

An Update On Silica Claims

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I. EXECUTIVE SUMMARY

The recent increase in the number of silicosis claims filed has many concerned that **silicosis litigation may follow the path asbestos litigation took in the early 1980s**. Similar to patterns observed in asbestos litigation, silicosis claims filed to date have affected a broad array of industries and continue to increase. It is believed that many of the workers that have been exposed to asbestos have also been exposed to silica, and that lawyers will continue to file claims for both illnesses at once. On the other hand, the number of recorded silicosis-related deaths has been decreasing since the late 1960s. Various initiatives have been undertaken to reduce workers' exposure to silica in efforts to reduce the number of silica-related illnesses.

Silica is still widely used in many industrial settings across the United States. Approximately 2 million workers are in jobs where they could be exposed to silica dust across a wide variety of occupations and industries. However, estimating the number of workers exposed to silica dust and then estimating the number of workers who may contract a silica-related disease is complex and difficult, with few studies performed to date. Silicosis litigation continues to ensue in dozens of states and the risk of silicosis litigation has increased.

Insurance companies have begun to establish reserves for silica matters. In contrast to the increasing number of silica claims, the number of deaths from silica exposure has been decreasing. The future is unclear at this point as to whether the number of silica claims will continue to increase.

II. INTRODUCTION

The recent rising number of claims involving silica sand, the second most abundant element on earth, has many concerned that silicosis could follow in the footsteps of asbestos litigation. Some have labeled the recent surge in silicosis litigation as "the next big toxic tort wave" after

asbestos and mold.¹ Described in 1936 as “America’s worst industrial disaster,” silicosis can be a disabling and occasionally fatal lung disease caused by overexposure to respirable crystalline silica or silica dust.² The U.S. Department of Labor, Occupational Safety and Health Administration (“OSHA”) estimates more than 250-300 American workers die each year of silicosis and millions more are exposed.³ Reminiscent of the legal onslaught over asbestos, the increased number of lawsuits filed on behalf of individuals exposed to silica has created a recent trend that could become a major problem for United States companies.

Plaintiffs have filed over 750,000 asbestos claims. Several recently conducted studies estimate that there may be as many as approximately one million to three million additional asbestos claims filed over the next twenty to forty years. Estimates of the cost of these claims range from \$200 billion to \$265 billion. In the earlier years of asbestos lawsuits, various studies and estimates of the potential number of asbestos claims predicted that the future costs of asbestos litigation could reach \$38 billion.⁴ These early estimates were proven to have significantly underestimated the actual number of claims filed by the late 1990s. Silicosis claims appear to be similar to the early years of asbestos claims in a number of ways. The issues⁵ surrounding silicosis lawsuits mirror many of the asbestos lawsuits including insurance coverage, such as when does coverage begin and end;⁶ allocation to policies; medical issues related to causal relationships between exposure and disease; long latency periods; among others. Many plaintiffs’ attorneys view silica litigation as a natural extension of asbestos litigation. More recently, the rising number of silicosis claims being filed has accelerated, similar to both the rise in asbestos claims in recent years as well as the rise in claims in the early years of asbestos lawsuits. To date, few if any studies or estimates have been prepared related to the potential number of silicosis claims that

¹ Sue Reisinger, Mounting Silica Suits Pose New Threat to Industrial Companies, Corporate Legal Times, March 2003, at 64.

² Update: NIOSH Issues Nationwide Alert on Silicosis, DHHS (NIOSH) Publication No. 93-123, November 18, 1992.

³ www.osha.gov/SLTC/etools/silica/index.html, and Preventing Silicosis, NIOSH/Department of Labor Fact Sheet, October 31, 1996.

⁴ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at vi-vii, 75-77.

⁵ This article does not address insurance coverage issues and the medical issues related to exposure to silica dust and silicosis.

⁶ Often referred to as trigger of coverage. Most insurance policies had specific asbestos exclusion language by approximately 1985. However, most insurance policies did not have specific silicosis exclusionary language through 2002.

may be filed. Experience with asbestos claims to date illustrates that the challenges in estimating the number of potential claims to be filed include numerous factors such as determining the actual number of people exposed to asbestos, the duration of exposure, the severity of the disease(s), and the degree of involvement by the plaintiffs' bar in identifying potentially injured people. These same challenges exist for estimating the potential number of silicosis claims.

III. OVERVIEW OF SILICOSIS

Silica is highly purified quartz and is the second most abundant element found in the earth's crust.⁷ It is widely used and can be found as a primary ingredient in glass manufacturing, sand blasting material, paints and ceramics, residential pool filters, municipal water filtration, concrete and bricks.⁸ According to published articles, individuals that work in certain industries, such as sandblasting, construction, mining, masonry, demolition, glass manufacturing, and railroad construction are at greatest risk for developing silicosis.⁹

Silicosis, caused by the inhalation of crystalline silica particles, is the development of scar tissues, or nodules, in the lungs. As a result, the lungs' ability to extract oxygen from the air in order to breathe is progressively reduced and ultimately respiratory failure may ensue. Similar to asbestosis, silicosis mainly results from breathing mineral dust in construction and industrial settings. Once diagnosed, chances of recovery from advanced silicosis are slim; there is no known cure. Symptoms of silicosis can include shortness of breath, wheezing, coughing, fever, loss of appetite and weight loss.¹⁰ Dr. Gregory R. Wagner, director of the National Institute for Occupational Safety and Health ("NIOSH") division of respiratory disease studies, claims, "asbestos and silicosis can have very similar effects."¹¹ According to a review released by NIOSH, workers exposed to respirable crystalline

⁷ Silica: NYT Examines Increase in Lawsuits Over Exposure, American Health Line, September 8, 2003.

⁸ Ingredients Might be in Place to Make Silica the New Asbestos, BestWire, September 10, 2003.

⁹ Kenneth B. Moll & Associates, Ltd. is Investigating Whether Companies, Such as 3M and U.S. Silica, Failed to Prevent Injuries and Deaths Caused by Silica Exposure, Business Wire, July 14, 2003.

¹⁰ Preventing Silicosis, NIOSH/Department of Labor Fact Sheet, October 31, 1996.

¹¹ Jonathon D. Glater, Suits on Silica Being Compared to Asbestos Cases, The New York Times, September 6, 2003, at C1.

silica have an increased risk of developing lung cancer, pulmonary tuberculosis, airway diseases, and various other adverse health effects.¹²

According to the United States Department of Labor, silicosis can exist in three forms: 1) chronic, 2) accelerated, or 3) acute. Chronic silicosis is the most common form of silicosis, and usually occurs after many years of exposure to relatively low levels of airborne silica dust. Accelerated silicosis results from higher exposures to silica dust and develops over five to ten years. Acute silicosis occurs where exposures to silica dust are highest and symptoms develop over a short period of time. As with asbestosis, silicosis may go undetected for years in the early stages, a chest x-ray may not reveal an abnormality until after 15 to 20 years of exposure.¹³ To complicate matters, it is possible to suffer from both silicosis and asbestosis, and for individuals to file claims involving both diseases.¹⁴

Although silica has been a health concern for several decades, more recent studies reveal the hazards of exposure. In 1997, the International Agency for Research on Cancer upgraded crystalline silica to a “Group (1) human lung carcinogen.”¹⁵ In the same year, the American Thoracic Society published a paper that stated that the inhalation of crystalline silica caused or contributed to silicosis and extrapulmonary diseases including scleroderma, rheumatoid arthritis and renal disease. Then in 2000, the United States National Toxicology Program upgraded silica in its annual report to the “known to be a human carcinogen” category. And recently, in 2003, an epidemiological study undertaken by the United States Occupational Safety and Health Administration (“OSHA”) and the National Institute for Occupational Safety and Health has “corroborated the reported association between crystalline silica and several respiratory and autoimmune diseases.”¹⁶

¹² NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica, DHHS (NIOSH) Publication No. 2002-129, April 2002.

