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CAMBRIDGE MA.

20 Columbus Avenue
Cambridge, MA 02140
November 20, 1997

Cambridge City Council
City Hall, 2nd Floor
795 Massachusetts Ave.
Cambridge, MA

To whom it may concern:

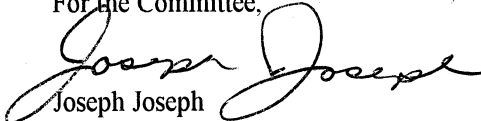
Would you please forward copies of this cover letter and the attached communication to all members of the City Council. Any and all responses should be directed to either of the following persons:

Vicki Paret, Co-chair
Alewife Study Group
122 Montgomery St.
Cambridge, MA 02140

Joel Nogic, Co-chair
Alewife Study Group
94 Clifton St.
Cambridge, MA 02140

Thank you for your attention to this matter.

For the Committee,


Joseph Joseph

November 20, 1997

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CAMBRIDGE MA.

David B. Struhs
Commissioner
Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Protection
Metropolitan Boston - Northeast Regional Office

Dear Commissioner Struhs:

It has come to the attention of members of the North Cambridge community that the history of chemical processing and production by W.R. Grace at the 62 Whittemore Avenue facility provided by Haley and Aldrich for their client W.R. Grace (RTN #3-0277) in their *Environmental Data Report* is substantially incomplete. It is clear from historical records that extensive manufacture of asbestos friction products occurred at this facility, but nowhere in any data assessment submitted by W.R. Grace to the DEP, including their multi-volume *Environmental Data Report* completed in 1988 and the LSP's 1995 *Compliance History Summary*, is there any mention of such activity and no field testing for asbestos has ever been done. The purpose of this letter is to request that the Phase II of this site be re-opened and that additional and extensive soil sampling and analysis for asbestos be conducted at the Whittemore Avenue site.

Asbestos friction products were manufactured at the 62 Whittemore Avenue facility under ownership and operation by Dewey and Almy

Documentation attached to this communication establishes that asbestos friction products were manufactured at the Whittemore Ave. facility at least from 1929 through 1936. This time corresponds to the period during which Dewey and Almy (acquired by W.R. Grace in 1954) purchased and operated the Multibestos Plant at Walpole, Massachusetts (see document #1: *Moody's Index - 1929-1936*).

The Walpole site (known formally as the Blackburn and Union Privileges Superfund Site - Cerclis # MAD 9082191363) is on the National Priorities List (NPL) and is completely fenced and secured to prevent any public access due primarily to substantial asbestos contamination. During the period 1929 - 1936 and beyond, both the Walpole facility and the facility at 62 Whittemore Ave. Cambridge, were the subject of special attention by the Department of Labor and Industries Division of Occupation Hygiene (see communication # 2) due to a high incidence of asbestosis complaints resulting in both awards of workman's compensation claims and related legal actions (see communications # 2A and #3).

Ownership and operation of the Multibestos Corp. by Dewey and Almy, (purchased in 1954 by W.R. Grace), is further demonstrated by verifying statements from both Charles Almy (then Vice President of Dewey and Almy), and Bradley Dewey (President) in the Harvard Class of 1908 Twenty-fifth Anniversary Report (see documentation #4).

Specific asbestos friction products manufactured

Hervey Elkins (Harvard Class of 1928) then a recent graduate of the Harvard School of Public Health and eventually Director of the Division of Occupational Hygiene, under the supervision of his predecessor, Manfred Bowditch, described his visit to the Whittemore Avenue facility and made the following observation:

"Certain brake linings, especially those for heavy work, are made from asbestos to which carbon black and other substances may be added, and rubber latex. The various materials are mixed in a paper beating machine, spread on a wire screen and the water sucked out, then pressed in a hydraulic press, cured and brought to the proper thickness with a sanding machine."

(see page three *Notes on visit to Dewey & Almy Chemical Co., on November 27, 1934 and December 11, 1934 and to Multibestos Company, Walpole, on November 28, 1934* ; document # 2).

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File documentation included with this letter reflects that the Walpole Multibestos facility did in fact supply or at least partially supply the Cambridge facility with raw asbestos. On page 6 of the Workman's Compensation Report to the Industrial Accident Board filed by John Lightbody in 1933, the following description is given:

"When he left the weave room on June 26, 1925, he went to work on the truck immediately. At times witness would be in contact with asbestos dust for a half a day - that would be when he would bag it up and bring it to Cambridge."
(see document 2A page 6)

Additionally, it appears that the Cambridge plant may also have manufactured clutch facings as the AR dope (coal tar pitch in toluol) used to impregnate the clutch facings was produced there. The manufacturing stage is described by Dr. Elkins as the process which produces the highest level of Asbestos particulate. It should also be noted that the intensity of the manufacturing protocol at the Whittemore Avenue facility required that the processing equipment be purged on a regular basis. Older neighbors recollect that this phenomenon was so intrusive that it would require residents living nearby to shut their windows when the whistles blew to prevent dust from settling in their homes. In addition to the included information, verbal descriptions from neighbors confirm that manufacture of asbestos-based friction products was a substantial part of the Dewey & Almy operation at the Whittemore Avenue facility during the thirties.

Request for additional and extensive soil sampling and analysis for asbestos

Given the problems encountered at the Multibestos site in Walpole with respect to random and improper disposal of large volumes of asbestos waste product resulting in Superfund designation during the same period, we respectfully request that:

- additional and extensive soil sampling and analysis for asbestos be required immediately of the PRP;
- the regulatory status and potential risks posed by the site be reevaluated; and
- a full and forthright accounting of this matter be provided.

The Principal Responsible Party is aware of at least some of these facts

There is evidence that the PRP is aware of at least some of these facts. In a deposition conducted on September 17, 1996 (see document # 5), Bradley Dewey Jr., son of Bradley Dewey, president and co-founder of the Dewey and Almy Company, acknowledged that "everything that had been Dewey and Almy was moved into W.R. Grace ... the entire company, all the facilities, all the records, all the property of whatever nature" (p.58). In that same deposition, Dewey Jr. admits that he "knew that Dewey and Almy had been in the brake lining business" and that "brake linings included asbestos" (p.24 and 27). In the same deposition (p.26), Dewey Jr. identifies photographs of the Dewey and Almy facility at 62 Whittemore Avenue with a fleet of Multibestos Motorized Brake Service Institute vans in the parking lot of the facility.

Additional evidence was provided by Susan M. Cooke, of the law firm Goodwin, Proctor, and Hoar, representing W.R. Grace and Co. Ms. Cooke submitted substantial comments during the public comment period for August 22 to September 21, 1994 regarding the preliminary public health assessment for the Walpole site. Knowledge of the Multibestos and Whittemore Avenue operation (manufacture of asbestos friction products) had to have been common company knowledge for the previous three years if not for the previous sixty years.

Required disclosure by the Licensed Site Professional

There is a comprehensive body of case law regarding when a party knew or should have known of environmental violations. There is also a significant body of law describing how knowledge held by individual members of a corporation can be imputed to the organization itself when applying the "knew or should have known" standard. The actions and statements by W.R. Grace and /or predecessors or agents clearly meet this standard, leaving no doubt that this PRP knew or should have known of the potential for asbestos contamination and had an affirmative duty to act accordingly. It is our understanding that the Licensed Site Professional (LSP) assigned to the Whittemore Avenue

site is required to disclose all pertinent facts regarding these circumstances. The Rule of Professional Conduct, 309 CMR Section 4.03 (5) (c) state that:


“a licensed site professional shall make a good faith and reasonable effort to identify and obtain the relevant and material facts, data, reports and other information evidencing conditions at a site that his or her client possesses or that is otherwise readily available, and identify and obtain such additional data and other information as he or she deems necessary to discharge his or her professional obligations under M.G.L. 21A # 19 through 19J, and 309 CMR.”

