

California Asbestos Products Liability

Claims, Defenses and Elements of Proof

By
Stephen Healy

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Acknowledgements and Dedication

I wish to thank some people.

I want to thank my mother and father (of course!), both of whom were children of trial attorneys, who pointed me to college debate, dinner table politics, a particularly Irish love of story and language, and most of all, the need to fight the good fight.

Most of all, I want to thank my *wife and children*. This book would not have been written but for the love and support of my wife, Retha, who kept insisting that I finish it, if for no other reason, than for me to act as a good an example to our four wondrous children: Sean, Aidan, Kieran and Rekha.

Finally, I *dedicate this book* to the men and women who suffer from asbestos related disease, those that have perished from asbestos related disease, and their family and friends. The clients I have represented have inspired me beyond words. They fought the wars, raised the kids, built the bridges, the hospitals, the ships, the oil refineries, the schools and the Universities. They washed the clothes, vacuumed the rugs, changed the diapers, helped with the homework, paid the bills, and they worked in the factories and the automobile repair shops. At a very fundamental and basic level, they did exactly what we ask of American men and women. And yet they were not warned about the hazards of working with, near and around asbestos. They were not given the tools to protect themselves and their bodies. These men and women were unknowingly and unwittingly exposed to toxic dusts for reasons – at root – that arose from profit, indifference, neglect, and reasons that are fundamentally incompatible with decency and right behavior. The least that they are entitled to is fair compensation under the law from the companies that exposed these men and women to asbestos. It is to these men and women that this book is dedicated.

About the Author

Stephen Healy has been licensed to practice law in both the States of California and Nevada since 1988. In his 23 years of law practice, he has tried numerous asbestos personal injury and wrongful death cases. Some of his significant trial verdicts include:

McGrail v. Advocate Mines, Ltd.

Civil Jury Trial
Superior Court: Los Angeles, California
Judge: Hon. Richard L. Fruin
Trial Type: Wrongful Death—
Mesothelioma
Verdict: \$2.6 Million
3 weeks, 2009

Rogers v. John Crane, Inc.

Civil Jury Trial
Superior Court: San Francisco,
California
Judge: Hon. Marla J. Miller
Trial Type: Wrongful Death—
Mesothelioma
Verdict: \$1.4 Million
4 weeks, 2008

Mudgett v. Plant Insulation Company

Civil Jury Trial
Superior Court: San Francisco,
California
Judge: Hon. Julie M. Tang
Trial Type: Wrongful Death—
Mesothelioma
Verdict \$1.25 Million
3 weeks, 2008

Yancey v. Plant Insulation Company

Civil Jury Trial
Superior Court: San Francisco,
California
Judge: Hon. Julie M. Tang
Trial Type: Wrongful Death—
Mesothelioma
Verdict: \$7.7 Million
3 weeks, 2008

Reid v. Thorpe Insulation Company

Civil Jury Trial
Superior Court: San Francisco,
California
Judge: Hon. Ernest H. Goldsmith
Trial Type: Personal Injury—Asbestosis
Verdict: \$2.7 Million
3 weeks, 2006

Efstratios v. John Crane, Inc.

Civil Jury Trial
Superior Court: Los Angeles, California
Judge: Hon. Fumiko H. Wasserman
Trial Type: Personal Injury—
Mesothelioma
Verdict: \$4.4 Million
3 weeks, 2001

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Chapter One

Asbestos

1.1.0 What Is Asbestos?

Asbestos is a mineral – a specialized form of rock mined from the earth.

Many older California appellate decisions involve disputes concerning asbestos mining claims. *Schmidt v. Miller, et al* (1921) 52 Cal. App. 496 (debts from California asbestos mining claims were litigated); *Stark v. Hoeft* (1928) 205 Cal. 102, 104 (an asbestos mining claims dispute named the mines involved - “[The Nevada County mines] bear the following names: Quartz and Asbestos, January Quartz, The Cotton King Asbestos Quartz, Asbestos Quartz, and Lent Asbestos and Gold mining claims”); *Russell v. Johns Manville Co.* (1971) 20 Cal.App.3d 405 (litigation involving portions of the New Idria asbestos deposit, near Coalinga, California); *Stewart v. Union Carbide Corporation* (Nov. 16, 2010, 2nd App. Dist., Div. 5) 2010 Cal. App. LEXIS 1944 (“Plaintiffs presented evidence that USG and Hamilton Materials obtained asbestos from Union Carbide, which mined chrysotile asbestos in Coalinga, California and sold that asbestos under the brand name Calidria”).

The legal and jurisdictional effect of the tonnage of raw asbestos fiber shipped into the State of California, that originated from one particular asbestos mine in Canada, was the subject of *Cassiar Min. Corp. v. Sup. Ct.* (1998) 66 Cal. App. 4th 550, 553 (A Canadian company that mined raw asbestos fiber from 1953 to 1992, unsuccessfully sought to avoid California jurisdiction, where the record showed that it sold “thousands of tons of raw asbestos” to California manufacturers of finished asbestos-containing products, including companies such as Johns-Manville, Fibreboard, and CertainTeed).

Asbestos fiber comes from crushing asbestos rock, then extracting and compacting the raw asbestos fiber into bags. *Arena v Owens Corning Corp.* (1998) 63 Cal. App. 4th 1178, 1187, fn 5 (describing this mining and milling process and holding that raw asbestos fiber is a “product” within the meaning of strict products liability tort law).

The name “asbestos” derives from the Greek word (σβεστος) meaning “inextinguishable,” and this name reflects one of its principal characteristics: fire resistance. *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, 255.

1.1.1 Asbestos Geology

Geologists divide asbestos mineral fibers into two groups or mineralogic families: serpentines and amphiboles. Virta, Robert L., "Asbestos: Geology, Mineralogy, Mining and Uses," (U.S. Dept. of the Interior, U.S. Geological Survey, Open File Report, 02-149).

The serpentine group contains a single asbestos variety: chrysotile asbestos. The amphibole group contains the five remaining asbestos varieties: amosite asbestos (grunerite), crocidolite asbestos (riebeckite), tremolite asbestos, anthophyllite asbestos and actinolite asbestos. (*Id.*)

California law specifically defines "asbestos" to include these six varieties, and describes them as "naturally occurring fibrous hydrated mineral silicates: (1) chrysotile, (2) crocidolite, (3) amosite, (4) fibrous tremolite, (5) fibrous anthophyllite, and (6) fibrous actinolite." California *Health & Safety Code*, Sec. 25925(a); accord, 29 *Code of Federal Regulations* 1910.1001(b)

(1) Chrysotile, known for its silky white color, its durability, and its flexibility, is the most widely used asbestos fiber. Manufacturers have used it in the production of asbestos textiles, cement products, friction materials, insulation, and paper products. See, e.g., *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7.

(2) Crocidolite, a harsher, blue fiber, is used in pipes, cement products, textiles, and felts for plastics. Crocidolite is especially resistant to acids and alkalides. *Id.*

(3) Amosite is a harsh, brown fiber. It is extremely heat resistant, and manufacturers use it in cement, pipes, refractory tiles, and plastic reinforcement. *Id.*

(4) Anthophyllite is used in cement production and the chemical industry. *Id.*

(5) Tremolite is used for talc filters and in the chemical industry. *Id.*

(6) Actinolite usually is not used commercially. *Id.*

1.1.2 Physical Properties of Asbestos Fibers

All six of the asbestos varieties share several physical properties: (1) they occur as bundles of mineral fibers that can be easily separated from the host matrix or cleaved into thinner fibers; (2) the fibers exhibit high tensile strengths; (3) these mineral fibers show high length-to-diameter (aspect) ratios, sometimes up to 1:1000; (4) these fibers are sufficiently flexible to be spun into asbestos yarn and woven into cloth; and (5) macroscopically, asbestos fibers resemble organic fibers such as cellulose. Virta, Robert L., "Asbestos: Geology, Mineralogy, Mining and Uses," (U.S. Dept. of the Interior, U.S.

Geological Survey, Open File Report, 02-149).

Since all six asbestos varieties are silicates, they exhibit several other common physical properties, such as incombustibility, thermal stability, resistance to many chemicals, and low electrical conductivity. (*Id.*)

In *Saller v. Crown Cork & Seal Co., Inc.* (2010) 187 Cal.App.4th 1220, the court summarized the evidence concerning the physical and toxicological properties of asbestos at page 1228, as follows:

Susan Raterman, a certified industrial hygienist, [fn 5 - An industrial hygienist is skilled in the art and science of recognizing, anticipating, evaluating and controlling health hazards in the workplace] testified that asbestos fibers are small and invisible when airborne. It is difficult to ascertain the level of asbestos in the air and scientists rely on the asbestos content of materials to determine airborne content. A person can be exposed to asbestos without knowing it because the fibers are so small. According to Raterman, asbestos is a toxin and a carcinogen, and in an industrial setting, there is no safe dose of asbestos. Products that incorporate asbestos release asbestos into the air if they are handled in a manner that disturbs them because this causes the asbestos to become airborne.

1.2.0 Where Is Asbestos Found?

Asbestos has figured in commercial production in the United States for more than a century, and over “3,000 separate uses [of asbestos in consumer, commercial and industrial products] have been identified. *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, 255 (citing a landmark asbestos products liability decision, *Borel v. Fibreboard Paper Products Corporation* (5th Cir.1973) 493 F.2d 1076, 1083, at fn. 3).

Although asbestos use dates back at least 2,000 years, modern industrial use of asbestos in the United States began around 1880. *Report on Carcinogens*, Eleventh Edition; U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 2005 (substance profile “Asbestos”).

The earliest decisions of the California appeals courts involve unspecified “public work” performed in the City and County of San Francisco in February of 1912; the first personal injury case against an asbestos company was published in 1931, although the injury case does not specify asbestos lung damage, or any other specific injury. *See, Asbestos Mfg. & Supply Co. v. American Bonding Co. of Baltimore* (1914) 25 Cal. App. 641; see also *Asbestos Mfg. & Supply Co. v. Lennig-Rapple Engineering Co.* (1914) 26 Cal. App. 177 (a companion case); see also *Lidberg v. E.T. Leiter & Son, et al* (1931) 116 Cal.App. 312, 313-314 (“plaintiff commenced this action against the [defendant] ... Western Asbestos Magnesia Company in tort for damages resulting from said injuries”).

U.S. demand for asbestos increased dramatically from 1900 to the early 1970s. By 1950,

the United States was the world's largest user of asbestos. (Virta, R. L. 2000. Asbestos. Mineral Yearbook. U.S. Geological Survey. <http://minerals.usgs.gov/minerals/pubs/commodity/asbestos/index.html>).

Use of asbestos in the United States peaked in the late 1960s and early 1970s, and as health and liability issues became apparent, asbestos demand declined rapidly after 1973. (*Id.*).

