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1 WILLIAM LEVIN, ESQ. (SBN 134637)
2 ANNA MARIA COSTA, ESQ. (SBN 203741)
3 **LEVIN SIMES KAISER & GORNICK, LLP**
4 44 Montgomery Street, 36th Floor
5 San Francisco, CA 94104
6 Telephone: (415) 646-7160
7 Facsimile: (415) 981-1270

8 Attorneys for Plaintiffs

9 **SUPERIOR COURT OF CALIFORNIA**
10 **COUNTY OF SAN FRANCISCO**
11 **(UNLIMITED JURISDICTION)**

12 LYNN R. BARANCO, individually and on)
13 Behalf of the Estate of ALVINA)
14 BARANCO, Decedent; LISA SMITH;)
15 LESLIE MARTIN; LYNN BARANCO)
16 BIBB,)

17 Plaintiff,

18 vs.

19 A.W. CHESTERTON COMPANY, et al.

20 Defendants.

Case No. CGC 08 274960

21 **DECLARATION OF BARRY**
22 **CASTLEMAN IN SUPPORT OF**
23 **PLAINTIFFS' OPPOSITION TO**
24 **DEFENDANT GENERAL CABLE**
25 **CORPORATION'S MOTION FOR**
26 **SUMMARY JUDGMENT OR, IN THE**
27 **ALTERNATIVE, SUMMARY**
28 **ADJUDICATION**

Date: December 9, 2010
Time: 9:30 a.m.
Department: 220
Judge: Hon. Harold E. Kahn
Complaint Filed: December 4, 2008
Trial Date: January 10, 2011

1. My name is Barry I. Castleman. I received a Bachelor's Degree in Chemical Engineering from Johns Hopkins University 1968. I have a Master's Degree in Environmental Engineering, which was mainly in areas related to air pollution control from Johns Hopkins University, 1972. I have a Doctor of Science Degree in Health Policy from Johns Hopkins School of Hygiene and Public Health, 1985.

2. My professional experience goes back over 30 years in the area of asbestos and other occupational and environmental health problems. My field is occupational and environmental health policy, which is a branch of Public Health, mainly oriented towards the recognition of risk factors and the prevention of disease from industrial activities.

3. My Doctoral degree was awarded for two years of course work, various examinations, and the writing of a doctoral dissertation. The course work was mainly in the areas of toxicology,

1 epidemiology, biostatistics, physiology, and public health policy. These are the tools that are used to
2 understand how the body works and can be damaged by toxic substances, how these effects can be
3 identified by means of various studies of people, studies of animals experimentally exposed. Attached
4 hereto is a copy of my Curriculum Vitae.

5 4. My Doctoral thesis was, Asbestos: An Historical Case Study of Corporate Response to
6 an Industrial Health Hazard, and is largely identical to a book published in 1984 by Prentice Hall Law
7 and Business called Asbestos: Medical and Legal Aspects (now in its 5th Edition, 2004). My doctoral
8 thesis is an historical review of the asbestos problem as a public health problem in society worldwide,
9 but mainly in the United States. It encompasses a comprehensive review of medical literature of all
10 kinds, as well as other literature available in libraries and published sources such as government
11 publications, safety magazines, engineering journals, trade magazines, insurance publications,
12 encyclopedias, popular magazines, and newspapers. The doctoral thesis also involved research based
13 on unpublished government records. The government records included workers' compensation claims
14 files where claims had been made by individuals alleging that they had asbestos-related diseases of the
15 lungs, claims against various companies that were their employers, some of which companies were also
16 manufacturers of asbestos insulation products these individuals has used in the course of their work.

17 5. In addition to published information of all kinds, I examined files, unpublished
18 information available from the U.S. government archives, the archives of scientists and the archives of
19 institutions that had worked for and with asbestos companies.

20 6. I have also looked at unpublished information which was obtained in legal discovery.
21 This included trade association minutes, corporate documents, and testimony of corporate officials who
22 were associated with asbestos hazards over the years – doctors, plant managers, executives, and other
23 people who were aware of events that transpired.

