as they worked, and they had no idea why.

The Union Carbide officials knew exactly why these men were dying.2 Hawk's Nest Mountain was composed almost entirely of silica, the most common mineral in the Earth's crust.3 When silica is ground into a fine dust, as it would be when it is drilled, the dust becomes respirable.4 When silica dust enters the lungs, nodules form and swell; as the swelling continues, it becomes difficult and eventually impossible to breathe, causing death.5 The swelling of the nodules is called silicosis and it was the cause of death for over 700 of the men that the Union Carbide Corporation employed to drill the tunnel through Hawk's Nest Mountain.6 These men were buried on the side of the road next to the mountain in unmarked graves.7

The most appalling part of the Hawk Nest tragedy was the Union Carbide officials knew of the great dangers that silica dust posed, yet did nothing to stop the workers from being exposed to the dust.8 The men were not given any protective materials to prevent inhalation of the silica particles.9 This disaster shocked the nation.10 In response to the devastation, some reforms were made to help reduce the risk of contracting silicosis.
among workers, but it remains unknown whether these reforms have ever been enough to prevent contraction of the disease completely.

Recently, two occupational disease experts, Gerald Markowitz and Mark Rosner, traveled to the town of Picher, Oklahoma.\(^\text{11}\) They characterized the town as “a symbol of one of the worst public health disasters of the Depression era.”\(^\text{12}\) The entire town, even the children, had some form of silicosis caused by the winds that blew silica particles from piles containing thousands of tons of silica flint that had been mined years before.\(^\text{13}\) Prior to this visit, the experts had viewed the problems that silicosis had caused as history, having deemed it a “disease of the past.”\(^\text{14}\) “The medical community and the professional literature had virtually stopped talking about [silicosis] by the late 1940’s,”\(^\text{15}\) sometime after the Hawk’s Nest Disaster. But after visiting Picher, Markowitz and Rosner realized that silicosis was still a problem affecting many Americans, and that there were new epidemics of the disease affecting industrial workers all over the country.\(^\text{16}\) According to Markowitz and Rosner, “because silicosis was hidden from public view, a national tragedy developed in which workers [in foundries, shipyards, and mines] were assured that they were safe from harm while many were [ ]being exposed and ultimately killed by exposure to silica dust.”\(^\text{17}\) By 1997, after the National Conference to Eliminate Silicosis and many invitations to act as expert witnesses for plaintiffs who had contracted silicosis, Markowitz and Rosner began to see a resurgence of the disease and with that, of course, came litigation.\(^\text{18}\)

The most interesting part about the litigation that has increased because of a resurgence of silicosis is the astounding amount of recent lawsuit filings. “U.S. Silica, one of the nation’s largest suppliers of industrial sand, said its pending claims skyrocketed to 22,000 as of June 30[, 2003] from 3,505 [in 2002].”\(^\text{19}\) Different theories exist on why silica litigation has experienced this sudden revitalization. One would assume that the litigation is the result of more people contracting silicosis, as Markowitz and Rosner posit. But some assert that the resurgence of silica lawsuit filings is not the

11. MARKOWITZ & DAVID ROSNER, DEADLY DUST, supra note 10, at xi.
12. Id.
13. Id. at xi-xii.
14. Id. at xiii.
15. Id.
16. Id. at xi.
result of a silicosis medical crisis but rather the result of greedy plaintiffs’ attorneys using tactics developed in asbestos litigation to earn large settlements from deep pocketed silica manufacturers and suppliers.\(^{20}\)

In a recent article, the Wall Street Journal suggested that the silica litigation resurgence is so great that it could rival the volume and character of asbestos litigation.\(^{21}\) This hypothesis is supported by the fact that “[a]sbestos attorneys are using the same legal machinery to generate silicosis claims, relying on a huge network of chest X-ray screeners, medical experts and local labor unions involved in asbestos litigation.”\(^{22}\) In the same article, the author acknowledged that silica “e]xposure rates in the workplace have remained unsettlingly high.”\(^{23}\) Yet despite silica exposure rates being too high, silicosis related deaths are decreasing.\(^{24}\) These conflicting facts force one to question the reasons behind the sudden resurgence of silica lawsuit filings. Is the increase in silica lawsuit filings due to unsafe working conditions that have existed for years or due to plaintiffs’ attorneys recent efforts to capitalize on this old occupational disease? Could silica litigation rival asbestos litigation? Is there a crisis in the workplace where employees are being overexposed to deadly silica dust? Or, is the increase in lawsuit filings simply asbestos attorneys using the same legal machinery to generate silicosis claims in order to make a quick buck?

This comment examines the possible answers to those questions while contemplating silica litigation and its potential to rival or surpass asbestos litigation’s volume and character. Part II summarizes silica litigation and the history of silicosis from the first cases of the disease to the present. Part III analyzes several courts’ decisions in silica lawsuits and the affirmative defenses that are relieving defendants of liability. Part IV briefly summarizes asbestos litigation. Part V considers plaintiffs’ and defense attorneys’ thoughts on the current state of silica litigation. Part VI compares silica litigation to asbestos litigation and explores the reasons why the two topics have recently been discussed together. Part VII concludes.

II. HISTORY OF SILICA LITIGATION

People are aware of the lung diseases that plague miners and asbestos workers, but silicosis, an equally deadly occupational lung disease, remains “virtually unknown.”\(^{25}\) Silica is the most abundant mineral in the earth’s surface, comprising ninety percent of the earth’s crust.\(^{26}\) The word silica is actually a general term that refers to a variety of different minerals such as

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20. See id.
21. Id.
22. Id.
23. Id.
24. Id. NIOSH reported that in 1968 there were 1,157 silica related deaths. Id. In 1990, there were 308 silica related deaths. Id. While in 1999, there were only 187. Id.
25. MARKOWITZ & DAVID ROSNER, DEADLY DUST, supra note 10, at 3.
quartz, sand, granite, cristobalite and tridymite. Only when silica is found in its crystalline form does it pose a threat to one’s health.

Silicosis is a disease that affects the lungs and is caused by the inhalation of crystalline silica when it is ground down into fine dust particles. Acute silicosis is the rarest and can cause death. It occurs when workers are exposed to high levels of silica for short periods of time.

Classified as an occupational disease, silicosis typically affects workers in “mining and quarrying; steel, iron and other metal foundries; abrasive blasting; construction; glass and ceramics; paint and pigments; and crushing stone.” Although silicosis typically only affects workers in certain trades, it has been recognized as a “widespread hazard” by the National Institute of Occupational Safety and Health (“NIOSH”), and exists as a huge threat to the American workforce.

When a person inhales silica particles, the particles become trapped inside a person’s lungs and swelling occurs. Over time, the swelling increases and nodules form on the lungs. As the swelling continues, it becomes very difficult to breathe and eventually a person can die from respiratory failure. The disease is completely preventable, but once a person contracts the disease, the only possible cure is a lung transplant, an extremely expensive and dangerous procedure. Silicosis is irreversible and

27. Linda Regis, Comment, From the Sandbox to Sandblasting: Regulation of Crystalline Silica, 17 PACE ENVTL. L. REV. 207, 208 (1999); Black, supra note 1.
30. Regis, supra note 27, at 209 n.9.
31. Id.
33. MARKOWITZ & ROSNER, DEADLY DUST, supra note 10, at 4.
Ordinarily, the lung and the nasal passages . . . are able to sift, eliminate, and throw off such foreign particles . . . . But inhalation of dust containing silica, while harmless as long as these processes adequately function, results, if these fail, in nature isolating these particles of silica by creating a tissue to wall them off . . . . The mere inhalation does not necessarily cause injury. Rather the injury is the cumulative effect of successive inhalations which cause such large amounts of silica to be deposited in the lungs as to overcome their normal functioning.
Golden v. Lerch Bros., 281 N.W. 249, 251 (Minn. 1938).
36. Id.
37. Labor Secretary Calls for an End to Silicosis, American Lung Association, Mine Safety & Health Administration, Nat’l Institute for Occupational Safety & Health, Occupational Safety & Health Administration, at http://www.cdc.gov/niosh/newslrel.html (Oct. 31, 1996) (last visited Apr. 2, 2005); Nat’l Institute for Occupational Safety & Health, NIOSH Issues Nationwide Alert on
the symptoms of the disease, which include shortness of breath and coughing, are ambiguous. Many doctors have mistakenly diagnosed silicosis as other types of respiratory diseases, such as asthma or bronchitis. It is controversial as to whether silica is a carcinogen, but silica was classified as a carcinogen by the International Agency for Research on Cancer.

"Silicosis is one of civilization’s oldest known occupational diseases," recognized as early as 460 B.C.E. In the Progressive era, working Americans began uniting to confront the problems arising over the great number of deaths and injuries occurring in heavy industry. Awareness of silicosis grew with the industrial age. In the early 1900’s, workers who were employed cutting granite in Vermont began to notice that every one of them was dying before the age of fifty. The union knew that the workers were suffering from the inhalation of granite dust on the job and dying from what would come to be known as silicosis.

Silicosis has been nationally recognized as a deadly disease since the 1930’s. Even before 1930, many knew of the serious hazards that inhalation of silica dust caused. But it was not until the 1930’s that the national press along with scientific and medical journals published articles that recognized silicosis as a national problem that posed a threat to millions of Americans working in dusty trades. Lawsuits began to be brought against industry suppliers and employers. Relatives of workers who died


41. Regis, supra note 27, at 207.


43. Id. The disease was first recognized when Hippocrates saw a connection between the inhalation of dust and a metal digger who was having trouble breathing properly. Id.

44. MARKOWITZ & ROSNER, DEADLY DUST, supra note 10, at 7.

45. Id.

46. Id. at 13.

47. Id.


50. Black, supra note 1. “Throughout the 1930’s, books, films, popular articles in magazines, scores of reports in medical journals, and news articles in such weeklies as Business Week and Newsweek proclaimed that the health of millions of Americans was threatened by this ever-present substance.” MARKOWITZ & ROSNER, DEADLY DUST, supra note 10, at 4-5.

51. Black, supra note 1.
on the job sued employers and received large settlements. The September 1933 issue of Business Week wrote about the “epidemic of lawsuits[] [that] was ‘giving serious concern to the construction, quarry, and mining industries and to foundries and glass works.’”

Insurance companies were affected by the many lawsuits being filed because they were insuring foundries and other silica-using entities with general comprehensive liability policies. In 1933, the New York state foundry industry was pummeled with over $30,000,000 in lawsuits. One insurance attorney stated that “silicosis ‘has all but paralyzed the [insurance] industry in many cases.’” Still another insurance company claimed that silicosis caused the greatest claims problem ever in the company’s history. As insurance companies saw more lawsuits, they began to terminate coverage if companies would not fire those workers who had developed silicosis. Interestingly, one insurance company’s head of claims commented that “the problem was not that silicosis caused disability, but that unemployment caused workers to use the legal system as a welfare system and that unscrupulous lawyers were taking advantage of ignorant workers.”