One footnote in a court decision described a veritable laundry list of items that commonly contained asbestos:

Due to the fire resistant, insulative and reinforcing properties of asbestos, asbestos bearing products were widely used in shipbuilding and repair and in the construction industry. Asbestos was used in such products as textiles, paper, ropes, wicks, stoves, filters, floor tiles, roofing shingles, clutch facings, water pipe, cement, fillers, felt, fireproof clothing, gaskets, battery boxes, clapboard, wallboard, fire doors, fire curtains, and brake lining. It was also used for fire resistant partitions in schools, office buildings, hospitals and ships, as thermal insulation on structural steelwork, as acoustical insulation for walls and ceilings, as undersealing for automobiles, and as insulation for air conditioning, ducts, shafts, steam lines, oil lines, and chemical lines. Asbestos was also used in ironing board covers, theatre scenery, hot air pipe wrapping, stove lining, table pads, handles and coatings of all sorts. *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 (internal citation omitted).

California appellate decisions have discussed asbestos use in many and varied consumer and industrial products.

1.2.1 Asbestos Automotive Products

Asbestos used in automotive friction materials, such as asbestos brake pads, brake linings, clutch face plate linings, and related automobile and truck parts, such as head gaskets, exhaust manifold gaskets, asbestos undercoating, etc., has either been the subject of numerous appellate court decisions, or at least mentioned in passing in those opinions. See, e.g., *Wheeler v. Raybestos Manhattan* (1992) 8 Cal. App. 4th 1152 (discussing “market share” liability rules and their potential application to manufacturers of automotive friction products, such as brake pads, brake linings, and clutch face plate linings); *Skip Fordyce, Inc. v. Work. Comp. App. Bd.* (1983) 149 Cal. App. 3d 915 (evidentiary standards for proving asbestos content in automotive friction products in the Workers’ Compensation setting); *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, esp. fn 7 (holding that “market share” theory of liability generally not available in asbestos litigation – mentioning uses for “brake components” and “automobile coatings”); *Ferris v. Gatke* (2003) 107 Cal. App. 4th 1211 (discussing the applicability of “conspiracy” and “concert of action” theories of vicarious liability and their potential application to a manufacturer of automotive friction products); *Chavers v. Gatke* (2003) 107 Cal. App. 4th 606 (also discussing the applicability of “conspiracy” and

“concert of action” theories of vicarious liability and their potential application to a manufacturer of automotive friction products); *Cossmann v. DaimlerChrysler Corp.* (2003) 108 Cal. App. 4th 370 (wife exposed to asbestos dust that husband brought home on his clothing from his work at an auto parts business); *Courtney v. Abex Corp.* (1986) 176 Cal.App.3d 343, 345 (Plaintiffs filed a complaint alleging injuries caused to them by exposure to asbestos while they both worked at a car dealership); *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 (“... asbestos was used in ... clutch facings ... and brake linings” and undersealing of automobiles); *Volkswagen of America, Inc. v. Superior Court* (2001) 94 Cal.App.4th 695 (a case that appealed the overruling of a demurrer and upholding a San Francisco Superior Court Asbestos General Order for filing pleadings and complaints; VW was alleged to have used asbestos containing parts on VW cars and VW demurred to the summary nature of the complaint filed against it); *Volkswagen of America, Inc. v. Superior Court* (2006) 139 Cal.App.4th 1481 (Petition for Writ of Mandate granted where a car manufacturer sought bankruptcy settlement information during discovery as a means to offset its potential asbestos product liabilities, as part of a Proposition 51 defense); *Richie v. BridgestoneFirestone, Inc.* (1994) 22 Cal.App.4th 335 (“market share” theory of liability as applied to asbestos brake products and the reach of the *Wheeler v. Raybestos Manhattan* decision were discussed).

1.2.2 Asbestos Cement Pipe

Asbestos cement water pipe, used (for example) by municipal water districts for both water and sewer pipe. *Weber v. Milpitas Co. Water Dist.* (1962) 201 Cal. App. 2d 666, 669 (“The pipe shall be asbestos-cement water pipe in the sizes indicated on the Plans and shall conform to the Tentative Standard Specifications for Asbestos-Cement Pipe, approved as tentative on May 15, 1953, by the American Water Works Association and published as AWWA C400-53T.”); *Ashdown v Ameron Internat. Corp.* (2000) 83 Cal. App. 4th 868, 871-872 (“[A]s an inspector and tester of pipe, Smith was exposed to asbestos used in respondent's manufacture of asbestos-containing pipes and other related products”); *Henning v. California Div. of Occupational Safety and Health* (1990) 219 Cal.App.3d 747, 750 (certification for work with asbestos cement pipe or sheets); See also *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7.; *Garza v. Asbestos Corporation, Ltd.* (2008) 161 Cal.App.4th 651, 655-656 (“...Garza held a second job as a maintenance mechanic with Certainteed, a company that made fiber cement pipes”); *Smith v. Exxon Mobil Oil Corp.* (2007) 153 Cal.App.4th 1407, 1411 (“... work with asbestos-containing transite pipe”);

1.2.3 Asbestos Cloth, Cloth Tape, Rope and Textiles

Asbestos cloth, cloth tape, rope and textiles. *Anderson v. Owens-Corning Fiberlas Corp.* (1991) 53 Cal. 3d 987, 991 (Plaintiff alleged “exposure to asbestos and asbestos products (i.e., ... [asbestos] cloth and cloth tape ...)”); *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 579 (“City alleged the asbestos-containing building materials included ... tape, ... textiles ... ”); *Kaminski v. Western MacArthur Co.* (1985) 175 Cal.App.3d 445, 450-451 (“While employed at Bethlehem [Shipyard in San Francisco], Kaminski helped welders install aluminum angle bars in the ammunition

compartments of 1,650-ton destroyers. Kaminski's job was to hold the bars in place with an asbestos cloth, or blanket, while the bars were welded to the bulkhead. Kaminski would also drape himself with the cloth to ward off sparks and occasionally tore the cloth, which released asbestos dust"); *Rose v. City of Hayward* (1981) 126 Cal.App.3d 926, 943 fn 2 (asbestos cloth for firefighters' uniforms); *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 ("... asbestos was used for ... textiles ... rope... fireproof clothing ... [theater] fire curtains ..."); *Cooper v. W.C.A.B.* (1985) 173 Cal.App.3d 44, 45 (asbestos impregnated cloth used to insulate electrical cords);

1.2.4 Asbestos Containing "Marinite" Boards

Asbestos containing "marinite" boards, used in ship building. *Rodgers v. Sargent Controls & Aerospace* (2006) 136 Cal.App.4th 82, 87;

1.2.5 Asbestos Containing Acoustical Plaster and Ceiling Compounds

Asbestos containing acoustical plaster and decorative ceiling compounds. *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 579 ("City alleged the asbestos-containing building materials included ... ceiling tile, acoustical materials, plaster ... The five defendants involved with this appeal are: W.R. Grace & Co.-Conn., a manufacturer of fireproofing insulation and acoustical plaster; ... Hamilton Materials, Inc., a manufacturer and supplier of decorative ceiling compounds; and Proko Industries, Inc., also a manufacturer and supplier of decorative ceiling compounds"); *Ocean Park Associates v. Santa Monica Rent Control Board* (2004) 114 Cal.App.4th 1050, 1057 ("[Inspectors] observed disturbance of acoustic material that could have contained asbestos ..."); *WYDA Associates v. Merner* (1996) 42 Cal.App.4th 1702, 1707 ("the property contained asbestos throughout the ceilings of all buildings");

1.2.6 Asbestos Containing Clapboard, Wallboard and Fire Doors

Asbestos containing clapboard, wallboard, and fire doors. *Daniel Lyons v. Chinese Hospital Association* (2006) 136 Cal.App.4th 1331, 1336 (doors with asbestos cores); *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 ("... asbestos was used for ... clapboard, wallboard, fire doors ...");

1.2.7 Asbestos Containing Drywall Joint Compound

Asbestos containing drywall joint compound. *Garza v. Asbestos Corporation, Ltd.* (2008) 161 Cal.App.4th 651, 655-656 ("... after that Garza worked as a maintenance mechanic ..., where he hung drywall and sanded drywall compound in a project"); *McGonnell v. Kaiser Gypsum Co., Inc.* (2002) 98 Cal.App.4th 1098, 1102 ("Kaiser Gypsum ... manufactured various compounds for installing and finishing wallboard that did contain asbestos. Kaiser Gypsum ceased to use asbestos in these products in the early to mid-1970's"); *Stewart v. Union Carbide Corporation* (Nov. 16, 2010, 2nd App.

Dist., Div. 5) 2010 Cal. App. LEXIS 1944 (“At trial, Stewart testified that throughout his career, he worked on large commercial and residential construction projects. He worked near drywallers on ‘just about every job.’ Drywallers use joint compound, and plaintiffs presented evidence that during relevant time periods, joint compound contained asbestos which was released when the walls were sanded.”)

1.2.8 Asbestos Containing Electric Switchboards and Battery Boxes

Asbestos containing electric switchboards and battery boxes. *Pacific Sash & Door Co. v. Bumiller* (1912) 162 Cal. 664, 667 (“asbestos comprising a part of the electric switchboard”); *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 (“... asbestos was used for ... battery boxes ...”);

1.2.9 Asbestos Containing Household Appliances

Asbestos containing household appliances such as hair dryers, coffee pots, microwave ovens and power cords. *Dekens v. Underwriters Laboratories Inc.* (2003) 107 Cal.App.4th 1177, 1185 (“Plaintiffs offered (1) deposition transcripts of U.L. employees, (2) a report of the Consumer Product Safety Commission (CPSC) listing hair dryers containing asbestos, (3) pages from a catalogue for West Bend coffee percolators bearing the U.L. logo, (4) pages from U.L.'s internet website, and (5) transcripts from a congressional hearing on the danger of asbestos in handheld hair dryers.”); *Cooper v. W.C.A.B.* (1985) 173 Cal.App.3d 44, 45 (Asbestos impregnated cloth used to insulate electrical cords);

1.2.10 Asbestos Containing Masonry Cement and Plaster

Asbestos containing masonry cement and asbestos containing plaster, also known as “gun cement.” *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 579; *Greathouse v. Amcord, Inc.* (1995) 35 Cal.App.4th 831, 835-836 (a plaster product known as asbestos gun cement); *Larkspur Isle Condominium Owners' Ass'n, Inc. v. Farmers Ins. Group* (1996) 31 Cal.App.4th 106, 108 (asbestos-containing ceiling materials); *McGonnell v. Kaiser Gypsum Co., Inc.* (2002) 98 Cal.App.4th 1098, 1102 (“Kaiser Cement did make two products that contained asbestos-‘plastic cement’ and ‘masonry cement’”); *McKinney v. Cal. Portland Cement Co.* (2002) 96 Cal.App.4th 1214 (“decendent used asbestos-containing gun plastic cement, manufactured by [California Portland Cement, Company]”);

1.2.11 Asbestos Containing Rock used to Surface Roads

Asbestos containing rock used to surface unpaved roads. *Reasonable Regulation of Naturally Occurring Substances v. California Air Resources Board* (2004) 122 Cal.App.4th 1249;

1.2.12 Asbestos Containing Talc

Asbestos containing talc. See, e.g., *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7 (“Tremolite [asbestos] is used for talc filters ...” [the author wonders if the appellate court actually meant to use the word “fillers” instead of “filters”]); *Truck Ins. Exchange v. Amoco Corp.* (1995) 35 Cal.App.4th 814, 819 (an insurance coverage case - “[b]eginning in 1979, plaintiffs filed actions against Cyprus alleging injuries caused by exposure to asbestos-containing talc in products the company manufactured and distributed (‘talc-related litigation’)”);

