

FILE NAME: Allis Chalmers (ALL)

DATE: 1932 Nov

DOC#: ALL011

DOCUMENT DESCRIPTION: Published Conference Presentation – Effects of Dusts Upon the Respiratory System

at _____ 1752
C-28

**INDUSTRIAL COMMISSION
OF
WISCONSIN**

FRED M. WILSON
Commissioner, Chairman

R. G. KNUTSON
Commissioner

VICTA WRABETZ
Commissioner

A. J. ALTMAYER, *Secretary*

HARRY A. NELSON, *Director of Workmen's Compensation*

Proceedings of Conference Concerning

**EFFECTS OF DUSTS UPON
THE RESPIRATORY
SYSTEM**



**Held at Medinah Athletic Club, Chicago
November 16-17, 1932**



CONTENTS

	Page
WEDNESDAY, NOVEMBER 16, 1932—MORNING SESSION	
Fred M. Wilcox, Chairman, Industrial Commission of Wisconsin	
Preliminary remarks	3
Address of Dr. Leroy U. Gardner, Director of Saranac Laboratory for study of tuberculosis.....	3
 WEDNESDAY, NOVEMBER 16, 1932—AFTERNOON SESSION	
Address of Dr. W. Irving Clark, Medical Director of Norton Company, Worcester, Massachusetts	50
Discussion	60
Continuation of address of Dr. Gardner.....	70
Address of Donald E. Cummings, Assistant Director of Saranac Laboratory for Study of Tuberculosis.....	81
Discussion	103
 THURSDAY, NOVEMBER 17, 1932—MORNING SESSION	
Discussion of addresses of Dr. Gardner and Mr. Cummings...	112
Address of Dr. H. S. Willis, Pathologist of Wm. H. Maybury Sanatorium, Detroit, Michigan	124
Address of J. J. Bloomfield, Sanitary Engineer, U. S. Public Health Service	136
 THURSDAY, NOVEMBER 17, 1932—AFTERNOON SESSION	
Address of Dr. Albert E. Russell, Surgeon, U. S. Bureau of Mines	167
Discussion	188
 APPENDICES	
APPENDIX A.—Biographical sketches	208
APPENDIX B.—List of persons who attended conference.....	213

Dr. Albert E. Russell, Surgeon, U.S.
Bureau of Mines.

180

This man was a slate worker. His history is that he lived in the area of this slate and that for most of his life, aside from farming, that had been his sole occupation. The slate workers in one plant which we observed were not exposed to any quartz. The plant adjacent to this mill had about 3% quartz in the slate it used. You will note in considering slate that the silica content of slate varies in different areas so we can't say that slate has a definite amount of silica without determining it first. The same holds true for granite. There are certain granites which have much less than 35%. I think most of the Vermont granite contains about 35% quartz. You can see the futility of trying to compare X-rays of the lungs from workers in one industry to those of another.

This is an X-ray of a slate miller. You will notice he has a few pulmonary markings, with quite a bit of fine linear fibrosis. We found in the group of slate miller workers one case who had an active tuberculosis. He had been in this slate mill about six years and apparently the tuberculosis was just incidental and not a result of his occupation.

Other slate workers showed hilus thickenings with a few calcifications. Still other slate workers showed a different picture but not extensive pathology.

This is an X-ray of another slate worker showing quite a bit of shadows in the lower portion of the right lung with a few calcifications.

This is the X-ray of a man who had, or has, asbestosis. His occupation was that of cleaning and restoring the asbestos on pipes in one of our government hospitals. He had been working at the trade about six years, I think; and you will see, he has fibrosis of both lungs. The character of the fibrosis is quite a bit different from that of the granite workers. He had disability and the government compensated him for it.

This is a graph showing classification of silicosis. The first classification was made in South Africa. They started out classifying their cases as primary and secondary stages, and as they learned more about the disease they had to add to this classification. They learned that they had a stage earlier than primary and it was called ante-primary.

and as it
they can
that "the
chest and
and then
the at
placed in
case as
basis, the
pensation
This is t

In Am
They can
Dr. Moore
more fib
culosis,
dust. T
advanced
phases.
classifica
mended.
written i
they sai
should b
stages d
brosis th
commend
stages v
first stag
consider

This :
come un
ever, th
stage, b
dicating
the lung
States C
eight ye
masks,
which w
ing in t

which position he held until 1919. He then entered the employment of the United States Public Health Service as a member of the Staff of Service, Hospital No. 26, at Greenville, South Carolina, where he remained in service, specializing in the treatment of tuberculosis during 1920 and 1921. From 1922-23, inclusive, Dr. Russell acted as Assistant Chief of the Tuberculosis Hospital Section of the U. S. Veterans' Bureau. From 1924-30 he was in charge of field studies as to the health of workers in dusty trades for the United States Public Health Service. In 1930 he was appointed as official representative of the United States at the International Silicosis Conference at the League of Nations at Johannesburg, South Africa, of which he acted as Vice-Chairman. In 1930 he became Chief Surgeon of the U. S. Bureau of Mines.

Dr. Russell has made numerous contributions to medical magazines, and has written many reports for the U. S. Public Health Service, covering particularly the field of pulmonary diseases and more specifically those diseases resulting from the inhalation of dust.

LIST OF PERSONS
CONCERNING THE
SYSTEM OF
NOTIFICATION OF
CASES OF
TUBERCULOSIS

Albright, A. A.

Atkinson, F. ...

Auger, R. A. ...

Bailey, Dr. A. L.

Beknap, E. L. M.

Bell, Dr. G. L.

Berlin, Dr. D. S.

Bier, E. J. ...

Blumfeld, J. J.

Britton, Dr. J. A.

Brown, Wm. E.

Clark, Dr. W. Lewis

Cottingham, M. I.

Cummings, D. E.

DeBlos, Lewis

Dickson, L. H.