Requested action by W.R. Grace

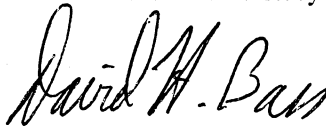
If laypersons concerned about the past practices at this site can access this information with relative ease, it seems only fair that the PRP be required to provide the abutting public a fuller and more candid description of the manufacturing operation in their environmental assessment.

Given the significant data gaps created by the PRP's not having analyzed the site for asbestos contamination, we respectfully request that W.R. Grace through their LSP provide a full accounting for this apparent omission and implement a plan for appropriate field-testing for asbestos. If there is any way that this neighborhood can be of further assistance in this matter, please let us know. Representatives of the Alewife Study Group will call you within ten days to two weeks of your receipt of this letter to discuss these issues.

Submitted on behalf of the Alewife Study Group,



Craig A. Kelley, Esq.
6 St. Gerard Terrace
Cambridge, MA 02140
(617) 354 - 8353



David H. Bass, Sc.D., CHMM
23 Norris St.
Cambridge, MA 02140
(617) 354 - 2797



Joseph J. Joseph
20 Columbus Ave.
Cambridge, MA 02140
(617) 354 - 3295

- cc:
- Cambridge City Council
 - John DeVillars, U.S. EPA
 - Karen Stromberg, DEP
 - David Wightman, W.R. Grace Co.
 - Wesley Stimson, LSP
 - State Senator Warren Tolman
 - State Representative Alice Wolf
 - State Senator Robert Havern
 - U. S. Senator Edward M. Kennedy
 - U. S. Senator John Kerry
 - U. S. Representative Joseph P. Kennedy

With respect to the 62 Whittemore Avenue W.R. Grace site (RTN #3-0277), we the undersigned support the attached request to Commissioner Struhs, and respectfully request his immediate attention. Specifically, we urge the Commissioner to:

- 1.) require the PRP to provide a fuller and more forthright accounting of asbestos usage and manufacture at the site;
- 2.) require additional and extensive soil sampling and analysis for asbestos;
- 3.) and reevaluate the regulatory status and potential risks posed by the site.

Thank you for your attention to this matter.

SIGNATURE	PRINTED NAME	ADDRESS
<i>Steve Schnapp</i>	Steve Schnapp	32 Clay St. Cambridge 02140
<i>Marc Saunders</i>	MARC SAUNDERS	69 HARVEY ST. Cambridge 02140
<i>Lew Weitzman</i>	Lew Weitzman	124 Montgomery Cambridge 02140
<i>Elizabeth W. Burk</i>	Elizabeth W. Burk	20 Columbus Ave. Camb. 02140
<i>Russell Bromfield</i>	Russell Bromfield	118 Clifton St Camb 02140
<i>Martha E. Cleveland</i>	Martha E. Cleveland Russell Bro	118 Clifton St 02140
<i>Peter V. Cignetti III</i>	PETER V. CIGNETTI III	5 THERIAULT CT, CAMBRIDGE, MA 02140
<i>Hope L. Hayden Kelley</i>	Hope L. Hayden Kelley	68 Berard Terrace, Camb. 02140
<i>Seymour Kellerman</i>	Seymour Kellerman	21 Cogswell Ave Camb
<i>Aram Hollman</i>	ARAM HOLLMAN	15 Clifton St, Camb, MA 02140
<i>Daniel Kamman</i>	Daniel Kamman	69 Harvey St #1 Cambridge MA 02140
<i>Hannah Goodwin</i>	Hannah Goodwin	94 Clifton St #2 Cambridge MA 02140
<i>Joel Nogie</i>	Joel Nogie	94 Clifton St. #2 Cambridge MA 02140
<i>Patricia A. Casch</i>	PATRICIA CASCH	364 Rindge Ave 155 Cambridge MA 02140
<i>Ralph Yoder</i>	Ralph Yoder	364 Rindge Ave 17-L Cambridge MA 02140
<i>Ruth M. LeBlanc</i>	RUTH M. LEBLANC	32 MAGOUN ST. CAMB, MA 02140
<i>Susan Maguire</i>	SUSAN MASURE	125 Jackson St. Cambridge 02140
<i>Paul Miranda</i>	PAUL MIRANDA	125 Jackson St. CAMB 02140

23, 1922, as Oklahoma Eastern Oil Co. and acquired oil and gasoline properties of Oklahoma Natural Gas Co. On Feb. 14, 1925, merged Devonian Oil Co., incorporated in Delaware June 3, 1920, and assumed that company's name and charter. Producers of crude oil and gasoline.

As of Dec. 31, 1934, the company was interested in Oklahoma, Kansas, Texas and New Mexico and had undeveloped leases representing 75,399 acres. Owns 2 gasoline plants located at Kellyville and Chickasha, Okla., with total capacity of 40,000,000 cu. ft. of natural gas. (Gas plant at Chickasha, Okla., was not operating in April, 1934). Three producing leases in the East Texas field were sold in 1934. Number of employees Jan. 1, 1935, 54.

MANAGEMENT: OFFICERS: J. H. Evans, Pres.; A. W. Leonard, Vice-Pres. and Gen. Mgr.; L. C. Ritts, Vice-Pres. and Treas.; Geo. D. Foster, Sec., Tulsa, Okla.; H. R. Dean, Asst. Sec. and Asst. Treas.; W. E. Lofton, Asst. Treas., Tulsa, Okla. **DIRECTORS:** J. H. Evans, A. W. Leonard, Geo. D. Foster, L. C. Ritts, Tulsa, Okla.; H. Heasley, H. J. Crawford, Emlenton, Pa.; J. V. Ritts, T. W. Phillips, Jr., Butler, Pa.; J. P. Flynn, Sistersville, W. Va. **ANNUAL MEETING:** Fourth Tuesday in March. **OFFICE:** 618 National Bank of Tulsa Bldg. (P. O. Box 1379), Tulsa, Okla.

PRODUCTION STATISTICS, YEARS ENDED DEC. 31

	1934	1933	1932	1931
Oil (bbls.)	1,213,564	1,488,064	1,170,702	930,028
Gasoline (gal.)	978,652	315,855	77,589	1,046,368
Natural gas (M cu. ft.)	5,930	72,670	313,780	

† In 1934 wells were mostly under proration.

COMPARATIVE INCOME ACCOUNT, YEARS ENDED DEC. 31

	1934	1933	1932
Gross income	\$1,257,078	\$948,171	\$1,163,024
Operating expenses	182,764	287,833	421,404
Gen. & admin. expenses	113,501	95,695	85,876
Operating profit	960,813	1564,643	1655,744
Profit sale producing prop.	1,147,852		
Other income credits	36,149		5,971
Gross income	2,144,814	1564,643	1661,715
Federal income tax	211,225		
Other charges	57,853	17,739	
Balance	1,875,736	1546,904	1661,715
Depreciation	143,734	202,332	209,283
Depletion	137,072	125,028	103,779
Und. leasehold chgs., etc.	124,320		
Net income	1,470,610	219,544	348,653
Dividends	1,930,830	150,556	164,400
Surplus for year	(d)\$460,220	\$68,988	*\$184,253
Earned per share	\$4.57	\$0.67	\$1.06
Number of shares	321,805	†328,800	328,000

* Before crediting \$182,887 surplus adjustment on account of drilling charges for 1931, which has been capitalized.
 † Includes reacquired stock.
 ‡ After taxes and undeveloped leasehold expenses, etc. (in 1934, before such charges).
 § Deducted above (see †).
 ¶ After undeveloped leasehold expenses, etc. (1934, before such charges).