In response to the great amount of litigation that was arising, insurance companies began to lobby for silicosis to be recognized as a disease that was compensable under workers’ compensation statutes. The workers’ compensation system was originally created to compensate employees who had been injured in accidents. But companies were trying to include injuries like those caused by silica exposure within the coverage of these statutes, as opposed to just injuries caused by accidents like slipping and falling on the job. Lobbying was an effort to solve the great burden that silica litigation was placing on the insurance industry and the work force.

52. Markowitz & Rosner, Deadly Dust, supra note 10, at 78.
53. Id. (citing Silicosis Menace, Business Week 19-20 (Sept. 1933)).
54. Id.
55. Id. at 81.
56. Id. at 79.
57. Id. (“Employers Mutual, a company that had a large industrial clientele, reported in its twenty-fifth annual report to policyholders that silicosis suits resulted in ‘the most serious claim problem ever encountered... in its entire history.’”).
58. Id. at 79-80.
59. Id. at 78-79. It is interesting to note that attorneys who represent insurance companies that are facing numerous silicosis claims maintained the same attitude about silicosis lawsuits in 1932 as they do in 2003. Both groups of attorneys believe that the extensive amount of silica litigation is caused by plaintiff attorneys who are taking advantage of workers and their illnesses. Attorneys of today and yesterday also believe that the results of this type of litigation will not be “justice for [the] work force but rather the ‘closing of industrial plants and a vast economic loss.’” Id. at 79.
60. Black, supra note 1.
61. Markowitz & Rosner, Deadly Dust, supra note 10, at 83.
62. Id.
63. Id. at 82 (“Since the Progressive Era, workers’ compensation had proven extremely effective
Insurance companies found that the advantage in “covering silicosis through workers’ compensation was that administrative tribunals handled the claims. . . . Workers’ compensation removed contention over responsibility for industrial disease from the public arena of the courts.”\(^6\) Also, workers’ compensation statutes limited the amount of possible recovery for silicosis claims.\(^6\)

In the mid-1930’s the Hawk’s Nest Disaster brought silica to the national forefront and caused the silicosis epidemic to be known as a “national scandal.”\(^6\) The disaster occurred when the Union Carbide Corporation employed 2,000 workers to drill a tunnel through Hawk’s Nest Mountain in Gauley Bridge, West Virginia.\(^6\) Although the mountain was composed of pure silica, workers were sent to work without any protection despite Union Carbide company officials’ awareness of the dangers that the unprotected drilling posed.\(^8\) Most, if not all, of the workers were exposed to respirable silica, and 700 workers died while working on the project.\(^9\) Union Carbide buried the workers in unmarked graves on the side of the road near the tunnel.\(^7\) Five hundred thirty-eight workers and their families brought lawsuits against Union Carbide.\(^7\) The Hawk’s Nest Disaster solidified silicosis as a national problem.\(^7\) “For more than twenty years [prior] labor leaders, government officials and independent experts ha[d] reported their findings on silicosis as the most widespread of occupational diseases in America, but it remained for the. . . trail of death across the West Virginia countryside to startle the nation to doing something about it.”\(^7\)

In the early twentieth century, the great number of industrial accidents, like the Hawk’s Nest Disaster, sparked the interest of social reformers who fought for compulsory health insurance and for the codification of workers’ compensation laws.\(^7\) In 1936, the Committee on Labor of the House of Representatives met and authorized an investigation of occupational disease.\(^7\) As a result, statutes were enacted around the country that made silicosis compensable under workers’ compensation statutes.\(^7\)

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64. Id. at 83.
65. Id. ("[T]he average awards through the compensation system were dramatically lower than under the liability system. The U.S. Commissioner of Labor Statistics estimated that the average award in New York State for other occupational diseases only $325 in 1929.")
66. Markowitz & Rosner, The Reawakening, supra note 1; Markowitz & Rosner, Deadly Dust, supra note 10, at 96.
67. Markowitz & Rosner, The Reawakening, supra note 1; Black, supra note 1.
68. Black, supra note 1.
69. Markowitz & Rosner, The Reawakening, supra note 1; Black, supra note 1.
70. Id.
71. Markowitz & Rosner, Deadly Dust, supra note 10, at 98.
72. Black, supra note 1.
73. Markowitz & Rosner, Deadly Dust, supra note 10, at 98 (quoting Silicosis Prevention, 43 American Federationist 596 (June 1936)).
74. Id. at 5.
75. Id. at 96.
76. Black, supra note 1.
In 1935, the annual American Foundrymen’s Society meeting included an extensive discussion of occupational health hazards.\textsuperscript{77} By that date, the foundry industry had acknowledged that it was necessary to control workers’ exposure to silica because of the hazards the dust posed.\textsuperscript{78} Experts identified the methods and sources of silica exposure and began to implement programs that would control the dissemination of the particles.\textsuperscript{79} “[T]he 1936 [American Foundrymen’s Society’s] transactions, in their concise chronology of the history of the foundry industry’s knowledge of the silicosis problem from 1871, point out that the dangers of silicosis had been commonly known for some time prior to that date.”\textsuperscript{80} Although the American Foundrymen’s Society recognized silicosis as a deadly disease in 1936, it was not until more than a decade later that the United States Supreme Court acknowledged the hazards that silica posed. The Court’s acknowledgement enabled other courts to impute knowledge of these hazards on employers and suppliers.\textsuperscript{81} “In 1949 the U.S. Supreme Court said ‘[i]t is a matter of common knowledge that it is injurious to the lungs and dangerous to the health to work in silica dust, a fact which [a] defendant [is] bound to know.’”\textsuperscript{82}

\textbf{A. Urie v. Thompson}\textsuperscript{83}

In \textit{Urie}, the U.S. Supreme Court decided the question of whether the health coverage of the Federal Employers’ Liability Act and the Boiler Inspection Act included injuries caused by occupational diseases such as silicosis or was limited to injuries caused by accidents.\textsuperscript{84} In 1941, Tom Urie brought suit against Thompson, the trustee of the Missouri Pacific Railroad, seeking damages for being forced to stop work because he had been diagnosed with silicosis.\textsuperscript{85} Urie had worked as a fireman on Missouri Pacific’s trains for thirty years.\textsuperscript{86} He contracted silicosis by inhaling silica dust from the “‘locomotives’ sanding boxes... containing 80 to 90 per cent of silica... [T]he locomotives’ faultily adjusted ‘sanders’ [exceeded the]...
amounts. . . needed to provide traction for locomotive wheels." The Court held that Thompson should have been aware of the dangers posed by the excess of silica in the cabs with the exercise of due care. The Court further held that silicosis was an "injury" according to the definition given in the Federal Employers' Liability Act when the "injury" results from the employer's negligence; this was the holding despite Congress' original purpose for enacting the Federal Employers' Liability Act, namely compensating for injuries resulting from accidents on interstate railroads. This case allowed for federal workers' compensation statutes to include silicosis as a compensable injury, which allowed an injured party to file a workers' compensation claim in order to recover, instead of having to go to court. More important than the law at issue in Urie, was the Court's public recognition as "'a matter of common knowledge that it is injurious to the lungs and dangerous to health to work in silica dust. . .'." After this case, defendants could no longer play dumb to the fact that silica was hazardous to one's health. Urie initiated the type of silica litigation that would exist in the future. This case forced the question of liability to rest upon whether or not an employer or supplier could be held accountable for the presumed knowledge of the dangers of inhaling silica.

"Ironically, despite the controversy and conflict over the nature of the silicosis hazard, by the 1950's, silicosis was virtually forgotten." When the United States entered World War II, the interest in silica and silicosis came to a halt. Labor and political reformers were ignored universally. "Silicosis was defined as a disease of the past that could be adequately addressed by medical researchers, and engineers working with an enlightened business community." The only groups still affected by silicosis were workers employed in dusty trades. Articles were written about how silicosis was only a concern of those workers who were hypersensitive to dust. This conclusion was drawn partly because employers now had implemented safety precautions that they thought "reduced dust levels to 'safe' limits that posed a negligible risk to the work force." Unfortunately, the problem of silicosis, even when combated with

87. Id. at 166.
88. Id. at 179.
89. Id. at 180-81.
90. See id.
91. Id. at 180 (quoting Sadowski v. Long Island R.R. Co., 292 N.Y. 448, 455-56 (1966)).
94. MARKOWITZ & ROSNER, DEADLY DUST, supra note 10, at 5. This is not truly ironic because workers' compensation was one of the causes of the decline in silica litigation at this time. Id.
95. See id. at 6. The war shifted the nation's focus from labor reform. Id.
96. See id. at 179.
97. Id.
98. Id. at 82.
99. Id. at 181.
100. Id. at 194.
safety equipment and protective gear, continued. Protec-
tive gear may reduce the problem but it cannot be completely prevented. Therefore, at
certain times, the federal government had to intervene and regulate heavy
industry in order to control the growing problem of silicosis.

Silicosis experts concluded that the changing social environment in the
United States during the 1960’s and 1970’s sparked a new interest in the
disease. In the 1960’s, the galvanization of politically active industrial
workers would force the U.S. government and others to take notice of the
dangers silicosis posed. During this time, doctors at Tulane University
began to study silicosis and its effect on workers in shipyards on the Gulf
Coast.

By the 1970’s, the advanced knowledge gained about chronic disease
would cause “new constituencies [to] raise again questions that had been
asked for the first time in the early years of the Depression.” The
Occupational Safety and Health Act passed in 1970; this act created the
National Institute of Occupational Safety and Health (NIOSH) in the
Department of Health, Education and Welfare and the Occupational Health
and Safety Administration (OSHA) in the Department of Labor. These
organizations developed standards for recommended exposure limits to
hazardous materials. NIOSH would set the standards and OSHA would
enforce them. NIOSH commissioned a study of safety precautions
provided for silica workers, which was done partially in response to the
earlier studies on silicosis done at Tulane. The study found that most
safety equipment provided did not give workers adequate protection from
the hazardous dust.