Dobbins, Dr. Thos.

Doe, Arthur B. ...

Earlywine, J. L. ...

French, G. E.

Ford, Dr. W. B.

California

N. Dakota

Connecticut

Mass

Wisc

and all states

and Congress in 1932 and
1933.

Would the report be made by the State or by the Federal Government?

Appendix B

LIST OF PERSONS WHO ATTENDED CONFERENCE CONCERNING EFFECTS OF DUSTS UPON THE RESPIRATORY SYSTEM- HELD BEFORE THE INDUSTRIAL COMMISSION OF WISCONSIN AT CHICAGO, ILLINOIS, ON NOVEMBER 16-17, 1922.

Name	Address	Profession	Insurance Association
Andrews, Art A.	Chicago, Ill.		Lumbermen's Mutual Casualty Co.
Atkinson, F.	Milwaukee, Wis.		Liberty Mutual Casualty
August, R. A.	Montreal, Wis.		Montreal Mining Co.
Banyai, Dr. A. L.	Milwaukee, Wis.	Physician	Clinic Director, Municipal San.
Belknap, E. L. M. D.	231 W. Wis. Ave. Milwaukee, Wis.	Medical Director	Globe Union Mfg. Co.
Bellis, Dr. G. L.	Wauwatosa, Wis.		Supt. Municipal San.
Berlin, Dr. D. S.	Chicago, Ill.		Augustine Hosp.
Biever, E. J.	Kohler, Wis.	Mech. Engineer	Kohler Company
Bloomfield, J. J.	Washington, D. C.		U. S. Public Health Service
Britton, Dr. J. A.	Chicago, Ill.	Medical Director	International Harvester Co.
Brown, Wm. E.	Milwaukee, Wis.	Lawyer	Allis-Chalmers Mfg. Co.
Clark, Dr. W. Irvine	Worcester, Mass.	Physician	Norton Company Harvard School
Cottingham, M. D.	Kohler, Wis.	Medical Director	Kohler Company
Cummings, D. R.	Saranac Lake, N. Y.	Asst Director	Saranac Lab.
DeBlois, Lewis	New York, N. Y.		
Dickson, L. E.	Chicago, Ill.		Standard Equipment Co.
Dobbins, Dr. Thos.	Kenosha, Wis.		Nash Motors Co.
Doe, Arthur B.	825 N. Broadway, Milwaukee, Wis.	Lawyer	Employers Group
Earlywine, J. L.	Chicago, Ill.		
French, G. E.	Chicago, Ill.		Liberty Mut. Cas.
Ford, Dr. W. B.	Milwaukee, Wis.	Physician	Asst Chief T. B. Div. Health Dept.

Name	Address	Profession	Business Connections	Name
Gandrey, Alfred R.	Milwaukee, Wis.	Lawyer	Ass't City Atty.	Guillerm, P.
Nowak, C. A.	Chicago, Ill.		Ill. Indus. Com.	Guire, Peter, J.
O'Malley, Dr. T. S.	221 W. Wis. Ave., Milwaukee, Wis.	Surgeon		Hahne, Dr. J. I.
Ogden, Dr. C. H.	Chicago, Ill.		Ill. Steel Co.	Hensel, H. G.
Otjen, C. J.	Milwaukee, Wis.	Attorney	Liberty Mutual Ins. Co.	Huth, Gordon
Parrish, L. J.	Milwaukee, Wis.		A. O. Smith Corp.	Ireland, Walter
Pierpont, Dr. D. C.	Ironwood, Mich.		Pickens, Mather Co.	Janzer, W. W.
Reid, M. A.	Hurley, Wis.		Montreal Mining Co. & Odanah Iron Co.	Knutson, R. G.
Reynolds, Paul F.	Cleveland, Ohio		Montreal Mining Co.	Kuesche, B. E.
Ringo, Dr. H. F.	Montreal, Wis.		Montreal Mining Co.	Ruhn, Dr. Lert
Russell, Dr. A. E.	Washington, D. C.	Surgeon	U. S. Public Health Service	Lavich, J. L.
Sander, O. A.	800 Empire Bldg., Milwaukee, Wis.		Employers Mut.	Lotz, Oscar
Sappington, Dr. C. O.	Chicago, Ill.	Consultant Ind. Med.		McIntyre, M. E.
Schlomovist, W. Benj. H.	210 Empire Bldg., Milwaukee, Wis.	Internist		McLaren, Dr. J.
Sexton, James M.	Milwaukee, Wis.		Employers Mut.	Mellum, H. J.
Story, H. W.	Milwaukee, Wis.		Allis-Chalmers Mfg. Co.	Miloslavich, Dr. Edw. L.
Tarrell, L. A.	Milwaukee, Wis.	Attorney		Nelson, Harry A.
Tharinger, E. L.	Milwaukee, Wis.	Pathologist		Wrabetz, Vuyta
Warfield, Dr. Louis M.	Milwaukee, Wis.	Internist		Wright, C. B.
White, Wm. W.	Cleveland, Ohio		Montreal Mining Co.	Zinn, R. F.
Wilcox, F. M.	Madison, Wis.	Chairman	Wis. Indus. Com.	
Wills, H. S.	Detroit, Mich.		Detroit Public Health Dept.	
Goldschmidt, W. J.	Milwaukee, Wis.	Attorney		
Graves, Dr. S. S.	Chicago, Ill.	Medical Director	Ill. Indus. Com.	
Gray, A. W.	324 E. Wis. Ave., Milwaukee, Wis.	Medical	Private Practice	

