

litigation decades later. Fibreboard did not test products for harmfulness before 1966, he said (deposition in *Dartez v. Owens-Illinois*, U.S. Dist. Court, E. Dist. of Texas, Beaumont Div., C.A. No. B-81-227, Feb. 6, 1989).

Pabco Products was a member of the Magnesia Insulation Manufacturers Association in the 1950s, and Fibreboard was a member of the National Insulation Manufacturers Association in the 1960s.

Fibreboard was purchased by Owens-Corning for its insurance coverage in the 1990s, and subsequently Owens-Corning filed for Chapter 11 reorganization in bankruptcy court (2000).

OWENS-CORNING FIBERGLAS CORPORATION

OCF was organized in 1938 and initially manufactured fiberglass ("Fiberglas") insulation, a competitor of asbestos-containing insulation materials. OCF used asbestos and fiber-glass to make insulating cement from 1940-1951. OCF made a number of other products with asbestos, including coating for acoustical tile (in the 1960s) and roofing cements. In the mid-1950s, OCF was the main distributor for "Kaylo," an asbestos-containing insulation made by Owens-Illinois. In 1958, OCF bought the Kaylo business outright and continued to use asbestos in Kaylo until 1972. OCF was also active in the insulation contracting business. The following material consists of internal communications produced by OCF in discovery and contract unit workers' compensation claims (filed by insulation workers).

Internal Communications, Etc.

Jan. 20, 1941. Legal and Patent Dept. letter to L.U. Gardner (Saranac Lab).

It is indeed good news to hear that you do not feel you will encounter any evidence of an asbestos-like reaction since none of the (glass) fiber reaches the interior of the lungs.

May 23, 1941. "Trip Report." (memorandum to Harold Boeschstein, who later became President of OCF).

Describes meeting of OCF representatives with Mr. Bartley, a union attorney and consultant, who was interested in the health effects of fiber-glass, particularly respiratory dangers. Mentions a meeting with union representatives in which the low workers' compensation insurance rate for fiber-glass manufacturers was contrasted with the rates for asbestos manufacturers, magnesia manufacturers, etc. At the meeting with Asbestos Workers Union (union of insulation installers) representatives, OCF officials read from Gardner's report on fiber-glass ("These findings may allay any skepticism as to the theoretical hazard involved from the handling of a glass wool . . ."). This memorandum also discusses meetings at

American Industrial Hygiene Association and interest expressed by the National Safety Council in fiber-glass safety.

June 16, 1941. E.C. Ames memorandum to H. Boeschstein, "Investigation of Health Aspects of Fiberglas by Dr. W.J. Siebert."

June 12, 1941. Draft of Brochure re: F-glass safety. Discusses research and writing by Dr. Siebert in St. Louis, a pathologist considered reliable by the Asbestos Workers Union. Dr. Siebert questioned Gardner's implication that there was no health hazard because the glass fibers were too large to get into the lungs, and wanted to see Gardner's slides.

1941. OCF brochure featuring a letter from J. Hill (Aetna) saying workers' compensation insurance for fiber-glass was cheaper than coverage for asbestos, etc. (Industrial Health Foundation files)

Sept. 8, 1941. OCF legal and patent department letter ordering government reprints of the asbestos industrial hygiene reports of Page and Bloomfield, Lanza *et al.* from *Public Health Reports*.

Jan. 7, 1942. Ed Ames memorandum to Harold Boeschstein, President of OCF.

Jan. 7, 1942. Ed Ames memorandum to E.J. Marshall.

These describe a plan to "take the offensive" in 1942, by going to the Asbestos Workers Union with documentation on asbestosis. To further make fiber-glass an attractive alternative to asbestos, OCF considered offering the assurance that product safety was, in effect, "certified," by low-cost product liability coverage purchased by OCF from the insurer, Aetna (See "The Owens-Corning Fiber-glass Itch Documents" in Chapter 3).

Mar. 13, 1943. L.U. Gardner letter to E.C. Ames.

Reports on examination of pre-employment chest X-rays, notes that R. Smock "shows a reaction strongly suggestive of asbestosis," urges rejection for employment at OCF.

Dec. 27, 1943. Ed Ames memorandum to C.E. Gregory. "Public Relations Angles in Branch and Division Post War Survey."