24 7. In addition to published information and corporate knowledge that came primarily out of
25 legal discovery, I have also interviewed numerous current and former leading officials in the field of
26 industrial medicine and hygiene. They included physicians who were active in the field of occupational
27 medicine, such as Harold Stewart, M.D., who first published on asbestosis in 1931, and Alfred Angrist,
28 M.D., who first published on asbestos and lung cancer in 1942. Another, Dr. Wilhelm Hueper, was a
leading United States authority in the field of occupational cancer and first director of the
environmental cancer section of the National Cancer Institute. Dr. Harriet Hardy, Dr. Thomas

1 Mancuso, Dr. Gerrit Schepers, and others I interviewed were involved in the area of asbestos and health
2 over the past decades.

3 8. I have provided testimony to United States congressional committees concerning the
4 hazards of asbestos and other toxic substances. I have also testified before United States congressional
5 committees regarding the development of asbestos knowledge. I have been a paid consultant to the
6 Office of Toxic Substances of the United States Environmental Protection Agency and have performed
7 research on environmental asbestos hazards. I have performed consulting work for the United States
8 Occupational Safety and Health Administration. In my research, I have reviewed thousands of
9 publications and documents pertaining to asbestos-related disease and have interpreted and related the
10 contents of the same. I have acted as consultant for The National Science Foundation, the European
11 Commission, the Environmental Defense Fund, and the Natural Resources Defense Council.

12 9. I have testified as an expert witness in over two hundred cases throughout the nation on
13 issues related to the knowledge of dangers of asbestos by the medical, scientific and industrial hygiene
14 community. I have been asked to provide my expert opinion as to General Cable Corporation knew or
15 should have known by the year 1952.

16 10. General Cable Corporation is a wire and cable manufacturer incorporated in 1927. General
17 Cable Corporation manufactured asbestos insulated cables up to approximately 1975. In the 1940's
18 and 1950's General Cable Corporation had manufacturing plants in Maryland, New Jersey, New York,
19 California, Tennessee, Illinois, Rhode Island, Missouri and Florida. General Cable Corporation also
20 had sales offices throughout the United States including Pennsylvania, Texas, Oregon, Washington and
21 North Carolina. During 1933 to 1975 or before, General Cable Corporation employed at least five
22 physicians.

23 11. General Cable Corporation has been a member of the National Safety Council since 1947 or
24 1948. *National Safety News*, the main periodical of the National Safety Council since 1919, ran a
25 number of articles dealing with asbestos dust hazards. The National Safety Council also held annual
26 congresses and the published "transactions" of these meetings were automatically mailed to the
27 industrial members of the Council. Asbestos dust and dust allaying methods was the subject of
28 discussions, meetings and publications of the National Safety Council in the 1930's and 1940's.

THE BODY OF KNOWLEDGE ABOUT ASBESTOS

12. The originally published reports in the era of the modern asbestos industry came at just
before the turn of the last century, and the first reports in the English language were included in the

1 annual reports of the chief inspector of factories and workshops in Great Britain. The report published
2 in 1899, the report for the year 1898, talked about the observation of lung disease in individuals who
3 had worked in asbestos manufacturing plants and about the "evil effects of asbestos dust."

4 13. The medical literature of asbestos disease mainly developed after the publication of a case
5 report in the British Medical Journal by Dr. Cooke, a pathologist in Britain in 1924. This was called,
6 "Fibrosis of the Lungs Due to the Inhalation of Asbestos Dust." Dr. Cooke reported on the death of a
7 33-year-old woman who had worked off and on in asbestos plants from the age of 13. According to
8 Cooke, the scarring of her lung tissues was largely attributable to the inhalation of asbestos in the
9 course of her work. There followed a number of other reports in British sources, and this is reflected as
10 well in the United States in editorials of the Journal of the American Medical Association. In one on
11 January 14, 1928, called "Pulmonary Asbestosis," reference is made to Cooke's case and other reports
12 on the disease now called asbestosis. The Journal of the American Medical Association recommended
13 that further attention be paid to this disease, as it may well be occurring in the United States. The
14 Journal of the American Medical Association issued another editorial in 1930 about asbestosis, this
15 time noting the asbestosis had become a compensable occupational disease in Great Britain under the
16 workers' compensation law. The Journal of the American Medical Association was believed to have
17 been read by 80 percent of American physicians in those years, medical historians have written.
18 Additionally, there were additional reports of asbestosis published in the British Medical Journal,
19 which is in every medical library I have ever walked into. The reports mainly involved deaths of
20 individuals who were verified as having asbestosis by autopsy.