In 1974, NIOSH recommended the exposure limit of silica dust be
decreased by one-half the previous recommended amount. They further

101. Id. at 83.
102. See generally id.
103. Id. at 83.
104. Id. at 215.
105. Id. at 215-16.
106. Markowitz & Rosner, The Reawakening, supra note 1. When shipyard workers in Louisiana
began to complain about breathing difficulty, three doctors at Tulane University “began a series of
epidemiological studies that documented widespread silicosis among workers at Gulf Coast
shipyards.” Id.
107. MARKOWITZ & ROSNER, DEADLY DUST, supra note 10, at 216.
109. Id.
110. Id.
111. Id.
112. Id.
113. Id. (“NIOSH contracted with Austin Blair, an industrial hygienist from the Boeing Aerospace
Company in Seattle, whose report proved to be an indictment of silica exposures and of the lack of
protection that respirators and protective equipment afforded workers.”).
recommended that an alternative to sand should be used for abrasive blasting.\textsuperscript{115} These suggestions were made after the Tulane study of Louisiana shipyard workers.\textsuperscript{116} However, the Occupational Safety and Health Association refused to adopt NIOSH’s new recommended standards, making them non-binding.\textsuperscript{117} In 1975, in response to NIOSH’s new recommendations, the Silica Safety Association (“SSA”) was formed by representatives of companies in the affected industries.\textsuperscript{118} The SSA stated that its “goal was to ‘investigate and report on possible health hazards involved in [the] use of silica products and to recommend adequate protective measures considered economically feasible,’ but in reality its purpose was to make sure that OSHA did not adopt the NIOSH’s recommendation standards.”\textsuperscript{119} Its goal was to assure that sand blasting could continue unabated.\textsuperscript{120} The SSA engaged in devious practices in order to accomplish its goals of convincing the silica industry that the use of protective devices would prevent excessive exposure, when in actuality, the SSA had imputed and actual knowledge that safety equipment did not afford workers proper protection.\textsuperscript{121} The SSA concealed a study that revealed that under the SSA’s promulgated standards, almost half of the air samples were above the threshold limit value specified by the American Conference of Governmental Industrial Hygienists.\textsuperscript{122} “The [SSA’s] lobbying effort[s] led to countless unnecessary exposures to a known hazard in... [the] affected industries.”\textsuperscript{123}

During this time President Jimmy Carter appointed Eula Bingham as the head of the Occupational Health and Safety Association.\textsuperscript{124} Under Bingham’s leadership, more safety standards were implemented than ever before or since.\textsuperscript{125} The rejuvenated interest in silicosis reflected a national resurgence of health awareness in America.\textsuperscript{126} But when Ronald Reagan became President, economic impact studies began to be required before the government would implement regulations.\textsuperscript{127} Reagan’s policies resulted in OSHA’s abrasive blasting standards being made a non-issue because the economic impact would be so great that the U.S. government did not want to force industries to adopt higher safety regulation standards.\textsuperscript{128} “By 1982, the anti-regulatory and pro-business environment in Washington had all but killed the efforts to lower the silica standard and made lobbying efforts

\begin{thebibliography}{99}
\bibitem{115} Black, \textit{supra} note 1.
\bibitem{116} Markowitz & Rosner, \textit{The Reawakening, supra} note 1.
\bibitem{117} Bergfeld, 319 F.3d at 352-53.
\bibitem{118} Markowitz & Rosner, \textit{The Reawakening, supra} note 1.
\bibitem{119} Id.
\bibitem{120} Id.
\bibitem{121} See id.
\bibitem{122} Id.
\bibitem{123} Black, \textit{supra} note 1.
\bibitem{124} Markowitz & Rosner, \textit{The Reawakening, supra} note 1.
\bibitem{125} Id.
\bibitem{126} See \textit{Markowitz & Rosner, DEADLY DUST, supra} note 10, at 5.
\bibitem{127} Id.
\bibitem{128} Id.
\end{thebibliography}
unnecessary.”

In 1983, the National Institute of Occupational Safety and Health estimated that 3.2 million people were exposed to silica, indicating that silica still posed a huge hazard to the American work force. As a result of the Silica Safety Association’s success in accomplishing its goals, people stopped making monetary contributions to the association and the SSA’s board lacked the need to continue.

As the Silica Safety Association closed its offices, “the silicosis epidemic was spreading” throughout Texas. The mid-1970’s OPEC oil crisis triggered a resurgence of the West Texas oil industry. Workers were needed to clean out the old oil tankers by sand-blasting tar and oil residue. They were not provided with adequate protective gear. These workers began to develop symptoms of silicosis and doctors began to diagnose the workers with acute silicosis. In 1988, the epidemic received public attention and by the early 1990’s “scores of workers” had developed the disease. Workers began to bring lawsuits against sand providers and equipment manufacturers. Sand providers and equipment manufacturers, unlike employers, were not protected by workers’ compensation statutes that were enacted to limit liability. Also, Texas common law provided that dangerous product suppliers had an affirmative duty to warn users of the possible hazards.

During this time, the Fifth Circuit held an asbestos manufacturer liable for injuries suffered by the ultimate user of the asbestos product. Following this case, asbestos litigation continued to grow and eventually skyrocketed. Plaintiffs’ attorneys began to use litigation tactics developed in the 1970’s and 1980’s to obtain large settlements from asbestos manufacturers. Other plaintiffs’ attorneys began to try and hold manufacturers of products like asbestos liable for injuries suffered by also
implementing these tactics. They brought suits against silica suppliers and manufacturers for the injuries suffered by the West Texas oil workers. Once a court found the manufacturer liable to the ultimate user, the floodgates of litigation opened. Employers and deep-pocketed manufacturers and suppliers were now being held liable.

The focus remained on asbestos among silica and asbestos suppliers and manufacturers, the scientific community, and attorneys; therefore silica litigation "was not pursued with the same vigor as asbestos claims." In response to the litigation, some silica users began to use non-silica substitutes as an abrasive. In an alternative response to the growing amount of silica litigation, many companies that were members of the National Industrial Sand Association began to put warnings on their products. It was surprising and disheartening to know that members of the National Industrial Sand Association knew of the hazards that silica posed as early as the 1930's, but did not put warnings on their products until this time.

About a decade ago, different attitudes towards silicosis existed among experts. "Some argue[d] that silicosis [w]as a workplace epidemic [and wa]s over and done with, while others [saw] this disease as still potentially disastrous to a large number of American workers." In 1997, the IARC published a new study regarding the carcinogenicity of crystalline silica and concluded that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources should be classified as carcinogenic to humans. This determination has been subsequently debated. When the IARC deemed silica a carcinogen, the Occupational Safety and Health Association [OSHA] responded by "propos[ing] a more comprehensive crystalline silica standard in an attempt to further reduce the risk of [silicosis and possibly cancer]."

When President Clinton was elected, his administration tried to give new life to NIOSH and OSHA. President Clinton appointed leaders of these organizations that had a strong interest in silica regulation. Their efforts were indicated by the 1997 National Conference to Eliminate Silicosis, which brought together more than six-hundred federal employees,
public health workers, union officials, and industry representatives.\textsuperscript{160} Silicosis and its effects were discussed among coal miners, oil workers, foundry workers, sandblasters, and hard rock miners.\textsuperscript{161} The sponsors of the event, NIOSH, OSHA, and the American Lung Association, exchanged information and shared specific techniques to prevent silicosis.\textsuperscript{162}

The two-day event... highlight[ed the] "best practices" in equipment and engineering controls, and training, respiratory protection, and health surveillance programs, as well as other timely topics. The goal [wa]s to have every participant leave the Conference armed with practical ways to control silica dust and prevent silicosis....\textsuperscript{163}

The conference generated a lot of attention for the silicosis problem.\textsuperscript{164} The American National Standards Institute\textsuperscript{165} believes that silica should be banned in indoor sandblasting.\textsuperscript{166} NIOSH also seeks to ban silica as an abrasive in blasting.\textsuperscript{167} To combat these organizations' proposed standards and others like it, the Silica Coalition has been formed.\textsuperscript{168} The Silica Coalition is a ""diverse coalition of trade associations and companies involved in the mining, processing, production, and use of silica and silica-containing materials,' established in 1997 in anticipation of 'OSHA rulemaking to control worker exposure to crystalline silica dust in the not-too-distant future.""\textsuperscript{169} The Coalition claims to be focused on making scientific information as well as legal resources available to companies that could be impacted by the change in regulation, but "it is also clear that increased awareness of the dangers of silica and the resulting threat of litigation hang over the heads of industry executives.""\textsuperscript{170} Part of the Coalition consists of potential silica litigation defendants.\textsuperscript{171} Possible defendants in silica litigation include: industrial sand manufacturers and processors, bentonite manufacturers, refractory products manufacturers,

\begin{flushright}
\textsuperscript{160.} Id.  \\
\textsuperscript{161.} Id.  \\
\textsuperscript{163.} Id.  \\
\textsuperscript{164.} Markowitz & Rosner, The Reawakening, supra note 1.  \\
\textsuperscript{165.} Id. The American National Standards Institute is a voluntary association of industrial hygienists and industry representatives that establishes standards for different substances. Id.  \\
\textsuperscript{166.} Markowitz & Rosner, The Reawakening, supra note 1. The use of sand for abrasive blasting has been banned in Great Britain since 1949. Black, supra note 1. Other European nations also banned sand after Great Britain. Id.  \\
\textsuperscript{167.} Markowitz & Rosner, The Reawakening, supra note 1.  \\
\textsuperscript{168.} Id.  \\
\textsuperscript{169.} Id.  \\
\textsuperscript{170.} Id.  \\
\textsuperscript{171.} Id.  \\
\end{flushright}
respiratory protection product manufacturers, grinding wheel manufacturers, shot blast cabinet manufacturers, sandblasting compressor manufacturers, sandblasting equipment manufacturers, ventilation system manufacturers, construction companies, plant and refinery operators.  

By the late 1990's, silicosis concerns seem to have been revitalized. The rate of silica lawsuit filings has grown tremendously in recent years. Today, silica litigation has reached an all time high. A national sand supply company, U.S. Silica, claims that in the course of one year the amount of lawsuits pending against them has risen from 3,505 to 22,000. Other companies like 3M Corporation and Aero Corporation also claim that their companies have seen an increase in the number of silica claims filed against them. One large insurance company also asserts that silica claims have increased tenfold from last year, with 25,000 in over half of the country. In 1999, it was estimated that almost 2,000,000 workers were exposed to crystalline silica. "If only 10% of occupationally exposed workers (or their heirs) believed their lung cancer or other respiratory diseases is due to their occupational silica exposure," then there [is] a potential for enormous litigation.