1.2.13 Asbestos Fiber and in its Raw State

Asbestos fiber and powder in its raw state used by other manufacturers as an ingredient for finished asbestos products. *Arena v. Owens Corning Corp.* (1998) 63 Cal. App. 4th 1178, 1182 (Asbestos Corporation, Ltd., raw asbestos fiber used by Eagle Picher in the manufacture of insulating cements); *Gutierrez v. Cassiar Mining Corp.* (1998) 64 Cal.App.4th 148, 151 (raw asbestos fiber used in a cement manufacturing plant); *Garza v. Asbestos Corporation, Ltd.* (2008) 161 Cal.App.4th 651, 657 (“[Witness] Bockstahler stated that Asbestos Corporation Limited (“ACL”) was the sole supplier of chrysotile asbestos fiber to Eagle-Pitcher between 1935 and 1957”); *Jenkins v. T&N PLC* (1996) 45 Cal.App.4th 1224, 1226 (“The raw asbestos fibers in Keasbey & Mattison's pipe insulation were supplied in bulk by T & N.”); *Kellogg v. Asbestos Corp. Ltd.* (1996) 41 Cal.App.4th 1397, 1400-1401 (“During Kellogg's employment, Fibreboard purchased asbestos from several suppliers, including ACL, a Canadian corporation which mined, processed, and sold asbestos fiber”);

1.2.14 Asbestos Fillers for Plastics and Plastic Reinforcement

Asbestos fillers for plastics and plastic reinforcement. See, e.g., *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7 (“Crocidolite, a harsher, blue fiber, is used in ... felts for plastics ... Amosite is a harsh, brown fiber ... and manufacturers use it in ... plastic reinforcement ... Consumer uses include ... molded plastics”); *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 (“... asbestos was used for ... fillers ...”);

1.2.15 Asbestos Fireproofing Sprayed on to Structural Steel Beams

Asbestos fireproofing sprayed on to structural steel beams. *Brown v. Green* (1994) 8 Cal.4th 812, at 820 (landlord tenant dispute concerning who would pay for County-ordered asbestos abatement of sprayed on insulation on steel beams); *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 578; *Diamond Heights Homeowners Ass'n v. National American Ins. Co.* (1991) 227 Cal.App.3d 563, 572 (suit for abatement costs for, inter alia, asbestos sprayed on insulation); *Kaiser Found. Hosp., Inc. v. California Occupational Safety and Health Appeals Bd.* (1984) 155 Cal.App.3d 282, 284-285 (“... the building had been constructed beam supports and floor parts had been

coated with an [asbestos containing] insulating material with the trade name Monicote, as a fire retardant ... ”);

1.2.16 Asbestos Gaskets, Valve and Pump Packing

Asbestos gaskets, valve and pump packing. *Jones v. John Crane, Inc.* (2005) 132 Cal.App.4th 990; *Hackett v. John Crane, Inc.* (2002) 98 Cal.App.4th 1233, 1236 (The plaintiff’s “duties as a pipefitter included removing and replacing asbestos-containing packing materials used to seal valves and gaskets used to seal pipe joints”); *Garza v. Asbestos Corporation, Ltd.* (2008) 161 Cal.App.4th 651, 655-656; *Cadlo v. Metalclad Insulation Corporation* (2007) 151 Cal.App.4th 1311, 1314 (“[John Crane, Inc.] manufactured and supplied asbestos-containing pump and valve packing material and gasket material”); *Taylor v. John Crane Inc.* (2003) 113 Cal.App.4th 1063, 1065 (“His work on valves included removing and installing the asbestos-containing packing that was used as a sealant to prevent steam from leaking out of the valve”); *Whitlock v. Foster Wheeler, LLC* (2008) 160 Cal.App.4th 149, 152 (“Two of the components used in the construction of the boilers contained asbestos-the thermal block that was used as an insulating material and the high temperature gaskets used in the boiler pipes”); *Wilson v. John Crane, Inc.* (2000) 81 Cal.App.4th 847, 850-851; *Weber v. John Crane, Inc.* (2006) 143 Cal.App.4th 1433; *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 (“... asbestos was used for ... gaskets ...”);

1.2.17 Asbestos In Color Crayons

Asbestos in color crayons. *Consumer Defense Group v. Rental Housing Industry Members* (2006) 137 Cal.App.4th 1185, 1193;

1.2.18 Asbestos Insulation Wrap on Heating, Ventilation, and Air Conditioning Boxes and Asbestos Duct Tape

Asbestos insulation wrap on heating, ventilation, and air conditioning boxes. *Daniel Lyons v. Chinese Hospital Association* (2006) 136 Cal.App.4th 1331, 1336; *Garcia v. Duro Dyne Corporation* (2007) 156 Cal.App.4th 92, 104 (asbestos containing flexible duct connectors); *Wheeler v. Raybestos-Manhattan* (1992) 8 Cal. App. 4th 1152, at 1155 (asbestos containing duct tape);

1.2.19 Asbestos Lined Chimney

Asbestos lined chimney. *Gottlieb, et al v. Tait’s, Inc.* (1929) 97 Cal. App. 235, 236-237 (“The chimney erected was of brick from the basement to the first floor of the building, and from thence to the roof a patent chimney, with asbestos filling and terra cotta lining was used ...”);

1.2.20 Asbestos Lined Wall Safe

Asbestos lined wall safe for fire protection. *People v. Baca* (1961) 197 Cal. App. 2d 362 (A criminal case - the defendant's criminal conviction was supported, in part, by his *footprints* left in the white powder of "fire clay and asbestos material" that had lined the wall safe);

1.2.21 Asbestos Lined Waste Paper Receptacle

Asbestos lined waste paper receptacles to prevent fire. *Schifano v. Security Building Co.* (1955) 133 Cal. App. 2d 70;

1.2.22 Asbestos Mats and Felt

Asbestos mats and felt. *Hinchman, Rolph & Landis v. Golding* (1948) 85 Cal.App.2d 146 (in an action for a fire loss, a witness was questioned about whether an "asbestos mat" had been placed under a boiler to prevent fire); *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 ("... asbestos was used for ... felt ...");

1.2.23 Asbestos Paper Products

Asbestos paper products. See, e.g., *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7; *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6; *Thomas Haverty Co. v. Jones* (1921) 185 Cal. 285, 292-293 (suit relating to defective construction notes that one of many defects was a "failure to cover with asbestos paper the hot-water pipes extending through parts of the second and third stories");

1.2.24 Asbestos Refractory Tiles

Asbestos refractory tiles. See, e.g., *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7;

1.2.25 Asbestos Roof Shingles and Roofing Paper

Asbestos roof shingles and roofing paper. *Ex Parte Smith* (1928) 88 Cal.App. 464, 466-467 (*habeas corpus* issued as to man who was arrested because he shingled his roof with Pabco composition roof shingles, as opposed to City of Berkeley Ordinance mandated Johns Manville asbestos roof shingles; the city ordinance under which the arrest was made passed after a devastating Berkeley city fire that took place in 1923); *Kellogg v. Asbestos Corp. Ltd.* (1996) 41 Cal.App.4th 1397, 1400-1401 (roof shingle manufacturer's laboratory technician worked with raw asbestos in formulating products); *Baptist v. W.C.A.B. of State of Cal.* (1982) 137 Cal. App. 3d 903, 904; *Hill v. Eaton & Smith* (1944) 65 Cal.App.2d 11, 12 (personal injury case brought by a roofer against a general contractor); *King v. Griffith Co.* (1944) 65 Cal.App.2d 114, 116 ("Plaintiff was an

employee of Asbestos Roofing and Insulation Company, holder of a sub-contract for the roofing and papering on the buildings” and injured while working on the construction of the reception center at Manzanar, as part of the evacuation of Japanese Americans during April, 1942); *Ramos v. United Slate, Tile and Composition Roofers, et al* (1952) 113 Cal.App.2d 31, 32 (name of the trade union: “[p]laintiffs employ only union labor and had an agreement with Wood, Composition and Asbestos Shinglers' Union, Local No. 3111”); *Vela v. W.C.A.B.* (1971) 22 Cal.App.3d 513, 516 (“Petitioner filed an application for adjudication of his claim alleging that he had suffered a cumulative industrial injury to his lungs [asbestosis] while employed as a machine tender (asbestos shingle machine) by the Johns-Manville Products Corporation for a period of 33 years from 1935 to August 12, 1968”);

1.2.26 Asbestos Sheeting for Fireproofing

Asbestos sheeting for fireproofing in a restaurant kitchen. *Pekus v. Lake Arrowhead Boat Co.* (1967) 255 Cal.App.2d 864, 865-866; *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6 (“... asbestos was used in ... stoves ...”);

1.2.27 Asbestos Siding

Asbestos siding used an exterior construction material for a house or building. *West Coast Home Imp. Co. v. Contractors’ St. Bd* (1945) 72 Cal. App. 2d 287, 292 (“The witness was informed by petitioner’s representatives that they would put asbestos siding on her home and that they would do a ‘spray job’ for termites.”); *City and County of San Francisco v. Pacello* (1978) 85 Cal.App.3d 637, 640 (asbestos siding applied to a two family dwelling); *Kovacik v. Reed* (1957) 49 Cal.2d 166, 167 (“[P]laintiff, a licensed building contractor in San Francisco, operated his contracting business as a sole proprietorship under the fictitious name of ‘Asbestos Siding Company’”);