21 14. In 1930, a report was published by a physician, Dr. E.R.A. Merewether, and an engineer
22 named C. W. Price. Merewether and Price reported a survey that had been conducted by the Factory
23 Inspectorate in England, including 363 asbestos workers who were actively employed. Of these
24 individuals, 26 percent were found to have asbestosis. Merewether and Price reported that the people
25 longest exposed had the highest prevalence of the disease: 80 percent in workers with 20 years or more
26 in the industry. There were no cases of asbestosis in individuals with less than five years, and
27 Merewether referred to that phenomenon that the disease was delayed in appearance and developed
28 gradually over a period of years. It could in seven years be substantially developed in the most severe
cases, but more often 11 years or more would elapse before the disease had become largely developed
in exposed individuals. This is the time from the onset of exposure. Merewether urged that workers be
"educated to a sane appreciation of the risk" to health posed by asbestos dust. Merewether's 1930

writings on asbestosis are among those most often cited in the literature on asbestosis.

15. By 1932 there were 60 or more publications in print on asbestosis. These were noted by way of reference in a bibliography published by the International Labor Organization in 1932. These publications continued to emerge from many countries. The first cases of asbestosis in the United States were reported in 1930. Asbestosis was also described in an article in the trade magazine Asbestos in the United States in the March 1930 issue, amid numerous advertisements from asbestos mining and manufacturing companies.

16. In 1932, the first case of asbestosis in an asbestos product user was reported at a conference held by the Industrial Commission of Wisconsin, which published their proceedings. Here, Dr. Albert Russell of the United States Bureau of Mines described an individual who had worked maintaining the insulations on pipes in a government hospital and had been diagnosed as having asbestosis and had been compensated by the government for disability sustained from this asbestos condition. This is the first published product user case. There were other cases reported in the United States in 1933 by Philip Ellman and also reported by Ellman in 1934 in The British Journal of Radiology. Wood and Gloyne reported in 1934 reported on cases of asbestosis including a boiler riveter who would have been exposed to asbestos because it was used as an insulation material on boilers. Wood & Gloyne's report was called "Pulmonary Asbestosis: A Review of 100 Cases." That was published in The Lancet, the world's oldest medical journal, in 1934. The Lancet is, like the British Medical Journal, a general medical journal published in England and available very widely in medical libraries in the English-speaking world. This article was widely cited in subsequent literature. Of the hundred cases of asbestosis they reported on, the shortest duration of exposure in any case was six months, in the case of two women who had worked in an asbestos plant.

17. Literature on asbestosis was substantially developed by 1935. The disease was shown to have a distinctive pathological appearance with asbestos bodies, types of scarring that would form around the asbestos fibers trapped in the lung tissues. This was commented upon a great deal by pathologists in the 1920s. The disease was shown to have an identifiable radiological appearance on chest X-ray distinctly different from such diseases as TB and silicosis. The disease was also characterized by shortness of breath, which would become more pronounced as the individual became more seriously affected by the disease.

18. In 1934 and 1935, the Industrial Hygiene Section of the Pennsylvania Department of Labor

1 and Industry published a report on asbestosis in the asbestos fabricating industry in the state. This
2 article was called Asbestosis, published by William B. Fulton and three of his coworkers at the
3 Pennsylvania Department of Labor and Industry.

4 19. One-fourth of the workers examined had asbestosis. Their article included an impressive
5 bibliography of 125 references to asbestos-related disease previously published in journals in the
6 United States, England, France, Italy, Germany and other countries. Among the references cited by
7 Fulton, Dooley et. al., were the historic 1930 report by Merewether and Price for the British
8 government and the version published later that year in the US in the Journal of Industrial Hygiene.
9 The Merewether reports made recommendations for the control of asbestos dust in asbestos plants,
10 recommended periodic medical examinations of workers exposed to this dust and dust suppression
11 measures in processes involving the use of asbestos, and noted the hazards of asbestos insulation work
12 in shipyards. The Pennsylvania study was one of the first surveys of this kind in the United States
13 similar to that which had been done by Merewether and Price and published in Great Britain and the
14 United States separately in 1930.