¹³ Preventing Silicosis, NIOSH/Department of Labor Fact Sheet, October 31, 1996.

¹⁴ Jonathon D. Glater, Suits on Silica Being Compared to Asbestos Cases, The New York Times, September 6, 2003, at C1.

¹⁵ Category established by the International Agency for Research on Cancer to describe the relative carcinogenic nature of chemicals to humans. The Group 1 classification identifies the agent as “carcinogenic to humans.”

¹⁶ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.

IV. DETAILED DISCUSSION

A. Brief History Of Silicosis

Silicosis as a disease first became a national issue in the 1930s when, in 1935, approximately 700 workers died after being exposed to hazardous conditions as they were drilling tunnels through a mountain of almost pure silica near the town of Gauley Bridge, West Virginia. That incident, together with several thousand lawsuits, gave silicosis the title as the “king of occupational diseases.”^{17,18} Over the next couple of decades, the evolution of new safety measures and procedures, such as respirator masks, offered better protection for workers. Preventative actions, combined with a decreasing trend of silicosis deaths in the United States, have led some to believe silicosis to be a disease of the past. **(See Figure 1.)** However, certain facts show workers are not always given proper warnings or safety training, and the threat of contracting the disease still exists to many.¹⁹

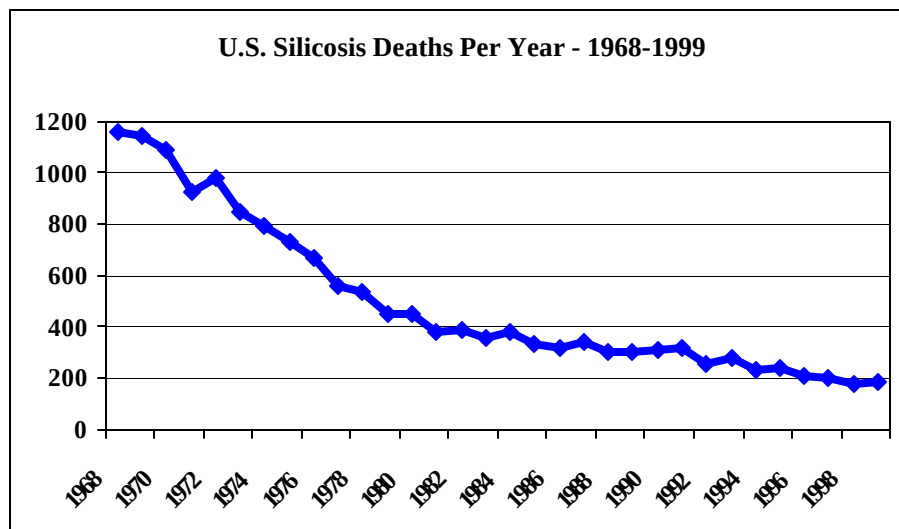


Figure 1^{20,21}

¹⁷ Gerald Markowitz and David Rosner, The Reawakening of National Concern About Silicosis, Public Health Reports, Vol. 113, No. 4, July 17, 1998, at 302.

¹⁸ Update: NIOSH Issues Nationwide Alert on Silicosis, DHHS (NIOSH) Publication No. 93-123, November 18, 1992.

¹⁹ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.

²⁰ Worker Health Chartbook, 2000, DHHS (NISOH) Publication No. 2000-127, September 2000.

²¹ Work-Related Lung Disease Surveillance Report 2002, Division of Respiratory Disease Studies, National Institute for Occupational Safety and Health, NIOSH Publication No. 2003-111.

The National Center for Health Statistics (“NCHS”), a part of the Center of Disease Control and Prevention, estimates that a total of 15,841 silicosis-related deaths occurred between 1968 and 1999.²² This number may be understated given that reporting the cause of occupational deaths to the NCHS didn’t begin until 1985, and at most only 22 states reported data between 1985 and 1994.²³ Also, because the disease is very similar to a variety of other illnesses, silicosis symptoms can be misdiagnosed. As a result of potentially undetected silica-related illnesses, the numbers that die each year could be higher if properly diagnosed. A chart depicting the number of silicosis-related deaths in certain states is illustrated in **Figure 2**.

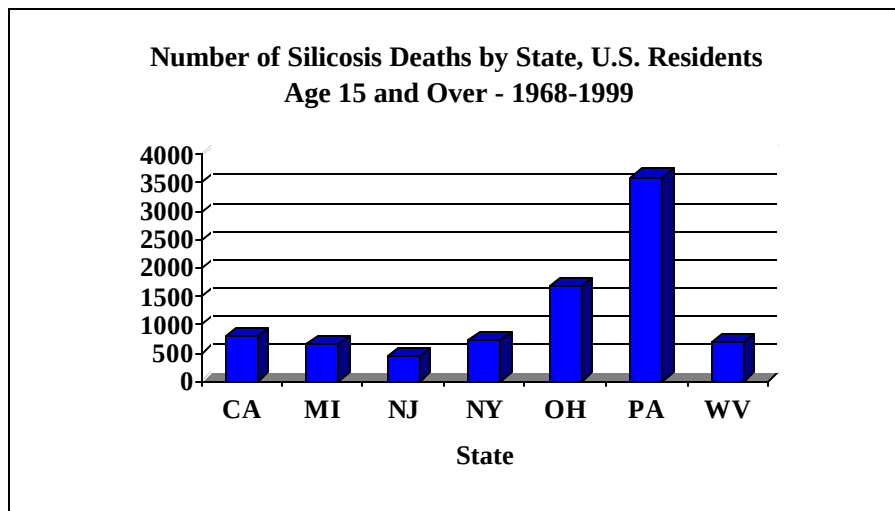


Figure 2²⁴

In addition, due to a long latency period associated with silica illness, it is likely a large number of exposed workers have not yet manifested illness.²⁵ Therefore, it is possible that the number of future silicosis-related illnesses could increase as a result.

²² Tables 3-2 and Table 3-4 of The Work-Related Lung Disease Surveillance Report for the years 1996 and 2002 respectively, <<http://www.cdc.gov>>.

²³ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.

²⁴ A chart containing statistics from the National Center for Health Statistics multiple cause of death data can be found in Table 3-2 and Table 3-4 of The Work-Related Lung Disease Surveillance Report for the years 1996 and 2002 respectively, <http://www.cdc.gov>.

²⁵ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.