III. COURTS’ APPROACHES TO SILICA CLAIMS – THE SOPHISTICATED USER DOCTRINE AND THE BULK SUPPLIER DOCTRINE

Numerous states have enacted statutes that create a non-delegable duty for employers to keep the workplace safe for its employees. Thus, if an employer does not take the appropriate precautionary steps to provide its employees with a safe work environment, it will be liable for the injuries caused. Yet, common law products liability also places duties on those who supply dangerous materials or provide safety equipment to warn the potential users of a product’s hazards. Thus, although an employer may be the most suitable candidate to incur liability for silica exposure to its employees, they are not the only potential defendant. "Despite the availability of purportedly safer alternative abrasives, industry and silica product manufacturers have apparently concluded that the

172. Hughes, supra note 40, at 4; Warren, supra note 19, at B5.
174. See id.
175. Lorber & Emily Laird, supra note 82.
176. See Warren, supra note 19, at B5.
177. Id.
178. Id.
179. Id.; Lorber & Laird, supra note 82.
180. Regis, supra note 27, at 209.
183. Id.
184. See generally id.
185. See generally id.
increased costs of using these alternatives outweighs the protection of... workers." While trying to limit their liability, sand suppliers have persuaded courts to adopt the sophisticated user defense. This defense places the duty on the intermediate purchaser to warn the ultimate silica user of its potential hazards. It relieves suppliers of their duty to warn. Some courts have applied this approach to silica litigation, while other jurisdictions are still contemplating adoption.

The sophisticated user doctrine states that a manufacturer of a product has no duty to warn a sophisticated user with equal knowledge of the product's propensities. Section 388 of the Restatement (Second) of Torts, entitled "Chattel Known to be Dangerous for Intended Use," states that:

One who supplies directly or through a third person a chattel for another to use is subject to liability to those whom the supplier should expect to use the chattel with the consent of the other or to be endangered by its probable use, for physical harm caused by the use of the chattel in the manner for which and by a person for whose use it is supplied, if the supplier (a) knows or has reason to know that the chattel is or is likely to be dangerous for the use for which it is supplied, and (b) has no reason to believe that those for whose use the chattel is supplied will realize its dangerous condition, and (c) fails to exercise reasonable care to inform them of its dangerous condition or of the facts which make it likely to be dangerous.

The sophisticated user doctrine relieves a dangerous product supplier of liability if the supplier has reason to believe that those who will use the product know of its dangerous condition. Therefore, in order for a supplier to relieve itself of liability, it must show that those it supplied the product to knew of the product's dangerous condition. The doctrine is based on the premise that a warning given by the supplier would have little
effect “because sophisticated users are already aware of a product’s potential adverse health effects.” It also rests on the notion that “modern life would be intolerable unless one were permitted to rely to a certain extent on others doing what they normally do, particularly if it is their duty to do so.”

*Goodbar v. Whitehead Brothers* provides the clearest application of the sophisticated user doctrine, “protect[ing] a supplier from liability for failure to warn when the end user knows or reasonably should know of a product’s dangers.” Defense attorneys are urging courts to apply this doctrine in order to limit their clients’ liability.

A. *Goodbar v. Whitehead Brothers*

In this class action lawsuit comprised of failure to warn and negligence claims, 132 foundry employees brought suit against the foundry’s suppliers of silica sand. Each of the plaintiffs claimed to have silicosis and was suing the multiple defendants for failing “to advise the Foundry’s employees with respect to the dangerous characteristics of silica products and how to protect themselves from them.” Plaintiffs’ claims involving strict liability were dismissed because Virginia has not adopted Restatement (Second) of Torts, Section 402A, which outlines the elements of a strict liability cause of action. Defendants filed for summary judgment for the duty to warn cause of action, contending that they did not have a duty to warn the plaintiffs “because: (1) silicosis is an occupational respiratory disease about which the foundry industry... has been knowledgeable since at least the 1930’s; and (2) only the Plaintiff’s employer, the Lynchburg Foundry, can communicate any type of effective warnings.”

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196. Lorber & Laird, *supra* note 82.
197. *Goodbar*, 591 F. Supp. at 557 (citation omitted). One variation of the Sophisticated User Doctrine, the “Sophisticated Intermediary User” is also based on § 388 of Restatement 2d. of Torts. Lorber & Laird, *supra* note 82. Comment n. to § 388 “recognizes that products do not often pass directly from the supplier to the end user but instead pass through one or more intermediary users... before winding up in the hands of the end user.” *Id.*
203. *Id.* at 555.
204. *Id.* at 554. The Restatement (Second) of Torts, Section 402A reads:

(1) One who sells any product in a defective condition unreasonably dangerous to the user or consumer or to his property is subject to liability for physical harm thereby caused to the ultimate user or consumer, or to his property, if (a) the seller is engaged in the business of selling such a product, and (b) it is expected to and does reach the user or consumer without substantial change in the condition in which it is sold. (2) The rule stated in Subsection (1) applies although (a) the seller has exercised all possible care in the preparation and sale of his product, and (b) the user or consumer has not bought the product from or entered into any contractual relation with the seller.


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Restatement (Second) of Torts, Section 388.206 Section 388 contains three elements that must be fulfilled in order for a defendant to assert the sophisticated user doctrine as a defense.207 The first element is that the defendant "supplies a defective or dangerous product."208 The second element is that the defendant "has no reason to believe that the user (i.e. the Plaintiff foundry employees) lacks knowledge of this defect or dangerous condition."209 The third element is that the defendant "cannot reasonably rely upon the purchaser/employer (i.e. the Foundry) to supply necessary warnings to Plaintiffs, the ultimate users of the product."210 Defendants conceded for argument's sake that the first two elements of the Restatement provision were met.211 They admitted that silica is a dangerous product, even in the more raw form, than in the form the mineral was in when it was initially sold.212 The defendants also admitted that the plaintiffs might not have been aware of the dangers that silica posed.213 Therefore, the defendants' liability rested on the issue of "whether the Defendants failed to exercise reasonable care in relying upon the Foundry to supply its employees with the necessary information to satisfy the duty to warn."214

"[I]n alleged negligent failure to warn situations[,]... if the danger related to the particular product is clearly known to the purchaser/employer, then there will be no obligation to warn placed upon the supplier."215 The court found that there was a "reasonable basis" for the defendants to have believed that the Foundry would have provided their employees with adequate warnings about silica.216 In reaching this conclusion, the court examined the factors provided by comment n. of Section 388, which includes: dangerous condition of the product, product's purpose, warnings given, reliability of the third party to adequately give the warning, risk associated with use of the product, and burden of requiring the defendant to provide the adequate warning.217 After examining the factors, the court

206. Id.
207. See RESTATEMENT (SECOND) OF TORTS § 388 (1965).
208. Goodbar, 591 F. Supp. at 556 (citing RESTATEMENT (SECOND) OF TORTS § 388(a) (1965)).
209. Id. (citing RESTATEMENT (SECOND) OF TORTS § 388(b) (1965)).
210. Id. (citing RESTATEMENT (SECOND) OF TORTS § 388(c) (1965)).
211. Id. at 556-57.
212. Id. Although silica is a raw material (because it is a naturally occurring mineral in the earth's crust), silica sand as it is sold is refined, thus making it more readily inhaled and thus more dangerous. Id. at 557.
213. Id.
214. Id.
215. Id. at 560-61.
216. Id. at 557.
217. Id. The Restatement (Second) of Torts, Section 388, cmt. n. reads:
Warnings given to third person. Chattels are often supplied for the use of others, although the chattels or the permission to use them are not given directly to those for whose use they are supplied, as when a wholesale dealer sells to a retailer goods which are obviously to be used by the persons purchasing them from him, or when a contractor

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furnishes the scaffoldings or other appliances which his subcontractor and the latter's servants are to use, or when an automobile is lent for the borrower to use for the conveyance of his family and friends. In all such cases the question may arise as to whether the person supplying the chattel is exercising that reasonable care, which he owes to those who are to use it, by informing the third person through whom the chattel is supplied of its actual character.

Giving to the third person through whom the chattel is supplied all the information necessary to its safe use is not in all cases sufficient to relieve the supplier from liability. It is merely a means by which this information is to be conveyed to those who are to use the chattel. The question remains whether this method gives a reasonable assurance that the information will reach those whose safety depends upon their having it. All sorts of chattels may be supplied for the use of others, through all sorts of third persons and under an infinite variety of circumstances. This being true, it is obviously impossible to state in advance any set of rules which will automatically determine in all cases whether one supplying a chattel for the use of others through a third person has satisfied his duty to those who are to use the chattel by informing the third person of the dangerous character of the chattel, or of the precautions which must be exercised in using it in order to make its use safe. There are, however, certain factors which are important in determining this question. There is necessarily some chance that information given to the third person will not be communicated by him to those who are to use the chattel. This chance varies with the circumstances existing at the time the chattel is turned over to the third person, or permission is given to him to allow others to use it. These circumstances include the known or knowable character of the third person and may also include the purpose for which the chattel is given. Modern life would be intolerable unless one were permitted to rely to a certain extent on others' doing what they normally do, particularly if it is their duty to do so. If the chattel is one which if ignorantly used contains no great chance of causing anything more than some comparatively trivial harm, it is reasonable to permit the one who supplies the chattel through a third person to rely upon the fact that the third person is an ordinary normal man to whose discredit the supplier knows nothing, as a sufficient assurance that information given to him will be passed on to those who are to use the chattel.

If, however, the third person is known to be careless or inconsiderate or if the purpose for which the chattel is to be used is to his advantage and knowledge of the true character of the chattel is likely to prevent its being used and so to deprive him of this advantage—as when goods so defective as to be unsalable are sold by a wholesaler to a retailer—the supplier of the chattel has reason to expect, or at least suspect, that the information will fail to reach those who are to use the chattel and whose safety depends upon their knowledge of its true character. In such a case, the supplier may well be required to go further than to tell such a third person of the dangerous character of the article, or, if he fails to do so, to take the risk of being subjected to liability if the information is not brought home to those whom the supplier should expect to use the chattel. In many cases the burden of doing so is slight, as when the chattel is to be used in the presence or vicinity of the person supplying it, so that he could easily give a personal warning to those who are to use the chattel. Even though the supplier has no practicable opportunity to give this information directly and in person to those who are to use the chattel or share in its use, it is not unreasonable to require him to make good any harm which is caused by his using so unreliable a method of giving the information which is obviously necessary to make the chattel safe for those who use it and those in the vicinity of its use.

Here, as in every case which involves the determination of the precautions which must be taken to satisfy the requirements of reasonable care, the magnitude of the risk involved must be compared with the burden which would be imposed by requiring them (see § 291), and the magnitude of the risk is determined not only by the chance that some harm may result but also the serious or trivial character of the harm which is likely to result (see § 293). Since the care which must be taken always increases with the danger involved, it may be reasonable to require those who supply through others chattels which if ignorantly used involve grave risk of serious harm to those who use them and those in the vicinity of their use, to take precautions to bring the information home to the users of such chattels which it would be unreasonable to demand were the chattels of a less dangerous character.