Surplus Account, year ended Dec. 31, 1934: Deficit, Dec. 31, 1933, \$356,238 (Note: The 1933 annual report gave surplus at Dec. 31, 1933 as a credit of \$219,946). Credit: Development costs applicable to recoverable oil and gas reserves (previously written off) restored, \$205,375; gross operating deficit, \$150,863. Debits: Deficit for year (per above), \$460,220; expenses applicable to prior year, \$21,514; depreciation applicable to prior years (resulting from change to per-barrel basis of computing depreciation of equipment on producing properties, \$34,020; total debits, \$515,754; deficit, Dec. 31, 1934, \$666,616.

Note: A change in accounting was made during 1932 in connection with drilling costs, which are now charged to investment and amortized over a period of years instead of being charged direct to operating costs.

COMPARATIVE BALANCE SHEET, AS OF DEC. 31

	1934	1933
Assets:		
Developed properties	\$4,416,820	\$2,376,594
Undeveloped leaseholds and fee lands	351,976	1239,234
Materials	25,211	26,491
Cash	149,700	549,199
Accounts receivable	125,139	146,942
Notes receivable	31,800	130,300
Investments	7,925	49,175
Notes receivable	204,880	
Deferred items	1,224	
Reacquired stock		43,433
Total	\$5,484,675	\$3,561,368
Liabilities:		
Capital stock	\$3,218,050	\$3,288,000
Accounts payable	71,120	47,234
Federal income tax	211,225	
Deferred credits	*26,517	6,188
Surplus	††1,957,762	††129,946
Total	\$5,484,675	\$3,561,368
Current assets	\$501,850	\$852,932
Current liabilities	282,345	47,234
Working capital	219,505	805,698

* Less depletion and depreciation: 1934, \$3,022,368; 1933, \$3,893,071. † Consists of: Leaseholds: Cost, \$2,411,541; appreciation (see footnote †† relative to surplus), \$2,624,379; equipment, \$2,048,521; total leaseholds, \$7,084,441; gasoline plants, \$293,194; warehouse, automobiles, etc., \$61,553; total, \$7,439,188; less, depreciation and depletion, \$3,022,368; balance (as above), \$4,416,820. †† At cost. § Employees. ¶ Due from officer; collateralized by stocks with market quotations of \$257,613 and equities in stocks pledged with others. ** Discount on treasury stock pur-

(see footnote † relative to developed properties). †† \$576,184 surplus from appraisal, less operating deficit of \$356,238. Accounts certified by Haskins & Sells.

Capital Stock: 1. Devonian Oil Co. stock: Authorized, \$3,500,000; outstanding, \$3,218,050; in treasury, \$69,950; par \$10. Dividends paid per share: 1925, 20 cents; 1926, 40 cents; none thereafter to Apr. 1, 1930, when 15 cents was paid, and quarterly thereafter to Oct. 1, 1930, incl. Subsequent dividends per share as follows: Jan. 2, 1931, \$0.15 (\$0.08746 from capital and \$0.06254 from earnings); the following from capital: July 20, 1932, \$0.10, Oct. 20, 1932, \$0.15, Jan. 20, 1933, \$0.25, Apr. 20 and July 20, 1933, \$0.15, Oct. 20, 1933, \$0.1578947 (\$0.11303 from capital and \$0.04486 from earnings); Jan. 20 and Apr. 20, 1934, \$0.25 each from earnings; June 11, 1934, \$5.00 (\$3.40 from capital and \$1.60 from earnings); July 20 and Oct. 20, 1934, \$0.25 each from earnings; Jan. 21 and Apr. 20, 1935, \$0.25.

Transfer Agent: Colonial Trust Co., Pittsburgh, Pa. Registrar: Peoples-Pittsburgh Trust Co., Pittsburgh, Pa. Listed on Pittsburgh Stock Exchange. Number of stockholders, Apr. 1, 1935, 1,911.

Price Range:	1934	1933	1932	1931	1930
Stock	18-9	10-7	9-4	8-4	14 1/4-3 1/4

DEWEY & ALMY CHEMICAL CO.: Incorporated under Massachusetts laws in 1919.

Controls the Multibestos Co., Mass. (a sales company organized in 1934); Multibestos Co. (a Texas Corp.); Dewey & Almy Chemical Co. of Canada, Ltd.; Dewey & Almy, Ltd. (Eng.); Dewey & Almy Chemical Co. (Ill.), and Walpole Factories, Inc. (formerly Multibestos Co., Walpole, Mass., acquired in May, 1930). Practically all assets of the latter, other than land and buildings, were purchased in 1934 by Dewey & Almy Chemical Co. (Mass.), a division of which now carries out many of the manufacturing operations formerly conducted by the old Multibestos Co.

Manufactures sealing compositions for tin cans, machines for applying and drying sealing compositions, soldering fluxes, labeling adhesives, shoe soles and heels, soda lime, brake linings, brake blocks and clutch facings, sold under the trade names Dewalco, Gold Seal, Darex and Multibestos. Plants in the United States located at Cambridge and Walpole, Mass., and Oakland, Calif. Subsidiaries' plants located at Naples, Italy; Farnham, P. Q., Canada. During 1933 the company sold its entire 45.5% interest in Dartex, A.G., Frankfurt a-M., Germany.

Management: Officers: Bradley Dewey, Pres.; Charles Almy, Jr., Vice-Pres. and Clerk; H. S. Ferguson, Sec. and Treas., Cambridge, Mass. **Directors:** Bradley Dewey, Charles Almy, Jr., S. H. Lawton, Cambridge, Mass.; Merrill Griswold, A. L. Putnam, Boston, Mass.; H. S. Ferguson, C. H. Egan, Belmont, Mass.; P. L. Reed, Chicago; A. Besse, New York; F. G. Allen, O. K. Anderson, Richmond Mayo-Smith, J. A. Lunn. **Annual Meeting:** Third Tuesday in February. Office: North Cambridge, Mass.

CONSOLIDATED INCOME ACCOUNT, YEAR ENDED DEC. 31, 1934 (Dewey & Almy Chemical Co. and subsidiaries)

	1934	1933	1932
Sales	\$3,393,202		236,189
Costs & expenses	2,908,334		151,106
Depreciation	164,800		
Operating profit	320,068		
Margin of profit	9.43%		
Other income	44,880		Surpl. for yr. \$85,083
Total income	364,948		Earned per share prior preference \$27.33
Sundry charges	66,587		Earned per share pfd. & cl. A pfd. 9.75
Net income	298,361		Earned per share cm. & cl. A cm. 1.11
Fed. & State tax	61,400		
Minority interest	772		

CONSOLIDATED INCOME ACCOUNT, YEARS ENDED DEC. 31 (Dewey & Almy Chemical Co. and subsidiaries)

	1933	1932	1931
Net profit before deprec.	\$345,725	\$7,869	(d)\$291,834
Depreciation	169,910	182,427	144,230
Operating profit	175,816	(d)154,558	(d)436,110
Loss from sale of Dartex, A. G.	62,327		
Net profit for year	\$113,488	(d)\$154,558	(d)\$436,110

CONSOLIDATED BALANCE SHEET, AS OF DEC. 31 (Dewey & Almy Chemical Co. and subsidiaries)

	1934	1933
Assets:		
Fixed assets	\$1,312,416	\$1,448,571
Formulae and processes	60,000	60,000
Cash	60,178	97,082
Notes & acceptances receivable	14,819	16,400
Accounts receivable (net)	248,485	239,100
Life insurance, cash value	50,466	48,071
Raw material and supplies	312,814	234,119
Work in process & finished goods	509,163	438,750
Prepayments	11,522	13,280
Total	\$2,579,862	\$2,583,773
Liabilities:		
Prior preference stock	\$617,562	\$617,562
Preferred & class A preferred stock	2,063,700	2,063,700
Common & class A common stock	189,730	189,730
Total	2,870,991	2,870,991
Less: Treasury stock	**100,426	133,133
Balance	2,770,565	2,870,600
Less: Deficit	485,826	570,909
Balance	\$2,284,739	\$2,299,691
Minority interest	1,337	562
Funded debt	2,000	2,000
Accounts payable	71,906	99,381
Notes payable	50,000	50,000
Dividends payable	30,230	30,230
Federal and State tax reserve	61,400	70,830
Accrued accounts	73,232	4,611
Reserve for container redemption	5,018	6,600
Deferred credits		
Total	\$2,579,862	\$2,583,773

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Notes on visit to Dewey & Almy Chemical Company, Cambridge, on November 27, 1934 and December 11, 1934 and to the Multibestos Company, Walpole, on November 28, 1934.