B. Potential Exposure To Silica – Who May Be At Risk?

In 1983, the National Occupational Exposure Survey estimated that 53,724 facilities nationwide, from 254 industries, had 2,250,097 employees potentially exposed to silica dust. Current estimates of **the potential number of United States workers exposed to crystalline silica generally range from 1 million to over 3 million workers.**²⁶ According to OSHA, 2 million workers are exposed to silica each year.²⁷ The National Institute for Occupational Safety and Health estimated in 2002 that at least 1.7 million workers are in jobs where they can be exposed to silica dust.²⁸ However, these estimates appear to be a snapshot of the potentially exposed population and not a cumulative figure. Obviously, from year to year the same and also new or different workers may be exposed to silica dust as the workforce changes. As detailed in **Figure 3**, workers in a wide variety of occupations and industries have had silicosis listed on their death certificates. Of those, mining machine operators and laborers have had the largest percentage. Workers have developed the disease in settings such as foundries, quarries, construction sites, shipyards, and mines, where silica dust can be prevalent.²⁹ A list of typical industries named in silicosis lawsuits is detailed in **Table 1**.

²⁶ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1, Silica, A Growing Concern for the Property-Casualty Insurance Industry, Credit Suisse First Boston, June 1, 2004, and Search LungUSA, American Lung Association, November 2003.

²⁷ www.osha.gov

²⁸ NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica, DHHS (NIOSH) Publication No. 2002-129, April 2002.

²⁹ Gerald Markowitz and David Rosner, The Reawakening of National Concern About Silicosis, Public Health Reports, Vol. 113, No. 4, July 17, 1998, at 302.

Occupations Of Individuals With Silicosis Listed On Their Death Certificates

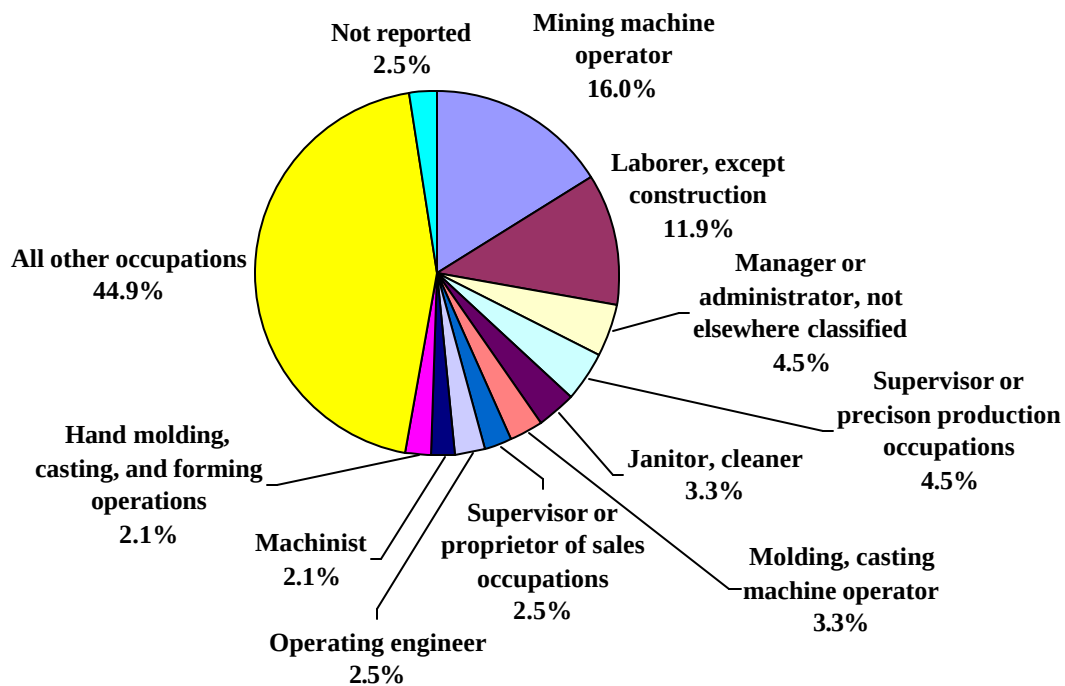


Figure 3³⁰

³⁰ NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica, DHHS (NIOSH) Publication No. 2002-129, April 2002.

Table 1: Industries Named In Silicosis Lawsuits

- | | |
|---|---|
| • Clay, ceramic, glass, and refractory materials | • Masonry, stonework, tile setting and plastering |
| • Combination of gas and electric and other utilities | • Mining and quarrying operations |
| • Compressor manufacturers | • Oil and gas extraction |
| • Concrete, gypsum, and plaster products | • Roofing and sheet metal work |
| • Construction | • Services to dwellings and other buildings |
| • General industrial machinery and equipment | • Silica sand producers |

Statistics shows that out of the approximately 2 million United States workers at risk of developing silicosis, nearly 100,000 are employed as sandblasters.³¹ In industrial settings, the process of sandblasting is commonly used to remove old paint, tar, oil, or other residues off metal pipes, bridges, oil storage tanks, oil rigs, or buildings.³² In the process of abrasive sandblasting, compressed air or steam forcefully projects abrasive particles onto a surface. The abrasive sandblasting material is often silica sand. Since 1974, the National Institute for Occupational Safety and Health has recommended that silica sand be banned for use in abrasive blasting, and that a substitute material be used.³³ While the use of silica sand abrasive is banned in several countries, it is still allowed and widely used in the United States because it is abundant, economical, and highly effective.³⁴

³¹ Kenneth B. Moll & Associates, Ltd. is Investigating Whether Companies, Such as 3M and U.S. Silica, Failed to Prevent Injuries and Deaths Caused by Silica Exposure, Business Wire, July 14, 2003.

³² Gerald Markowitz and David Rosner, The Reawakening of National Concern About Silicosis, Public Health Reports, Vol. 113, No. 4, July 17, 1998, at 302.

³³ NIOSH Alert: Preventing Silicosis and Deaths From Sandblasting, DHHS (NIOSH) Publication No. 92-102, August 1992.

³⁴ Sue Reisinger, Mounting Silica Suits Pose New Threat to Industrial Companies, Corporate Legal Times, March 2003, at 64.

Efforts to raise awareness of the potential health hazards associated with the inhalation of silica dust have been put forth by the National Institute for Occupational Safety and Health and OSHA. In August 1992, the National Institute for Occupational Safety and Health issued an alert nationwide to notify workers, employers, trade unions, regulatory agencies, and other occupational and public health agencies of the risk of silicosis from sandblasting.³⁵ Similarly, OSHA developed a Special Emphasis Program in the mid-1990s seeking to improve awareness of the health risks associated with excessive silica dust exposure and to step up enforcement efforts in workplaces.^{36,37}

According to the General Re Corporation, one of the four largest reinsurers worldwide, compliance with regulatory standards cannot be assumed, and even full compliance does not necessarily equate to full workplace safety. Based on various reports from regulators and watchdog groups, it appears that the risk is reduced but not entirely eliminated. While the OSHA Special Emphasis Program has increased inspections and awareness of risk since 2000, most workplace studies predated the program, and doubt remains about whether current employers have eliminated the risks of silica.³⁸

C. Recent Trends in Silicosis Claims – Tip of the Iceberg?

Workers' compensation claims involving silica have been around since the 1930s, but recently there has been an increase in silica litigation. While preventive initiatives have been set forth by regulatory agencies, lawsuits charging that thousands of workers have developed silicosis are being filed against an array of companies. In many cases, the same plaintiffs have filed silicosis-related claims against a list of defendants that mirror the defendants in asbestos litigation.³⁹

Bob Glenn, president of the National Industrial Sand Association trade group, confirmed, **“Because of silica’s wide use, the**

³⁵ NIOSH Alert: Preventing Silicosis and Deaths From Sandblasting, DHHS (NIOSH) Publication No. 92-102, August 1992.