Thus, while it may be proper to permit a supplier to assume that one through whom he supplies a chattel which is only slightly dangerous will communicate the information
found that "a plethora of material exist[ed] on the... Foundry’s extensive knowledge of the hazards of inhaling silica dust, the disease of silicosis, and proper dust control methods."\textsuperscript{218}

The court imputed the American Foundrymen’s Society’s knowledge about silicosis onto the foundry through the company’s vice president who was an active member of the society.\textsuperscript{219} The American Foundrymen’s Society maintained an extensive knowledge about the dangers of silica and silicosis since the 1930’s.\textsuperscript{220}

The court also noted the difficulties that present themselves to sand suppliers in trying to adequately warn foundry employees of the dangers in the use of sand.\textsuperscript{221} Some of the difficulties that face the suppliers include: the extensive amount of monitoring required to determine how the sand is used, the inability of product warnings placed on packages to effectively communicate the warnings given, the inability to provide training and facilities that would reduce silica exposure, and the unrealistic goal of pressuring foundries to follow certain safety measures.\textsuperscript{222} Through close examination and balancing of the factors listed above, the district court granted summary judgment in favor of the defendant sand suppliers by finding that the employers were able to more adequately warn their

given him to those who are to use it unless he knows that he other is careless, it may be improper to permit him to trust the conveyance of the necessary information of the actual character of a highly dangerous article to a third person of whose character he knows nothing. It may well be that he should take the risk that this information may not be communicated, unless he exercises reasonable care to ascertain the character of the third person, or unless from previous experience with him or from the excellence of his reputation the supplier has positive reason to believe that he is careful. In addition to this, if the danger involved in the ignorant use of a particular chattel is very great, it may be that the supplier does not exercise reasonable care in entrusting the communication of the necessary information even to a person whom he has good reason to believe to be careful. Many such articles can be made to carry their own message to the understanding of those who are likely to use them by the form in which they are put out, by the container in which they are supplied, or by a label or other device, indicating with a substantial sufficiency their dangerous character. Where the danger involved in the ignorant use of their true quality is great and such means of disclosure are practicable and not unduly burdensome, it may well be that the supplier should be required to adopt them. There are many statutes which require that articles which are highly dangerous if used in ignorance of their character, such as poisons, explosives, and inflammables, shall be put out in such a form as to bear on their face notice of their dangerous character, either by the additional coloring matter, the form or color of the containers, or by labels. Such statutes are customarily construed as making one who supplies such articles not so marked liable, even though he has disclosed their actual character to the person to whom he directly gives them for the use of others, and even though the statute contains no express provisions on the subject.

\textsc{Restatement (Second) of Torts § 388 (1965)}.

\textsuperscript{218} \textit{Goodbar}, 591 F. Supp. at 561.

\textsuperscript{219} \textit{Id.} at 562.

\textsuperscript{220} \textit{Id.}.

\textsuperscript{221} \textit{Id.} at 566.

\textsuperscript{222} \textit{Id.}
employees about the hazards of silica dust than was the initial supplier.\footnote{223}{Id. at 565.}

*Goodbar v. Whitehead Brothers* was one of the first cases to relieve a defendant silica sand supplier of liability for injuries suffered by employees from the contraction of silicosis though application of the sophisticated user defense.\footnote{224}{See Goodbar, 591 F. Supp. 552.} Soon after, *Bergfeld v. Unimin Corporation*\footnote{225}{319 F.3d 350 (8th Cir. 2003).} was decided by one of the courts influenced by the *Goodbar* decision.

### B. Bergfeld v. Unimin Corporation\footnote{226}{Id.}

Roger Bergfeld was employed at Dubuque Works Foundry for fourteen years,\footnote{227}{Id. at 352.} where Lockheed Martin supplied the silica sand.\footnote{228}{Id.} Bergfeld brought a products liability action against Lockheed Martin and other defendants when he contracted silicosis, claiming that Lockheed had failed to provide the foundry or its employees with the proper information about the risk of contracting silicosis when being exposed to respirable silica dust.\footnote{229}{Id. at 353 (citing Mercer v. Pittway Corp., 616 N.W.2d 602, 623 (Iowa 2000)).} The Eighth Circuit Court of Appeals asserted that the sophisticated user doctrine "is a rule of negligence, not one of strict liability."\footnote{230}{Id. (quoting Vandelune v. 4B Elevator Components Unlimited, 148 F.3d 943, 946 (8th Cir. 1998)).} Applying the sophisticated user doctrine, the Eighth Circuit found that Lockheed had "no duty to warn if the user knows or should know of the potential danger, especially when the user is a professional who should be aware of the characteristics of the product."\footnote{231}{Id. (citing Smith v. Walter C. Best, Inc., 927 F.2d 736, 740 (3d Cir. 1990)).} In so holding, the court noted that the foundry itself was "in a better position to convey warnings to the employees."\footnote{232}{Id. at 354 (citing Smith v. Walter C. Best Inc., 927 F.2d 736, 740 (3d Cir. 1990)).} The court cited *Goodbar v. Whitehead Brothers*\footnote{233}{591 F. Supp 552 (W.D. Va. 1984)} and *Smith v. Walter C. Best, Inc.*,\footnote{234}{927 F.2d 736 (3d Cir. 1990).} two cases where courts also found defendant suppliers of silica sand not liable for failure of duty to warn, because the suppliers were not in an adequate position to give warnings to foundry employees.\footnote{235}{Bergfeld, 319 F.3d at 354.}

Courts have also applied the bulk supplier doctrine included in the Restatement (Third) of Torts on products liability to relieve a supplier of bulk products or raw materials of a duty toward end users of a product when the products are delivered to sophisticated intermediary buyers.\footnote{236}{See Lorber & Laird, supra note 82.} The bulk supplier doctrine is based on the rationale that these types of suppliers sell silica and other raw materials to a wide variety of customers and it is
difficult to determine what the intended use of these materials will be. Restatement (Third) of Torts, Products Liability Section 5, Comment c., states that “’t]o impose a duty to warn would require the seller to develop expertise regarding a multitude of different end products and to investigate the actual use of raw materials by [employers] over whom the supplier has no control.’” Comment c. also states that raw materials cannot be defectively designed.

Sand suppliers have tried to capitalize on the idea that raw materials cannot be defectively designed by claiming that sand is a natural material and therefore cannot be defective. But this idea is not completely correct because “industrial sands are processed and refined.” Although, silica sand is a raw material, because the sand is refined, some courts may not define silica sand as a raw material within the definition provided in the Restatement (Third) of Torts: Products Liability Section 5, and consequently not relieve sand suppliers of liability based on the bulk user doctrine. The court in Gray v. Allied Products, Inc. acknowledged “’[f]oundry sand, unlike ‘natural’ sand is specifically refined for its size, which is precisely which [sic] makes it respirable and dangerous... [T]he sand supplied... to the foundry cannot be obtained simply by proceeding to the nearest beach.’”

In Gray, the trial court denied the defendants’ motion for summary judgment based on the bulk user doctrine. The Gray court found that sand

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237. Id.
238. Id. (quoting RESTATEMENT (THIRD) of TORTS: PRODUCTS LIABILITY § 5 reporter’s note to cmt. c (1998)).
239. RESTATEMENT (THIRD) of TORTS: PRODUCTS LIABILITY § 5 reporter’s note to cmt. c, (1998). Comment c. reads:

Raw Materials. Product components include raw materials. See Comment a. Thus, when raw materials are contaminated or otherwise defective within the meaning of § 2(a), the seller of the raw materials is subject to liability for harm caused by such defects. Regarding the seller’s exposure to liability for defective design, a basic raw material such as sand, gravel, or kerosene cannot be defectively designed. Inappropriate decisions regarding the use of such materials are not attributable to the supplier of the raw materials but rather to the fabricator that puts them to improper use. The manufacturer of the integrated product has a significant comparative advantage regarding selection of materials to be used. Accordingly, raw-materials sellers are not subject to liability for harm caused by defective design of the end-product. The same considerations apply to failure-to-warn claims against sellers of raw materials. To impose a duty to warn 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. Courts uniformly refuse to impose such an onerous duty to warn. For a consideration of whether special circumstances may give rise to a duty on the part of raw-material sellers to warn of risks attending integration of raw materials with other components.

Id. (emphasis added).
240. Hughes, supra note 40, at 1.
241. Id. at 6.
supplied by the defendant was never incorporated into an end product and therefore sand suppliers did not need to determine what end products might be and who the end users are and therefore it did not need to warn them of the dangers of inhaling silica.\textsuperscript{244} The appeals court subsequently reversed the Minnesota district court's ruling in \textit{Gray} and applied what the court called the "sophisticated user doctrine."\textsuperscript{245}

\section*{C. Gray v. Badger Mining Corporation\textsuperscript{246}}

Plaintiff Lawrence Gray contracted silicosis at a foundry which was supplied silica sand by the Badger Mining Corporation.\textsuperscript{247} Gray brought suit against Badger Mining Corporation alleging that the company failed to warn about the threat of silicosis when working with silica.\textsuperscript{248} The Badger Mining Corporation countered Gray's claims by asserting the sophisticated user doctrine.\textsuperscript{249} Badger claimed that Gray's employer had a duty to warn Gray of the dangers of working with silica because the employer was in the best position to warn its employees.\textsuperscript{250} The court framed the issue as "whether Badger had a legal duty to warn Gray about potential hazards of inhaling silica."\textsuperscript{251} The court noted that the foundry industry has been made aware of the dangers of silica for over one hundred years due to the formation of the American Foundrymen's Society, whose purpose was to educate workers about foundry processes and the threats silica posed.\textsuperscript{252} The court held that "because [Gray's] employer (the foundry) was a sophisticated purchaser of a dangerous product, [Badger] did not have a duty to warn [Gray]."\textsuperscript{253}

Another case that has applied the sophisticated user doctrine in a different manner is \textit{Humble Sand & Gravel, Inc. v. Gomez}.\textsuperscript{254} In this case, Raymond Gomez, an abrasive blaster, brought suit against Humble Sand &

\textsuperscript{244} Hughes, \emph{supra} note 40, at 5. The rationale behind the Bulk User Doctrine is that the case law imposing a duty to warn immediate buyers of general dangers attendant to use of a raw material or component is clear. Sellers of components and raw materials have a duty to provide reasonable warnings. \textit{See, e.g.,} Hill v. Wilmington Chem. Corp., 156 N.W.2d 898, 902 (Minn. 1968). The issue is whether the seller of a component or raw material has a duty to inform itself about specific applications of its component and a further duty to determine whether the buyer who will integrate it into another product is knowledgeable as to the dangers attendant to that specific application. No cases have been found imposing such an onerous duty. Indeed, the entire thrust of the case law is that when the product component is not defective in itself, liability only arises when the component seller substantially participates in the design of the final integrated product. \textit{Id. (citing RESTATEMENT 3D of TORTS: PRODUCTS LIABILITY § 5, reporters' notes to cmt. c. (1998)).}

\textsuperscript{245} \textit{Gray}, 664 N.W.2d at 885.

