

BOARD OF DIRECTORS MEETING

New York, N.Y.

December 3, 1956

A meeting of the Board of Directors of the Lead Industries Association was held on Monday, December 3, 1956, at the office of the Association.

PRESENT

Andrew Fletcher, Chairman
Jean Vuillequez
K. C. Brownell
J. D. Bradley
K. W. Green
Clarence Glass

J. A. Martino
F. S. Mulock

REPRESENTING

St. Joseph Lead Co.
The American Metal Co. Ltd.
American Smelting and Refining Co.
The Bunker Hill Co.
Electric Storage Battery Co.
International Smelting & Refining Co.
(Anaconda Sales Co., Agents)
National Lead Co.
United States Smelting Refining & Mining Co.

OTHERS

S. D. Strauss	American Smelting and Refining Co.
D. A. Merson	National Lead Co.
C. M. Chapin, Jr.	St. Joseph Lead Co.
C. R. Ince	St. Joseph Lead Co.

Robert L. Ziegfeld, Secretary-Treasurer

The meeting was called to order at 3:05 P.M.

The minutes of the previous meeting of April 24, 1956 were approved.

CHAIRMANSHIP OF TECHNICAL STEERING COMMITTEE

The secretary announced that Dr. A. J. Phillips, chairman of the Technical Steering Committee had tendered his resignation as chairman but would continue to serve actively on the Committee. He explained that Dr. Phillips had accepted the chairmanship originally for a year and that he had now served nearly two years. The president recommended that the resignation be accepted and that the Technical Steering Committee be empowered to appoint its own chairman. The Board concurred in this recommendation.

MEMBERSHIP

RESIGNATIONS - The Board then proceeded to the consideration of the following resignations from the Association:

Division Lead Co.	Metro Smelting Co.
Johnston Foil Manufacturing Co.	United American Metals Corp.

The president recommended acceptance of the resignations in which the Board concurred.

POTENTIAL MEMBERS - The secretary then distributed a list of potential members among mining companies, cable companies and storage battery companies. (Attached as

December 3, 1956

Exhibit "A.") It was felt that efforts should be made to solicit the membership of these companies either by the secretary or by any directors individually who might have close contacts with the potential members.

NOMINATING COMMITTEE

With the approval of the Board, the president then appointed the following as a Nominating Committee to nominate directors for election at the next annual meeting in April, 1957:

S.D. Strauss, Chairman
C.R. Ince
W.J. Welch
H.F. Jones
R.A. Gardiner, Jr.

American Smelting and Refining Co.
St. Joseph Lead Co.
National Lead Co.
E.I. duPont de Nemours & Co.
Gardiner Metal Co.

BUDGETS -- 1957

The 1957 Association budgets were next considered. The president asked whether all had read the data submitted to them with the agenda on November 23 and whether there were any questions or clarifications needed. As there were none, motion was regularly moved, seconded and carried that the budgets be accepted as recommended (attached as Exhibit "B").

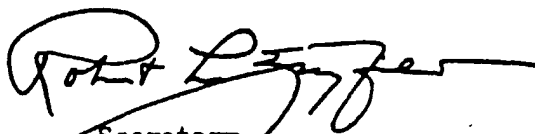
PROGRAM FOR 1957 MEETING

The president explained that he and the secretary had prepared a suggested program for the next annual meeting April 24-25, 1957, and which is attached as Exhibit "C." He further explained that none of the suggested speakers had been approached and that this was merely to get an early start in arranging a program. He asked that each director look over the suggestions and then communicate to the secretary any further suggestions or opinions he might have with respect to the program.

L. I. A. ACTIVITIES

The president requested the secretary to bring the Board members up to date on the activities of the Association since his last report and the secretary did so. (Attached as Exhibit "D").

Meeting adjourned at 3:35 P.M.


Secretary

LIAC0566

Board of Directors Meeting Minutes

MEMBERSHIP POSSIBILITIES

Exhibit "A"

December 3, 1956

Non-Member Lead Mining Companies

Combined Metals Reduction Co.

Idarado Mining Co.

Lucky Friday Mining Co.

New Jersey Zinc Co.

Ozark-Mahoning Mining Co.