³⁶ U.S. Silica Exposure Stats Concern Canadians, Plant Engineering and Maintenance, Vol. 26, No. 3, June 2002, at 28-30.

³⁷ Special Emphasis Program (SEP) for Silicosis, Occupational Safety & Health Administration, May 2, 1996.

³⁸ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.

³⁹ Susan Warren, Silicosis Suits Rise Like Dust, Wall Street Journal, September 4, 2003, at B5.

potential for lawsuits is great.”⁴⁰ He believes the recent flood of silica litigation is “the tip of the iceberg” of what plaintiffs’ attorneys could potentially go after.⁴¹ The number of claims in America has in fact increased to over 30,000 in 2003 from fewer than 10,000 in 2002.⁴² According to the Coalition for Litigation Reform in Washington, D.C., one major insurance company says its policyholders now face lawsuits from 30,000 plaintiffs, a tenfold increase from August 2002.⁴³ In Mississippi, where the number of silica plaintiffs is highest, with over 17,000 people filing lawsuits in the state, several small sand suppliers face bankruptcy as a result of inadequate employer liability insurance to cover costs of legal defense.^{44,45}

There are claims pending in approximately two dozen other states. Hundreds of claims have been filed in Texas in order to beat a deadline for new civil-justice reforms in the state.⁴⁶ Although Mississippi and Texas lead the nation in number of lawsuits, Ohio⁴⁷ and Pennsylvania are the top sources of silica deaths according to a National Institute for Occupational Safety and Health mortality study. Claims have been filed in both of these states, as well as numerous other states including Iowa, Louisiana, Minnesota, New York, and Wisconsin.⁴⁸

The chart on the next page shows the percentage of the silica claims filed by state between 2002 and 2004.

⁴⁰ Jonathon D. Glater, Suits on Silica Being Compared to Asbestos Cases, The New York Times, September 6, 2003, at C1.

⁴¹ Susan Warren, Silicosis Suits Rise Like Dust, Wall Street Journal, September 4, 2003, at B5.

⁴² Helen Leonard et al., Disease That Could Bankrupt Small Firms, The Times [London], September 10, 2003, at B29.

⁴³ Ingredients Might be in Place to Make Silica the New Asbestos, BestWire, September 10, 2003, and How Much Will Silica Claims Cost Insurers? Property & Casualty/Risk & Benefits Management Edition, June 14, 2004.

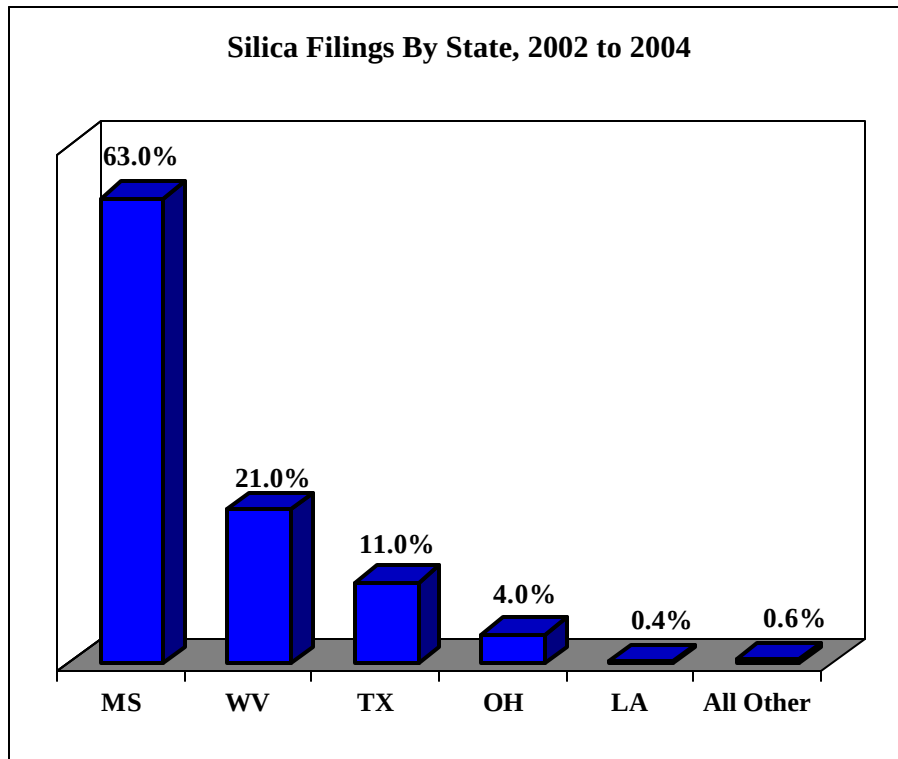
⁴⁴ Ingredients Might be in Place to Make Silica the New Asbestos, BestWire, September 10, 2003.

⁴⁵ Helen Leonard et al., Disease That Could Bankrupt Small Firms, The Times [London], September 10, 2003, at B29.

⁴⁶ Ingredients Might be in Place to Make Silica the New Asbestos, BestWire, September 10, 2003.

⁴⁷ Governor Taft signed a bill on June 2, 2004 requiring individuals filing a personal injury claims relating to silica or mixed dust to meet minimum medical criteria. This bill took effect September 2, 2004.

⁴⁸ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.



U.S. Silica, the second largest supplier of industrial sand, had 19,214 claims filed against the company in 2003. This was a significant increase over the 5,225 claims filed in 2002.⁴⁹ In 2001, the number of claims filed was even lower at 1,320.⁵⁰

⁴⁹ Better Minerals & Aggregates Company, First Quarter 2004, Form 10-Q.

⁵⁰ Jonathon D. Glater, Suits on Silica Being Compared to Asbestos Cases, The New York Times, September 6, 2003, at C1.