\textsuperscript{246} \textit{Id.} at 881.

\textsuperscript{247} \textit{Id.} at 882-83.

\textsuperscript{248} \textit{Id.} at 883.

\textsuperscript{249} \textit{Id.}

\textsuperscript{250} \textit{Id.}

\textsuperscript{251} \textit{Id.}

\textsuperscript{252} \textit{Id.} at 884.

\textsuperscript{253} \textit{Id.} at 887.

\textsuperscript{254} 48 S.W.3d 487, 495-96 (Tex. App. 2001), \textit{rev'd on other grounds}, 146 S.W.2d 170 (Tex. 2004).
Gravel, Inc., one of his employer's silica suppliers, for failure to warn against the dangers of the use of silica in abrasive blasting. Rather than absolving a silica supplier of a duty to warn its potential users, the *Humble Sand* court imposed a duty to warn on the silica supplier. The Texas Court of Appeals found that those parties who wish to invoke the sophisticated user doctrine must show they provided adequate warnings to the parties or intermediaries that they supplied silica to, or that a warning was unnecessary because the intermediaries possessed knowledge of the hazards that silica posed. The *Humble Sand* court ruled that "[m]anufacturers of silica flint who do not provide the product in bulk should be required to adequately warn the ultimate user. This requirement results from the grave health risks of silicosis and from the minute cost and effort that an adequate warning would require." The case has been appealed to the Supreme Court of Texas. The ruling will have vast implications on future silica litigation for many reasons: one such reason is that because Texas is known as a plaintiff-friendly jurisdiction, adopting the sophisticated user doctrine will make the state unfriendly to silica plaintiffs. Another reason is that since Texas is such a big state with a large population of potential plaintiffs that have been exposed to silica, adoption of the doctrine will make it more difficult for a significant number of plaintiffs to recover. A final reason is the possible persuasive influence that the Supreme Court of Texas could have on other states in their decisions to adopt the sophisticated user doctrine.

In 2004, the Supreme Court of Texas delivered its ruling in *Humble Sand & Gravel v. Gomez*. When examining the issue of "whether a supplier... had a duty to warn its customers' employees that inhalation of silica dust can be fatal", the court discussed much of the history of silica litigation. silica suppliers were not required to give warnings to abrasive blasting operators of the dangers that silica posed because "a supplier has no duty to warn of risks involved in a product's use that are commonly known to foreseeable users, even if some users are not aware of them." Instead of making an outright decision of whether to adopt the sophisticated user doctrine, the court remanded the case for a new trial asking for more evidence. The court declared that it could not determine whether "a duty
to warn should be imposed on [silica] suppliers without evidence that the warnings by [silica] suppliers could effectively reach their customers' employees. The dissent vehemently disagreed with the court's decision, proclaiming "[t]he Court's improper application of the sophisticated-user doctrine in this case establishes a dangerous precedent that severely undermines worker safety.

The implications of this ruling have yet to be seen. The court seems to be leaning towards absolving most silica suppliers of a duty to warn potential users. Once the case has been retried and Humble Sand & Gravel, Inc., presents evidence to show the effectiveness or lack thereof of a warning given, it will become clearer whether plaintiffs will be able to successfully bring failure to warn causes of action against silica suppliers. But from examining the Texas Supreme Court opinion, plaintiffs' attorneys may need to develop a new cause of action in order to try and hold silica suppliers liable for injuries to silica sand users because a failure to warn claim may be too difficult to bring.

D. Plaintiffs and Defense Attorneys' Thoughts on The Sophisticated User and The Bulk Supplier Doctrines

Plaintiffs and defense attorneys disagree about the application of these two doctrinal defenses. In defense attorney Leah Lorber's article, Silica Litigation: Judicial Controls Needed to Curb Unwarranted Excessive Claims, she argues that "courts should apply hornbook law to allow legitimate silica personal-injury claims and, accordingly, should place liability on the party who is best able to prevent injuries in the future." Lorber urges courts to adopt the sophisticated user doctrine and the bulk user doctrine discussed in the Restatement of Torts. Lorber insists that courts should apply these doctrines to silica litigation because they place the burden of warning those who are at risk of silica exposure on employers and intermediaries instead of the initial supplier or manufacturer. Exposing employers to greater liability would force them to adopt better safety precautions and in turn help prevent workers from contracting silicosis.

Plaintiffs' attorney James M. Hughes disagrees with Lorber. Hughes wants courts to reject the sophisticated user doctrine and require a warning despite a plaintiff's possible knowledge of the risk of silica exposure, because of the great dangers that silica presents. Hughes also argues that

265. Id.
266. Id.
267. Id. at 198 (O'Neill, J., dissenting).
268. See Lorber & Laird, supra note 82; see also Hughes, supra note 40, at 4.
269. Lorber & Laird, supra note 82.
270. Id.
271. Id.
272. Id.
273. See Hughes, supra note 40, at 6-7.
274. Id. at 7.
the defenses are "often misapplied." Hughes recognizes Goodbar v. Whitehead Brothers as the "most highly touted application" of the sophisticated user doctrine, but that the Goodbar court actually applied the bulk supplier doctrine, illustrating courts' misapplication. Hughes asserts that misapplication of the bulk supplier doctrine relieved defendants of liability, when in actuality, with proper application of the doctrine "the bulk supplier is by no means absolved of its duty either to supply adequate warnings to the intermediary or to ensure that its reliance on the intermediary is reasonable." 

From examining the defense and plaintiffs attorneys' perspectives on these types of affirmative defenses, it is evident that defense attorneys want the defenses adopted in all jurisdictions because the defenses limit certain defendants' liability, while plaintiffs' attorneys want jurisdictions to place a duty to warn on silica suppliers and manufacturers in order to increase liability. Applying the sophisticated user and the bulk supplier doctrines have limited plaintiffs' potential recovery when some of these suppliers and manufacturers have knowingly sold a dangerous product. The theory behind the doctrine that places liability on employers in order to force employers to adopt adequate safety measures sounds effective, but in reality could possibly be ineffective because employers' liability has been limited by workers' compensation statutes. If employers will not face the consequences of their liability because their liability is limited by workers' compensation, the purpose of the application of these affirmative defenses could be futile.

IV. ASBESTOS LITIGATION AT A GLANCE

After World War II, asbestos was used as a key ingredient in many different products, like insulation, floor tiles, roofing shingles, blankets, aprons, and corks. The medical community had determined that inhalation of asbestos fibers could cause lung cancer as early as the

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275. Id. at 4.
277. Hughes, supra note 40, at 6. Hughes notes that Goodbar was "predicated... on the 'bulk supplier' factor that the supplier could not have provided direct warnings to the employees." Id.
279. See Black, supra note 1.
280. See MARKOWITZ & DAVID ROSNER, DECEIT AND DENIAL, supra note 18.
281. The purpose of the sophisticated user and bulk supplier doctrines is to place liability on employers since they have the greatest ability to protect their employees from injury. When workers' compensation statutes allow employers to escape liability, there is nothing forcing employers to make conditions safer for their employees.
1930's. Although the asbestos-producing industry had knowledge that asbestos caused lung cancer, the public and those who were exposed to it did not learn of the hazards that asbestos posed until the 1970's. Since the public discovery of the cover-up of the harmful effects of asbestos fibers on the human lungs, asbestos claims have been litigated for more than thirty years. Plaintiffs' attorneys have been filing lawsuits on behalf of all types of Americans, including miners, shipbuilders, construction workers, and their wives and children. Manufacturers and sellers of asbestos products have faced vast numbers of personal injury claims for asbestos exposure, and the litigation continues. In response to all of these lawsuits, companies slowly stopped using asbestos to create products. "In part because use of new asbestos basically ceased, and in part because many asbestos producers and suppliers were bankrupted fairly quickly, most observers believed that the asbestos litigation eventually would fade. That has not happened. In fact, quite the opposite has occurred." Asbestos has become a litigation crisis that plagues the country's courts' dockets. There are different reasons that can explain the explosion of asbestos litigation. One reason is the relaxed procedural and substantive rules that some courts have adopted in order to make the judicial process more efficient for asbestos plaintiffs. Another reason "for the phenomenal increase in asbestos cases is the explosion in the number of claims filed by unimpaired or mildly impaired plaintiffs." Although the early cases involved people who had actually suffered devastating injuries from asbestos exposure, the new plaintiffs of the present have not suffered. "The truly sick are having trouble getting compensation because the healthy are clogging the courts." This explosion of litigation has no end in sight. According to a study by the Rand Institute of Civil Justice, over the past three decades, over six-hundred-thousand asbestos related lawsuits have been filed. Rand also estimates that there are 2.4 million asbestos victims that have not filed

283. Id.
284. Id.
285. Id.
287. Id.
288. Id.
290. Cupp, Jr., supra note 286.
291. Id. at 206.
292. Id.
293. Id. at 207. ("By 1997 ... the U.S. Supreme Court observed that 'up to one half of asbestos claims are now filed by people who have little or no physical impairment.' More recent reports estimate that up to ninety percent of new asbestos claims are filed by unimpaired or mildly impaired plaintiffs." (quoting Amchem Prods. Inc. v Windsor, 521 U.S. 591, 629 (1997)).
claims and their claims could amount to 210 billion dollars.297 Defendants estimate that 300,000 settlements are pending around the country.298 In the wake of all of this asbestos litigation, huge businesses have been forced into bankruptcy.299 Tens of thousands of workers have lost their jobs and retirement plans.300

"Many of these [asbestos] claims are generated by for-profit screening enterprises that work closely with plaintiffs' law firms."301 Some plaintiffs' attorneys have made a cottage industry out of asbestos litigation.302 Defense attorneys and their clients have become extremely concerned that these same types of for-profit screening enterprises are beginning to work closely with law firms that represent silica plaintiffs.303 More importantly, potential defendants and their attorneys worry that the devastating effects of asbestos litigation could be felt across the silica community as well.304

V. DEFENSE AND PLAINTIFFS ATTORNEYS' THOUGHTS ON THE CURRENT STATE OF SILICA LITIGATION

Defense attorney Leah Lorber has become concerned about the current state of silica litigation. In her article, "Silica Litigation: Judicial Controls Needed to Curb Unwarranted, Excessive Claims," she quickly acknowledges that the rate of silica lawsuits filings has dramatically increased in recent years.305 She also notes that many of the same lawyers from asbestos

297. Id.
298. Id.


Id. (citing Mark D. Plevin & Paul W. Kalish, Where Are They Now? A History of the Companies that Have Sought Bankruptcy Protection Due to Asbestos Claims, 17-20 MEALEY'S LITIG. REP.: ASBESTOS 18 (2002)).
301. Cupp, Jr., supra note 286, at 207.
302. See Warren, supra note 19, at B5.
303. See Lorber & Laird, supra note 82.
304. See id.
305. Id.
litigation are bringing these silicosis claims. She finds herself concerned with these facts because there is not "a burgeoning silica medical crisis to explain this increase in lawsuit filings." Lorber suspects that greedy plaintiffs' attorneys are the actual "burgeoning" crisis.