15 20. The Pennsylvania study also included an effort to relate dose and response. The authors
16 had sampled the exposure of the workers to dust in four asbestos plants, including one that produced
17 asbestos containing insulation known as 85 percent magnesia, and found that, overall, average
18 concentrations of dust could be broken down into three groups that varied from 4.64 million particles
19 per cubic foot up to 44 million. Asbestosis was reported in all three groups, with the prevalence and
20 severity of disease greater in the more heavily exposed groups. But no level of exposure was found to
21 be free of the disease, including levels below 5 million particles per cubic foot. In summary, in the
22 Pennsylvania study at least 25 percent of the workers were diagnosed as having asbestosis and levels of
23 exposure even below 5 million particles per cubic foot were found to cause asbestosis.

24 21. In 1938, a study similar to the Pennsylvania study was done by the Public Health Service,
25 Washington D.C. entitled *A Study of Asbestosis in the Asbestos Textile Industry*. The study included
26 plants where asbestos yarn and unfinished woven asbestos tape were woven into finished goods. The
27 study looked at carding machines where asbestos and cotton mixture revolves on rollers at a high
28 speed, resulting in asbestos fibers blown into the air. The study noted that the carding operation of
asbestos and cotton was used to make **electrical insulation**. The study also looked at the braiding of
asbestos cotton mixture such as the winding, twisting and spooling of the asbestos cotton mixture with
brass, zinc or cotton wire. An estimated asbestosis rate in the workplace was given as 27.5 percent.

1 The report recommended that dust exposure in asbestos plants be limited to 5 million particles per
2 cubic foot. This guideline was recommended as a tentative occupational exposure limit, though it was
3 noted that the Pennsylvania study had found cases of asbestosis at that level of exposure.

4 22. In 1935, another aspect of the hazards of asbestos was identified with the publication of
5 medical case reports of asbestosis in combination with lung cancer. The first such reports were
6 published by Lynch and Smith in the United States in 1935 in the American Journal of Cancer and by
7 Dr. Gloyne in Great Britain in Tubercle in two separate reports in 1935 and 1936. In these reports, the
8 question was raised that chronic irritation of the lung tissues from asbestos might be producing cancer
9 as well as lung scarring already well identified as an asbestos-related phenomenon.

10 23. There were additional reports of lung cancer in combination with asbestosis reported by
11 Egbert and Geiger at Yale in 1936, and Nordmann in 1938. An abstract of this last publication
12 appeared in the United States in the Journal of Industrial Hygiene & Toxicology, also in 1938. The
13 article was entitled "The Occupational Cancer of Asbestos Workers." The German author, Nordmann
14 concluded that asbestosis was definitely related to lung cancer, that lung cancer was in fact an
15 occupational disease of asbestos workers. Various features of the six cases Nordmann knew of were
16 tabulated to justify that. Nordmann noted, among other things, that the prevalence of lung cancer
17 among autopsied victims of asbestosis was one in six both in Germany and Great Britain. This was
18 very much higher than the prevalence of lung cancer in the general population, which tended to be more
19 like 1 percent or several percent at most. The high rate of lung cancer among people dying with
20 asbestosis would be a most consistent finding around the world.

21 24. There were additional publications of cases of lung cancer and asbestosis in 1939 in the
22 United States and in 1941 and 1942 in Germany. Holleb and Angrist reported in the American Journal
23 of Pathology on two individuals who had been pipe coverers (users of asbestos products) diagnosed at
24 autopsy as having both asbestosis and lung cancer. These were the first cases of cancer and asbestosis
25 in users of asbestos products published in the medical literature. Holleb and Angrist tabulated a total of
26 10 cases of lung cancer in combination with asbestosis that had been published in the United States,
27 Britain, and Germany.

28 25. Articles linking asbestos and cancer appeared in the *Archives of Industrial Hygiene and*
Occupational Medicine in the early 1950s. The March, 1952 edition of this journal contains an
article by Dr. Wilhelm Hueper entitled "Occupational Cancer Hazards in American Industries." In the

1 article, Dr. Hueper discusses the excessive incidence of lung cancer associated with asbestosis in a
2 series of 235 documented cases of asbestosis.