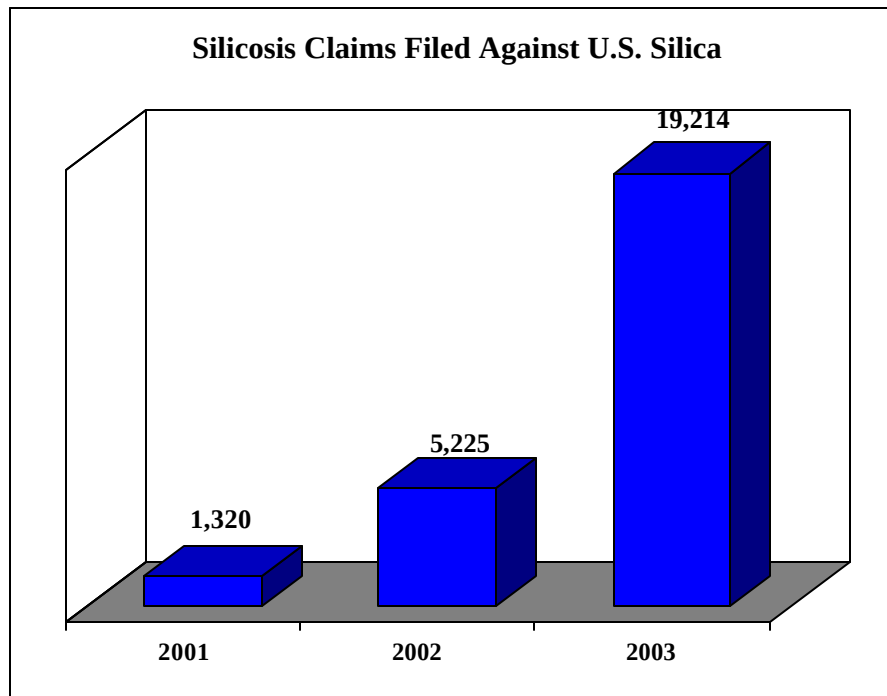


Figure 4⁵¹

A filing by U.S. Silica in defense of a claim brought against it reads:

“The plaintiffs, who allege that they are employees or former employees of our customers, claim that our silica products were defective or that we acted negligently in selling our silica products without a warning, or with an inadequate warning...these alleged defects or negligent actions caused them to suffer injuries and sustain damages as a result of exposure to our products. In almost all cases, the injuries alleged by the plaintiffs are silicosis or ‘mixed dust disease,’ a claim that allows the plaintiffs to pursue litigation against the sellers of both crystalline silica and other minerals.”⁵²

⁵¹ Jonathon D. Glater, Suits on Silica Being Compared to Asbestos Cases, The New York Times, September 6, 2003, at C1.

⁵² Silica Madness in the Courts: U.S. Silica [N]amed Defendant in Cases, Pit & Quarry, Vol. 93, No. 13, June 1, 2001, at 22.

D. Estimating Future Claims

To date, **few comprehensive studies have been performed to estimate the number of potential silicosis cases.** An analysis was recently performed and published in the “2003 Annual Report on Silicosis in Michigan” conducted by the Michigan State University, Department of Medicine and the Michigan Department of Consumer and Industry Services, Bureau of Safety and Regulation, Occupational Health Division (issued in September 2004). This report estimates, based primarily on data from Michigan, that during the ten year period 1987 to 1996 there were approximately 36,000 to 73,000 new cases of silicosis in the United States. This equates to an average of approximately 3,600 to 7,300 newly diagnosed cases of silicosis per year in the United States.

Since there is no national surveillance system in place to capture an accurate account of the number of people diagnosed with silicosis, the Michigan report had to make a number of assumptions and estimates to arrive at its estimate of 3,600 to 7,300 new silicosis cases annually (US). This estimate may or may not be accurate for numerous reasons including an assumption that the Michigan data is accurate and reflective of silicosis cases in the rest of the country, and that the incidence rate has been constant over the ten year period, among others. If one assumed for a moment that the Michigan estimate can be used to predict the average potential newly diagnosed cases of silicosis,⁵³ then the estimated number of silicosis cases for the next thirty years would be approximately 108,000 to 219,000. However, the recent dramatic increase in the number of silicosis claims may make the Michigan study already obsolete.

E. Some Recent Court Decisions Involving Silica

There are a growing number of lawsuits involving silica. Defendants include employers of organizations using silica, suppliers of silica sand or silica products, and manufacturers of protective gear or equipment. Recent cases illustrate the potential for significant damage awards to the plaintiffs.

⁵³ In assuming the potential validity of this estimate, I would caution that early estimates of asbestos cases turned out to be significantly lower than the actual number of cases. Regressions of historical trends of the actual number of silicosis claims received by defendants results in higher estimates of the potential future silicosis claims.

Employers:

Earlier in 2004, Bechtel and a number of other defendants were named in a suit relating the Department of Energy's Yucca Mountain project and silica dust exposure. Contractors dug tunnels in the early 1990s at a proposed nuclear waste repository at Yucca Mountain in Nevada. The complaint alleges that the defendants concealed information that the toxic silica dusts inside the tunnels exceeded regulatory limits.⁵⁴

A recent jury verdict in August 2004 awarded \$1.5 million to a former track worker for Norfolk Southern Railway. The track worker contracted silicosis and accused the company for failing to provide a safe work environment.⁵⁵

In *Arlon, Inc. v. Richard Messick*, a Delaware court has affirmed a state Industrial Accident Board's decision to grant workers' compensation benefits for silica-related diseases.⁵⁶ The court maintained that an expert's testimony proved a causal link between silica exposure and scleroderma, a chronic disease of connective tissue in organs such as the lungs.⁵⁷

In *Altvater v. Claycraft Company*, a jury in Ohio awarded \$1.3 million to the wife of a former brick factory employee, who died of obstructive pulmonary disease caused by exposure to silica at work.⁵⁸

Suppliers of Silica Sand or Silica Products:

Sand suppliers have used a "sophisticated user" defense asserting that large industrial employers knew, or should have known, of the dangers presented by silica dusts and thus, the employer should have taken adequate protective measures. Court rulings have been both for and against the sophisticated user defense.

In March 2004, the Minnesota Supreme Court reversed a judgment in favor of the defendant—*Gray v. Badger Mining Corp.* Mr. Gray had

⁵⁴ Yucca Mt. Worker sues DOE contractors over alleged exposure to silica dust, Inside Energy, March 15, 2004.

⁵⁵ Virginia Jury Hands Railroad Worker \$1.5 Million Silicosis Award, Mealey's Litigation Reporter Asbestos, September 1, 2004.

⁵⁶ *Arlon, Inc. v. Richard Messick*, C.A. No. 99A-07-008 RRC, Superior Court of Delaware, New Castle, Lexis 109 (May 17, 2000).

⁵⁷ Sue Reisinger, Mounting Silica Suits Pose New Threat to Industrial Companies, Corporate Legal Times, March 2003, at 64.

⁵⁸ Altvater v. Claycraft Company, No. 00AP-156, 2000 Ohio App. LEXIS 5645 (Ohio Ct. App., Franklin County, Dec. 5, 2000).

worked for Smith Foundry that used sand to create molds for metal objects. Badger Mining supplied sand to Smith Foundry. The Court held that since there was “evidence that Badger Mining had greater general knowledge of the dangers of the use of silica in the foundry process and had specific knowledge of the ineffectiveness of disposable respirators, it cannot be said as a matter of law that Gray’s knowledge was sufficient to relieve Badger Mining of its duty to warn.”⁵⁹ The sophisticated user defense failed in this instance.