By: H. B. Elkins

Officials met:

Mr. Egan (chief chemist)
Mr. Ferguson (plant manager)
Mr. Leach
Mr. Edwards
Mr. Ross
Mr. Jensen
Mr. Taggart

Mr. McMordie (engineer)
Mr. Bateson (superintendent, Multibestos)
Mr. Slagle
Mr. Martin
Mr. Mears
Mr. Stowe

The more important contacts are underlined.

Note: Due to the nature of its business many of the processes of this company are unique. Items which it is believed may not be general practice are marked with an asterisk and should be treated as confidential until passed upon by an official of the company.

The Dewey and Almy Chemical Company manufactures primarily latex cements and allied products, such as solvent rubber cements, rubberized fabrics, and rubber bonded brake linings. It was because of their developments in this last field that they acquired the Multibestos Company, which manufactures brake linings and clutch facings of all types.

Dewey and Almy Company

Mr. Egan showed me about the plant in Cambridge.

Latex cements:

Rubber latex is obtained in solutions containing 35, 60 or 75 per cent solids. In the dilute solutions there is about three fourths of a per cent of ammonia, which keeps the solution at a pH of 11, and so prevents fermentation and spoilage. In the most concentrated solutions the alkalinity is maintained by a mixture of caustic potash and a potassium coconut oil soap. Ammonia is preferable for most purposes because it evaporates off. Its concentration is so low that it is no problem except when the cement or compound is used in very large quantities.

*Various materials such as pigments and fillers are added to the latex solution in making the compound. One such material is a modifying soap made from beeswax and ammonia under high pressure. Sulfur is added whenever it is desirable and possible to cure the rubber in the cement or other product. In the linings for tin cans sulfur can not be used but fortunately an uncured material is more satisfactory.

For many purposes a latex cement is inferior to an artificial rubber emulsion, made by masticating vigorously coagulated rubber and then dispersing it with protective colloids and other suitable chemicals. A cement of this type seemed much finer and more homogeneous than corresponding latex cements, and its cost was said to be the same.

Latex cements are of interest to us because they compete with solvent rubber cements. One of the chief uses of benzol is as a solvent for the latter. For some purposes non-toxic non-inflammable latex cements are better substitutes for toxic, inflammable benzol cements than the slightly toxic but inflammable naphtha cements.

Mr. Ferguson said that there had been a swing away from latex sealing compounds toward solvent compounds, but that he felt that its peak had passed and the immediate future would see an increased use of the latex products.

Solvent room:

This company makes both benzol and naphtha solvent cements and compounds. The latter constitute about two thirds of the total, and it was said that probably next year three quarters of the solvent compounds would be made from naphtha. The so-called solvent room is the second floor of an isolated building. It is about 35' x 12' x 8', and contains two mixers, for naphtha and benzol products, respectively. Each mixer holds about a hundred gallons.

Exposure to the solvent may occur chiefly in three places; the pump room, the solvent room, and muddler room, in which the finished cement is loaded into drums for shipment. In the pump room there is some leakage of vapor, or seemed to be, but the pumps are operated from outside, and the room is rarely entered. In filling the drums there is undoubtedly some exposure, but the greatest hazard is certainly in the solvent room.

The solvent is ordinarily pumped through a meter into the mixer. The stirrers are heavy spiral shaped knives which twist and tear the small pieces of rubber which are introduced. Some heat is evolved in this operation, so that the temperature of the mixture is raised, the outside of the mixer being above body temperature when the process was observed. The mixers are closed except for an opening in the top about 18" x 10" which is covered loosely except when materials are being added, when the batch is being inspected, and when it is being emptied. The addition of rubber (cut in small pieces) takes some time, as the several layers are torn apart by hand or they are fed into the machine. Some other materials, such as wax, are usually added. In the operation observed inspections of the batch as it was being mixed were frequent. As the top of the mixer is about five feet from the floor the tendency is for the workman to put his face close to the opening in looking in at the batch.

After two to eight hours, depending chiefly on the kind of rubber used, the mixer is tipped on its side and the batch of finished product is dumped through an opening in the floor into the muddler. The dumping operation observed took four minutes, including the time required to rake out the residual compound. The opening in the mixer through which the substance is poured is about three feet from the floor, and the operator stands three to four feet away except when he is cleaning out the residue. The extremely viscous and elastic ~~was~~ was said to contain only thirty per cent of solids. Its vapor pressure would presumably be appreciably more than 70 per cent of that of pure benzol, but the viscosity of the mixture should cut down its rate of evaporation considerably.

A blower was operating in the wall opposite the mixer, near the floor, and above it the window was opened. The operator was between the window and the mixer, but a little to one side most of the time. The efficiency of this system of ventilation seems somewhat questionable. Tests on the air in this room (made by the insurance company) showed satisfactory conditions, however, it was said.

The men working on this job are given blood counts every three months and as a rule are transferred after six to nine months. No real cases of benzol poisoning have been encountered.

AR dope:

This impregnating material is a mixture of about five parts coal tar pitch and one part toluol. The components are heated in mixing, and ventilating equipment has been ordered for the process. The fumes did not seem bad at the time a finished batch was observed in the open mixer.

***Rubber bonded brake lining material:**

Certain brake linings, especially those for heavy work, are made from asbestos to which carbon black and other substances may be added, and rubber latex. The various materials are mixed in a paper beating machine, spread on a wire screen and the water sucked out, then pressed in a hydraulic press, cured and brought to the proper thickness with a sanding machine. The last operation is well ventilated, but the method of feeding the paper bester was said to be dusty and needs improvement. Probably some such method as was worked out at Walpole will be applied here. None of these processes were in operation.

***Artificial leather:**

A soft absorbent paper is passed through a latex solution containing sulfur, coloring matter, etc., and then over a series of heated rolls where the water and ammonia are given off and the rubber is cured. An exhaust system provides for the removal of the ammonia given off (estimated at three pounds, or about sixty cubic feet, per hour).

It is necessary to stop the machine for brief periods in order to attach new rolls of paper. If the stop is for too long the paper in contact with the hot rolls tends to disintegrate. Even the short stops unavoidably made may cause variations in quality in the finished material.

The rubberized sheet is passed through a calender to bring it to the proper thickness. Two or more sheets are often cemented together, sometimes two or three rolls being combined on a machine similar to the impregnating machine, but smaller. No provision for the removal of ammonia is made in this case, but there was no appreciable odor of ammonia around the machine.

If still thicker sheets are to be made, pieces about five feet square are cemented together by hand. In the operation observed a naphtha solvent cement was used.

Other products:

Soda lime, used in gas masks for absorbing phosgene, chlorine and acid gases, is made in some quantity. Zinc chloride solutions and zinc ammonium chloride crystals are also made. Some dermatitis has been caused by these materials.

Chloroform and toluene are used as preservatives. Carbon tetrachloride is also used for some purposes. Apparently these are used in relatively small amounts. Another small use of benzol is in cleaning out drums.

The Multibestos Company

Mr. McKordie, who designed a large part of the ventilating equipment used at the plant, showed me about.