1.2.28 Asbestos Thermal Insulation

Asbestos thermal insulation, including pipecover, half rounds, insulating block and insulating cements (“mud”) made from asbestos powder mixed with water used on boilers, steam lines, chill water lines, and the like, have been the most reported group of asbestos products found in the published decisions, by far. *Rutherford v. Owens-Illinois, Inc.* (1997) 16 Cal.4th 953 (asbestos thermal insulation); *Arena v. Owens Corning Corp.* (1998) 63 Cal. App. 4th 1178, 1182; *Anderson v. Owens-Corning Fiberlas Corp.* (1991) 53 Cal. 3d 987, 991; *Biles v. Exxon Mobil Corp* (2004) 124 Cal. App. 4th 1315 (premises liability case involving exposure to asbestos containing insulation products); *Blakey v. Sup. Ct.* (1984) 153 Cal. App. 3d 101; *Buttram v. Owens-Corning Fiberglas Corp.* (1997) 16 Cal.4th 520, 525; *Cadlo v. Owens-Illinois, Inc.* (2004) 125 Cal.App.4th 513, 517; *Chevron U.S.A., Inc. v. W.C.A.B.* (1990) 219 Cal.App.3d 1265, 1268; *Clark v. W.C.A.B.* (1991) 230 Cal.App.3d 684, 686-687; *Sparks v. Owens-Illinois, Inc.* (1995) 32 Cal. App. 4th 461; *Mullen v. Armstrong World Industries, Inc.* (1988) 200 Cal. App. 3d 250, fn 7; *Arques v. National Superior Co.* (1945) 67 Cal. App. 2d 763, 775-776 (conversion tort action arising from “asbestos work” performed on a vessel – presumably

involving asbestos insulation); *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 578 (real property damage, abatement costs and nuisance-tort case, involving the removal and cleanup of, inter alia, asbestos thermal insulation); *Crowley Maritime Corporation v. Boston Old Colony Insurance Company* (2008) 158 Cal.App.4th 1061 (asbestos exposure working aboard tugboats, presumably related to asbestos thermal insulation); *Deschene v. Pinole Point Steel Co.* (1999) 76 Cal.App.4th 33, 41 (wrongful termination case where worker alleged he was fired for testifying on behalf of a co-worker who had been exposed to asbestos thermal insulation); *Dumin v. Owens-Corning Fiberglas Corp.* (1994) 28 Cal.App.4th 650, 653; *Employers Reinsurance Company v. Superior Court (Thorpe Insul. Co.)* (2008) 161 Cal.App.4th 906 (insurance coverage case concerning asbestos claims against an asbestos insulation company that both operated as a licensed contractor and seller and distributor of asbestos insulation products); *Fuller-Austin Insulation Company v. Highlands Insurance Company* (2006) 135 Cal.App.4th 958 (insurance coverage for an asbestos insulation contractor); *Gatton v. A.P. Green Services, Inc.* (1998) 64 Cal.App.4th 688, 690 (installing and tearing out asbestos block insulation); *Grahn v. Tosco Corp.* (1997) 58 Cal.App.4th 1373 (an employee of insulation contractor sued an oil refinery for personal injury); *Howard v. Owens Corning* (1999) 72 Cal.App.4th 621 (U.S. Navy exposure to pipe insulation claimed); *Industrial Indem. Co. v. Workers' Compensation Appeals Bd.* (1983) 145 Cal.App.3d 480, 483; *Jenkins v. T&N PLC* (1996) 45 Cal.App.4th 1224, 1225; *Garza v. Asbestos Corporation, Ltd.* (2008) 161 Cal.App.4th 651, 655-656; *Smith v. Exxon Mobil Oil Corp.* (2007) 153 Cal.App.4th 1407, 1411; *Kellogg v. Asbestos Corp. Ltd.* (1996) 41 Cal.App.4th 1397, 1400-1401 (Throughout his employment at Fibreboard, Kellogg was also exposed to asbestos whenever repair work was done to the insulation within the plant.); *Kinsman v. Unocal Corp.* (2003) 2 Cal.Rptr.3d 87 (carpenter's bystander exposure to asbestos insulation while working at oil refineries); *Lineaweaver v. Plant Insulation Co.* (1995) 31 Cal. App. 4th 1409 (seminal case on proof standards involved asbestos pipecover and block insulation); *Morton v. Owens Corning Fiberglas Corp.* (1995) 33 Cal.App.4th 1529; *Overly v. Ingalls Shipbuilding, Inc.* (1999) 74 Cal.App.4th 164, 168 (“During the 1960's, insulators regularly used several types of asbestos insulation products including pipe covering, block insulation, cement and tape”); *Sparks v. Owens-Illinois, Inc.* (1995) 32 Cal.App.4th 461; *Whitlock v. Foster Wheeler, LLC* (2008) 160 Cal.App.4th 149, 152 (juror misconduct case involving asbestos thermal insulation: “[t]wo of the components used in the construction of the boilers contained asbestos-the thermal block that was used as an insulating material and the high temperature gaskets used in the boiler pipes”); *Williamson v. Plant Insulation Co.* (1994) 23 Cal.App.4th 1406; *Viad Corp. v. Superior Court* (1997) 55 Cal.App.4th 330 (asbestos thermal insulation – used in railroad applications);

1.2.29 Asbestos Vinyl Floor Tiles and Floor Mastics

Asbestos vinyl floor tiles and floor mastics. *Anderson v. Owens-Corning Fiberlas Corp.* (1991) 53 Cal. 3d 987, 991; *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 578; *Daniel Lyons v. Chinese Hospital Association* (2006) 136 Cal.App.4th 1331, 1336; *Ehret v. Congoleum Corp.* (1999) 73 Cal.App.4th 1308 (“Ehret I”); *Ehret v. Congoleum Corp.* (2001) 87 Cal.App.4th 202 (“Ehret II”); *Henning v.*

California Div. of Occupational Safety and Health (1990) 219 Cal.App.3d 747, 750 (vinyl asbestos floor materials and asbestos bituminous or resinous materials); *Petrini v. Mohasco Corp.* (1998) 61 Cal.App.4th 1091, 1093 (a corporate successor-in-interest case: “Plaintiffs allege that Mohasco is liable as the successor in interest of Volker, which supplied some of the floor tiles and linoleum products containing asbestos.”); *Robinson & Wilson, Inc. v. Stone* (1973) 35 Cal.App.3d 396, 401 (contractor’s lien on materials, including asbestos vinyl floor tile);

1.2.30 Asbestos Wicks

Asbestos wicks. *Zanardi v. Pacific Telephone and Telegraph* (1955) 134 Cal. App. 2d 3 (explosion from oil-fired industrial heaters due to failure to inspect and maintain the equipment, that included equipped with incombustible asbestos wicks, a part of the oil-heater’s burning device); see also, *Vermeulen v. Superior Court* (1988) 204 Cal.App.3d 1192, 1198-1199, fn 6.

1.3.0 How Are People Exposed to Asbestos?

People are exposed to asbestos from inhaling asbestos particles, dust and fibers in the air. See, e.g., *Armstrong World Industries, Inc. v. Aetna Cas. & Sur. Co.* (1996) 45 Cal. App. 4th 1, 37-39. The *Armstrong* court stated that the “health problems caused by asbestos” result from “quantities of asbestos dust composed of millions of tiny fibers which may be inhaled into the body by those working in and around it.” *Id.*, at p. 37.

The *Armstrong* court further observed that:

“Those fibers that avoid the body's initial natural defense mechanisms are deposited in the human lung and remain there. The very quality that has made asbestos useful for so long, its indestructibility, also accounts for the problems that result in asbestos-related disease.” (See also, *Hamilton v. Asbestos Corp.* (2000) 22 Cal.4th 1127, at 1134, citing to *Armstrong* with favor for its detailed discussion of asbestos inhalation and the diseases resulting from asbestos inhalation).

The California *Labor Code*, Sec. 6501.8, embraces the same basic notion. The California *Labor Code* defines “‘asbestos-related work’ ... [to mean] disturbing asbestos-containing construction materials [that] may release asbestos fibers into the air ...” (Stats.1985, ch. 1587, § 12, p. 5876.); See also, *Henning v. California Div. of Occupational Safety and Health* (1990) 219 Cal.App.3d 747.

California *Labor Code*, Sec. 6501.8, provides:

(a) For purposes of this chapter, "asbestos-related work" means any activity which by disturbing asbestos-containing construction materials may release asbestos fibers into the air and which is not related to its manufacture, the mining or

excavation of asbestos-bearing ore or materials, or the installation or repair of automotive materials containing asbestos.

(b) For purposes of this chapter, "asbestos containing construction material" means any manufactured construction material that contains more than one-tenth of 1 percent asbestos by weight. ...

In a similar vein, "exposure to asbestos dust created during use of products" is a phrase found in the reported decisions involving exclusions of insurance coverage in commercial general liability insurance policies. See, e.g., *Fireman's Fund Ins. Co. v. Fibreboard Corp.* (1986) 182 Cal.App.3d 462, 466 ("The policies issued by Truck and the excess carriers expressly excluded coverage for liability for injury, sickness, disease or death 'arising from exposure ... to asbestos dust created during use of products manufactured by the insured which contained asbestos.'").

Such asbestos particles, dusts, fibers, and structures are frequently described as *microscopic* in nature. See, e.g., *Rutherford v. Owens-Illinois, Inc.*, (1997) 16 Cal. 4th 953, at 974 "At the most fundamental level, there is scientific uncertainty regarding the biological mechanisms by which inhalation of certain *microscopic* fibers of asbestos leads to lung cancer and mesothelioma"(emphasis supplied); *Armstrong World Industries, Inc. v. Aetna Cas. & Sur. Co.* (1996) 45 Cal. App. 4th 1, at 37-39 ("... asbestosis is a form of lung disease characterized by the permanent deposition of *microscopic* asbestos fibers in the lungs and the resultant scarring of the lungs' alveoli (air sacs) and interstitium (the membrane through which gas exchange occurs between the alveoli and the blood)"(emphasis supplied).

Below, we discuss asbestos exposure from the mining, milling and manufacture of asbestos-containing products, then the various exposures that arise from the end use of those finished products.

1.3.1 Asbestos Mining, Milling, Product Manufacturing and Raw Asbestos Packaging

Inhalation of airborne asbestos particles, dust and fibers has been long associated with the mining, milling, manufacturing and packaging of raw asbestos. See, e.g., *Johns-Manville Products Corp. v. Sup. Ct.* (1980) 27 Cal. 3d 465, 469-470; accord, *Chavira v. W.C.A.B.* (1991) 235 Cal.App.3d 463, 466 ("During his employment by Manville, applicant [Chavira] had extensive exposure to asbestos").

The California Supreme Court's decision in *Johns-Manville Products Corp.*, is unusual in that the Court held that an employee injured by asbestos exposure who had filed a workers' compensation claim could later bring a civil action against his employer for fraudulent concealment of asbestos disease, despite the statutory bar against such suits. This exception to the workers' compensation "exclusive remedy" statute exists because of Johns-Manville's willful withholding of medical information of the existence and

genesis of plaintiff's asbestos-related diseases from the plaintiff's physician. The Supreme Court further observed:

“Defendant is engaged in mining, milling, manufacturing, and packaging asbestos. ... The defendant corporation has known since 1924 that long exposure to asbestos or the ingestion of that substance is dangerous to health, yet it concealed this knowledge from plaintiff, and advised him that it was safe to work in close proximity to asbestos. It failed to provide him with adequate protective devices and did not operate the plant in accordance with state and federal regulations governing dust levels.

In addition, the doctors retained by defendant to examine plaintiff were unqualified, and defendant did not provide them with adequate information regarding the risk of asbestos exposure. It failed to advise these doctors of the development of pulmonary disease in plaintiff or of the fact that the disease was the result of the working conditions at the plant, although it knew that his illness was caused by exposure to asbestos. Finally, defendant willfully failed to file a First Report of Occupational Injury or Illness with the State of California regarding plaintiff's injury, as required by law. Had this been done, and if the danger from asbestos had been revealed, plaintiff would have been protected. Each of these acts and omissions was done falsely and fraudulently by defendant, with intent to induce plaintiff to continue to work in a dangerous environment. Plaintiff was ignorant of the risks involved, and would not have continued to work in such an environment if he had known the facts.”

Exposure to airborne asbestos particles, dust and fibers are, of course, not limited to the mining, milling, manufacturing and packaging of raw asbestos and asbestos-containing products.

Rather, the many circumstances under which asbestos exposure can occur from product use are far too numerous to list, but attorneys and courts sometimes find it helpful to think of asbestos exposures as either (1) direct asbestos product exposures, (2) bystander asbestos product exposures, and/or (3) take-home asbestos product exposures.