3 26. Dr. Wilhelm Hueper is an important figure in the history of the knowledge of occupational
4 cancer and in the development of the knowledge of asbestos hazards. In 1942, Dr. Hueper published a
5 book on occupational cancer called Occupational Tumors and Allied Diseases. It included a lengthy
6 section on asbestosis and cancer from asbestos, in which a large number of references from the United
7 States, Great Britain and Germany were cited in support of the view that asbestos most likely did cause
8 occupational cancer. It also pointed to the fact that occupational contact with asbestos is present in
9 many industries using asbestos products, **including in the manufacture of asbestos wires**.

10 27. Dr. Hueper made unequivocal statements the next year in the article called: "Cancer in its
11 Relation to Occupational and Environment" published in the Bulletin of the American Society for the
12 Control of Cancer. There, Hueper said that "asbestosis cancer of the lung" as he called it then, was the
13 newest proved occupational cancer of the lung, to be listed with the ones that were already known at
14 that time. In the Journal of the American Medical Association (JAMA), there appeared an editorial
15 called "Environmental Cancer" in 1944, in which asbestos was listed among agents known and
16 suspected of causing occupational cancer.

17 28. In 1946, Dr. Hueper also published an article in the Journal of the American Medical
18 Association (JAMA) discussing asbestos and other cancer causing substances that were used in
19 industry. In 1944 and 1949, at the invitation of the editors of JAMA, Dr. Hueper wrote editorials for
20 JAMA that discussed asbestos as a cause of lung cancer. Beginning in 1948, Dr. Hueper became Chief
21 of the Environmental Cancer Section of the National Cancer Institute ("NCI").

22 29. Dr. Hueper's writings were widely known. For example, in an interview with Newsweek
23 Magazine in 1950, Dr. Hueper stated that the rising rates of lung cancer in urban dwellers in this
24 country could be attributable to the air pollution of industrial carcinogens such as asbestos. Dr. Hueper
25 retired in 1964. In my opinion, during his tenure at the NCI, Dr. Hueper was the federal government's
26 leading official concerned with environmental cancer. Indeed, it is my opinion that he was considered
27 by many to be the world's foremost authority on environmental cancer in the 1940s, 50s, and 60s.

28 30. In sum, it is my opinion that the medical and scientific literature established a definite
connection between asbestos exposure and the development of lung cancer in the 1940s.

31. In 1949, the Journal of American Medical Association (JAMA) published an editorial

1 solely on asbestosis and lung cancer that was unsigned but authored by Dr. Hueper. The original
2 JAMA editorial from 1949 discussed the dangerous propensities of asbestos for "asbestos consuming
3 industries." An abstract of this article stated the following: "Records of English, American and
4 German physicians and the Annual Report of the Chief Inspector of Factories in England for 1947
5 show that the occurrence of cancer of the lung is related to pulmonary asbestosis. This relation is
6 supported by the following observations: (1) the incidence rate of cancer of the lungs in asbestosis
7 patients is 10 to 15 times as high as among the general population. (2) the male-female ratio is more
8 nearly equal than it is for the general populations, which indicates that and environmental and evidently
9 occupational carcinogen tended to equalize the incidence rate of cancer of the lungs for both sexes.
Recent experimental observations support this interpretation of the clinical evidence."

10 32. In 1951, an article entitled "Asbestosis Associated with Bronchiogenic Carcinoma" from
11 the Archives of Internal Medicine was published. The abstract provided that "Investigators have found
12 carcinoma in 7.5 to 14.8 percent of cases of asbestosis... the opinion is suggested that the silicate in
13 asbestos must itself be carcinogenic. It establishes an additional reason for preventive measures in the
14 use of asbestos."

15 33. In April 1955, R. Doll published an article in the *British Journal of Industrial Medicine*
16 entitled the "Mortality from Lung Cancer in Asbestos Workers." This study reported that among 18
17 asbestos textile workers out of a cohort of 105 asbestos textile workers, 18 died from lung cancer. Of
18 those 18, 15 of the workers had underlying asbestosis. In an editorial published shortly after Doll's
19 study was published, the prestigious British medical journal *the Lancet* editorialized that Doll's study
confirmed that lung cancer is an occupational hazard of workers regularly working with asbestos.

20 34. The disease mesothelioma of the pleura was attributed to exposure to asbestos or asbestosis
21 starting in 1943 with the report of Dr. H.W. Wedler in Heidelberg. Between 1943 and 1960, there were
22 additional reports in the German literature as well as British literature. The case reports that appeared
23 prior to 1960 are annotated and cited by way of reference in Chapter 2, table 5 of my book. Dr. Wedler
24 was the first to state that he believed the pleural cancers were occupational cancers, and his work was
25 prominently cited in the United States in the 1940s. Other German pathologists starting with Leicher in
1954 would identify peritoneal mesothelioma as an asbestos disease.