In formulating our policy on admixtures with asbestos, we should keep on the alert because otherwise we will run the risk of smearing Fiberglas with the hazards of exposure to asbestos." (original emphasis)

Talks about premium rates charged by insurers to handle fiber-glass, discusses "the itch" as a marketing obstacle.

Nov. 21, 1944. Dr. A.E. Canfield letter to Ed Ames.

Nov. 22, 1944. Ed Ames letter to Dr. Canfield.

Undated letter from Dr. Canfield to Ed Ames.

Jan. 21, 1946. Don Hanna letter to Medical Department (copy from OCF files).

Discusses asbestosis in insulation worker Albert Baumgardner. After a claim was filed, Ohio state officials attributed the man's dust hazard to asbestos, with exposures in the "range of from 5 to 10 M."

Aug. 29, 1945. Ed Ames memo to J.A. McKay. "Todd Ship Yard Erie Basin." Says in part:

The asbestos fiber is the only silicate that has been determined by lung pathologists to involve a lung hazard . . . The asbestos fibers of certain particle size and in certain concentrations can penetrate into the respiratory passages and cause havoc when they reach the alveoli of the lungs where they set up a chemical reaction with body fluids, similar to that found in silicotics.

April 7, 1947. A.R. Morrison (OCF Laboratories, Newark, OH). Memorandum for the Record. "Dust Counts".

Reports on dust counts in OCF Insulation Cement Dept. taken for the purpose of determining the "extent of an asbestos dust hazard." Total dust counts were made and reduced to account for average asbestos fractions, with the result that the "asbestos concentrations" calculated were 7 to 12 MPPCF (first floor) and 12 to 25 MPPCF (2d floor). This was contrasted by the OCF laboratory author with the 5 MPPCF limit for asbestos set by the Ohio Dept. of Health. Possible control options listed were substitution of asbestos, installation of exhaust ventilation, and continual use of respirators by the workers.

Dec. 6, 1955. T.S. Rogers memorandum to H. Boeschenstein. "New Health Hazard Research Fine Fibered Fiberglas Products."

Describes report by Schepers of old Saranac studies ("An Experimental Study of the Effects of Glass Wool on Animal Lungs." *Arch. Indust. Health* 12:276-279, 1955) commenting on adverse effects of small-diameter fibrous glass. Memo warns of potential resulting liability and advises that \$15,000 is available for a "defensive" research contract.

Feb. 6, 1956. G.W.H. Schepers (Saranac Laboratory) letter to M. Burch (OCF Director of Personnel and Industrial Relations).

Feb. 8, 1956. John D. Black memorandum to Dr. Charles Bishop.

Schepers urges OCF to sponsor research to see if fiber-glass is carcinogenic. Asbestos "fairly well incriminated as a carcinogen." Attorney Black disappointed that the requested letter was "certainly nothing that we could show customers or a union."

July 27, 1956. G.W.H. Schepers (Saranac Laboratory) letter to M. Burch (OCF Director of Personnel and Industrial Relations).

Informs OCF that fiber-glass does not produce fibrosis of the lungs as asbestos does.

Oct. 11, 1956. W.L. Bowes memorandum to John Black (OCF). "Asbestos Workers Union."

Oct. 16, 1956. J.D. Black memorandum to W.L. Bowes. "Asbestos Workers Union."

Nov. 20, 1956. Ira I. Brought (consultant) letter to M.D. Burch (OCF).

These documents discuss union concerns about occupational lung disease hazards, and OCF officials' fears that fibrous glass may be implicated as a cause.

May 9, 1957. Brought letter to H. Boeschstein (President of OCF).

Quotes minutes of western states conference of the Asbestos Workers Union, mailed out to thousands of union members. The minutes announced that due to the recognition that "a large number of men" in the trade had definite symptoms and concern that a number of deaths in one local might be job-related, the international union was "compiling facts and figures on this matter." The diseases asbestosis and silicosis were named and lung ailments were blamed on "fibrous materials."

May 23, 1957. K.S. Johnson (OCF) memorandum to M.D. Burch (OCF). "Asbestosis."