Lorber points to NIOSH's statistics to illustrate that silicosis related deaths and injuries have decreased since the initial great silicosis tragedies of the 1930's.

Over the past 30 years, the annual number of silica related deaths has dropped... from 1,157 in 1968, to 308 in 1990, to 187 in 1999. To put these figures into context, the federal government reports that on average, 400 people in the United States die each year from extreme heat and that 155 workers die annually in falls from rooftops.

Lorber continues that "[f]indings of silicosis cases today are so rare that one specialist remarked that '[s]ilicosis is becoming more of a radiology curiosity.' She also points out that, "coincidentally," the majority of silica lawsuits are filed in "so-called 'magic jurisdictions' where plaintiffs are likely to make a big recovery," like Texas and Mississippi. Yet states with greater populations or the highest silica mortality rates have seen far less silica lawsuit filings.

Lorber believes that "[t]he recent increase in silica lawsuits after years of relatively stable dockets may reflect efforts by plaintiffs' lawyers to 'beat the clock' and file their cases before new tort-reform legislation takes effect in a number of states." She suggests that another possible reason for the recent escalation might be a response to the asbestos litigation reforms at the state and federal level that have precipitated plaintiffs' attorneys implementing the same asbestos litigation tactics in silica lawsuits, such as mass screenings.

306. Id.
307. Id.
308. See id.
309. Id. (citing NIOSH statistics); see also Warren, supra note 19, at B5.
310. Lorber & Laird, supra note 82.
311. Id. (quoting Jerry Mitchell, Silica Suits Latest to Hit Miss. Courts: More Than 17,000 Plaintiffs Claim to Have Incurable Lung Disease, CLAIRON-LEDGER, Oct. 19, 2003, at 1A.
312. Id. (citing Medical Monitoring and Asbestos Litigation: A Discussion With Richard Scruggs & Victor Schwartz, 17-3 MEALEY'S LITIG. REP.: ASBESTOS 19 (2002)).
314. Id. (citing 2002 NIOSH WORK-RELATED LUNG DISEASE SURVEILLANCE REP., at xxiv, 58).
315. Id.
316. Id. ("For example, marketing materials sent by a medical screening company to a plaintiffs' law firm suggested the screening company could increase the firm's business, showcased it number of positive screenings in other states and asked for the opportunity to produce the same 'remarkable results for your law firm.'" (quoting Letter from Lloyd Criss, Gulf Coast Marketing, to M. Davis Ready (May 9, 2003)).
Other defense attorneys agree with Lorber that the increase in silica claims can be attributed to the constraints that have been placed on asbestos litigation. They find it a telling coincidence that silica claims are on the rise at the very same time as the asbestos legislation that limits recovery is being proposed.

While defense attorneys have different reasons for their angst felt about the sudden increase in silica lawsuit filings, the reason for Lorber’s greatest concern is that the truly sick may be unable to recover. When courtrooms are clogged by healthy plaintiffs, the sick claimants will be unable to recover. If silica is to be anything like asbestos, Lorber suggests that measures must be taken to try and prevent a repeat of the situation in asbestos litigation where “claimants are not sick and may never develop an asbestos-related disease,” which prevents the truly crippled from receiving deserved compensation.

Defense attorney Thomas Gilligan takes a similar view to Lorber’s concerning the sudden resurgence of silica lawsuit filings. He wrote, “[f]rom a litigation standpoint, plaintiffs’ attorneys have created a model for asbestos litigation that can easily be converted to silica litigation.” Some attorneys and journalists have commented that many of the defendants are similar, but Gilligan notes that many defendants are new because they are solvent. He then acknowledges that it may be an exaggeration to classify silica as the next asbestos, but also recognizes that those involved with silica-related industries and products should be wary of the devastating affects asbestos had on the industry. Gilligan warns potential defendants of the possibility of plaintiffs’ attorneys imputing actual or constructive knowledge of silica’s history as a deadly occupational disease, like courts have done in cases like Goodbar.

Defense attorneys argue that courts should learn from the huge problems that asbestos litigation caused, claiming that “[t]he lesson of asbestos is instructive, because silica litigation is at a tipping point. Silica litigation can and should be carefully guided by the courts to make sure that it does not
squirrel out of control and result in the same problems as the asbestos litigation.\textsuperscript{328}

Plaintiffs' attorney, James M. Hughes responds to defense attorneys' assertions that silica is the next asbestos.\textsuperscript{329} Hughes, in his article entitled \textit{Silica Litigation From Both Sides of the Bar: Is Silica the Next Asbestos? The Plaintiff's Perspective}, addresses defense attorneys' claims about silica litigation.\textsuperscript{330} He posits that defense attorneys are creating a big discussion over silica litigation because they "have a vested interest in trying to convince the courts and the public that silica is the next asbestos."\textsuperscript{331} Hughes avers that defense attorneys are trying to "make the court sick of silica litigation at the outset,"\textsuperscript{332} along with "press[ing] the policy argument that silica litigation will inevitably result in clogged courts, unreasonable verdicts, and bankrupt defendants."\textsuperscript{333} Hughes also insists that defense attorneys are "attempt[ing] to use any asbestos plaintiffs' counsel's misbehavior or discovery abuses as a brush to tar all the plaintiffs' counsel."\textsuperscript{334}

Hughes first addresses the asbestos litigation nightmare. He contends that the asbestos litigation nightmare was not caused by plaintiffs' attorneys, but rather by the misdeeds of asbestos defendants.

Asbestos has injured and killed tens of thousands of people; . . . many asbestos defendants made conscious efforts to conceal, at worst, and exercised benign neglect, at best, in the face of knowledge about the hazards of asbestos; and . . . punitive damage awards in the asbestos arena give some indication of the wrongfulness of the asbestos defendants' actions. In short, sick and deceased asbestos plaintiffs and their counsel created considerably less of the asbestos litigation nightmare than did asbestos defendants and asbestos itself.\textsuperscript{335}

Hughes also notes that silica litigation could not rival asbestos litigation in "scope, breadth, or financial impact."\textsuperscript{336} He compares the amount of asbestos cases in certain jurisdictions with the amount of silica cases in those jurisdictions and finds that the number of silica cases is "minuscule" compared to the number of asbestos cases.\textsuperscript{337}

Some plaintiffs' attorneys scoff at the idea that silica is the next asbestos, asserting that this notion is being concocted by defense attorneys to

\textsuperscript{328} Lorber & Laird, supra note 82.
\textsuperscript{329} See Hughes, supra note 40, at 1, 3.
\textsuperscript{330} Id. at 3-7.
\textsuperscript{331} Id. at 3.
\textsuperscript{332} Id.
\textsuperscript{333} Id.
\textsuperscript{334} Id.
\textsuperscript{335} Id.
\textsuperscript{336} Id. at 4.
\textsuperscript{337} Id. Hughes bases this statement on "anecdotal evidence." Id.
stifle plaintiff recovery, while others are hopeful in some ways that silica will become the next asbestos. Rick Nemeroff, a Dallas plaintiffs' attorney who specializes in silica after doing extensive work in asbestos litigation, is quoted in the Wall Street Journal as saying, "Why reinvent the wheel?" Nemeroff acknowledges that the "two ailments [asbestosis and silicosis], both mainly acquired by breathing mineral dust in construction and industrial settings, naturally overlap." He is excited about using the so-called "asbestos litigation machinery" and applying it to silica.

Other plaintiffs' attorneys contend that the increase in silica litigation comes from a greater awareness about silicosis that has been ignited by government and scientific communities' debate over the proper threshold limit value of exposure, as well as the debate over protective equipments and the appropriate safety precautions. This sentiment is echoed by silica experts Gerald Markowitz and David Rosner, who agree that new silicosis claims are most likely to be attributed to the increased awareness about silicosis. Other experts agree, claiming:

[t]he current rise in claims is the result of the latency of pulmonary dust disease and increased awareness among affected workers. Government agencies have begun efforts to alert workers and physicians of the silica hazard and its associated diseases. Although silica litigation is not expected to reach the scope or magnitude of asbestos litigation, there remain thousands of injured workers that deserve compensation. Exposures to silica continue today, and without an outright ban on the use of silica in blasting and foundry applications, the number of injured workers is likely to continue into the foreseeable future.

VI. COMPARING SILICA AND ASBESTOS LITIGATION

Silica and asbestos have been discussed together for many reasons. One reason is that silicosis and asbestosis are both diseases that affect the lungs. The diseases also occur in a similar class of people, for the most
part industrial workers. But most of all, the amount of silica lawsuit filings has skyrocketed in recent years in a way that reminds one of the increase in asbestos lawsuit filings over a decade ago.

Also silica litigation presently involves many of the same players as asbestos litigation. Some of the same defendants involved in asbestos litigation including: Ingersoll Rand Company, Betchel Corporation, Sherwin Williams Company, Union Carbide Corporation, Pfizer Incorporated, Allied Signal, and Du Pont Company are also being sued for injuries caused by exposure to silica. Silica litigation has also involved some of the same plaintiffs as asbestos litigation. Dallas defense attorney Steve Russell asserts that "he has seen many silicosis cases where the plaintiff already has collected a settlement from an asbestos lawsuit."

Despite many of the same plaintiffs and defendants being involved in asbestos and silica litigation, at present the potential asbestos plaintiffs are far greater in amount than the potential silica plaintiffs because more people have been exposed to asbestos than to respirable silica. A bigger plaintiff pool indicates that there is greater potential for more asbestos litigation. Yet this larger plaintiff pool may not always exist. Once the general public became aware of the devastating effects of asbestos exposure, asbestos manufacturers ceased production of the chemical. Yet, although silica exposure is known to have devastating effects similar to that of asbestos exposure, silica continues to be used in abrasive blasting and other related trades. With workers continuing to use silica, the plaintiff pool increases everyday, although it is unlikely it could possibly surpass that of asbestos cases.