1.3.2 Asbestos Product Use – Direct Asbestos Exposure, Bystander Asbestos Exposure, and Take-Home Asbestos Exposure

Inhalation of asbestos particles, dust and fibers can result from normal wear, aging, abrasions, and impacts, as well as routine maintenance and repair of asbestos containing products.

In the insurance coverage setting, one court noted that “upon release of asbestos fibers into the building's air supply and onto the building's surfaces “ [t]he area becomes hazardous and certain [asbestos abatement and industrial hygiene] measures must be

taken to restore the surface to its prior condition.’ ” *F & H Const. v. ITT Hartford Ins. Co. of Midwest* (2004) 118 Cal.App.4th 364, 375.

This need for “asbestos abatement” of asbestos contaminated buildings formed the basis of an unsuccessful lawsuit brought by the City of San Diego against 31 manufacturers of asbestos-containing products. *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575. There, the Court noted at 578-580:

“[The] City [of San Diego] alleged it owned or leased more than 1,000 public buildings that contained these [asbestos-containing] materials. In its second amended complaint, City alleged *asbestos particles, fibers and dust* have contaminated city-owned and city-leased buildings due to ‘normal wear, aging, abrasions, and impacts, as well as routine maintenance and repair.’ ...

... In 1980, Safety Director Cumming wrote the deputy City Manager concerning asbestos exposure to 400 to 500 city employees. He stated: ‘These exposures are encountered when asbestos-cement water pipe is cut; when making brake and clutch repairs; when cutting dry wall impregnated with asbestos; and when doing maintenance/repair work in crawl spaces, on ceiling tiles or on pipe insulation impregnated with asbestos.’” (emphasis supplied).

The appellate court decisions often discuss inhalation of asbestos particles, dust and fibers in association with the word “*friable*.” The word “*friable*” asbestos was described by the California Supreme Court in *Brown v. Green* (1994) 8 Cal.4th 812, at 820, fn 2, as material that can be “readily crumbled”; compare, *Deschene v. Pinole Point Steel Co.* (1999) 76 Cal.App.4th 33, 41 (wrongful termination case where worker alleged he was fired for testifying on behalf of a co-worker who had been exposed to asbestos thermal insulation, i.e., “There was also testimony in *Gatton* to the effect that [the employer] did not make much effort to protect its employees from *friable* asbestos by properly encapsulating it”)(emphasis supplied). The term “*friable*” was more particularly defined in *City of San Diego v. U.S. Gypsum* (1994) 30 Cal.App.4th 575, 581, fn 1 as “easily crumbled, pulverized, or reduced to powder.”

Even non-friable asbestos products pose an asbestos hazard where mechanical energy, such as sanding, cutting, tearing or grinding on those materials, results in a “disturbance” of asbestos containing material. For example, the United States Occupational Safety and Health Administration defines the term asbestos “disturbance” more broadly than the term “friable” implies. A “disturbance” includes any activity that “disrupt[s] the matrix of asbestos containing material, or to crumble, pulverize, or generate visible debris from such material.” 29 *Code of Federal Regulations* 1926.1101(b).

The California *Labor Code* employs the terms asbestos “exposure” to describe the hazard of airborne asbestos particles, dust and fibers. For example, the California *Labor Code* broadly defines “Asbestos worker” to mean “*any* person whose occupation subjected him or her to an exposure to asbestos fibers.” See California *Labor Code*, Sec. 4402(b) (emphasis supplied); See also, *Clark v. W.C.A.B.* (1991) 230 Cal.App.3d 684, 687 (The

Workers Compensation Appeals Board found a stationary engineer working for the California Youth Authority to be an “Asbestos Worker” under the *Labor Code* because his duties “included removal of asbestos insulation from pipes and the interior of boilers and replacement of the insulation”).

For products liability analyses, lawyers often categorize California appellate decisions that describe asbestos exposure in one of three ways: (1) direct asbestos exposures to an individual working directly with an asbestos containing product; (2) bystander asbestos exposures to an individual near others who were working with one or more asbestos containing products; and (3) take-home asbestos exposures, quite often involving spouses and children of persons who bring asbestos dust and fibers home on clothing, hair, skin, shoes, work vehicles, and the like, as the result of working with, near or around asbestos containing products.

1.3.2.1. Product Use - Direct Asbestos Exposure.

By way of example of direct asbestos exposure from product use, large amounts of asbestos dust, debris and fibers generated during the normal installation, inspection, removal, and replacement of asbestos-containing thermal insulation was discussed in some detail in *Sparks v. Owens-Illinois, Inc.* (1995) 32 Cal. App. 4th 461, at 465-469. The facts recited in the *Sparks* opinion presents an example of direct asbestos exposure from the use of asbestos containing thermal insulation products.

1.3.2.2. Product Use - Bystander Asbestos Exposure.

Similarly, in *Lineaweaver v. Plant Insulation Co.* (1995) 31 Cal. App. 4th 1409, 1420, the court found that Mr. Lineaweaver was exposed directly and as a bystander to asbestos-containing pipe covering and block insulation which was not only “friable and ‘very powdery,’” but that it also “created visible dust reminiscent of a ‘snow storm.’”

Many California appellate decisions have discussed *bystander* asbestos exposures in detail. *Rutherford v. Owens-Illinois, Inc.* (1997) 16 Cal. 4th 953, at 960 (“Although [Mr. Rutherford] ... never himself worked as an installer of asbestos insulation, he nevertheless had been exposed to respirable asbestos dust on a daily basis during periods of his employment at Mare Island [naval shipyard.]”); *Cf., D & M Financial Corporation v. City of Long Beach* (2006) 136 Cal.App.4th 165, 172 (A city may obtain a warrant to inspect a building for asbestos where, after due notice, a substandard building is to be demolished, one presumes, in order to prevent bystander asbestos exposures, i.e., preventing asbestos exposures that would occur during the building demolition, from ever occurring in the first place); *Kinsman v. Unocal Corp.* (2005) 37 Cal 4th 659, 665 (“Though Kinsman did not work directly with such insulation, the evidence showed he was exposed to asbestos dust in three ways: (1) When insulators worked on scaffolding, asbestos-containing debris accumulated on the planks. Kinsman was exposed to this asbestos material when he cleared debris from the planks in dismantling used scaffolding. (2) Some asbestos dust was produced from Kinsman's work 'tying in' scaffolding to insulated pipes or equipment. (3) Asbestos fibers released by the work of other trades

'float[ed] in the air,' exposing Kinsman as he worked nearby. Kinsman did not wear a mask or respirator at Unocal.”); *Saller v. Crown Cork & Seal Co., Inc.* (2010) 187 Cal.App.4th 1220, at 1225 (“William Saller was diagnosed with mesothelioma in June 2005 ... Although Saller did not work with asbestos-containing products at his employment, he worked in close proximity with those who did”); *Stewart v. Union Carbide Corporation* (Nov. 16, 2010, 2nd App. Dist., Div. 5) 2010 Cal. App. LEXIS 1944 (“Larry Stewart worked as a plumber, or plumber's apprentice, from 1968 until his diagnosis with mesothelioma in 2007. ... He worked near drywallers on ‘just about every job.’ Drywallers use joint compound, and plaintiffs presented evidence that during relevant time periods, joint compound contained asbestos which was released when the walls were sanded. ... Based on studies, plaintiffs' expert opined that a person exposed to dust created when asbestos-containing joint compound was sanded was at risk of mesothelioma, even if the person was a bystander”).

1.3.2.3. Product Use - Take-Home Asbestos Exposure.

Take-home exposures were specifically discussed in 1986, in the Occupational Safety and Health Administration (“OSHA”)’s final standards concerning asbestos exposure limits in the workplace, published in the *Federal Register*:

“... Evidence of an Excess Risk of Lung Cancer and Mesothelioma at Low Cumulative Exposures of Asbestos

In establishing whether an existing permissible exposure limit is inadequate for protecting workers against the risk of occupational disease, the [Occupational Health and Safety] Agency [“OSHA”] [considered] a number of studies [that] have recorded cases of mesothelioma among members of families of asbestos workers [citations omitted]. Mesothelioma has also been observed among community members living near mines and factories. [citations omitted]. Anderson, et al. [Ex. 84-16] reported that 4 cases of pleural mesothelioma had been diagnosed among 626 family contacts of amosite factory workers. *Presumably, family contacts received their exposures to asbestos from dust carried home on the worker’s clothing and especially during the laundering of dusty clothes. ...*”

51 *Federal Register* 22612, at p. 22619
(emphasis supplied).

The decisional law has similarly discussed *take-home exposure* in at least two cases. In *Cossmann v. DaimlerChrysler Corp.* (2003) 108 Cal. App. 4th 370, the court addressed jurisdictional issues in a case of take-home asbestos exposure, where allegations of asbestos dust and fibers that the Plaintiff’s husband brought home on his clothing from his work at an auto parts business formed the basis of that particular lawsuit. Similarly, in *Franklin v. USX Corp.*, (2001) 87 Cal.App.4th 615, at 618, the court also addressed allegations of take-home exposure; there, the complaint alleged childhood exposure to second hand asbestos, carried home by the plaintiff’s parents on their clothing and in the family automobile, as the result of both parents working at the Western Pipe & Steel

Shipyards (WPS) in South San Francisco during World War II, and such exposure resulting in the Plaintiff's mesothelioma.

1.4.0. What Are the Injuries Resulting from Asbestos Exposure?

A number of California court decisions have discussed, in some detail, both the disease and injuries that result from asbestos exposure and, relevant to our discussion here, the biologic mechanisms currently thought to bring about those diseases and injuries in humans.

Among the key decisions discussing the biologic mechanisms of asbestos disease and injuries are:

Armstrong World Industries, Inc. v. Aetna Cas. & Sur. Co. (1996) 45 Cal. App. 4th 1;

Chevron USA, Inc. v. W.C.A.B. (1990) 219 Cal. App. 3d 1265;

Hamilton v. Asbestos Corp. (2000) 22 Cal. 4th 1127; and

Rutherford v. Owens-Illinois, Inc. (1997) 16 Cal. 4th 953.

The discussion below draws heavily on the courts' summary of medical evidence received in the court record and summarized in those four legal opinions, above.

1.4.1. Parenchymal Asbestosis (a.k.a., Scarring of the Lungs), Pleural Fibrosis and Pleural Plaques

The California *Labor Code* defines *asbestosis* as follows: “‘Asbestosis’ means any pathology, whether or not combined with preexisting pathology, which results in disability or need for medical treatment from inhalation of asbestos fibers.” California *Labor Code*, Sec. 4402(a); *See also, Clark v. W.C.A.B.* (1991) 230 Cal.App.3d 684, 692 (Mr. Clark was diagnosed with pulmonary fibrosis, pleural effusion, laryngeal cancer and *cor pulmonalae*, all of which would arguably qualify as “asbestosis” under the *Labor Code* Sec. 4402(a) definition of “asbestosis”).