Contrary to the ruling in Minnesota, the Wisconsin Supreme Court ruled in favor of Badger Mining Corp. in a similar matter—*Haase v. Badger Mining Corp.* The Court said, “Because we determine that Badger’s product, silica sand, underwent a material and substantial change after leaving its possession, we conclude that Badger cannot be held strictly liable.”⁶⁰

In November 2002, a Texas jury awarded \$7.5 million to the estate of the deceased plaintiff, Tompkins, in a case against U.S. Silica, an industrial sand supplier.⁶¹ Tompkins was employed as a sandblaster for several different companies between 1968 and 1977 and later developed silicosis and emphysema. The suit alleged that the silicosis was caused by exposure to products manufactured by U.S. Silica or its predecessors and that Mr. Tompkins was not provided with adequate knowledge of the dangers. The jury agreed and found that this failure to warn of the dangers of silica exposure constituted a marketing defect that caused Tompkins’ injury.⁶² The court ruled that manufacturers who supplied sand to be used in abrasive sandblasting had a duty to warn of the hazards of using the product. Though U.S. Silica appealed to the Texas Court of Appeals, the court held that the evidence was sufficient that the defendant’s negligence in failing to warn Tompkins was a proximate cause of the injury.⁶³

Gomez v. Humble Sand, a closely watched case, expected to bring clarity to the sophisticated user doctrine. Almost two years after hearing arguments in, the Texas Supreme Court in Sept. 2004 reversed a \$1.9 million verdict and sent it back to the district court for a new trial to

⁵⁹ Minnesota Supreme Court Reverses Silica Judgment, Mealey’s Emerging Toxic Torts, April 2, 2004.

⁶⁰ Wisconsin High Court: Sand Supplier Not Liable For Foundry Worker’s Silicosis, Mealey’s Product Liability & Risk, August 6, 2004.

⁶¹ *Tompkins v. U.S. Silica Company*, 92 S.W. 3d 605 (Tex. App. 2002).

⁶² Sue Reisinger, Mounting Silica Suits Pose New Threat to Industrial Companies, Corporate Legal Times, March 2003, at 64.

⁶³ Texas Court Rules Manufacturers Had Duty to Warn of Silica, Asbestos Litigation Reporter, Vol. 25, No. 4, December 30, 2002, at 5.

determine whether an abrasives supplier owed a duty to a silica-inflicted worker. Raymond Gomez and his two children were awarded \$1.9 million in 1999 after a jury found that Humble Sand provided inadequate warning of the silica danger on the bags it supplied to Gomez's employer.⁶⁴ The Texas Court of Appeals affirmed the judgment in 2001 claiming, "Humble Sand relied on the insignificant warning that it had placed on the individual bags and on general industry knowledge about the dangers of silica sand. These actions, or more appropriately lack of actions, did not put Gomez on notice of the danger."⁶⁵ Humble Sand & Gravel, had asked the trial court to adopt a "sophisticated user" defense to products liability claims. But the lower court refused the defense, as did the courts in the Tompkins case.⁶⁶ The case was resolved in October 2004 prior to the new trial ordered by the Texas Supreme Court.⁶⁷

In Horton v. Lone Star Industries, the plaintiff and silica sand supplier settled during jury deliberations for \$650,000.⁶⁸ Jurors were set to award \$12.8 million in damages including \$2.8 million for future medical costs and \$10 million for future pain, mental anguish and future impairment.⁶⁹ Interviews with jurors revealed that the jury was also going to assess punitive damages against the defendant.

Manufacturers of Protective Gear or Equipment:

The defendants in silica lawsuits extend beyond employers and suppliers of silica sand to manufacturers and sellers of respiratory equipment. Safety-equipment makers Minnesota Mining and Manufacturing Company ("3M") and Aero Corporation both disclosed an increase in silica-related claims in recent financial filings.⁷⁰ 3M

⁶⁴ Humble Sand & Gravel, Inc., v. Raymond Gomez, et al., 48 S.W.3d 487 (Tex App. 2001), pet granted, (S. Ct. May 30, 2002).

⁶⁵ Mary Alice Robbins, A Sophisticated-User Doctrine in Silica Cases? Texas Lawyer, Vol. 19, No. 32, October 6, 2003, at 1.

⁶⁶ Sue Reisinger, Mounting Silica Suits Pose New Threat to Industrial Companies, Corporate Legal Times, March 2003, at 64.

⁶⁷ Humble Sand v. Gomez Resolved; No New Trial on Duty to Warn, www.HarrisMartin.com, October 21, 2004.

⁶⁸ Horton v. Lone Star Industries, No. 0104284-000H, Texas Dist. Ct. Nueces Cty. [2003].

⁶⁹ Horton v. Lone Star Industries, No. 0104284-000H, Texas Dist. Ct. Nueces Cty. [2003].

⁷⁰ Susan Warren, Silicosis Suits Rise Like Dust, Wall Street Journal, September 4, 2003, at B5.

Corporation announced that in its first and third quarters of 2003 it was experiencing an increase in the number of silica-related claims.⁷¹

On August 25, 2004, 3M won a defense verdict from a jury in state court in Jefferson County, Texas. The jury found that 3M had no liability to the plaintiff who claimed he had silicosis and sought to recover damages from the company arising from his alleged illness. The plaintiff claimed to have contracted silicosis from occupational exposure to silica despite his purported use of the 3M's respirator mask equipment at various times. With this victory in Jefferson County, the Company has prevailed in six of the seven cases taken to trial. The Company expects the appeal of the one adverse jury verdict rendered in Holmes, County, Mississippi will be heard in that state's Supreme Court in December 2004.⁷²

Of the claims pending against 3M, the company joined other defendants in removing approximately 7,600 silica-related claims from Mississippi courts. The claims were consolidated before a federal court in Corpus Christi, Texas. A vast majority of these claims are based on alleged use of 3M's mask and respirator products. 3M is vigorously defending these actions.⁷³

Similarly, E.D. Bullard Company, maker of respiratory protection devices, has had over 600 lawsuits from over 17,000 plaintiffs in 2003.⁷⁴ The plaintiffs allege that the air-supplied respirator products did not work or that the company did not give proper warning. The company faced one silica-related lawsuit in 1975, and it was not until 1993 that multi-plaintiff suits were filed against the company. The following summarizes the increases in cases filed against Bullard.

E.D. Bullard Company Silica Cases

<u>Year</u>	<u>Cases</u>	<u>No. Of Plaintiffs</u>
1999	62	200
2002	156	4,305
2003	643	17,288

⁷¹ 3M Company 10-Qs, for the quarter ending March 31, 2003, filed on May 14, 2003, and for the quarter ending September 30, 2003, filed on November 11, 2003.

⁷² 3M Company, 10-Q for the quarter ending September 30, 2004, filed on November 1, 2004.

⁷³ 3M Company, 10-Q for the quarter ending June 30, 2004, filed on August 4, 2004.

⁷⁴ Silica Claimants Jump From Hundreds To Tens Of Thousands, National Underwriter, May 10, 2004.