Rico Argentine Mining Co.

Sidney Mining Co.

Triumph Mining Co.

Approximate Subscriptions

\$400

700

?

800

300

300

200

300

Total

\$3,000 +

Member Mining Companies

American Zinc Lead & Smelting Co.

Day Mines, Inc.

Hecla Mining Co.

New Park Mining Co.

Pend Oreille Mines & Metals Co.

Shattuck Denn Mining Corp.

Sunshine Mining Co.

United Park City Mines Co.

Non-Member Cable Companies

American Steel & Wire Co.

Anaconda Wire & Cable Corp.

General Cable Corp.

General Electric Co.

Kennecott Wire & Cable Corp.

John H. Roebling's Sons Co.

Simplex Wire & Cable Corp.

Member Cable Companies

The Okonite Co.

Phelps Dodge Copper Products Corp.

Western Electric Co.

Non-Member Battery Companies

Delco-Remy Div., General Motors Corp.

Electric Auto-Lite Co.

Member Battery Company

The Electric Storage Battery Co.

LIAC0517

N 637.01

LEAD INDUSTRIES ASSOCIATION

DETAILED BUDGET DATA AND RECOMMENDATIONS, 1956-1957

On the following pages you will find detailed information with respect to the various activities and budgets of the Association in support of the summary data attached to the agenda for the Board meeting on December 3, as follows:

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ORDINARY FUND
INCLUDING HEALTH AND SAFETY AND PENSION FUNDS

ORDINARY FUND - The Association's accounts during 1956 in the Ordinary Fund were complicated by the separation of the Metal Powder Association from L.I.A. on July 1 and the moving of the Association's offices.

A deficit of approximately \$3,500 is expected in the Ordinary Fund in 1956, most of this accounted for by the direct moving expenses and the cost of new furniture, fixtures and equipment, such as shelving made necessary thereby, and will therefore be nonrecurring. However, the move has resulted in a saving of rent of approximately \$1.00 per square foot in the future as compared with what it would have been had we stayed in the Graybar Building.

The income of this Fund is \$8,000 less than anticipated because of the separation of M.P.A. However, expenses were curtailed about \$7,000 to compensate for most of this.

The budget for the Ordinary Fund recommended for 1957, \$84,000, is \$15,500 less than approved for 1956, approximately equal to the loss of revenue formerly derived from the M.P.A. It is recommended that the amount raised by subscriptions from members be \$79,500 in 1957, a slight increase over 1956, the balance to be transferred from the Industry Development Fund and applied to the cost of publishing "Lead" magazine.

HEALTH AND SAFETY - For the Health and Safety Fund, a budget of \$20,000 is recommended for 1957, which is equal to the actual expenses of this Fund in 1956 and \$4,000 less than the amount approved for this Fund in 1956. No change in the nature of these important activities is anticipated. The research on childhood lead poisoning supported by us at Boston is continuing at little current cost to us through a new arrangement we have made with the Massachusetts General Hospital. A great amount of our time is now directed toward uniform labeling laws to prevent hardship on our members. Also the Subcommittee on Lead of the American Standards Association, of which our Health and Safety Director is chairman, has approved an increase in the maximum acceptable concentration of lead in air which will materially lessen engineering problems of our members. This is of course subject to final approval of A.S.A.

PENSION - The accrued liability for the Pension Fund in 1956 was \$9,500 of which approximately \$2,500 came from interest on the savings accounts of this Fund and the balance transferred from the Ordinary Fund. For 1957 our insurance brokers estimate a smaller accrued liability in the neighborhood of \$7,000 of which again approximately \$2,500 would be received from interest on savings accounts and the balance transferred from the Ordinary Fund.

Subscriptions to these funds are made by all members of the Association in accordance with the basis outlined in the Association's By-Laws.