Name	Address	Profession	Business Connection
Guillert, F.	Chicago, Ill.		Eye Shield Co.
Guire, Peter, Jr.	Chicago, Ill.	Commissioner	Ill. Indus. Com.
Habbe, Dr. J. E.	Milwaukee, Wis.	Röntgenologist	
Hensel, H. G.	Chicago, Ill.	Safety Director	Youngstown Sht. & Tube Co.
Huth, Gordon C.	Chicago, Ill.		Universal Atlas Cement Co.
Ireland, Walter	Kohler, Wis.	Employment Mgr.	Kohler Co.
Janzer, W. W.	Milwaukee, Wis.		Seaman Body Corp.
Knutson, R. G.	Madison, Wis.	Member	Wis. Indus. Com.
Kuechle, B. E.	Box 32, Wausau, Wis.	Insurance	Employers Mut.
Kuhn, Dr. Leroy P.	Chicago, Ill.		Lumbermens Mut. Cas. Co.
Lavich, J. L.	Chicago, Ill.		Lumbermens Mut. Cas. Co.
Lotz, Oscar	324 E. Wis. Ave., Milwaukee, Wis.	Medical	Private Practice
McIntyre, M. D.	Cleveland, Ohio		Pickands, Mather Co.
McLaren, Dr. J. B.	Appleton, Wis.	Physician	Chief Surgeon, Kimberly-Clark Corp.
Mellum, H. J.	Kenosha, Wis.		Nash Motors Co.
Milosavljev, Dr. Edw. L.	Milwaukee, Wis.	Pathologist	
Nelson, Harry A.	Madison, Wis.	Director, Workmen's Comps.	Wis. Indus. Com.
Wrabetz, Voyta	Madison, Wis.	Member	Wis. Indus. Com.
Wright, C. B.	Minneapolis, Minn.	Internist	
Zinn, R. P.	Ironwood, Mich.		Pickands, Mather Co.

Castleman Asbestos File on Allis Chalmers

w/c = with cover letter or memo If DATE = 0, undated

CD-ROM Document #: Allis *I* DATE = *1935*

☐ article ☐ letter from ☐ medical ☐ trade journal

☐ published presentation from conference

☐ published government report ☐ Fed Register notice

☐ government inspection results

☐ unpublished or internal report

☐ unpublished presentation from conference

☐ newspaper article

☐ letter ☒ memorandum

☐ industry warning labels

☐ industry sales literature

☐ industry recommended practices

☐ agenda ☐ minutes ☐ attendee list

legal ☐ deposition ☐ testimony of _____:

☐ other

Woody

*of meeting
attendee list*

MEMORANDUM

February 27, 1935

MR. LINCOLN
VICE PRESIDENT AND GENERAL COUNSEL.

Yesterday I suggested that Dr. Lanza and I would like to go over our current activities and certain recent developments in the field of dust in industry, in a conversation with you, so that all angles of the situation could be considered in connection with our routine activities and special appropriations.

Dr. Lanza has endeavored to summarize his views in the attached memorandum, and it occurs to me, if you have time, that it will be helpful to look this over prior to our conference. We could then no doubt get the benefit of your reactions in a very few minutes, and can perhaps present certain angles of the situation more compactly in this memorandum than could be done in conversation.

I suggested a reply to General Cumming's letter concerning the silicosis research with the Public Health Service that indicated the belief that our participation in this particular activity should be terminated, unless the participation of other agencies might later seem to justify our continuation on a modified basis. The field is really of great importance, and a little stake in the research aspect of it, jointly with the leading Government agency in the field, may actually be quite advantageous and logical in view of the significance of the dust problem to our extensive Group and Industrial interests and in view of the routine services now carried out by the Industrial Health Section primarily for Group policyholders, and largely in this dust field, as indicated by Dr. Lanza's memorandum.

*for abeyance -
Cumming?*

BAW

D. B. Armstrong, M.D.
Third Vice-President.

DE. ARMSTRONG
THIRD VICE PRESIDENT

With reference to our recent conversation, I will endeavor to summarize the present status of the dust question in industry and our relation to it.

Viewed broadly, the problem of dust in industry is the problem of tuberculosis in industry. Conversely, it may be stated that the problem of tuberculosis in this country today is an industrial one. It is true that the death rate from tuberculosis in general has been steadily falling for a number of years. It is also true that the vital statistics in this country and abroad show definitely an inordinate amount of tuberculosis in what might be summarized as the dusty trades.

The specific action of silica dust is well known as is the fact that those exposed to silica dust have an extremely high tuberculosis death rate. In the last few years, there has been an extraordinary number of damage suits brought by employees against employers on the basis of exposure to silica dust so that at the present time it is estimated that these damage suits are well in excess of \$100,000,000. Now there is a very marked tendency of employees who are exposed to dust other than silica dust to bring damage suits against their employers, alleging pulmonary injury and this state of affairs has progressed to a point where whole industries are in a turmoil, handicapped on the one hand by lack of definite knowledge of the action of these dusts on the lungs and on the other by the inadequacy of the law to protect them.

The Metropolitan has had a co-operative agreement with the Public Health Service (formerly with the Bureau of Mines) to carry on dust studies. As the budget was originally set up for the Picher Clinic, the mine operators (Group policyholders) contributed \$16,000 a year, the Government \$8,000 a year, and the Metropolitan \$8,000 a year. Later when the Picher Clinic was turned over to the operators, our relationship with the Public Health Service continued. Both we and the Public Health Service contribute \$8,000 a year for co-operative dust studies.

We have also contributed \$5,000 a year for several years to the Saranac Laboratory for the Study of Tuberculosis for studies on the pathological effects of dusts. Last year, this office was instrumental in getting both the Association of Stock Casualty Companies and the Association of Mutual Casualty Companies each to contribute \$5,000 a year.