There have been numerous cases of asbestosis developed here, and as a result the methods of manufacture have been greatly modified. The carding process has been dropped, the yarn being bought already spun, and a wet weave substituted for a dry weave process. Mr. Bateson said that more cases of asbestosis were developed in the weave room where the dust count was about seven and a half-million particles per cubic foot, than in the carding room, where the dust count was much higher. The most recent counts ran from half a million to two million, except at a carboloy saw, where it was 6.7 million, and at the paper beater during its feeding (31 million). A new process has been developed for feeding the paper beater, the use of the carboloy saw is discouraged pending its removal, and the general ventilation has been greatly improved since these counts were made.

Woven fabrics are used chiefly for brake linings, but for some clutch facings as well. Most of the latter and some brake linings, especially for heavy brakes, are moulded, or made originally as an asbestos paper. For impregnating materials asphalt, chinawood oil, and bakelite resins are used. Rubber bonded linings are not impregnated; the rubber bonding is done in Cambridge, but all cutting, shaping and finishing is done in Walpole.

Weave room:

The yarn consists of cotton and asbestos fibre wound around a small wire. The warp is dry as it leaves the spools but passes over a wet roll before going through the guides so that the dust given off by the vigorous agitation of the dry warp in the weaving process is largely eliminated, since the yarn is wet at this stage. The spindles of weaving yarn are soaked in water before use. The loom spools of dry yarn are shaken somewhat but undoubtedly by far the largest part of the potential dust is prevented from coming off.

*On some of the looms a process of impregnating the yarn as it is woven is being tried. The roll wet with water is replaced with one wet with impregnating solution, in most cases asphalt in kerosene. This is supposed to give a more thorough impregnation and eliminates a process. It has the disadvantage of dirtying up the loom, however, and the fumes of the solution contaminate the air of the weave room. A solution of resin was also being applied in this way: they have succeeded in eliminating toluol from the solvent for these mixtures. On one section of a loom a water emulsion of a resin impregnant was being tried, it being both non-toxic and non-inflammable.

The fumes of kerosene near the looms using the asphaltic impregnant were somewhat obnoxious.

Impregnating room:

The method still used for most of the woven linings is that of impregnating the fabric after it is woven. A long strip is run through a bath of solution, before and after which are placed drying ovens. Conditions in this room seemed satisfactory.

Grinding room:

Here the clutch facings and brake linings are ground down to the proper size, the required holes are drilled, etc., and in this room the most strenuous efforts in ventilation have been made. The removal of visible dust seemed almost perfect in the case of all the grinding operations observed. The chief source of dust seemed to lie in the handling of piles of articles in loading or unloading a machine. In some cases ventilation was even provided for these operations.

One of the men operating an inside grinder (for the inside of clutch facings) wore a respirator, however.

Clutch department:

In the process of making moulded brake linings and especially clutch facings, asbestos is fed into a paper beating machine, where it is mixed with water, pigments, fillers and a little red lead, which helps the impregnant to harden. From here it is pumped to the paper machine where a layer of the mixture is spread continuously on an endless belt, the water drained off, and the resulting sheet of asbestos paper is removed, pressed, and cut up.

Formerly the act of feeding asbestos into this machine was very dusty. Now the bags of asbestos are emptied into a chute (in an enclosed room on the second floor) and the water for the mixture is sprayed in simultaneously, wetting down the asbestos so that it is soaked with water when it enters the beater, and little or no dust is given off. The man handling the bags of asbestos wears a respirator, the operation taking but a few minutes. The room where this was done seemed surprisingly free from visible dust.

This seemed to me a very satisfactory, common sense and economical solution of this particular problem.

Twenty pounds of red lead are sprinkled with a hand scoop into each batch mixed up in the paper beater. This is heavier than many lead compounds and none of it seemed to be dissipated in the form of dust. I understood the workman to say that the maximum output of the machine was five batches a day.

Clutch impregnating room:

Most of the clutch facings are impregnated with AR dope, a solution of a coal tar pitch in toluol, which is made in the Cambridge plant. A rack about 4' x 5' x 6' is filled with clutch facings and then submerged in one of the tanks of dope, of which there are three or four in a room about 28' x 12' x 8'. The solution is kept at 60 degrees F. or higher, and the tanks are covered except when the solution or solvent is being added, when the rack of clutch facings is being introduced, and when the clutch facings have just been removed and the excess solution is allowed to drain back into the tanks.

There is no ventilation in this room and the fumes are said to be bad at times. The foreman said he wouldn't enter the place on a damp day, and that the men often got jags from the fumes. One of the men said he was often made dizzy by the toluol vapor, and that he and his colleague suffered considerable discomfort generally.

It seemed to me that unless these men were exaggerating greatly the conditions should by all means be improved. A determination of the toluol concentration in the air might be worth while. Two or three window blowers, to be operated when the tanks were open, might improve the situation sufficiently for practical purposes.

While the insurance company was said to have investigated these conditions and to be satisfied, and while it is true that toluol is not as insidious a poison as benzol, or asbestos dust, and while there is some doubt about its ever causing chronic poisoning, it is still classified with benzol in Bulletin 582 of the U. S. Dept. of Labor. Certainly conditions such as apparently exist here should not be tolerated if they can be easily remedied.

Drums containing toluol were in some cases labelled as containing alcohol.

General:

Mr. McMordie said that some dermatitis was caused by the formaldehyde used with tar acid in the manufacture of bakelite resins.

Respirators were worn on many odd jobs, such as sweeping the floor, using the carboloy saw, etc.

In general the firm has been admirably thorough, ingenious, and, I believe, effective in the steps taken to eliminate dusty conditions.

WORKMEN'S COMPENSATION ACT.
Industrial Accident Board
Boston, Massachusetts.

2A

John L. Lightbody
Multibestos Company
Employers' Liability Assurance Corporation, Ltd.
Liberty Mutual Insurance Company
Hartford Accident & Indemnity Company

Employee
Employer
Insurer
Insurer
Insurer

REPORT OF MEMBER OF INDUSTRIAL ACCIDENT BOARD. (MR. CLARK)

The Member of the Industrial Accident Board, appointed under the provisions of G. L., c. 152, ss. 7 and 8, having heard the parties in the above-named case at Boston, Massachusetts, on Tuesday, June 26, 1934, reports as follows:

Appearances: Everett Potter, Esq., for the Employers' Liability Assurance Corporation, Ltd.
Stephen C. Bean, Esq., for the Liberty Mutual Insurance Company.
Francis G. Claffie, Esq., for the Hartford Accident & Indemnity Company.
Leonard E. Weaver, Esq., for the employee.

There is a reported injury dated October 25, 1933 which states the date of the injury as "7" and states further that the employee left work on October 5, 1933; that he was a truck driver since 1925; that previously he was a weaver; and that his average weekly wages were \$23.19. There is no statement in regard to the cause of the injury.

A claim for compensation was filed on February 9, 1934 giving the date of injury as, "not able to work since Oct. 3rd 1933"; the place of the injury as, "mill, South St., Walpole, Mass."; the cause of the injury as, "inhaling asbestos dust"; and the nature of the injury as, "Dyspnea from lungs being filled with dust and lining the bronchioles. Weakness resulting from same together with loss of weight."

Another claim for compensation was filed on March 27, 1934 which gives the date of injury as, "May 1924"; the cause of the injury as, "inhalation of dust from working in or near asbestos products"; and the nature of the injury as, "shortness of breath and loss of weight, weakness, loss of appetite. Pains in chest, cough."

QUESTIONS: (1) Whether or not the employee sustained an injury arising out of and in the course of his employment; and (2) which insurer is liable.

REPORT OF THE EVIDENCE.