26 35. A major report of pleural mesothelioma came from South Africa by Wagner and his
27 coworkers, published in the *British Journal of Industrial Medicine* in 1960. Within a very short time it
28 was widely accepted that asbestos did cause mesothelioma and that levels of asbestos exposure present

1 from environmental exposure as well as occupational exposure were sufficient to cause mesothelioma.

2 HOUSEHOLD CONTACT ASBESTOS EXPOSURE AND DISEASE

3 36. In 1897, the first physician in modern times to write about lung disease in asbestos workers
4 also commented on ill health among the workers' family members. The families of asbestos-exposed
5 workers in the 20th century were exposed to asbestos brought home on the clothes, shoes, hair, tool
6 boxes, lunch boxes, and automobiles of the workers.

7 37. A report to Congress prepared pursuant to the Workers' Family Protection Act, discussed
8 early reports of home contamination by toxic substances including studies published in 1860 and 1896
9 as well as other reports of potential hazards to the families of workers between 1905 and 1936. See
10 National Institute for Occupational Safety and Health *Report to Congress on Workers' Home*
11 *Contamination Study Conducted Under the Workers' Family Protection Act* (10 U.S.C. § 671a),
12 preface (Sept. 1995)

13 38. In 1913, the text, Safety, by W.H. Tolman and L. B. Kendall (p. 249) emphasized the
14 importance of having workers remove work clothes before leaving a factory where toxic materials are
15 handled, so the poisons would not be carried "into the homes of workers."

16 39. It has long been internationally recognized good practice to provide washing
17 accommodations and cloakroom separated from process areas in industries with dust hazards.
18 American specialists in industrial medicine, writing in 1924, advised that street clothes not be worn at
19 work, and added that provisions for changing clothes and washing were needed in all dusty profession.
20 See Kober, G.M. and E.R. Hayhurst, *Industrial Health*, Philadelphia: P. Blackison's Son, 1924, p. 24.

21 40. On December 14, 1933 an Industrial Hygienist employed by General Electric Company,
22 named Dr. Alice Hamilton informed General Electric that she was concerned about the **hazards of**
23 **asbestos in plants where asbestos insulated cables were manufactured**. Between 1933 to 1934 Dr.
24 Hamilton and General Electric exchanged letters on the asbestos hazards at four General Electric plants
25 where asbestos was used in such applications as wire insulation. Dr. Hamilton suggested making dust
26 counts at the plants where asbestos insulated cable was manufactured. The study revealed "a fairly
27 serious condition as regards asbestos dust in the Insulating Department where asbestos roving in lap
28 form is done". Dr. Hamilton advised a completely enclosed apparatus to prevent the release of dust
being blown about and accumulating on surfaces.

41. As early as 1936, the California Department of Industrial Relations issued Safety Orders

1 applicable to every place of employment where a work or process is carried on by which asbestos dusts
2 are produced or generated, or exist independently of the work or process (See Department of Industrial
3 Relations of the State of California; *Dust, Fumes, Vapor and Gases Safety Orders* effective December
4 28, 1936 and revised in November 22, 1930 and July 20, 1945.) The California Safety Orders
5 required, businesses such as General Cable Corporation in Emeryville, CA to provide safety
6 precautions, e.g. ventilation, protective equipment, dust allaying media, a change room, shower and
7 baths having hot and cold running water. Additionally exhaust systems were to be utilized even after
8 the work producing the dust ceased.

9 "Since dust..., according to the best medical opinion, of microscopic size tending to remain for
10 hours in suspension in still air, it is essential that the exhaust system be continued in operation
11 for a time after the work, process or equipment served by the same shall have ceased, in order to
12 insure the removal of the harmful elements to the required extent."

13 42. Asbestos insulation was not the first insulation product to be definitely associated with
14 illness in the households of workers handling it. Workers handling chlorinated wax compounds used to
15 insulate wire became the subject of controversy when one worker died in 1936 and two young children
16 of workers were affected. "Cable rash" or "Halo wax acne" was reported during World War II among
17 electricians handling electrical cables and some of their wives who had contact with the men's work
18 clothes and laundered them.