The object of these studies, particularly at Saranac, has been to increase our knowledge of the action of silica dust in the body, its relationship to tuberculosis, and the determining of methods of prevention and control of the silica dust hazard. With respect to the Public Health Service, we have been more concerned with formulating accurate and speedy methods of determining whether any given dust is harmful and as a matter of fact, such a technique has been

Dr. Armstrong - 2

Developed by Dr. Sayers and his associates. All kinds of dust have been tested by this method, including limestone, kaolinite, calcite, tripoli, gypsum, soapstone, carborundum, anthracite coal, bituminous coal, precipitator ash, talc, foundry dust, fullers earth, feldspar, asbestos, and others too numerous to mention, but all representing dusts to be found in various plants of our Group policyholders.

Our Industrial Hygiene Section is being continually consulted on the technical aspects of wording of proposed laws, regulations, and codes dealing with the dust problem. For several years, this Section has been engaged in field studies designed to determine the scope, severity, and the hazard from silica dust and other dusts in industrial plants. Most of these studies have been restricted to the plants of Group policyholders in accordance with our declared policy. Where studies have been made on an industry wide basis, they have included plants not covered by Group insurance. I might mention, for instance, the study of the foundries in Wisconsin and the preliminary asbestos study. The Industrial Hygiene Section is now engaged in completing the final study on asbestos and will then take up the ceramic industry in New York State. This latter study will include some of our important Group policyholders such as the General Electric Company, the Carborundum Company, the Corning Glass Company, and others.

So important has this subject become and so great is the interest taken in it that in January of this year, a conference was held at the Mellon Institute in Pittsburgh, to which were invited representatives of eighty-five industries and manufacturing plants, for the purpose of considering what might be done in the way of concerted action dealing with research into the medical aspects of the dust problem, engineering methods for the control of dust hazards, and legal procedures with reference to laws, codes, and regulations. About two hundred representatives of various industries were present at this meeting and a Temporary Committee was formed, consisting of one representative each from the following industries:

- (1) Asbestos, Cork and non-metallic;
- (2) Chemical, Abrasives, Alloy and non-ferrous metals;
- (3) Foundries;
- (4) Glass Sand, Ground Sand and Glass Manufacturers;
- (5) Iron, Steel and Iron Ore
- (6) Limestone, Cement and Gypsum
- (7) Refractories, Ceramics and Clays

The Chairman of this Committee is Mr. Roger A. Hitchins, President of the American Refractories Institute, and the organization work was largely done by Mr. A. W. Sherwood, Vice President of the Owens-Illinois Glass Company, and heading up the glass sand, and ground sand and glass manufacturers.

Last week, Mr. Sherwood and Mr. Hitchins spent an afternoon with me, outlining their plans and endeavoring to formulate their procedure. It was made perfectly plain to me, both by these two gentlemen and others that the industries they

Dr. Armstrong - 3

represent are looking to the Metropolitan for advice and leadership. In this endeavor to set up a co-ordinating agency to deal with dust problems. Mr. Hitchins told me that he had received a letter from Mr. Gentholtz, Counsel for the Republic Steel Company, stating that his Company would not be interested in this Pittsburgh plan unless I were associated with it; also that he had received a letter to similar effect from Mr. E. O. Jones on behalf of the National Foundry Association. I told Mr. Hitchins and Mr. Sherwood that I would be glad to be of any possible help in the way of advice and consultation but that I could not interest myself in this undertaking in any more active way.

Naturally, it is our large Group policyholders who have the most vital interest in this whole dust problem, such as the General Electric Company, the Westinghouse Electric Company, Jones and Laughlin, Pickens-Mather, General Motors, Cleveland Cliffs Iron Company, Union Carbide and Carbon Corporation, the gypsum and cement companies. Since this meeting, I have been consulted by representatives of both the Republic Steel Company and the American Car and Foundry Company, both incidentally, very active prospects for Group insurance.

Appended to this memorandum is a list of the various persons who participated in the Mellon Institute meeting. I mention all this to show how wide-spread and active is the interest of these large manufacturing companies, many of whom are numbered among our Group policyholders.

In a paper presented before the National Tuberculosis Association two years ago, Lanza and Vane estimated on a conservative basis that there were over half a million industrial workers exposed to silica dust and that the problem of family infection due to incident tuberculosis in many instances is a serious one.

I do not know whether this effort to set up a co-ordinating agency to deal with dust problems in industry will be successful or not. I am inclined to think that there are possibly too many divergent interests represented in the group that was brought together at Pittsburgh to get concerted action from them. But there is no question in my mind that many of the largest industries in the country are looking to the Metropolitan as the one place where they can get accurate and impersonal guidance in dealing with the problem that at present is a serious menace to them from an economic standpoint. This is true also of the casualty insurance companies with whose representatives both Dr. McConnell and I have had many conferences in the past two years.

As you well know, we have been extremely careful to keep away from all litigative and legislative matters and there is a pretty general realization now in industry that we cannot be approached on these two phases of the subject. The effect of this has been, I think, to strengthen our position; there is a general feeling that we have no ax to grind and that our motives are in accord with our general policy of being willing to help as far as practicable, in any undertaking that has to do with the conservation of human life.

Dr. Armstrong - 4

With respect to our relationship with the Public Health Service, I can quite understand that it may not be expedient to continue further our present relationship. I do think that we should have some interest in research work in the general field of dust diseases.

February 27, 1935

AJL
A. J. Lanza, M.D.
Assistant Medical Director

1/15/25

Representatives at Silicosis Meeting

Aigeltinger, Arthur,
Southern Wheel Company,
230 Park Avenue,
New York, N. Y.

Allen, C. M.,
Staff Supervisor, Safety & Training,
The American Rolling Mill Company,
Middletown, Ohio.

Allen, W. B.,
Personnel Director,
Simonds Saw and Steel Company,
Lockport, N. Y.

Ames, W. F.,
Manager of Compensation,
Bethlehem Steel Company, Inc.,
Bethlehem, Pa.

Anderson, M. M.,
Aluminum Company of America,
Gulf Building,
Pittsburgh, Pa.

Atwood, F. H.,
Harbison-Walker Refractories Co.,
Farmers Bank Building,
Pittsburgh, Pa.