The decisional law defines asbestosis in a manner more closely fitting with a classic medical definition, i.e., “parenchymal asbestosis” is a “diffuse interstitial fibrosis [of the lungs] resulting from inhalation of asbestos fibers.” *Armstrong World Industries, Inc. v. Aetna Cas. & Sur. Co.* (1996) 45 Cal. App. 4th 1, at 37-39.

The *Armstrong* court observed that asbestosis is a form of lung disease characterized by the permanent deposition of *microscopic* asbestos fibers in the lungs and the resultant scarring of the lungs' alveoli (air sacs) and interstitium (the membrane through which gas exchange occurs between the alveoli and the blood). (*Id.*)

Fibrosis refers to the formation of fibrous tissue, and is more commonly called scarring. When associated with an external cut to the skin, fibrosis may be considered a necessary and helpful form of healing which restores the body to a functional-albeit altered-state. When associated with the inhalation of asbestos, however, fibrosis results in the impairment and destruction of the alveolar/capillary gas exchange units necessary to breathe. As such, and because of the irreversible nature of the fibrotic process on the lung tissue, fibrosis caused by the inhalation of asbestos is more appropriately characterized as a form of injury than of healing or repair. (*Id.*)

Fibrosis within the lungs occurs as part of the body's reaction to the inhalation of foreign particulate matter. The indestructible nature of asbestos fibers that helped make asbestos such an attractive construction material makes it equally as detrimental to the body once inhaled. Once deposited in the lungs, the fibers tend to remain in the alveolar region and the lungs' normal clearance mechanisms are ineffective. (*Id.*)

One clearance mechanism -- and a key to the fibrotic process -- involves a specialized form of white blood cell known as a macrophage. These cells naturally respond to foreign matter within the body and attempt to eliminate this matter from the body by engulfing (i.e., phagocytosing) and digesting the matter with their own secretions and enzymes. This process occurs on the cellular level, but is frustrated and unsuccessful in the context of asbestos fibers because of the macrophages' inability effectively to engulf and digest the fibers.

This, in turn, leads to a further and sustained inflammatory process. The inflammation becomes chronic as more macrophages and other white blood cells are attracted to the site of the asbestos fibers caused by the release of certain chemical substances by the macrophages that responded initially to the fibers. More macrophages are summoned, further frustrated phagocytosis occurs, and the cycle continues. (*Id.*)

Another result of the inflammation is that other cells, called fibroblasts, are summoned to the site of inflammation by a different chemical secretion (fibronectin) from the macrophages. Fibronectin not only attracts these fibroblasts, but also causes them to proliferate. The fibroblasts, once summoned, produce the collagen in the alveolar walls and the interstitium which constitutes fibrosis. (*Id.*)

This process - inhalation of asbestos fibers, the inflammatory reaction, and the resulting fibrosis - characterizes the disease parenchymal asbestosis. When the fibrosis is extensive enough, i.e., when enough alveolar/capillary units have become fibrosed, clinical symptoms of parenchymal asbestosis become apparent. Although there is no universal threshold for when such symptoms will become apparent, it is estimated that at least 100 million of the 300 million alveolar/capillary units in the human body must be affected for a clinical diagnosis to occur. (*Id.*)

In *Hamilton v. Asbestos Corp.* (2000) 22 Cal.4th 1127, at 1134, the California Supreme Court stated that, in asbestosis, the scarring often occurs on the middle and lower portions

of the lung; scarring in the lining of the lung on both sides is called pleural plaque; scarring throughout the lining of the lung is *diffuse pleural fibrosis*; and scarring that has been present long enough to calcify is *pleural calcification*.

1.4.2. Fibrosis of the Lungs and/or Pleura Is Separate and Distinct from Cancer Of the Lungs and/or Pleura

As seen below, separate and apart from parenchymal asbestosis, pleural fibrosis and pleural plaques, an individual exposed to asbestos may develop an asbestos-related cancer. The disease and biologic mechanisms involved in the development of asbestos-induced fibrosis of the lungs or pleura and asbestos-related cancer of the lungs or pleura appear to be entirely *separate* and *distinct* diseases, one from the other, as discussed in the California Supreme Court opinion of *Hamilton v. Asbestos Corp.* (2000) 22 Cal.4th 1127, at 1136;

In sum, the medical testimony established without contradiction that the asbestosis found in Mitchell's lungs in 1979 and the malignant mesothelioma found in his abdomen in 1996 were two separate and distinct diseases. Except for the likelihood that both were initially triggered by Mitchell's occupational exposure to asbestos, the two were unrelated in all respects: one did not cause or evolve into the other, they developed by means of wholly different mechanisms and at widely different rates, affected different tissue and organs, manifested themselves at different times and by different symptoms, and carried very different outcomes. As one of the medical experts explained, we deal here with “two different diseases, asbestosis, which is scar tissue formation ... and mesothelioma, which is cancer...” (fn 7)

FN 7. In a legally different but factually similar case, the Court of Appeal upheld an award of death benefits based on uncontradicted medical testimony that peritoneal mesothelioma does not develop from asbestosis but rather is “an entirely separate and distinct disease process resulting in an entirely separate and distinct injury and disability.” *Chevron USA, Inc. v. W.C.A.B.* (1990) 219 Cal. App. 3d 1265

Below, the process of *cancer* formation, or carcinogenesis, is discussed, in contrast to the process of scarring of the lungs or pleura (a.k.a., parenchymal asbestosis, asbestos-caused interstitial fibrosis, pleural fibrosis and pleural plaques) discussed above.

1.4.3. Asbestos Is A Known Carcinogen

Asbestos has been designated a known human carcinogen by the International Agency for Research on Cancer (IARC) and the U.S. Environmental Protection Agency (EPA). Tucker, Pamela, M.D., “Agency for Toxic Substances and Disease Registry Case Studies in Environmental Medicine (CSEM) Asbestos Toxicity” U.S. Dept. of Health and Human

Services Agency for Toxic Substances and Disease Registry, Div. of Toxicology and Env. Medicine, Env. Med. And Edu. Svcs. Branch (2002).

The United States Congress issued a “Congressional Statement of Findings and Purposes” when enacting the Asbestos Hazards and Emergency Response Act that: (1) exposure to asbestos fibers has been identified as significantly increasing the incidence of cancer, and (2) that medical science has not established any minimum level of exposure to asbestos fibers which is considered to be safe to individuals exposed to the fibers. 20 *United States Code*, Sec. 3601(a) (1)-(3).

The United States Occupational Safety and Health Administration (“OSHA”) has found *all* asbestos fiber types to possess a similarly potent *carcinogenic* effect on human beings and has declined to regulate separate asbestos varieties and fiber types in asbestos workplace exposure rules, finding:

There are at least three reasons for OSHA's decision not to separate fiber types [in its workplace asbestos exposure rules]. First, OSHA believes that the evidence in the record supports *similar potency* for chrysotile and [the other asbestos fiber types] with regard to *lung cancer and asbestosis*. The evidence submitted in support of the claim that chrysotile asbestos is *less toxic* than other asbestos fiber types is related primarily to mesothelioma. This evidence is *unpersuasive*, and it provides an insufficient basis upon which to regulate that fiber type less stringently.

59 *Federal Register* 40964, at p. 4112 (8/10/1994) (emphasis supplied).

The State of California Air Resources Board has made similar findings, as recited and restated within the decision *Reasonable Regulation of Naturally Occurring Substances v. California Air Resources Board* (2004) 122 Cal.App.4th 1249, at page 1260:

“The [California Air Resources] Board has determined there is no threshold level of exposure of asbestos below which no significant adverse health effects are anticipated and this means there is no safe level of exposure of human beings to airborne asbestos fibers. (*Regs.*, § 93000.)”

The leading decision in the State of California on asbestos related cancer, *Rutherford v. Owens-Illinois, Inc.* (1997) 16 Cal. 4th 953, involved a worker who died from lung cancer. Chapter 3 of this Book discusses the *Rutherford* decision at length, as much of what the Supreme Court wrote in that opinion has broad application to *all* asbestos personal injury and wrongful death litigation in California. A special and mandated civil jury instruction in the State of California entitled “CACI 435 Causation for Asbestos-Related Cancer Claims” – arose from the holding of the *Rutherford* court. Below, a brief discussion ensues on asbestos as a cause of lung cancer. See also, “Book of Approved Jury Instructions, BAJI 3.78 - Asbestos Causation” (discussed in detail, in Chapter 3, *infra*).

1.4.4. Asbestos Causes Lung Cancer

The biologic mechanism through which asbestos causes lung cancer, and the legal implications of those mechanisms, were discussed in great detail in *Rutherford v. Owens-Illinois, Inc.* (1997) 16 Cal. 4th 953. The *Rutherford* case, typical of many asbestos lung cancer cases attorneys and courts see every day, involved a worker who both smoked cigarettes and was occupationally exposed to asbestos. (*Id.*, at 960-962).

Plaintiffs presented medical evidence, and the jury rendered a special verdict finding upheld by the California Supreme Court, that Mr. Rutherford had died of *asbestos*-related lung cancer. Mr. Rutherford had worked aboard ships around asbestos insulators at Mare Island starting in 1940. Although pretrial discovery reflected Mr. Rutherford had never himself worked as an installer of asbestos insulation, he nevertheless had been exposed to asbestos particles, dust and fibers on a daily basis during periods of his employment at Mare Island.

In 1985 Mr. Rutherford first noticed he would tire quickly and get out of breath easily. In 1986, Mr. Rutherford was diagnosed with lung cancer and underwent surgery. A year later a cancerous tumor was discovered in his head, a metastatic tumor resulting from the primary tumor – his lung cancer. Mr. Rutherford received radiation treatments but died three weeks later.

Evidence was also presented that Rutherford had smoked approximately a pack of cigarettes a day over a period of 30 or more years until he quit smoking in 1977.

Undisputed evidence indicated that cigarette smoking sharply increases the risk of lung disease, including lung cancer, and works “synergistically” with asbestos exposure to enhance the severity of resulting damage to the lungs.

The jury heard medical testimony to establish that the plaintiffs' asbestos-related disease was “dose-related”- i.e., that the risk of developing asbestos-related cancer increased as the total occupational dose of inhaled asbestos fibers increased. Dr. Allan Smith, a professor of epidemiology, testified that asbestos-related lung cancers are dose-related diseases, and that all occupational exposures through the latency period can contribute to the risk of contracting the diseases. Owens-Illinois's own medical expert, Dr. Elliot Hinckes, similarly testified that asbestos-related cancers are dose responsive, and that if a worker had occupational exposure to many different asbestos-containing products, each such exposure would contribute to the degree of risk of contracting asbestos-related lung cancer, although he testified further that a very light or brief exposure could be considered “insignificant or at least nearly so” in the “context” of other, very heavy exposures.

At the end of the first phase of trial, the jury answered the question, “Did the decedent, Charles Rutherford, have lung cancer legally caused by his inhalation of asbestos fibers?” in the affirmative. The jury returned a verdict finding that a total of \$278,510 in economic damages had been incurred by plaintiffs, and \$280,000 in noneconomic

damages suffered by plaintiffs as a result of decedent's death.