The 643 cases filed in 2003 exceeds all the cases filed for the years 1995-2002 combined.⁷⁵

Other:

In addition to the fact that some recent cases have settled for high dollar amounts, plaintiffs' lawyers are also aggressively pursuing silicosis cases in a manner similar to asbestos cases. Many of the plaintiffs that attorneys "recruit" are in the same types of industries as plaintiffs in asbestos cases, drawing a fine line that separates claims between the two ailments, silicosis and asbestosis. According to Fred Krutz, a Jackson, Mississippi-based attorney, many of the same attorneys who had or still have asbestos suits are filing silica lawsuits, often times using the same experts in the process.⁷⁶ In the case of asbestos litigation, law firms representing plaintiffs began to promote mass screenings of asbestos workers at or near their places of employment to identify more potential claimants. The law firms would bring suit on behalf of all workers who showed signs of exposure, sometimes filing hundreds of cases under a single docket number.⁷⁷ Although the current number of silicosis claims is significantly less than asbestos claims, the potential exists for a continued growth in the number of silicosis claims.

In late 2003, Halliburton resolved its asbestos and silica liabilities through a prepackaged bankruptcy involving several of its subsidiary companies (DII Industries, Kellogg Brown & Root, and others). The settlement was \$2.775 billion. Votes received on the proposed plan of reorganization were received from over 386,000 asbestos claimants and from over 21,000 silica claimants.⁷⁸ The bankruptcy court entered an order confirming the plan of reorganization effective as of July 16, 2004.⁷⁹

F. Comparison to Asbestos

Annual filings of asbestos claims have risen sharply in the last few years. Over 750,000 asbestos-related claims have been filed in the United

⁷⁵ Silica Claimants Jump From Hundreds To Tens Of Thousands, National Underwriter, May 10, 2004.

⁷⁶ Ingredients Might be in Place to Make Silica the New Asbestos, BestWire, September 10, 2003.

⁷⁷ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 23.

⁷⁸ Halliburton Takes Major Steps To Resolve Asbestos And Silica Liabilities, www.halliburton.com, press release dated December 16, 2003.

⁷⁹ Halliburton, 10-Q for the quarter ending September 30, 2004, filed on November 5, 2004.

States.⁸⁰ In contrast, the highest identified figure for the number of silicosis claims is approximately 50,000. Initially, asbestos claims filings were focused on asbestos manufacturers and building product manufacturers. However, the asbestos litigation has spread far beyond these industries. After many of the major asbestos manufacturers went bankrupt, a wide variety of defendants began to be named in the lawsuits. According to the RAND study, the list of defendants now ranges across 75 out of 83 different types of industries in the United States. Although only a few firms are involved in certain industries, the litigation has “spread to virtually touch all parts of the U.S. economy.”⁸¹ In the early 1980s there were only 300 asbestos defendants. Now more than 6,000 companies in America have been subject to legal action,⁸² leading to the eventual bankruptcy of at least sixty companies in the United States. This resulted in over \$70 billion being paid out to plaintiffs.⁸³ The following table compares silica to asbestos for a number of criteria.

⁸⁰ www.mantrust.org

⁸¹ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 49.

⁸² Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 49.

⁸³ Helen Leonard et al., Disease That Could Bankrupt Small Firms, The Times [London], September 10, 2003, at B29.

Table 2: Comparison of Silica to Asbestos-Related Diseases

Criteria	Asbestos	Silica
Long Latency Period ⁸⁴	✓	✓
Potential Exposure in Numerous Industries	✓	✓
Afflictions of the Lungs	✓	✓
Recent Increase in Number of Claims Filed	✓	✓
Insurance Coverage Issues	✓	✓
Large Pools of Plaintiffs	✓	✓
Still in Use or Present in United States	✓	✓
Historically Widely Used Material	✓	✓
Current Death Rate Per Year > 1,500	✓	

As a result of the many similarities between asbestos and silica, “many plaintiffs’ attorneys see silica litigation as a natural extension of asbestos litigation.”⁸⁵

Mark A. Behrens, defense attorney with Shook, Hardy & Bacon, representing the Coalition for Litigation Justice says: “The plaintiffs’ bar that practices in asbestos is trying to diversify into other litigations.... There’s no medical explanation that explains the sudden spike in claims. When you look at when the number of silica claims began to rise, it was at about the same time there began to be serious discussions in Washington about asbestos litigation reform.”⁸⁶

⁸⁴ Asbestosis can have a longer latency period than silicosis. Both diseases can have latency periods of 10 to 20 years.

⁸⁵ Silica Primer-An Asbestos “Spin-Off?” Hazardous Times, General Re Corporation, October 2003, at 1.

⁸⁶ Dust Storm: A Sudden Rise In Silicosis Claims Is Reminiscent Of Asbestos Litigation, But This Time Insurers Are Blocking The Turbulence, Best’s Review, November 1, 2003.

G. Potential Future Silicosis Claims

At the current time, it is too early to determine how many companies ultimately may be named as defendants in silicosis matters. There have been few recent estimates or studies performed of the potential size of the silicosis litigation. Early studies and estimates of potential future asbestos claims turned out to be significantly understated. For example, when Johns-Manville, a leading manufacturer and marketer of building and specialty products, filed for bankruptcy in 1982 a trust was established to pay future claims against the company. In 1988 claims began to be paid out at one hundred percent of their liquidated values. After only two years, the majority of the money in the Manville Trust had been depleted, and a new plan to pay out claims at a reduced rate of ten cents on the dollar was approved.⁸⁷ In the beginning the predicted number of claims was between 83,000 and 100,000 for the entire life of the Manville Trust. As of December 31, 1995, the Manville Trust had received over 280,000 claims.⁸⁸ The number of claims received just through 1995 was far above what anyone had estimated and the situation continued to worsen. By July of 2004, the Manville Trust had received over 742,000 claims, over seven times the amount originally anticipated. In late 2000 and early 2001 claims began to increase significantly, and the amount paid out was further reduced to five cents on the dollar. The Manville Trust was predicting an additional 1.5 to 2.5 million claims as of 2001.⁸⁹

⁸⁷ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 79.

⁸⁸ See <<http://www.mantrust.org>>.

⁸⁹ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 80.