Avey, Dan M.,
(American Foundrymen's Assoc.)
Ponton Publishing Company,
Cleveland, Ohio.

Ayers, E. M., President,
Ayers Mineral Company,
Zanesville, Ohio.

Banker, E. O., Gen. Supt.,
Penna. Glass Sand Corporation,
Huntingdon, Pa.

Barnum, W. J., Claims Attorney,
Youngstown Sheet & Tube Co.,
Youngstown, Ohio.

Barrett, L. P.,
Jones & Laughlin Steel Company,
201 J. & L. Building,
Pittsburgh, Pa.

Bartholomew, Tracy,
Duquesne Slag Company,
Diamond Bank Building,
Pittsburgh, Pa.

Beal, Geo. D., Ass't. Director,
Mallon Institute,
Pittsburgh, Pa.

Bennett, R. H.,
The Baldon Brick Company,
Canton, Ohio.

Berg, Dr. Chas. F.,
(United Engineering & Foundry)
858 Lockhart Street,
N.S., Pittsburgh, Pa.

Boyer, R. A.,
Central Tube Company,
Ambridge, Pa.

Bidwell, R. E., President,
Abingdon Sanitary Mfg. Co.,
Abingdon, Ill.

Blank, E. F.,
Jones & Laughlin Steel Company,
511 Ross Street,
Pittsburgh, Pa.

Blommers, P.,
H. H. Robertson Company,
2000 Grant Bldg.,
Pittsburgh, Pa.

Bolz, Ralph D.,
Engineering Department,
Pittsburgh Plate Glass Company,
Grant Building,
Pittsburgh, Pa.

Bovard, Dr. Paul G.,
Allegheny Steel Company,
Brackenridge, Pa.

Brandt, A. D.,
Willson Products, Inc.,
Reading, Pa.

Brown, Martin,
(United Zinc Smelting Corporation)
Moundsville, W. Va.

Brown, Vandiver,
Johns-Manville Corporation,
22 East 40th Street,
New York, N. Y.

Burke, J. E., President,
National Ready Mixed Concrete Assoc.,
J. K. Davison & Bro.,
42nd & Davison Streets,
Pittsburgh, Pa.

Campbell, C. C.,
Koppers Company,
Koppers Building,
Pittsburgh, Pa.

Campbell, E. J., Vice Pres.,
Sun Sand Company,
Trayer, W. Va.

Campbell, John,
Eagle Picher Lead Company,
Joplin, Mo. (Box 578)

Carman, C. F., President,
National Silica Works,
Berkeloy Springs, W. Va.

Carr, J. O.,
Allegheny Steel Company,
Brackenridge, Pa.

Chivers, Dr. J. H.,
Medical Dept., Corwith Plant,
Crane Company,
Chicago, Ill.

Chormann, O. I.,
The Pfaudler Company,
Rochester, N. Y.

Clara, R. Linn,
Federal Seaboard Terra Cotta Corp.,
Woodbridge, N. J.

Collord, George L.,
The Shenango Furnace Company,
812 Oliver Building,
Pittsburgh, Pa.

Couchman, A. R.,
(Crushed Stone, Sand & Gravel &
Slag Industries)
1004 Baltimore Trust Bldg.,
Baltimore, Md.

Crotcher, L. H., Ass't. Director,
Mellon Institute,
Pittsburgh, Pa.

Crow, J. A.,
Ayers Mineral Company,
Zanesville, Ohio.

Cronin, Wm. J., Secretary,
Manufacturer's Committee,
Automobile Manufacturers Association,
General Motors Building,
Detroit, Mich.

Cummings, Donald E.,
Saranac Laboratory for the Study
of Tuberculosis,
Edward L. Trudeau Foundation,
Ironwood, Mich.

Curtis, A. J. R.,
Portland Cement Association,
33 West Grand Avenue,
Chicago, Ill.

Davidson, W. W., Personnel Director,
The Babcock & Wilcox Tube Co.,
Bayonne, N. J.

Davies, J. D.,
Mine Safety Appliances Company,
Braddock, Thomas & Meade Streets,
Pittsburgh, Pa.

Davis, C. E.,
The Colorizing Company,
400 Hill Avenue,
Wilkesburg, Pa.

Davison, E. K.,
J. K. Davison & Bro.,
42nd & Davison Streets,
Pittsburgh, Pa.

Dickey, C. W., Manager,
Compensation Division, Service Dept.,
E. I. du Pont de Nemours & Co., Inc.,
Wilmington, Del.

Dodge, J. S., Insurance Manager,
Pittsburgh Plate Glass Company,
Grant Building,
Pittsburgh, Pa.

Donoghue, Thos. K.,
Safety Engineer,
Pittsburgh Plate Glass Co.,
Creighton, Pa.

Dorfan, M. I.,
Post Collecting Division,
Blaw-Knox Company,
Pittsburgh, Pa.

Drinker, Dr. C. K.,
55 Shattuck Street,
Boston, Mass.

Drinker, Dr. Philip,
Harvard School of Public Health,
55 Van Dyke Street,
Boston, Mass.

DuBois, H. B.,
Consolidated Feldspar Company,
P. O. Box 522,
East Liverpool, Ohio.

Dunbar, F. B.,
Pickands, Mather & Company,
Cleveland, Ohio.

Durham, George T.,
Cleveland Cliffs Iron Company,
Union Trust Building,
Cleveland, Ohio.

Ellist, A. H.,
Southern Wheel Company,
220 Park Avenue,
New York, N. Y.

Ellis, E. A.,
Director of Safety & Welfare,
Wheeling Steel Corporation,
Wheeling, W. Va.

Engel, Dr. F. C.,
Welfare Director,
The Corrigan, McKinney Steel Co.,
Cleveland, Ohio.