Refers to notice in *Asbestos Worker* that a motion carried at the union's western states conference to "investigate the causes of Asbestosis and allied lung ailments caused by fibrous materials . . ." Expresses concern that the union may again ask a premium to handle Fiberglas. "I am sure that everyone in our company is conscious of the interest of the Asbestos Workers in the problems of Asbestosis and allied diseases."

1960-1963. Union-Management Committee meetings, monthly, Berlin, N.J. plant.

Frequent and repeated mention is made of excessive dust from mechanical saws in the plant making Kaylo insulation. Almost every month, the union complained about the dust, and various control options were discussed.

May 11, 1961. B. Roy (Aetna). Special Hazards Survey, Owens-Corning Fiberglas, Berlin, NJ.

Reports that the TLV for "mineral dusts containing asbestos" of 5 MPPCF was not exceeded on a daily average basis, although exposures in some non-continuous operations were 8.4 and 11.2 MPPCF.

Sept. 17, 1963. William A. Lots (OCF, Newark Product Devel. Lab) memorandum to A.J. Pearson, "Health Hazard Kaylo vs. GPL-400."

Acknowledges that asbestos in Kaylo "when breathed into the lungs causes asbestosis which often leads to lung cancer." Notes that "all insulations are dusty and insulators seldom complain except when the dust is particularly irritating to them."

April 13, 1964. Dr. Robert Kehoe (University of Cincinnati, consultant to OCF) letter to F.H. Edwards. From Kehoe Archives, Univ. of Cincinnati.

Reports that Kehoe was too late in contacting the editor of the *Journal of the American Medical Association* to see what the article by Selikoff, Hammond, and Churg said about fibrous glass hazards. Kehoe concluded that the just-published paper dealt solely with asbestos, however.

No reference is made directly or indirectly to fibrous glass or to "Fiberglas," and so far as I can see the evidence presented and its interpretation is not biased or unreasonable.

Aug. 12, 1964. F.H. Edwards memorandum to C.G. Staelin. "Labeling of Asbestos-Containing Products by Johns-Manville Company."

This acknowledges advance notice from Dr. K.W. Smith at Johns-Manville that his company had decided to begin using warning labels on shipping cartons of thermal insulation products containing asbestos.

The question before us is whether or not Fiberglas's Kaylo should protect itself against more stringent and punitive health laws and the possibility of third party actions by following the J-M lead.

Nov. 29, 1965. F.H. Edwards one-page memorandum and 4-page report to J.M. Briley.

Report assembles information on Dr. Selikoff's background. Included are such details as: the statement from the Asbestos Workers' Union President that Selikoff conducted the study published in 1964 without compensation, as a humanitarian project; and reference to Selikoff as an "immigrant" (he was really from New York but received his medical training in Scotland) who "was not approved to practice medicine in the United States after his first application."

The cover memo explains:

Our present concern is to find some way of preventing Dr. Selikoff from creating problems and affecting sales. A direct approach might be more damaging than helpful, and I am only suggesting that we explore, at this time, all avenues open to us.

This cover memo goes on to mention going to Mt. Sinai Hospital officials about Selikoff.

Aug. 8, 1966. F.H. Edwards memorandum to J.M. Briley. "Kaylo Dust—Bath Iron Works."

After noting that Kaylo is 12-18% asbestos, he says:

Asbestos is recognized as a health hazard causing asbestosis. The threshold limit value set by ACGIH is 5 million particles per cubic foot. However, Dr. Selikoff has stated that only one fiber in the body can cause cancer . . . At this point, I believe there is reason to question the ACGIH threshold limit . . . Again, I suggest that we consider the labeling of our Kaylo products in the same general way that J-M labels their Thermobestos . . .

June 21, 1967. R.F. Shannon memorandum to J.H. Thomas. "Kaylo—Replacement of Asbestos."

Asbestos replacement program in "low gear" and expresses hope that it will receive increased emphasis later in the year.

Oct. 16, 1967. R.F. Shannon memorandum to F.W. Swank. "1968 Projects."

The program directed toward the replacement of asbestos will be accelerated in 1968. The program at the moment does not offer any direct sales growth potential and/or manufacturing cost savings, but must be carried out so that in the event the health hazard aspect of asbestos fibers becomes a major national and/or political hot potato, OCF will have an alternate fiber to switch to so as to stay in business.

Oct. 23, 1967. R.F. Shannon memorandum to J.H. Thomas. "Kaylo Product Development."