All the material evidence is reported herewith:-

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mask or respirator at any time during his work, witness answered, he thought that all the men had them, witness did not wear any, very few men wore them. Witness could not breathe with a respirator on him. He wore one when he was in the weave room. Asked if it kept out all the dust, witness answered, no "not that kind." Witness also had to open up bags of cement in the freight car to get samples for the laboratory. In doing that work he would get dust on his hands and clothes. (At this point it was stated that the employee left the main weave room June 22, 1925) Asked to describe the condition of his health after he left the main weave room, witness answered, he left the weave room in the summer - June or July - and went out on the truck, he seemed to pick up in weight and feel a little better but he was always short of wind - if he did any lifting, the last year he started to lose, for six months he could notice he wasn't so well, he was getting short of wind and losing flesh until he finally had to quit. When he was in the Peter Bent Brigham Hospital he weighed about 106 pounds. When he left the job in the main weave room he seemed to pick up in weight. He never got all his weight back. He weighed 135 pounds when he went to work. The most he ever weighed when he left the main weave room was 118 pounds. After he left that room he was always short of wind. From six months to a year before he stopped work he started to lose weight again and got shorter of wind. He gradually lost weight. He weighed about 103 pounds when he left work October 3, 1931. After he developed the cough when working for the Multibestos Company he was never without it. It would be worse in the morning when he got up. He stopped work on October 3 because he felt he could not work any longer. A day or two before that he had a small hemorrhage - bleeding from the throat. He lost a half a cup of blood. As a result of that he felt pretty nervous and kind of scared. He was getting weaker gradually. That lasted over a period of six months or a year prior to October. On October 3 he felt so weak that he couldn't do his work. He thinks it was on that day that he consulted Dr. Fuller. He told Miss Kocca, a bookkeeper and secretary at the plant, that he would have to quit because he was sick. He has not done any work since October and has been under the care of Dr. Fuller. He has not felt able to work; he has not gained in strength; he does not feel a bit better. He does not think he feels any worse. Asked if he feels about the same, witness answered, he has lost a little more weight. He weighs between 98 and 99 pounds. From October 3 to now he has lost four or five pounds. During the last year he worked he does not think his cough got any worse. When he coughed he did not raise very much - once in a while a little. He did not eat very good and sometimes he did not sleep. During the last year he worked his appetite got worse. He did not have as much of a desire to eat during the last year or six months as he had five or six years ago. Asked if he slept as well nights during the last six months or year as he did prior to six years ago, witness answered, he does not know as there was no difference. Dr. Fuller had him x-rayed at the Norwood Hospital. Witness has the x-ray pictures with him.

TO THE COMMISSIONER: When he left the weave room on June 22, 1925 he went to work on the truck immediately. At times witness would be in contact with asbestos dust for a half a day - that would be when he would bag it up and bring it to Cambridge. Other times he would not be in contact with it. There were some days when he was away from the plant and not near asbestos dust. Asked how many days there were of that sort in a period of a month, witness answered, he cannot say, he might be called to Boston one day and he mightn't go out of Walpole for a week or so, he would be sent off in emergency cases, there would be no set time to go any place. Asked what the greatest number of hours a day was since June 22, 1925 when witness was exposed to asbestos dust, witness answered, six hours. That did not happen very often. It usually took three hours to unload a car of asbestos. It took a half an hour at noon to empty the dust collectors. They were emptied every day. It took probably an hour a day to dump the refuse. It would take probably all morning Saturday because the shop would be cleaned. Brake linings were not swept every day. They were swept once in a while. Witness thinks it is fair to say that he spent half of his time around dust.

TO THE COUNCIL FOR THE EMPLOYEES: Witness means asbestos dust.

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SOUTH STREET ASBESTOS SITE
WALPOLE, MA
PRELIMINARY INVESTIGATION
NOVEMBER 17, 1986

SHAFFER
REALTY
TRUST
FI-8801-01
MAE4EI

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SITE BACKGROUND

The South Street Asbestos site is located in Walpole, Ma. where the Neponset River crosses South Street. The areas located to the east and west of South Street at the Neponset River junction are contaminated with asbestos waste products. Both areas are owned by the Shaffer Realty Corporation. The site has had industries located there since the early 1800's. The industries included the manufacturing of snuff, wrought iron, tanning products, clothing, cotton batting, and wicking products at various times within the 1800's. Around 1900, the Massachusetts Chemical Company, located there, produced rubber products. The Multiple Triple Woven Hose and Rubber Co. (later known as MULTIBESTOS) located there in 1915 and soon after began manufacturing brake linings containing asbestos. In the mid 1930's, MULTIBESTOS closed the facility due to a class action suit brought by employees suffering respiratory ailments. Since then, the properties have been occupied by Walpole Factories, Industrial Properties, General Fiber, and the Kendall Corporation who used the facility for a fabric manufacturing and bleaching process. In 1985, the Shaffer Realty Corporation bought the property and the facility has been vacant since then. In 11/12/80, the Massachusetts Department of Environmental Quality Engineering (MA DEQE) notified the Kendall Corp. that asbestos contamination was discovered on their property. The Kendall Corp. was ordered to cover up asbestos pile and on 12/9/80 received a letter from the MA DEQE stating compliance to that order. On 9/18/81, the Metropolitan District Commission (MDC), notified the MA DEQE of asbestos waste piles along the Neponset River at South Street observed while working on sewer lines in that area. In October of 1986 a Walpole citizen notified the MA DEQE that vast asbestos waste piles lined the banks of the Neponset River banks at South Street. The MA DEQE responded to the site and obtained samples confirming the presence of asbestos waste products and secured the area to prevent public access. The MA DEQE requested the United States Environmental Protection Agency (US EPA) assistance on October 12, 1986, and on 11/17/86 the US EPA Oil and Hazardous Material Section (OHM) performed a preliminary investigation.

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HARVARD CLASS OF 1908

OCCUPATION: Sales Manager.

MARRIED: Mary Elizabeth Gardner, New York, N. Y., June 10, 1926.

ADDRESS: (home) 111 Coolidge Hill, Cambridge, Mass.; (business) Dewey and Almy Chemical Co., Cambridge, Mass.

IN the fall of 1909 I entered M. I. T., graduating from the Chemical Engineering course in 1910. After three delightful and incredibly cheap months abroad, I returned to Tech as a Research Associate in Applied Chemistry, later going to Pittsburgh on a special problem for the American Sheet and Tin Plate Company. In April, 1912, I went to Wilmington, Del., to start a research laboratory for the American Vulcanized Fibre Company, staying there through 1915 when I went to Baltimore as general manager for a company making glycerine and fatty acids. They went bust, not entirely my fault, but I kept my job under the receivers and under a reorganization until December, 1917, when I entered the service.

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I got my discharge in March, 1919, as Lieutenant-Colonel, Chemical Warfare Service, and shortly after started with Brad Dewey the Dewey and Almy Chemical Company, which has managed to survive even the past two years. We have branch factories in California, Canada, England and Italy, and in the spring of 1930, just when we thought the depression was nearly over, we bought the Multibestos Company, manufacturers of brake linings. It is strenuous and fascinating work directing sales activities for products so widely different as Darex shoe soles, can-sealing compounds, and brake linings, and it has taken me on one round-the-world trip, as well as on several shorter trips to Europe and Japan.

There doesn't seem to be much time left for other activities, but as a member of the Corporation of Browne and Nichols School, I have learned that private schools can suffer even more than business during hard times and require quite as much careful planning if they are to fulfill their destiny. I have also come to regret that I didn't become interested in Badminton at an age when my wind was a little better.

PUBLICATIONS: A few articles for trade papers.

MEMBER OF: Society of Chemical Industry; Harvard Club of New York City; Union Club, Boston, Mass.

RUDOLPH ALTROCCHI

BORN: Florence, Italy, Oct. 31, 1882. PARENTS: Giovanni Altrocchi, Pauline Zamvòs.

PREPARED AT: Proso Preparatory School, Kansas City, Mo.

YEARS IN COLLEGE: 1904-08. DEGREES: A.B., 1908; A.M., 1909; Ph.D., 1914.

OCCUPATION: University Professor.

RECORDS OF THE CLASS

MARRIED: Julia Cooley, Chicago, Ill., Aug. 26, 1920. CHILDREN: John Cooley, Nov. 2, 1928; Paul Hemenway, June 8, 1931.