Filmer, W. T.,
Youngstown Sheet & Tube Company,
Youngstown, Ohio.

Flint, F. C.,
Hazel Atlas Glass Company,
Washington, Pa.

Ford, Karl L.,
Glass Container Association,
19 West 44th Street,
New York, N. Y.

Franzheim, C. H.,
Consolidated Feldspar Corporation,
P. O. Box 205,
Wheeling, W. Va.

Frary, Dr. F. C.,
Research Laboratory,
Aluminum Company of America,
New Kensington, Pa.

Funston, S. R.,
Attapulgus Clay Company,
260 South Broad Street,
Philadelphia, Pa.

Gehrman, Dr. G. H.,
Medical Director, Service Dept.,
E. I. du Pont de Nemours & Co., Inc.,
Wilmington, Del.

Gentholt, A. J., Ass't. Gen. Attorney,
Republic Steel Corporation,
Republic Building,
Youngstown, Ohio.

George, A. H.,
Armstrong Cork Company,
Lancaster, Pa.

Gibson, A. C.,
Spang, Chalfant & Company, Inc.,
Etna, Pa.

Glass, Dr. S. J., Jr.,
Company Surgeon,
American Sheet & Tin Plate Co.,
Frick Building,
Pittsburgh, Pa.

Grau, Karl,
The Babcock & Wilcox Tube Co.,
17th Street & 21st Avenue,
Beaver Falls, Pa.

Greeno, F. L.,
General Refractories Company,
Claysburg, Pa.

Hall, A. B.,
Hazel-Atlas Glass Company,
Wheeling, W. Va.

Hall, J. T.,
Hall China Co.,
East Liverpool, Ohio.
Hare, H. R.,
Safety & Welfare Director,
McKeesport Tin Plate Company,
McKeesport, Pa.

Harrington, Dr. F. B.,
Chief Surgeon,
Weirton Steel Company,
Weirton, W. Va.

Harvey, Dr. A. M.,
Crane Company,
Chicago, Ill.

Harvey, O. F.,
American Car & Foundry Company,
30 Church Street,
New York, N. Y.

Hatch, J. W.,
Abingdon Sanitary Mfg. Co.,
Abingdon, Ill.

Hay, Russel G.,
Ayers Mineral Company,
Zanesville, Ohio.

Heythorn, Dr. Samuel R.,
Singer Memorial Laboratory,
Allegheny General Hospital,
Pittsburgh, Pa.

Hazard, W. G.,
Owens-Illinois Glass Company,
Toledo, Ohio.

Heilman, Dr. M. W.,
Allegheny Steel Company,
Brackenridge, Pa.

Hensel, H. G., Safety Director,
Youngstown Sheet & Tube Company,
2111 Conway Building,
Youngstown, Ohio.

Herr, H. T., Jr.,
J. S. McCormick Company,
25th and A. V. R. R.,
Pittsburgh, Pa.

Herron, Dr. Thos. B.,
Mill Doctor,
Pittsburgh Steel Company,
Monessen, Pa.

Hirth, A. C.,
Williams, Eversman & Morgan,
Board of Trade Building,
Toledo, Ohio.

Hitchins, Roger A., President,
American Refractories Institute,
1608 Walnut Street,
Philadelphia, Pa.

Hodes, Dr. Philip,
University Hospital,
Philadelphia, Pa.

Holbrook, E. A.,
School of Mines,
University of Pittsburgh,
Pittsburgh, Pa.

Hoyt, C. E.,
American Foundrymen's Association,
222 West Adams Street,
Chicago, Ill.

Huggins, G. L.,
General Electric Company,
818 Fulton Building,
Pittsburgh, Pa.

Huth, Gordon C., Manager,
Bureau of Safety and Casualty,
Universal Atlas Cement Company,
208 S. LaSalle Street,
Chicago, Ill.

Johnson, George W.,
Excelsior Supply Company,
34th Street and A. V. R. R.,
Pittsburgh, Pa.

Johnston, Dr. John,
U. S. Steel Corporation,
71 Broadway,
New York, N. Y.

Jones, E. O.,
National Founders Association,
23 South LaSalle Street,
Chicago, Ill.

Jones, F. Robertson,
Assoc. of Casualty & Surety Executives,
1 Park Avenue,
New York, N. Y.

Jones, Dr. R. R.,
Medical Director,
Bell Telephone Company,
416 Seventh Avenue,
Pittsburgh, Pa.

Junkin, Hays M.,
Knox, Strouss & Bragdon,
1725 Juniata Street,
N.S., Pittsburgh, Pa.

Kahl, J. C., Manager,
United Engineering & Foundry Co.,
Vandergrift, Pa.

Keller, J. M.,
Manager of Foundries,
American Car & Foundry Company,
1558 South Vandeventer Avenue,
St. Louis, Mo.

Kelly, Dr. J. C.,
(McKeosport Tin Plate Company)
219 Sixth Avenue,
McKeosport, Pa.

Kennedy, Dr. P. H.,
Youngstown Sheet & Tube Company,
Youngstown, Ohio.

Keplinger, R. B.,
Metropolitan Paving Brick Co.,
Canton, Ohio.

Kross, F. J., President,
F. J. Kross Box Company,
1 28th Street,
Pittsburgh, Pa.

Kuechle, Benjamin,
Employers Mutual Insurance Co.,
Wausau, Wis.

Kurtz, Thos. N.,
North American Refractories Co.,
Oliver Building,
Pittsburgh, Pa.

Lanza, Dr. A. J.,
Assistant Medical Director,
Metropolitan Life Insurance Co.,
1 Madison Avenue,
New York, N. Y.

Leitzel, F. O.,
Blaw-Knox Company,
Pittsburgh, Pa.

Lescallette, R. F.,
Armstrong Cork Company,
Beaver Falls, Pa.