To the best of our knowledge, the only asbestos free (high-temperature insulation) product on the market in recent years was OCF's Multitemp. Do we attempt to improve Multitemp? My answer would be no. The Multitemp concept of post impregnating a prebonded product was ill conceived. It does not lend itself to adequate profit margins.

Feb. 9, 1968. Dr. J.L. Konzen memo to Robert L. Logan (OCF Corporate Legal Dept.)

Refers to interrogatories sent to Dr. Selikoff in the lawsuit brought by Claude Tomplait in Texas. After noting that Tomplait had been an insulation installer for 25 years, Konzen confronted the implication that "asbestosis was a well-known entity to industrial medical practice over the entire period that Mr. Tomplait handled asbestos insulation." He concluded, "the condition was well known and well documented in the literature during the entire time that Mr. Tomplait used the insulation." No distinction was made between asbestosis from product use and product manufacture by the OCF Corporate Medical Director.

Apr. 10, 1968. W.C. Taylor memorandum to M. Hardwick. "Crocidolite Asbestos."

Notes the use of crocidolite in Kaylo on rare occasions either because it was accidentally included in an amosite shipment or purchased at a good price. Passes on request from Dr. Konzen that crocidolite not be used because of its prominence as a cancer causing agent.

Apr. 30, 1968. R. F. Shannon memorandum to W.R. Hibbard, Jr. "Corporate Planning."

Reports that program to replace asbestos in calcium silicate insulation "is temporarily on the shelf" due to shortage of manpower.

Asbestos, the current reinforcing fiber for calcium silicates, is reported to cause cancer. Because of adverse publicity, possible court

actions, and for the protection of our position in the calcium silicate market, it is necessary for OCF to eventually remove asbestos fibers from Kaylo.

Aug. 16, 1968. John Vyverberg memorandum to R.S. Grant. "Berlin—Dust Conditions."

Apprehensive that Dr. Selikoff might get involved and publicize plant neighbors' complaint to N.J. state health officials about asbestos air pollution.

To date we have been relatively successful in confining the problem to applicators of products containing asbestos. (original emphasis)

Mar. 10, 1969. Dr. J.L. Konzen memorandum to J.M. Briley. "Medical Services Department—Status Report."

In discussing Threshold Limit Values, Konzen says that Paul Gross, on the TLV Committee, "is representing the interest of the fibrous glass manufacturers in an attempt to get the current limit raised to that of an inert dust."

May 9, 1969. R.F. Shannon memorandum to A.J. Pearson. "Multi Temp."

Multi Temp is completely free of asbestos . . . it is our hope and plans to have an asbestos-free calcium silicate (Kaylo) product on the market in about a year. . .

When Multi Temp was dropped several years ago, two reasons were given. One was the refusal on the part of our distributor to inventory and handle two lines of high temperature insulations for the same market; the second was the relatively low gross margins being achieved as well as projected for Multi Temp pipe insulation. Recent discussions with Marketing indicate the real reason for dropping Multi Temp was low gross margins.

OCF has acknowledged that GPL-400, or Multi Temp, was marketed for one year in the 1960s.

May 29, 1969. D. Bradshaw memorandum to L. W. Saxby. "Asbestos-Free Insulation."

It appears that it should be possible to go to non-asbestos insulation systems at about present costs . . . Let's get rid of asbestos in the insulation industry and we can then get rid of other costly problems which are beginning to develop.

Oct. 30, 1969. E.B. Engel (Aetna). Special Hazards Survey, Owens-Corning Fiberglas, Berlin, NJ.

Notes that 8 of 12 samples taken exceed the current TLV (5 MPPCF of total dust, "regardless of the amount of asbestos present") and all 12 exceeded the proposed TLV (2 MPPCF). Control of asbestosis hazard possible through asbestos replacement or environmental controls.

Aug. 13, 1970. G.D. Clayton (Clayton & Associates) letter to Dr. Jon Konzen (OCF Medical Director). And attached report.

Reports excessive exposure to asbestos fiber and isocyanate vapor at OCF's Bloomington, IL plant, recently purchased from Unarco. ACGIH and British standards were described as based on data that was "not ideal." Construction of an entirely new plant was recommended, and asbestos exposures were described as "unbelievably bad."