The Supreme Court affirmed the judgment but wrestled with complex issues of medical and legal causation, discussed in Chapter 3 of this book, *infra*, in great detail. Suffice it to say here that the *Rutherford* court grasped that, after comprehensively reviewing the medical evidence, that much of the biologic mechanisms through which asbestos causes lung cancer are still not well understood in medical science, and this fact has practical legal implications for determining how a jury should be instructed on the question of medical and legal *causation*.

At pages 974 and 975 the *Rutherford* court wrote:

At the most fundamental level, there is scientific uncertainty regarding the biological mechanisms by which inhalation of certain microscopic fibers of asbestos leads to lung cancer and mesothelioma. Although in some cases medical experts have testified that asbestos-related cancer is the final result of the fibrosis (scarring) process (see *Armstrong World Industries v. Aetna Casualty & Surety Co.* (1996) 45 Cal. App. 4th 1, 37-39) a general reference on the subject describes the link between fibrosis and carcinogenesis as “a debated issue for which further extensive analysis is needed.” (1 Encyclopedia of Human Biology (1991) Asbestos, p. 423.) An answer to this biological question would be legally relevant, because if each episode of scarring contributes cumulatively to the formation of a tumor or the conditions allowing such formation, each significant exposure by the plaintiff to asbestos fibers would be deemed a cause of the plaintiff's cancer; if, on the other hand, only one fiber or group of fibers actually causes the formation of a tumor, the others would not be legal causes of the plaintiff's injuries.

If, moreover, the question were answered in favor of the latter (single cause) theory, another question-apparently unanswerable -would arise: *which* particular fiber or fibers actually caused the cancer to begin forming. Because of the irreducible uncertainty of the answer, asbestos-related cancer would, under the single-fiber theory of carcinogenesis, be an example of alternative causation, i.e., a result produced by a single but indeterminable member of a group of possible causes. The disease would thus be analogous to the facts of the hunting accident in *Summers v. Tice* (1948) 33 Cal. 2d 80, 86 [burden of proof on causation shifted to two hunters who both negligently discharged shotgun in the direction of Plaintiff, and where only one shotgun pellet caused injury, as it was impossible to ascertain the source of the pellet as coming from one hunter's shotgun, or the other]” (emphasis in the original).

Given this scientific uncertainty of the biologic processes underlying cancer formation, the California Supreme Court held, among other things, that a mandatory jury instruction was required to be given in cases involving asbestos-related latent injuries:

In conclusion, our general holding is as follows. In the context of a cause of action for asbestos-related latent injuries, the plaintiff must first

establish some threshold *exposure* to the defendant's defective asbestos-containing products, [footnote 12] *and* must further establish in reasonable medical probability that a particular exposure or series of exposures was a "legal cause" of his injury, i.e., a *substantial factor* in bringing about the injury. In an asbestos-related cancer case, the plaintiff need *not* prove that fibers from the defendant's product were the ones, or among the ones, that actually began the process of malignant cellular growth. Instead, the plaintiff may meet the burden of proving that exposure to defendant's product was a substantial factor causing the illness by showing that in reasonable medical probability it was a substantial factor contributing to the plaintiff's or decedent's *risk* of developing cancer. *The jury should be so instructed.* [footnote 13] The standard instructions on substantial factor and concurrent causation (BAJI nos 3.76 and 3.77) remain correct in this context *and should also be given.*

Rutherford v. Owens-Illinois, Inc., (1997) 16 Cal. 4th 953, at 982-983 (emphasis supplied).

In addition to its applicability in lung cancer cases, the *Rutherford* decision is of singular importance in cases involving all asbestos injuries, including mesothelioma and other asbestos-related cancers, discussed below.

1.4.5. Asbestos Causes Mesothelioma

Observation has established a strong linkage between mesothelioma and exposure to asbestos fibers. *Hamilton v. Asbestos Corp.* (2000) 22 Cal.4th 1127, at 1135-1136. Mesothelioma is a cancer of the mesothelial linings of the body. *Id.*

1.4.5.1. Mesothelioma Described.

The California Supreme Court in *Hamilton v. Asbestos Corp.* (2000) 22 Cal.4th 1127, at 1135-1136, described mesothelioma in detail.

In short, the *mesothelium* is a layer of specialized cells forming a thin membrane that lines certain body cavities: where it covers the lungs and the inner surfaces of the chest wall, it is called the *pleura*; where it covers the organs of the abdominal cavity and the inner surfaces of that cavity, it is called the *peritoneum*. Mesothelioma is a form of cancer that starts to grow in such lining: the most common form starts in the lining of the chest cavity and is therefore called *pleural mesothelioma*; less common is the form that starts in the lining of the abdomen, called *peritoneal mesothelioma*. Where the mesothelium constitutes the sac that surrounds the heart, it is called mesothelioma of the *pericardium*. *Pericardial mesothelioma* is by far the least common form of mesothelioma.

As explained above, inhaled asbestos fibers enter the bloodstream through the connective tissue of the lung. But while some fibers remain embedded in that tissue and cause

asbestosis, others migrate to different parts of the body. Some fibers are carried in the bloodstream; others move through the lymphatic system; still others are swallowed with mucus and enter the body through the digestive system. However they enter the body, asbestos fibers may ultimately lodge in the pleura, the pericardium, the peritoneum and other organs of the human body. (*Id.*)

Although the biologic mechanism by which such fibers cause malignant mesothelioma is not yet fully understood, it is believed they may trigger chromosomal abnormalities in cells of the pleura, the peritoneum or pericardium. Ordinarily the body's immune system will detect and eliminate cells having such mutations. But if enough of these genetic errors occur over a long period of time, the immune system may fail to eliminate them; the defective cells may then become malignant and rapidly multiply, and a tumor may start to grow in the mesothelial tissue. (*Id.*)

Whatever its precise etiology, the general characteristics of mesothelioma are well known. Malignant mesothelioma is a very rare cancer, even among persons exposed to asbestos; no one can predict whether or when such a person will develop mesothelioma. Among the population at large, malignant mesothelioma strikes only two or three persons per million each year. Yet it takes far less asbestos exposure to cause mesothelioma than to cause asbestosis. (*Id.*)

Mesothelioma is often difficult to diagnose: in the form of the disease from which Mitchell suffered - peritoneal mesothelioma - the tumor first grows as a spreading mass in the abdominal cavity of the victim, and its early signs are such nonspecific symptoms as stomach pain, nausea, vomiting, and weight loss. Mesothelial tumors initially grow very slowly; the disease has an average latency period of 30 to 40 years. But by the time the cancer is diagnosed, it is often in an advanced stage and is rapidly metastasizing. It is also inevitably fatal: there is no known cure for any form of malignant mesothelioma. As will appear, in the case at bar Mitchell died 17 months after the diagnosis of mesothelioma; the average survival time is less than a year. (*Id.*)

1.4.5.2. Mesothelioma And Asbestos Exposure.

The appellate decisions in California are both legion and uniform in their description of mesothelioma as an asbestos-induced cancer, and many describe it *exclusively* as an asbestos-induced cancer.

In contrast to lung cancer, the appellate courts offer no suggestion of an association between mesothelioma and any other carcinogen, including cigarette smoke:

* In *Chevron U.S.A., Inc. v. Workers' Comp. Appeals Bd.*, (1999) 19 Cal.4th 1182, 1187, the California Supreme Court noted that the worker, Mr. Steele, was “diagnosed with peritoneal mesothelioma, an *asbestos-related cancer* of the lining of the abdominal cavity.” (emphasis supplied).

* In *Sparks v. Owens-Illinois, Inc.* (1995) 32 Cal.App.4th 461, the court record revealed that “Dr. Allan Smith, a professor of epidemiology at the University of California, testified that *the only established cause of mesothelioma in humans* was asbestos exposure ...” (emphasis supplied).

* In *Skip Fordyce, Inc. v. Workers' Compensation Appeals Bd.* (1983) 149 Cal.App.3d 915, 928 the court wrote:

“The medical evidence was that mesothelioma is *caused exclusively by asbestos exposure*. So, if the test had shown that the cancer was mesothelioma, it would have definitively confirmed the asbestos exposure and causation.” (emphasis supplied).

* In *Jenkins v T&N PLC* (1996) 45 Cal. App. 4th 1224, 1226-1227, the court record revealed some agreement of the medical experts on the asbestos origins of mesothelioma:

“In 1991, Mr. Jenkins was diagnosed with *mesothelioma*. According to the [Plaintiffs] Jenkinses' medical expert, pathologist Victor Roggli, M.D., *mesothelioma* is a latent, asbestos associated disease which can develop 30 to 40 years after exposure to asbestos. [Defendant] T & N's medical expert, pathologist John Craighead, M.D., admitted on cross-examination that he wrote an article stating that the type of *mesothelioma* which Mr. Jenkins contracted is *exceptionally rare or never occurs in people not exposed to asbestos*.” (emphasis supplied).

* In *Ferris v. Gatke Corp.* (2003) 107 Cal.App.4th 1211, 1214, the court noted that “Mr. Ferris died from the effects of mesothelioma caused by *inhalation of asbestos particles*.” (emphasis supplied).

* In *Overly v. Ingalls Shipbuilding, Inc.* (1999) 74 Cal.App.4th 164, 166, the court wrote that “Robert was diagnosed with mesothelioma, a cancer of the lining of the lung *caused by exposure to asbestos*.” (emphasis supplied).

* In *Franklin v. USX Corp.*, (2001) 87 Cal.App.4th 615, at 618, the case came before the court on allegations that “Jeannette [Franklin] had contracted mesothelioma, *an asbestos-caused cancer*, as a result of childhood exposure to second hand asbestos carried home by her parents, who worked at the Western Pipe & Steel Shipyard (WPS) in South San Francisco during World War II.” (emphasis supplied).

* In *Gatton v. A.P. Green Services, Inc.* (1998) 64 Cal.App.4th 688, 690, the Plaintiffs in that wrongful death action were the widow and heirs of decedent Jerald A. Gatton “who died in April 1995 from mesothelioma *caused by occupational exposure to asbestos*.” (emphasis supplied).

* In *Ashdown v. Ameron Internat. Corp.* (2000) 83 Cal.App.4th 868, 872, the court found that the plaintiff “was diagnosed as having mesothelioma, an asbestos-related disease.”

* In *Cossmann v. DaimlerChrysler Corp.* (2003) 108 Cal.App.4th 370, 379 (Cal. Ct. App. 2003) the court wrote that “[i]t is undisputed that Bette Cossmann was diagnosed with mesothelioma in 1994 and told that it was caused by exposure to asbestos.”

* In *Kellogg v. Asbestos Corp. Ltd.* (1996) 41 Cal.App.4th 1397, 1401 the court wrote that “[i]n September 1987, Kellogg was diagnosed with pleural mesothelioma, a virulent form of cancer of the pleural lining of the lung caused by exposure to asbestos.”

* In *Ehret v. Congoleum Corp.* (2001) 87 Cal.App.4th 202, 204, the court addressed a jury verdict in favor of a person exposed to asbestos that the jury found to have resulted in his diagnosis of pericardial mesothelioma:

Robert Ehret was a journeyman floor covering contractor who was diagnosed with terminal pericardial mesothelioma. He sued several flooring manufacturers and distributors, including Congoleum Corporation, alleging that his illness was caused by asbestos in various flooring products he installed 20 to 30 years earlier. ... Mr. Ehret died during the trial. The case continued as a wrongful death action brought by his widow and three other heirs. The jury returned a special verdict in favor of plaintiffs and against Congoleum ...