Lindsay, Harry B., Sec.-Treas.,
Grinding Wheel Manufacturers Assoc.,
27 Elm Street,
Worcester, Mass.

Logan, A. E., Mgr.,
Safety & Welfare Department,
American Sheet and Tin Plate Co.,
Frick Building,
Pittsburgh, Pa.

Lohman, H. W.,
United Zinc Smelting Corporation,
Moundsville, W. Va.

Loxterman, H. B.,
Blaw-Knox Company,
Pittsburgh, Pa.

Lutton, C. L., Safety Director,
H. C. Frick Coke Company,
Frick Building Annex,
Pittsburgh, Pa.

McAfee, W. Keith, Pres.,
Universal Sanitary Mfg. Co.,
New Castle, Pa.

McArn, D. G., Works Mgr.,
Allis-Chalmers Manufacturing Co.,
N.S., Pittsburgh, Pa.

McConnoughy, Dr. J. B.,
Aluminum Company of America,
New Kensington, Pa.

McCord, Dr. Carey P.,
Industrial Health Conservancy Lab.,
Cincinnati, Ohio.

McCullough, Dr. J. F.,
301 Jenkins Arcade,
Pittsburgh, Pa.

McKibben, A. H.,
Macbeth-Evans Glass Company,
Charleroi, Pa.

MacLachlan, Dr. W. H. G.,
Medical Arts Building,
Pittsburgh, Pa.

Manor, J. H., Vice President,
Consolidated Feldspar Company,
East Liverpool, Ohio.

Marshall, J. C.,
Union Carbide Company,
Niagara Falls, N. Y.

Mather, S. L., Vice President,
Cleveland Cliffs Iron Company,
Union Trust Building,
Cleveland, Ohio.

Matthews, T. C.,
Pennsylvania Pulverizing Company,
Lewiston, Pa.

Mawhinney, Dr. Mort,
Mercy Hospital,
Pittsburgh, Pa.

Meiter, Dr. E. G., Director,
Industrial Hygiene Laboratory,
Employers Mutual Liability Insurance
Company of Wisconsin,
800 Empire Building,
Milwaukee, Wis.

Meller, H. B., Chief,
Bureau of Smoke Regulation,
Department of Public Health,
Pittsburgh, Pa.

Morfoot, F. G.,
Owens-Illinois Glass Company,
Toledo, Ohio.

Murphy, Walter B.,
Director of Plant Personnel,
Atlantic Refining Company,
3144 Passyunk Avenue,
Philadelphia, Pa.

Nichols, K. W.,
The Floridin Company,
Warren, Pa.

Osmond, Dr. L. H.,
301 Jenkins Arcade,
Pittsburgh, Pa.

Pendergrass, Dr. Eugene P.,
University Hospital,
Philadelphia, Pa.

Peters, Dr. S. E.,
(Mine Doctor, Pgh. Steel)
Masontown, Pa.

Pierce, H. L.,
The M. A. Hanna Company,
Cleveland, Ohio.

Pierce, W. H.,
Mine Safety Appliances Company,
Braddock, Thomas & Meade Streets,
Pittsburgh, Pa.

Pitt, William J.,
DeVilbiss Company,
Toledo, Ohio.

Polster, R. S.,
Vice Pres. in Charge of Operations,
Alan Wood Steel Company,
Conshohocken, Pa.

Poth, J. J., Jr.,
American Radiator Company,
40 West 40th Street,
New York, N. Y.

Powell, A. R.,
Koppers Research Corporation,
Koppers Building,
Pittsburgh, Pa.

Prescott, W. H., Jr.,
Pickands, Mather & Company,
Cleveland, Ohio.

Price, Charles M.,
Scott, MacLeish & Falk,
134 South LaSalle Street,
Chicago, Ill.

Putnam, John F.,
National Silica Company,
Oregon, Ill.

Racine, C. W.
Williams, Eversman & Morgan,
2nd National Bank Bldg.,
Toledo, Ohio.

Randall, Clarence B., Vice Pres.,
Inland Steel Company,
1st National Bank Bldg.,
53 South Dearborn Street,
Chicago, Ill.

Reynolds, Paul F.,
Ogleby, Norton & Company,
The Hanna Building,
Cleveland, Ohio.

Riddell, J. Murray,
Manager of Mines,
The Corrigan, McKinney Steel Co.,
Cleveland, Ohio.

Rose, H. A.,
Pickands, Mather & Company,
Cleveland, Ohio.

Rousseau, A.,
Grinding Wheel Manufacturers Assoc.,
Horton Company,
Worcester, Mass.

Rupert, F. F.,
Mellon Institute,
Pittsburgh, Pa.

Russert, E. J.,
Sharon Steel Hoop Company,
Sharon, Pa.

Saklatwalla, Dr. B. D.,
Vanadium Corporation of America,
Bridgeville, Pa.

Sayers, Dr. R. R.,
U. S. Public Health Service,
Washington, D. C.

Schultz, H. A.,
U. S. Steel Corporation,
71 Broadway,
New York, N. Y.

Schweim, Henry J., Secretary,
Gypsum Association,
211 West Wacker Drive,
Chicago, Ill.

Sherwood, A. W., Vice Pres.,
Owens-Illinois Glass Company,
Toledo, Ohio.

Shipley, R. A.,
National Fireproofing Corporation,
Fulton Building,
Pittsburgh, Pa.

Shoudy, Dr. Loyd A.,
Chief of Medical Service,
Bethlehem Steel Company, Inc.,
Bethlehem, Pa.

Sisson, L. B.,
Mellon Institute,
Pittsburgh, Pa.

Stoffe, Paul R.,
N. & G. Taylor Company,
Cumberland, Md.

Tabor, R. S.,
Titanium Alloy Mfg. Co.,
Niagara Falls, N. Y.

Tanner, P. S.,
United Engineering & Foundry Co.,
Vandergrift, Pa.