ADDRESS: (home) 129 Tamalpais Road, Berkeley, Calif; (business) 443 Wheeler Hall, University of California, Berkeley, Calif.

MY career is founded on my love for books, writing, scholarship and teaching. In College I made a specialty of English, (I still glory in the fact that I was one of three in our class to get an A in English and later an A in Dean Briggs' English 5), but in my senior year switched over to Romance Languages, for which I seemed to have exceptional equipment. Every new year I love my work better, do more enthusiastically, but discover that I get tired more easily than twenty years ago. (Everybody's story!) My great fortune in life has been to achieve a most happy marriage, to one who has the same literary interests (my wife is a poet and a scholar) as I have, besides all the other qualities that make for permanent happiness. Late in my life two beautiful children came to us, still further to top off our happiness.

I have taught in seven universities: I was Instructor in Romance Languages at Columbia, 1910-1911, where I had my first and last academic troubles; in 1911-1912 I had a similar position at the University of Pennsylvania; then I was called to Harvard where I taught French and Italian for three years, 1912-1915, and got my doctorate. Gosh, how I did grumble. In 1915 I was called as Assistant Professor to the University of Chicago. I was very sorry to leave Harvard, but, professionally, it was a wise move. Most fortunate also, because it was in Chicago that I met my wife. I still wonder at the casual element, so to speak, in life, for I decided to accept this offer from Chicago merely on professional grounds, not suspecting at all that my whole future happiness depended on that move.

In 1918-1919 I served first in Italy as a war representative of President Wilson, directing propaganda work, then in the A. E. F. in France where I served as a Second Lieutenant, Infantry, assigned to Liaison with Lyons. For my modest services (to me unsatisfactory, for, in spite of my urgent requests, I was not sent to the front), I received two little decorations: By Italy I was awarded the *Croce di Cavaliere della Corona d'Italia*; by France, the *Palme Académiques*.

My absence for a year and a half retarded a bit my academic progress. Nevertheless, in 1922 I was promoted to Associate Professor of Italian at Chicago. In 1927 I was called to Brown University as full Professor of Italian, and the following year to the University of California, where I have been Chairman of the Department of Italian ever since,—and it is probably the biggest and most important Department of Italian in the country.

because the passing of the sailing ship has eliminated much profit and some of the romance. It is a matter of common knowledge that navigation has become comparatively safe, voyages shorter by many days, some perils of the sea eliminated, others reduced, pirates confined to the land, and in consequence the high premiums of years gone by are over, and with them ample reward. Nevertheless, there is still a living to be made and because of the uncertainty of the sea, increased perils of collision, explosion and imminent "Acts of God, Kings, Princes and Peoples," the interest continues. The *Titanic*, the *Vestris*, the *Atlantique* and the *Exeter City*, even in these days of technocracy and the age of the machine, are reminders that the carriage of goods and souls by sea has still its possibilities of tragedy and disaster. I look forward to another twenty-five years in the occupation, and I hope and expect that new problems will arise which will give me and mine our bread and butter and a reasonable share of the comforts of life.

I am a Director of The Excess Insurance Co. of America, The American Merchant Marine Insurance Co., President and Director of Despard & Co. and Chairman of the Board of Dodge & Olcott Company, Director of Emergency Relief, Rumson, N. J.

My domestic life has been uneventful and, like a land without a history, more rather than less happy. I regret that some frivolity in my earlier years militated against settled habits of life and in consequence rather a late start in the production of offspring. However, there is a candidate for the class of Harvard, 1951, of some promise, but since fourteen years must lapse before he matriculates he is still too young to attend the Reunion in June, for I do not consider it wise to expose a youth of tender years to the loose language and questionable habits of some of my friends and classmates. I also have two daughters, who in fifteen years or thereabouts will be candidates for rich and desirable husbands, if marriage is then a respectable institution. As, however, this seems somewhat doubtful, they are being instructed in the theory of energy so that they may eventually compete in "ergs" with their sisters of the coming generation.

At intervals I fish a little, play at the game of golf, and indulge in some occasional poor tennis (doubles only), read a little, drink a little, and worry over the depression. The years roll fleetingly on and it is hard to acknowledge that we of the class of 1908 have passed on to middle age and the sedater pleasures of life. It seems difficult to realize that in June a quarter of a century will have passed since we departed through that academic gate to "Better Our Kind." I remain under the delusion that I

can do everything I did then, but reason tells me that this cannot be so, because I remember on that June day, now so long ago, the ancient appearance and the youthful deportment of the class of 1883. That we will look no less hoary, hairless and heavy and equally sportive to the class of 1933 seems reasonably certain. Doubtless, posterity will acknowledge that we have lived through stirring times and I wonder whether we have worn better or worse than our Victorian fathers of '83, whose corresponding quarter must have been comparatively placid. Perhaps the state of our health on that morning after of the June just ahead will be enlightening.

PUBLICATIONS: Various articles on marine insurance and general average for technical periodicals.

MEMBER OF: Maritime Exchange, Union Club, Chamber of Commerce of New York City; Racquet and Tennis Club, Harvard Club of New York City, Down Town Association, New York, N. Y.; Rumson Club; Seabright Lawn Tennis and Cricket Club; Laurentian Club of Quebec.

BRADLEY DEWEY

BORN: Burlington, Vt., Aug. 23, 1887. **PARENTS:** Davis R. Dewey, Mary Hopkins.

PREPARED AT: Volkmann School, Boston, Mass.

YEARS IN COLLEGE: 1904-07. **DEGREES:** A.B., 1908; S.B., 1909 (Massachusetts Institute of Technology).

OCCUPATION: Chemical Engineer; Executive.

MARRIED: Marguerite L. Mellen, Chicago, Ill., Apr. 17, 1915. **CHILDREN:** Bradley, Jr., Apr. 10, 1916; Davis Rich, 2d, July 12, 1917; Marguerite Mellen, Dec. 4, 1919; Ann, Feb. 2, 1926.

ADDRESS: (home) 21 Concord Ave., Cambridge, Mass.; (business) Dewey and Almy Chemical Co., Cambridge, Mass.

AFTER completing my college work in three years, and before entering Technology, I spent a summer working in a copper smelter in Anaconda, Mont. Then, after graduating in 1909 from the Chemical Engineering course at Technology, I went to work for the American Sheet & Tin-Plate Company, a subsidiary of the Steel Corporation. My first year or so with them was spent as a laborer in various departments of their mills in Vandergrift, Pa., and Morgantown, W. Va. At the end of this time I was delegated to organize a small research department. As preparation for this work, I returned to Technology for a few months of special work and then started a one-man research organization which gradually grew to a rather sizable unit and took its place as the first Steel Corporation organization entirely devoted to research.

HARVARD CLASS OF 1908

Between the problems incident to the thirty mills of the American Sheet & Tin-Plate at various points in the country and the problems of its customers, more especially those of the can-making and canning industries, these were fascinating years in which I was never long in one place. One by-product problem resulted in the making of a product which we sold to Almy, who was then located in Wilmington, Del. Though I had seen much of him in college and had worked with him while he was engaged in a special research in Pittsburgh, the trading he did in this negotiation gave me my first real experience in business and taught me that if I was ever going to be in business I wanted him with me — not "agin" me.

Playtime from my work in the steel works at Gary led me to Chicago, where I met Marguerite Mellen. We were married in 1915.

When the Mexican War scare came along, I worked with the District Training Unit and went to one of the Plattsburg summer camps. But, when we entered the World War, I was drafted first as a civilian by the Bureau of Mines, to work on problems in connection with poison gases, and it was not for a couple of months that I was taken over into the Army to specialize on gas masks and gas defense. The work for the next two years was a hectic jumble of research, manufacturing, politics — both civil and Army — all interspersed with a hurried trip to France.