* In *Kinsman v. Unocal Corp.* (2005) 37 Cal 4th 659, 665, the court wrote that “Kinsman developed mesothelioma, an asbestos-induced malignant cancer of the lining of the lungs.”

In *Saller v. Crown Cork & Seal Co., Inc.* (2010) 187 Cal.App.4th 1220 the court summarized the evidence as follows, at page 1228:

Robert Cameron, M.D., who performed plaintiff's September 2005 surgery, testified that mesothelioma is a tumor that grows in the space around the lungs, and is very diffuse. It is difficult to treat and there is no cure. *Mesothelioma is caused by asbestos exposure, and exposure to asbestos caused Mr. Saller's disease.* Barry Horn, M.D., who is board certified in pulmonary diseases, testified that with asbestos, it can be decades between exposure and the development of disease. Mesothelioma is a rare disease; there are only 3000 cases per year in the United States, and in his opinion, plaintiff's disease was caused by exposure to asbestos. Arnold R. Brody, a cell biologist, testified that there is no safe level of asbestos exposure. Smoking does not cause mesothelioma and an individual may have genetic susceptibility to mesothelioma. (emphasis supplied).

In addition to the repeated observation that mesothelioma is caused by asbestos exposure, there may be found in multiple court opinions that mesothelioma is largely an incurable

and fatal disease, whose only treatment is palliative care (chemotherapy to reduce the size of the tumor and/or pain medications to make the sufferer more comfortable).

1.4.5.3. Mesothelioma is incurable and fatal.

In *Garcia v. Duro Dyne Corporation* (2007) 156 Cal.App.4th 92, 98, the court noted the propriety of medical opinions offered in mesothelioma diagnosed Plaintiffs that they will more likely than not, die of their disease:

“Here, there was ample evidence to support a finding that Garcia's mesothelioma was reasonably certain to recur and result in future economic damages. Duro Dyne correctly points out that Garcia's mesothelioma was in remission at the time of trial and that its expert, Andrew Churg, M.D., believed he was ‘... more likely than not, ... cured of his disease.’ However, other experts testified that mesothelioma is not a curable disease and that Garcia's mesothelioma was not cured. Barry Horn, M.D. (Dr. Horn), a pulmonologist who testified as one of Garcia's experts, stated: ‘I have participated in the care of patients with mesothelioma, but this is an incurable disease. ¶¶ ... ¶¶ No one has reported a cure of this disease.’ He testified that Garcia needed to be followed medically because ‘[h]e has big trouble coming down the pike.’ He also stated there was ‘no question’ that Garcia would require future medical treatment and ‘surely will get chemotherapy again.’ On cross-examination, Dr. Horn acknowledged that he could not state with ‘absolute certainty’ that Garcia would die of complications related to his mesothelioma, but that it was ‘[m]ore likely than not,’ or even ‘overwhelmingly likely’ that he would. He added: ‘Under no circumstances can I be in a medical situation where I know something will happen with absolute certainty.’”

To summarize, aside from the fibrotic diseases of the lungs and pleura (parenchymal asbestosis, pleural fibrosis, pleural plaques) and cancer of the lungs, pleural, peritoneum and pericardium (lung cancer and mesothelioma), the appellate cases and courtroom observers have also described other cancers, heart disease and skin disease, associated with inhaling asbestos particles, dust and fibers.

1.4.6. Other Asbestos-Related Cancers

Claims of *other* asbestos-related cancers – cancers not associated with lung cancer or mesothelioma -- are often litigated in California trial courts. However, many personal injury and wrongful death cases involving *other* asbestos-related cancers, have simply not been *appealed* with sufficient frequency so as to produce much in the way of California published *appellate* court decisions.

Nonetheless, some published legal data exists concerning *other* asbestos related cancers that are commonly litigated in trial courts nationwide, as may be found in a 2005 publication of the RAND Corporation studying U.S. trends in asbestos litigation, as follows:

... Other cancers asserted by asbestos claimants include leukemia, and cancers of the bladder, breast, colon, esophagus, kidney, larynx, lip, liver, lymphoid, mouth, pancreas, prostate, rectum, stomach, throat, thyroid, and tongue. The relationship of these other cancers to asbestos is a subject of contention; defendants frequently dispute the causality of these cancer claims. No U.S. Government agency monitors the incidence of asbestos-related cancers other than mesothelioma.

Carroll, Stephen J., et al, *Asbestos Litigation* (2005 RAND Corp., Santa Monica, California), at pages 12-13:

The above-list of *other* asbestos-related cancers is probably not exhaustive and, at this writing, can be viewed as dated, owing to on-going advances in our understanding of cancer and asbestos-related diseases. However, this list detailed above should provide a notion to the litigator or judge handling these kinds of cases concerning the typical evidence one encounters in asbestos litigation.

As to published appellate decisions, the only *California* appeals court decisions directly touching on *other* asbestos-related cancers, are only *four* in number: (1) *Baptist v. W.C.A.B. of State of Cal.* (1982) 137 Cal.App.3d 903 where the court suggested that *pancreatic* cancer may have been caused by asbestos on the facts of that case, including a medical finding of microscopic asbestos bodies had been found on autopsy in the decedent's pancreas; (2) *Clark v. W.C.A.B.* (1991) 230 Cal.App.3d 68, where *laryngeal* cancer, asbestosis and *cor pulmonalae* (an asbestos-related cardiac condition, discussed in Sec. 1.4.7.1. of this book, immediately below), were the relevant asbestos-related diagnoses discussed in that case; (3) *Davis v. Lockheed Corp.* (1993) 13 Cal.App.4th 519 that included allegations of asbestos-induced *laryngeal* cancer; and (4) *City of Long Beach v. Workers' Comp. Appeals Board* (2005) 126 Cal.App.4th 298, finding a lack of association between *kidney* cancer and asbestos from the particular evidence in that trial court record that was submitted to that appeals court for review.

Suffice it to say here, however, that asbestos litigators often encounter cases involving claims of a asbestos-related cancers – separate and apart from mesothelioma and lung cancer – such as those listed above: e.g., leukemia, and cancers of the bladder, breast, colon, esophagus, kidney, larynx, lip, liver, lymphoid, mouth, pancreas, prostate, rectum, stomach, throat, thyroid, and tongue.

As one federal court put it:

“Inhalation of the fibers causes, or is at least causally related to, a number of serious and often fatal diseases. These include lung cancer, asbestosis (a chronic and disabling lung disease), mesothelioma (cancer of the lining of the chest cavity or abdomen), and gastrointestinal cancer. 51 *Federal Register* at 22,61 5/3. It is also associated with an increased risk of cancer of the esophagus, stomach, colon, kidneys, larynx, pharynx, and buccal cavity. *Id.* at 22,61 6/1. In the preamble to the standards here at issue, the Secretary emphasized that ‘OSHA is aware of no

instance in which exposure to a toxic substance has more clearly demonstrated detrimental health effects on humans than has asbestos exposure.” *Id.* at 22,615/3.

Building and Construction Trades v. Brock (1988) 838 F. 2d 1258.

1.4.7 Asbestos Caused Cardiovascular Conditions

1.4.7.1 Cor Pulmonale

Advanced asbestosis causing increased resistance to blood flow through the capillary bed of the lungs can lead to a condition known as *cor pulmonale*. See, e.g., *Clark v. W.C.A.B.* (1991) 230 Cal.App.3d 684, 686-687 (“The autopsy report stated Mr. Clark had congestive heart failure, cor pulmonale, marked bilateral emphysema, bilateral pleural effusions, bilateral lower lobe pleural fibrosis, pulmonary edema, dehydration, and emaciation”). This is most commonly seen in patients with long standing hypoxia and/or severe asbestosis, with clinical signs of tall jugular “a” waves on EKG; it can also occur with less severe fibrotic disease, especially if chronic obstructive pulmonary disease is simultaneously present, as is often the case with asbestos workers who smoke cigarettes. See, Tucker, Pamela, M.D., “Agency for Toxic Substances and Disease Registry Case Studies in Environmental Medicine (CSEM) Asbestos Toxicity” U.S. Dept. of Health and Human Services Agency for Toxic Substances and Disease Registry, Div. of Toxicology and Env. Medicine, Env. Med. And Edu. Svcs. Branch (2002), citing to Seaton, A, “Asbestos Related Diseases,” Ch. 13, in *Occupational Lung Diseases*, 2nd Ed. (Morgan WKC, Seaton A, eds.), Philadelphia: Saunders, 1984, pp. 323-376.

1.4.7.2 Pericarditis

The pericardium is a double-walled sac around the heart. Pericarditis, or inflammation of the pericardium, causes the inner and outer (parietal and visceral) walls to rub against each other. In rare circumstances, constrictive pericarditis may occur secondary to asbestos-induced severe fibrosis or calcification of the pericardium. Tucker, Pamela, M.D., “Agency for Toxic Substances and Disease Registry Case Studies in Environmental Medicine (CSEM) Asbestos Toxicity” U.S. Dept. of Health and Human Services Agency for Toxic Substances and Disease Registry, Div. of Toxicology and Env. Medicine, Env. Med. And Edu. Svcs. Branch (2002), citing to See, e.g., D Davies, M I Andrews, and J S Jones “Asbestos induced pericardial effusion and constrictive pericarditis,” *Thorax*, June, 1991, pp. 426-432.

1.4.8 Asbestos Caused Skin Disease

Asbestos-caused skin disease was the subject of a writ filed in *Abex v. Superior Court (Crouson)* (1989) 209 Cal. App. 3d 755. There, the plaintiff filed complaint alleging that he suffered injury from asbestos and asbestos-containing products produced by defendants. Defendants filed motion to compel biopsy of warts, which plaintiff claimed were caused by exposure to asbestos, with a supporting physician declaration that the

procedure would not be painful, as the plaintiff cut off the corns and/or warts periodically with a pocket knife. Plaintiff opposed the motion without the benefit of a physician declaration and requested sanctions. The trial court denied defendants' motion and imposed sanctions. Defendants petitioned for writ of mandate. The Court of Appeal held that plaintiff could be compelled to submit to a biopsy of the skin growths, given uncontradicted medical evidence that procedure would involve little pain or danger, and that biopsy was necessary to determine etiology of the lesions.

According to the United States Department of Health and Human Services, with the advent of personal protective equipment, dermal contact is rarely a significant exposure pathway. See, e.g., Tucker, Pamela, M.D., "Agency for Toxic Substances and Disease Registry Case Studies in Environmental Medicine (CSEM) Asbestos Toxicity" U.S. Dept. of Health and Human Services Agency for Toxic Substances and Disease Registry, Div. of Toxicology and Env. Medicine, Env. Med. And Edu. Svcs. Branch (2002). In the past, handling asbestos could result in heavy dermal contact and exposure. Asbestos fibers could become lodged in the skin, producing a callus or corn, but not more serious health effects. Evidence of dermal contact can be used as corroborative of lung disease caused by asbestos exposure. (*Id.*)