Thacher, F. B., Asst. Gen. Mgr.,
Interlake Iron Corporation,
532 S. Michigan Avenue,
Chicago, Ill.

Thomas, D. C., Manager,
Employment & Safety Department,
The Lorain Steel Company,
545 Central Avenue,
Johnstown, Pa.

Thomas, Wm. E.,
Babcock & Wilcox Tube Company,
Beaver Falls, Pa.

Thornton, George, Vice Pres.,
Ottawa Silica Company,
Ottawa, Ill.

Tillotson, E. W., Ass't. Director,
Mellon Institute,
Pittsburgh, Pa.

Titus, W. C., Personnel Director,
Allegheny Steel Company,
Brackenridge, Pa.

Tour, Sam, Exec. Sec.,
Non-Ferrous Foundry Association for
Industrial Recovery,
47 Fulton Street,
New York, N. Y.

Valentin, Dr. A. C.,
Henry Disston & Sons, Inc.,
Philadelphia, Pa.

Van Hagan, H. H.,
Certain-Teed Products Corporation,
Beaver & Military Roads,
Buffalo, N. Y.

Vessey, S. C.,
W. W. Sly Manufacturing Company,
Cleveland, Ohio.

Voss, J. A.,
Director of Industrial Relations,
Republic Steel Corporation,
Republic Building,
Youngstown, Ohio.

Waters, T. C.,
Pennsylvania Pulverizing Company,
Lowiston, Pa.

Watson, A. L.,
Koppers Company,
Koppers Building,
Pittsburgh, Pa.

Weber, G. J.,
Assoc. of Mfrs. of Chilled Car Wheels,
1847 McCormick Building,
Chicago, Ill.

Weeks, H. J., Manager,
Employment, Safety & Welfare Department,
American Steel & Wire Company,
Rockefeller Building,
Cleveland, Ohio.

Woidlein, E. R., Director,
Mellon Institute,
Pittsburgh, Pa.

Weil, Dr. G. C.,
Mercy Hospital,
Pittsburgh, Pa.

Williams, Marshall,
American Bridge Company,
Frick Building,
Pittsburgh, Pa.

Williamson, George H.,
J. K. Davison & Bro.,
42nd & Davison Streets,
Pittsburgh, Pa.

Wilson, L. C., Works Mgr.,
Reading-Pratt & Cady Company,
Reading, Pa.

Woods, W. J.,
Pennsylvania Pulverizing Company,
Lowiston, Pa.

Woody, G. V., Manager,
Pittsburgh District,
Allis-Chalmers Mfg. Company,
Koppers Building,
Pittsburgh, Pa.

Wychgal, Dr. James H.,
American Steel & Wire Company,
Rockefeller Building,
Cleveland, Ohio.

Yanson, C. R., Secretary,
Code Authority, Sandstone Industry,
1125 Builders Exchange Building,
Cleveland, Ohio.

Yant, William P.,
Bureau of Mines,
4800 Forbes Street,
Pittsburgh, Pa.

Yoder, Ray,
Standard Steel Works Company,
Burham, Mifflin Co., Pa.

MEMORANDUM

February 27, 1935

MR. LINCOLN
VICE PRESIDENT AND GENERAL COUNSEL.

Yesterday I suggested that Dr. Lanza and I would like to go over our current activities and certain recent developments in the field of dust in industry, in a conversation with you, so that all angles of the situation could be considered in connection with our routine activities and special appropriations.

Dr. Lanza has endeavored to summarize his views in the attached memorandum, and it occurs to me, if you have time, that it will be helpful to look this over prior to our conference. We could then no doubt get the benefit of your reactions in a very few minutes, and can perhaps present certain angles of the situation more compactly in this memorandum than could be done in conversation.

I suggested a reply to General Cumming's letter concerning the silicosis research with the Public Health Service that indicated the belief that our participation in this particular activity should be terminated, unless the participation of other agencies might later seem to justify our continuation on a modified basis. The field is really of great importance, and a little stake in the research aspect of it, jointly with the leading Government agency in the field, may actually be quite advantageous and logical in view of the significance of the dust problem to our extensive Group and Industrial interests and in view of the routine services now carried out by the Industrial Health Section primarily for Group policyholders, and largely in this dust field, as indicated by Dr. Lanza's memorandum.

In abeyance?
Cumming?

[Signature]
D. B. Armstrong, M.D.
Third Vice-President.

Mr. J. C. Lanza
Assistant Medical Director

It would be perfectly sound to approach industrial companies, where silica hazard is present, with the thought of selling annuities for those exposed.

However, the cost of an annuity bearing a reasonable relationship to pay is pretty high at age 55 and much higher at 50.

An annuity payable at 60 costs about two-thirds more than annuity at 65. We have a devil of a time to get employers to put up the necessary fund for Group Annuity Plans which have a normal retirement age of 65, so you can see it would be some sales job to get the money for an age 50 plan.

All in all, while the idea is sound enough, I question its salability unless some employer with the silica hazard is particularly sentimental about it.

If you want any actual figures, please advise.

E. C. Lanza
.....

Nov. 1, 1935

MEMORANDUM

October 11, 1935

THE PRESIDENT:

Dr. Gardner was in to see Dr. Lanza and me several days ago, concerning the possibility of our renewing our appropriation for his silicosis work next year. We have already contributed \$30,000 to this research.

I frankly and completely discouraged any further participation in silicosis research on our part - hence this statement from Dr. Gardner, without the usual request!

Their work will continue and not suffer a great deal from our withdrawal, for other sources of support, as Dr. Gardner says, have been developed. We shall of course continue practical working cooperation with their laboratory, through Dr. Lanza and our own Industrial Hygiene Section.

I have also written Dr. Gardner, asking for a summary report on the results of the work financed by us - as a matter of record.

D. B. Armstrong, M.D.
Third Vice-President.