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Early in the game I was lucky enough to get Almy to work with me. His help was invaluable. We were both fortunate in the matter of Army promotion and I was lucky enough so that, in addition to leaving the Army as a Colonel, I received the Distinguished Service Medal. This was in reality but a recognition of the work of the whole Gas Defense Division of the Chemical Warfare Service, but it gave me confidence and it was but natural that when the Armistice came on Almy and I should wonder whether to go back to our old lines or tie up together. Our decision was to go into business for ourselves. We wanted to live in Cambridge, so we decided to start the business in Cambridge. We felt that there was a demand for chemical specialties founded upon modern research and manufactured in a well laid out plant under conditions which would insure uniform quality. Based on this thought, we started the Dewey and Almy Chemical Company in 1919 and we have been at it together ever since.

Despite the troubles of the little depression of 1922, the Company succeeded so that by 1930 it had grown to sizable proportions and, in accordance with the spirit of the times, purchased the Multibestos Company. Since then, we have been doubly busy revamping the mer-

RECORDS OF THE CLASS

chandise and the policies of this Company and struggling with the real depression. It has hit us quite as hard as it has others. Curiously enough, all my work has meant quite a lot of travel, mostly in this country, some in Europe. In fact, I estimate that, in addition to five trips across the Atlantic, I have travelled on business at least 15,000 miles in every year since 1911. At the time, these have seemed to be drudgery, but in retrospect it must be confessed that they have certainly helped to broaden my life and add to the fun of it.

I have two boys. Both are now in Milton Academy, but one is planning to enter Harvard this fall. The other is but a year after him. One daughter is rapidly growing up and the other is a youngster of seven.

Outside of work, my pleasures consist of very vain attempts at strictly "duffer's golf" and a lot of fun summers with the family on a little place at Sunapee, N. H.

My outside interests have largely centered around Technology, where in 1932 I followed Tom Desmond as President of the Alumni Association. Last fall I was elected a five-year term member of the Corporation of Technology. While in every way loyal to Harvard and its traditions, I thoroughly enjoy what time I am able to spend in connection with the problems of engineering education.

ROBERT MERRILL DEWEY

BORN: Northampton, Mass., Oct. 15, 1884. **PARENTS:** Patrick Halloran Dewey, Annie Jane Holley.

PREPARED AT: High School, Northampton, Mass.

YEARS IN COLLEGE: 1904-08. **DEGREES:** B.S., 1912 (Columbia); M.A., 1926 (Columbia). **OCCUPATION:** Teacher.

MARRIED: Beacie May Felton, Northampton, Mass., Sept. 5, 1908. **CHILD:** Jane, Oct. 3, 1910.

ADDRESS: (home) 83 Crescent St., Northampton, Mass.; (business) Smith College, Northampton, Mass.

TAUGHT at University of Missouri, 1912 to 1921; at Smith College since 1921.

I have a granddaughter, Patricia Farrell, born September 19, 1931.

MEMBER OF: National Association of Speakers' Clubs (President).

FLETCHER DEXTER

BORN: Brookline, Mass., Feb. 15, 1885. **PARENTS:** Duncan Dunbar Dexter, Grace Fletcher Jones.

PREPARED AT: Stone School, Boston, Mass.

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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

THE PORT AUTHORITY OF NEW YORK
and NEW JERSEY (formerly known as
"The Port of New York Authority")
and PORT AUTHORITY TRANS-HUDSON
CORPORATION,
Plaintiffs,

vs. No. 91 Civ.0310(CLB)(MDF)

ALLIED CORPORATION (individually and
as a subsidiary of "Allied-Signal Inc.,),
et al.,
Defendants.

DEPOSITION OF: BRADLEY DEWEY, JR.
DATE: September 17, 1996
TIME: 2:35 p.m.
LOCATION: Hanover Inn
Hanover, New Hampshire
TAKEN BY: Counsel for the Plaintiff
REPORTED BY: Cynthia Foster Benson, RMR

5-21

11 A Well, I knew that asbestos was commonly
12 used where you wanted resistance to heat.
13 If you wanted to insulate, have something
14 which wouldn't self-destruct with heat. I
15 knew what was in the published
16 literature. Certain risks were
17 well-known. But not, I say well-known,
18 suspected, I think in those days. Like
19 smoking was suspected.

20 Q Did you read any of the literature
21 concerning the health hazards of asbestos
22 when you came to the company?

23 A No.

24 Q Did you know when you came to the company

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1 that Dewey and Almy had previously been
2 involved in the manufacturer of products
3 containing asbestos?

4 MR. MURPHY: Objection to the
5 form.

6 Q You can answer.

7 A I'm not sure. I knew that Dewey and Almy
8 had been in the brake lining business. I
9 think my education must have taught me
10 that brake linings included asbestos.
11 It's my impression that back in those days
12 they all did.

13 Q When you were a boy growing up did you

5-22

17 do or not. The water tank looks like the
 18 water tank that was over the plant at
 19 Whittemore Avenue. The place these cars
 20 are parked, I don't know. I can't figure
 21 out where that could be in the plant. It
 22 looks like it could be.
 23 Q Can you make out the name on the water
 24 tower as Dewey and Almy Chemical Company?

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1 A Oh, yes, it's clear.
 2 Q And parked in the front are the
 3 Multibestos vans I guess, for want of a
 4 better term?
 5 A Sure looks that way. It's a used car lot.
 6 Q The vans appear to have on the side panels
 7 reading Multibestos Motorized Brake
 8 Service Institute, as I can read. Does
 9 that look like what it is to you?
 10 A Yes.
 11 Q The first document I showed you, the
 12 interview with your father in March of 19,
 13 in June of 1936, references a Multibestos
 14 company which it says Dewey and Almy used
 15 to own and the picture, Exhibit 2, shows a
 16 fleet of Multibestos cars. Were you
 17 familiar in 1940 with the term
 18 Multibestos?

5-23

19 A If you had thrown that word at me it
20 would have rung a bell. Is that what you
21 mean?
22 Q Yes. Did your father during the time
23 before you came with Dewey and Almy, did
24 he discuss the company and the company's

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1 work in your presence?
2 A Two questions.
3 Q Did he discuss the company in your
4 presence?
5 A Yes.
6 Q Did he discuss any of the work the company
7 was doing?
8 A No.
9 Q Did you have any idea of the products the
10 company was making?
11 A I knew they were making brake linings.
12 Q Did you know that those brake linings
13 contained asbestos?
14 A No.
15 Q Did you know in 1940 anything about the
16 potential hazards of asbestos?
17 MR. MURPHY: Objection. Asked
18 and answered.
19 A I think you asked me this question
20 before. And I answered that as an
21 educated person I did. I suspected

- 14 Q Do you know at all who may have supplied
 15 asbestos to Dewey and Almy?
 16 A No.
 17 Q To your knowledge, when Dewey and Almy was
 18 merged into W.R. Grace, did everything
 19 that had been Dewey and Almy move into
 20 W.R. Grace, the entire company, all the
 21 facilities, all the records, all the
 22 property of whatever nature?
 23 A As far as I know that's what happened.
 24 Q And would that have included any

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- 1 outstanding patents?
 2 A Yes.
 3 Q Would that have included any outstanding
 4 license agreements?
 5 A Yes. To my knowledge.
 6 Q Right. I understand all of this is to
 7 your knowledge.
 8 Q When the merger occurred, did
 9 most of the people who had been working
 10 with Dewey and Almy stay in their
 11 positions and simply become Grace
 12 employees?
 13 A Yes.
 14 Q Did you ever work with a gentleman at
 15 Grace called Rodney Vining?
 16 A Rod Vining. Where was he. The answer is

5-25

Consent Communication #5

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Communication was received from Joe Joseph,
transmitting information regarding W.R. Grace
at the 62 Whittemore Avenue facility.

In City Council December 15, 1997

PLACED ON FILE