19 43. The Germans, in their 1940 industrial hygiene guidelines for asbestos plants, established the
20 practice that, "outdoor clothes were not to be kept in workrooms and work clothes had to be cleaned at
21 regular intervals."

22 44. In April, 1942, General Electric, a manufacturer of **asbestos insulated cable**, provided
23 coveralls, underwear, caps and gloves as outlined in an effort to prevent occupational disease due to
24 asbestos fiber and dust.

25 45. A 1940 text entitled Manual of Industrial Health Hazards authored by Travelers Insurance
26 Co. listed asbestos dust as a health hazard when **cable and wire insulation** manufacture.

27 46. In 1942, the Pennsylvania Department of Labor and Industry of Pennsylvania authored a
28 safe practice Bulletin entitled Exhausting Asbestos Fiber and Dust in Wire Insulation Manufacture.
Stating in part as follows:

When asbestos is used as an insulation agent in the manufacture of wire it enters the plant in a
refined form, having been through a previous manufacturing or processing treatment at some
asbestos factory, which has conditioned the raw supply of asbestos.

1 Thus we find two general types of asbestos supply, one the yarn of asbestos in the spool form
2 (to be used for braiding the outside of the finished wire) and the other the batt, or lap, form of
3 asbestos which is loosely wound in a reel (this is the form that is used on the carding machines).
High grade asbestos... is used in the wire manufacture intended for electrical insulation.

4 ... the asbestos by-product, if allowed to escape into the workroom, would soon float into the
5 far boundaries of the plant and hang like Spanish moss, even from the rafters, and settling on
6 belts, pulleys and equipment. It soon gets beyond the control of good housekeeping, if
unremoved at its origin.

7 47. Industry was well aware that asbestos was a mineral with high resistance to destructive
8 forces such as heat and that asbestos did not decompose even upon prolonged storage. (One scientist
9 borrowed from the language applied to radiation in stating that asbestos in the environment had a "half-
10 life of infinity").

11 48. It was also obvious that, absent any safeguards to prevent it, workers typically exposed to
12 asbestos dust from products would take the contaminant home on them, where it would accumulate in
13 carpets, clothing, window curtains and furniture. So the contamination of workers' homes and the
14 exposure of their spouses and children was very foreseeable, and with the knowledge that asbestos was
15 carcinogenic came the possibility that these household-contact exposures would have disastrous
consequences for members of workers' families.

16 49. Retired Monsanto chemist and industrial hygienist Jack Garrett testified concerning the
17 chemical company's employee protection in the 1950's against asbestos from insulation products
18 including showers and daily changes of clothes; "We went down to shoes and socks, underwear and all.
19 We didn't want it at home." (See deposition of Schmidt, District Court of Jefferson Co. TX, Dec. 16,
20 1993.)

21 50. Prior to 1952 it was established that toxic dust (including asbestos dust) taken home on a
22 worker's clothing posed a hazard to the worker's family. In the 1930s and 1940s, it was knowable or
23 known that developing Industrial Hygiene practices recommending or requiring workers that were
24 exposed to asbestos dust to change their clothing and to take showers before returning home from work
25 would reduce or eliminate exposure to family members. By the early 1950s it was well known and
26 established by the medical and scientific literature that individuals could contract asbestos-related
diseases as a result of relatively low exposures to asbestos dust.

27 51. Wire and cable manufacturing asbestos hazards were understood by the 1930's. It is
28

1 my opinion that General Cable Corporation knew or should have known of the asbestos hazards of wire
2 and cable manufacturing by the 1930's. It is also my opinion that by 1952, General Cable Corporation
3 knew or should have known that the asbestos-containing products in use on its premises emitted toxic
4 dust during handling and that the only means of mitigating potential harm from such dust was to
5 minimize or eliminate the opportunity for human exposure to it. Additionally, by 1952 General Cable
6 Corporation knew or should have known that any persons exposed to that dust, including those off the
premises such as the children and spouses of workers, would potentially suffer injury because of it.

7 I declare under penalty of perjury pursuant under the laws of the State of California that the
8 foregoing is true and correct, and that this Declaration was executed on November __, 2010 at
9 _____, California.

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12 BARRY CASTLEMAN
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