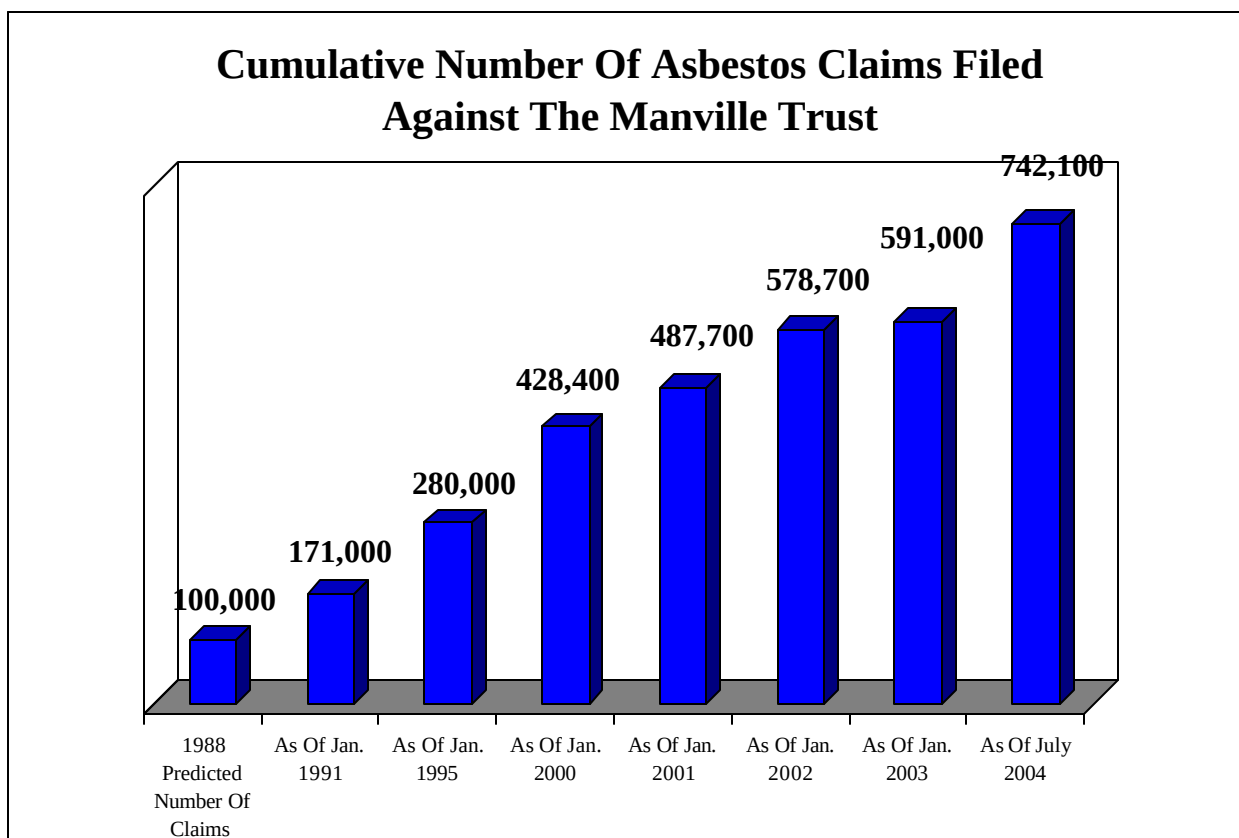


Figure 5 ^{90,91}

According to the recent RAND study, “the history of asbestos litigation has been characterized by failures to estimate its magnitude, scope, and evolution with any accuracy.”⁹² Early studies, published in the 1980s, predicted the future costs of asbestos litigation could reach \$38 billion.⁹³ However, recent studies that estimate the number of people who will file asbestos claims in the future, and their associated costs, are significantly higher than the earlier studies. “All accounts agree that, at best, only about half the final number of claimants have come forward. At worst, only one-fifth of all claimants have filed claims to date.”⁹⁴ Overall,

⁹⁰ See <<http://www.mantrust.org>>.

⁹¹ Stephen Carroll et al., Asbestos Litigation in the U.S.: A New Look at an Old Issue, Rand Institute for Civil Justice, August 2001, at 13.

⁹² Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 77.

⁹³ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at 77.

⁹⁴ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at vii.

present estimates of the total costs of all claims range from \$200 to \$265 billion—quite a disparity when compared to the earlier estimates of the 1980s of approximately \$38 billion.⁹⁵

A sizeable growth in the number of silicosis claims is quite possible. Many companies are currently seeing a large growth in the number of claims filed. For example, the companies that mine and process industrial sand have seen a “tremendous” increase in the number of silicosis lawsuits filed against them.⁹⁶ However, many question how silicosis can be the new asbestos if the annual number of silica deaths has declined and the numbers of claims filed are increasing. What explains that? Some trial attorneys maintain that silicosis lawsuits have increased because of more tests conducted for the disease and a larger awareness of legal rights.⁹⁷ Furthermore, despite initiatives to raise awareness, exposure to silica dust remains. According to an article published recently, “at construction and manufacturing work sites surveyed from 1979 to 1999, [exposure to] silica dust exceeded the recommended maximum more than half the time.”⁹⁸ Debates continue in government and scientific circles over appropriate exposure rates, protective measures and illnesses linked to silica.⁹⁹

What will this mean to the insurance industry? It’s still too early to tell. So far, many insurance policies do not contain silica exclusions. CNA is looking “very carefully” at silica, saying: “We have seen quite a bit of activity in the area of silica. It is obviously not asbestos, but it is considered part of our mass tort book. So stay tuned for development there.”¹⁰⁰ Recently, the Council of Insurance Agents & Brokers noted that the first of silica exclusions in policies took effect in the beginning of 2004.¹⁰¹ Standard & Poor’s published a report in 2004 indicating, “insurance companies, aware of the growing potential for large settlements

⁹⁵ Stephen Carroll et al., Asbestos Litigation Costs and Compensation: An Interim Report, Rand Institute for Civil Justice, 2002, at vii.

⁹⁶ Ingredients Might be in Place to Make Silica the New Asbestos, BestWire, September 10, 2003.

⁹⁷ Silica: NYT Examines Increase in Lawsuits Over Exposure, American Health Line, September 8, 2003.

⁹⁸ Susan Warren, Silicosis Suits Rise Like Dust, Wall Street Journal, September 4, 2003, at B5.

⁹⁹ Susan Warren, Silicosis Suits Rise Like Dust, Wall Street Journal, September 4, 2003, at B5.

¹⁰⁰ How Much Will Silica Claims Cost Insurers, Property & Casualty/Risk & Benefits Management Edition, June 14, 2004.

¹⁰¹ As Silica Litigation Moves Forward, Will Defendants Have Insurance Coverage? National Underwriter, Special Report Section: Silica, June 14, 2004, at 10.

involving silica, have begun setting aside reserves.”¹⁰² “S&P has therefore added silica exposure, along with other mass torts, as a discussion topic in its credit evolution of insurers.”¹⁰³

V. CONCLUSION

History has shown that the costs of asbestos litigation were not only unpredictable but also significantly underestimated. Asbestos costs have exceeded most everyone’s estimates and has led to the bankruptcy of many companies over time. Asbestos litigation may have led the way for the silicosis - “the next big toxic tort wave.”¹⁰⁴ As a result of their experiences with asbestos lawsuits, plaintiffs’ lawyers now have methods proven successful in recruiting new claimants and settling lawsuits. Also, since it is believed that many of the workers that have been exposed to asbestos have also been exposed to silica, the likelihood that lawyers will file claims for both illnesses at once is a viable threat. Estimating the number of workers exposed to silica dust and then estimating the number of workers who may contract a silica-related disease is complex and difficult, with few studies performed to date. On the other hand, the number of deaths caused by silicosis has been declining and various initiatives have been undertaken, with varying degrees of success, to minimize workers’ exposure to silica dust. These may be indicators that the number of silicosis claims may decline as well. The next few years should shed some light on the debate of whether or not silica will become the next asbestos.

¹⁰² Silica Liability, Insurance Information Institute, July 2004, at 17.

¹⁰³ Silica Liability, Insurance Information Institute, July 2004, at 17.

¹⁰⁴ Sue Reisinger, Mounting Silica Suits Pose New Threat to Industrial Companies, Corporate Legal Times, March 2003, at 64.

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