Also, even though some of the defendants are the same, there are other defendants in asbestos litigation that are quite distinguishable from those in silica litigation. Asbestos is produced more by large national companies,

347. See DYING FOR WORK: WORKERS' SAFETY AND HEALTH IN TWENTIETH-CENTURY AMERICA (Gerald Markowitz & David Rosner, eds., 1987) [hereinafter DYING FOR WORK].

348. Lorber & Laird, supra note 82.

349. Warren, supra note 19, at B5.

350. Id.

351. Hughes, supra note 40. From 1987 to 1996, asbestosis was the cause of twenty-eight percent of deaths caused by a work-related lung disease in the United States, whereas silicosis was only the cause of eight percent of deaths caused by work-related lung disease. Id. The higher death rate indicates that more people have been exposed to asbestos and that asbestos exposure could possibly be more lethal. See id.

352. See Cupp, Jr., supra note 286, at 205.

353. Protective equipment and respirators can only reduce the amount of silica inhaled, they cannot prevent exposure. Nat'l Institute for Occupational Safety & Health, NIOSH Issues Nationwide Alert on Silicosis, at http://www.cdc.gov/niosh/93-123.html (Nov. 18, 1992) (last visited Apr. 2, 2005). Any exposure to silica is dangerous. Id.

354. Hughes, supra note 40, at 1. Deaths caused by silicosis have dramatically decreased from the 1960's to the 1990's, whereas deaths caused by asbestosis have increased from less than one-hundred per year in the late 1960's to over one-thousand in the mid 1990's. Id. This statistic indicates that although the silica plaintiff pool has a greater potential to grow in the upcoming years, the asbestos plaintiff pool remains much larger.

355. Id. at 2.
whereas silica is produced more by local or regional defendants.\textsuperscript{356} Also, many new defendants have been brought into silica litigation because, unlike many veteran asbestos defendants, the silica defendants are solvent.\textsuperscript{357} Therefore, with new solvent defendants, silica litigation has the possibility to grow. However, the nature of silica litigation, and the path it will take, is unknown as of yet.\textsuperscript{358}

The similarities between silicosis and asbestosis have caused some attorneys to call silica the next asbestos.\textsuperscript{359} However, despite the commonalities, which sometimes cause the claims and their associated diseases to be discussed together, there are so many differences between silica and asbestos that it is questionable for attorneys to characterize silica as the next asbestos for litigation purposes.\textsuperscript{360}

One difference between silica and asbestos is the types of diseases that both products cause and their links to cancer.\textsuperscript{361} The relationship between asbestos and cancer is well-established.\textsuperscript{362} Exposure to asbestos causes a certain type of cancer called mesothelioma, whereas silica has not been connected to a specific type of cancer.\textsuperscript{363} It still remains questionable whether inhalation of silica dust is a direct cause of cancer.\textsuperscript{364} Many injured persons have brought suit against asbestos manufacturers because it has been proven that asbestos causes cancer. However, this same direct link has not been made between silica and cancer, and thus it is unlikely that silica could reach the litigation heights of asbestos.

Another difference between silica and asbestos litigation is the courts’ approaches to these types of claims. When the Fifth Circuit Court of Appeals in \textit{Borel v. Fibreboard} ruled that a manufacturer could be held liable for injuries suffered by the ultimate user of asbestos, the floodgates of litigation opened.\textsuperscript{365} With regard to silica litigation, many plaintiffs are having difficulty holding silica manufacturers liable because courts are recognizing affirmative defenses like the sophisticated user doctrine and the bulk user doctrine.\textsuperscript{366} These doctrines place liability on the party that is best

\begin{footnotes}
\item[356.] \textit{Id.}
\item[357.] Gilligan, Jr., \textit{supra} note 42, at 19.
\item[358.] \textit{Id.} at 19-20.
\item[359.] \textit{Id.} at 19 (explaining that would-be silica litigation resembles asbestos litigation in that “the respiratory injuries are similar, the claims are similar, the involved industries and trades are similar, the medical, geological and industrial hygiene experts are similar, and the state of art is similar.”).
\item[360.] \textit{Id.} at 19-20.
\item[361.] Hughes, \textit{supra} note 40, at 2.
\item[362.] \textit{Id.}
\item[363.] \textit{Id.}
\item[364.] See \textit{id}.
\end{footnotes}
equipped to adequately provide a warning to the ultimate user. Asbestos litigation has yet to see defensive measures like those that are being applied in silica cases. Consequently, if this trend continues and if plaintiffs are unable to recover from defendants with deeper pockets, then the silica litigation is likely to slow down from its rapid pace.

"One of the biggest differences between asbestos and silica is that personal injury cases involving exposure to silica may simply not lend themselves to products liability cases in the way that personal injury asbestos cases do." In a basic silicosis claim, an employee is exposed to silica dust when he is sandblasting or working in a mine. After some years, he realizes that he has shortness of breath and a terrible cough. He goes to see a doctor and the doctor gives him a chest x-ray. The chest x-ray shows that this employee has mild silicosis. The doctor tells him that if he does not stop working in this field, his silicosis will become acute and he will become unable to breathe. The employee learns that he has contracted silicosis because his employer has not informed him of the grave risks that working with silica poses as well as not provided him with adequate protective gear. The employee wants to be compensated for his injuries on the job and brings suit against his employer. The employee quickly learns that he is only able to bring a workers' compensation claim against his employer. The employee receives the minimal recovery allocated by statute from workers' compensation and is barely able to pay his medical expenses. His lawyer suggests that he file a personal injury lawsuit against the employer's silica supplier, like other plaintiffs in asbestos cases have done when they sued the asbestos manufacturers. The employee cannot bring a defective design claim, like the asbestosis claimant, because silica is a naturally occurring mineral and therefore cannot be defectively designed. Instead, he brings a failure to warn claim against the silica supplier. The supplier asserts the sophisticated user doctrine which places liability on the employer who the employee has already recovered from under workers' compensation.

This employee's situation is not uncommon. Among silica using industries, an employer is the most likely entity to have created the dangerous condition by not providing adequate warnings or protective gear. But workers are usually limited to bringing workers' compensation claims against employers, as opposed to more lucrative products liability suits against larger silica manufacturers and suppliers. Because most

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367. These types of defensive measures have not been applied in asbestos litigation. The bulk supplier doctrine applies to raw materials and asbestos is not a raw material. The premise of the bulk supplier doctrine is that no warning can be placed on raw materials delivered in bulk as they are not packaged or labeled. Goodbar, 591 F. Supp. at 566. The sophisticated user doctrine applies when a supplier has reason to believe that the ultimate user knows of a product's dangerous propensity. Id. at 561. These doctrines are thus inapplicable in cases where asbestos companies' concealment of asbestos' dangerous propensities prevent the asbestos supplier from having reason to believe that the user knew of its dangerous propensities.

368. Hughes, supra note 40, at 2.


370. Hughes, supra note 40, at 6.

371. Id. at 2.
infected or injured employees are only likely to be able to bring workers’ compensation claims against their employers, the possible threat of extensive litigation against their employers is minimal.\textsuperscript{372} Additionally, as more courts across the country adopt the sophisticated user defense and other similar measures that prevent manufacturers and suppliers from being held liable, the possible threat of extensive litigation against silica manufacturers and suppliers is also minimal.\textsuperscript{373} Only if courts were to adopt the viewpoint that the silica that causes silicosis is not a naturally occurring mineral because it is actually refined to a respirable form, making the silica at issue a defectively designed product,\textsuperscript{374} then perhaps silica manufacturers and suppliers could be held liable in products liability claims for defective design. But courts confronted with silicosis cases do not seem to be leaning in this direction.\textsuperscript{375} Therefore, without being able to hold deep-pocketed defendants liable, silica litigation is unlikely to reach the magnitude of asbestos litigation.

After examination and contemplation of the reasons for comparing silica and asbestos, it becomes evident that silica litigation is unlikely to reach the magnitude of asbestos litigation. The ways in which courts have approached the silica cases are distinguishable from asbestos cases and is likely to prevent silica litigation from spiraling out of control. This conclusion is most dependent on how and if each jurisdiction decides to adopt the bulk supplier doctrine or the sophisticated user doctrine.

While defense attorneys categorize silicosis as a waning problem,\textsuperscript{376} experts that have devoted their lives to the study of occupational disease see silicosis as monumental of a problem now as it was almost a century ago.\textsuperscript{377} Without providing workers with the proper protection or refraining from using silica completely, people will continue to develop silicosis. As long as people are getting sick, litigation will continue. Although the litigation will continue, the affirmative defenses that many courts have been adopting, like the sophisticated user and the bulk supplier doctrine, will prevent many silica manufacturers and suppliers from incurring liability and will most likely act as controls to help prevent the litigation from becoming the litigation nightmare that asbestos seems to be.

\textsuperscript{372} Id.
\textsuperscript{373} See, e.g., Gray, 664 N.W.2d at 887; Goodbar, 591 F. Supp. at 567.
\textsuperscript{374} Hughes, supra note 40, at 6 (quoting Gray v. Allied Mineral Prods., Inc., PI 99-66 (Minn. Dist. Ct. Aug. 28, 2002).
\textsuperscript{375} See, e.g., Gray, 664 N.W.2d at 887; Goodbar, 591 F. Supp. at 567.
\textsuperscript{376} See Lorber & Laird, supra note 82.
\textsuperscript{377} See DYING FOR WORK, supra note 347.
VII. CONCLUSION

Whether silica is the next asbestos will not be truly known until this resurgence of silica litigation plays itself out. Asbestos litigation and silica litigation maintain their differences but for defense attorneys, some of the patterns are all too similar. Although defense attorneys and their clients may be seeing large amounts of lawsuits filed against them, companies’ active concealment of the knowledge that silica injures people causes little pity to be felt for their legal troubles. Yet, Americans have seen many instances of people abusing the justice system in order to make a quick buck, and as with asbestos litigation, sometimes the rich employer, supplier, or manufacturer is not the only party who suffers from these abuses. But as long as towns like Picher still experience the devastation of silicosis, litigation will continue. Hopefully, the increase in litigation will force the silica-using industry to implement better, more effective safety measures or sustain from using silica completely. Then, and only then, can silicosis truly be a “disease of the past.”

Melissa Shapiro

378. J.D. Pepperdine School of Law, May 2005. I would like to thank my mother and father, without which, none of this would be possible.