September 21, 1970. J.P. Kern memorandum to Dr. Jon Konzen. "Asbestos-Labeling."

Reference is made to your memo of September 15 regarding the warning label that should appear on Kaylo. Are you saying that we have to do this now? I naturally would like to delay this requirement as long as possible. Please advise. (original emphasis—entire text of memorandum).

September 25, 1970. J.L. Konzen reply to J.P. Kern. "Asbestos-Labeling."

From a health standpoint I feel that we should label the product at this time. By copy of this letter I suggest Mr. Logan comment concerning the legal need for such a label. (entire text).

It appears that identical warning labels were put on packages of all OCF thermal insulation products in 1970, acknowledging explicitly that the dust could be harmful.

Oct. 28, 1971. R.F. Shannon memorandum to G.T. Faherty. "Wood Fibers—Calsi-crete."

"D" Day is upon us. Two of our competitors have introduced asbestos-free calcium silicates. So far, we have determined the reinforcement in the GAF (Ruberoid) product to be fibrous wood.

Oct. 1, 1973. Jim Summer memorandum, "Kaylo Asbestos Containing Inventory."

Announces reduced-price offering of remaining inventory (over 2000 cartons) of asbestos-containing Kaylo products, itemized on attached 5-page listing.

Workers' Compensation Claims Brought by Insulation Workers Against OCF and its Subsidiary Contracting Divisions. OCF was joined as a defendant in claims filed by Fred Strickland (1957), James Whitcomb Riley (1958), E.O. McCarrell (1959), Harvey Curtis (1959), Clifford Harding (1961), John Gronenthal (1961), John Wyss (1962), John Staples (1962), Paul Greischar (1963), and Robert Goans (1963) (See also "Claims by Insulators Against Contracting Divisions of Asbestos Product Manufacturers," in Chapter 3).

In addition to these claims, OCF and Johns-Manville were defendants in a claim brought by insulator Dean Templeton. The claim was

filed with the Michigan Workmen's Compensation Department in 1960, and a settlement was approved in 1961 (produced in discovery by R.B. Von Wald, Corporate Counsel of Johns-Manville Sales Corp., in 1982).

In 1990, OCF acknowledged that it had records of hitherto undiscovered compensation claims by contract insulation workers alleging injury from asbestos. Those predating 1964 were:

Paul Grathshire	1962	Oakland, CA
Burton Kramer	1960	Washington (state)
Leroy C. Winters	1959	Albuquerque, NM

Another 20 such claims were filed by OCF employees in the years 1966-1970 (Amended Answers to Interrogatories, U.S. Dist. Court, Dist. S.C., Columbia Div., Mar. 13, 1990).

OCF was also named as a defendant in 1961 in the product liability suit brought against insulation manufacturers by G. Faciane (See "Lawsuits by Product Users Against Asbestos Manufacturers," in Chapter 3).

Joint advertisements by OCF and O-I in October, 1956, continued to describe Kaylo insulation as "non-toxic," in the manner previously introduced by O-I (See "Owens-Illinois," this chapter).

OCF was a member of the National Insulation Manufacturers Association, and OCF businessman John Vyverberg coauthored the 1968 NIMA brochures with Clifford Sheckler of Johns-Manville (testimony of Dr. Jon Konzen in *Hicks v. OCF*, Bloomington, IL, Nov. 1, 1995. See also "Industry Trade Associations and Research Organizations" in Chapter 10).

UNARCO

(formerly Union Asbestos & Rubber Company;
since 1980, UNR Industries)

This company made "Unibestos" insulation initially at a plant in Cicero, Illinois in 1926. Another Unibestos manufacturing plant was opened in Paterson, New Jersey, in 1941; this was moved to Tyler, Texas in 1954. Unarco also operated a Unibestos manufacturing plant in Bloomington, Illinois, starting 1951. Amosite asbestos from South Africa used by Unarco was supplied by Cape Asbestos.

In 1942 or 1943 officials of Unarco became aware that employees of their firm were developing asbestosis. A meeting was then set up with top executives of Johns-Manville Corporation to discuss the problem and measures taken to deal with it (See "A Lobster Lunch with Vandiver Brown" and "Saranac Compensation Reviews for Manufacturers" in