BUDGET DATA

ORDINARY FUND

ESTIMATED YEAR 1956 AND RECOMMENDED 1957

	1956 Estimated <u>Expenditures</u>	1957 Recommended <u>Expenditures</u>
Rent and Light	\$10,300	\$11,500
Furniture, Fixtures and Equipment	1,405	500
Salaries	44,670	42,000
Social Security Taxes	725	650
Travel Expense	4,600	4,000
"Lead"	11,500	11,000
Printing	500	500
Mailing	1,500	1,500
Office Supplies	2,200	1,500
Association Dues	150	150
Entertainment and Luncheons	600	600
Meetings	1,300	1,500
Telephone and Telegraph	1,400	1,500
Books and Subscriptions	400	500
Illustrations	100	100
Moving Expenses	1,380	-
Consulting Fee	450	-
Miscellaneous Expense	<u>2,220</u>	<u>2,000</u>
	85,400	79,500
Transfer to Pension Fund	<u>7,200</u>	<u>4,500</u>
	\$92,600	\$84,000
<u>Receipts from:</u>		
Subscriptions	\$76,500	\$79,500
Metal Powder Association	8,600	-
"Lead in Modern Industry"	100	-
Industry Development Fund "Lead"	<u>4,500</u>	<u>4,500</u>
	\$89,100	\$84,000
Balance:	Jan. 1, 1956 <u>51,000</u>	Jan. 1, 1957 <u>47,500</u>
	\$140,100	\$131,500
Less: Expenditures	<u>92,600</u>	<u>84,000</u>
Estimated Balance:	Jan. 1, 1957 47,500	Jan. 1, 1958 \$ 47,500

BUDGET DATA

HEALTH AND SAFETY DIVISION

ESTIMATED YEAR 1956 AND RECOMMENDED 1957

	<u>1956</u> <u>Estimated</u> <u>Expenditures</u>	<u>1957</u> <u>Recommended</u> <u>Expenditures</u>
Salaries	\$15,800	\$16,000
Social Security Taxes	200	200
Travel Expense	1,200	1,200
Printing	310	100
Office Supplies	150	150
Mailing	250	250
Telephone and Telegraph	125	125
Books and Subscriptions	350	350
Research and Research Materials	150	500
Meetings	15	25
Association Dues	100	100
Illustrations	200	200
Entertainment and Luncheons	400	400
Miscellaneous Expense	620	400
	<u>\$19,870</u>	<u>\$20,000</u>

Receipts from:

Subscriptions		20,000		20,000
Balance:	Jan. 1, 1956	<u>27,500</u>	Jan. 1, 1957	<u>28,000</u>
		47,500		48,000
Less: Expenditures		<u>19,870</u>		<u>20,000</u>
Estimated Balance:	Jan. 1, 1957	\$27,630	Jan. 1, 1958	\$28,000

BUDGET DATA

PENSION FUND

ESTIMATED YEAR 1956 AND RECOMMENDED 1957

<u>Receipts from:</u>	<u>1956</u>	<u>1957</u>
Transfer from Ordinary Fund	\$7,000	\$4,500
Interest	<u>2,500</u>	<u>2,500</u>
	\$9,500	\$7,000
Balance:	Jan. 1, 1956	Jan. 1, 1957
	<u>79,000</u>	<u>88,500</u>
Estimated Balance:	Jan. 1, 1957	Jan. 1, 1958
	\$88,500	\$95,500

INDUSTRY DEVELOPMENT FUND

Two years ago this Fund was established by the sellers of primary pig lead with the thought that this group should bear more of the expense of sales promotion and research for the industry. A fund of \$57,000 was subscribed in 1956 at a rate of 7¢ per ton of pig lead sold. Of this \$52,000 was actually earmarked for Association activities in 1956.

In June of 1956 the Industry Development Committee decided in principle that in the future this Fund should bear the entire cost of sales promotion and research efforts for the industry. It has, therefore, recommended total subscriptions of \$115,000 to this Fund for 1957 which will be at the rate of approximately 15¢ per ton of pig lead sold. The Committee has recommended allocation of this Fund as follows:

Metallic Lead Products Division	\$35,000
Pigments and Chemicals Division	20,500
Ceramic Fund	30,000
Radiation Shielding Fund	5,000
Ordinary Fund (for publication of "Lead")	4,500
Contingencies	<u>20,000</u>
	\$115,000

This will leave a balance in the Industry Development Fund of \$15,000, accumulated over the last two years, in addition to the Contingency Fund which is set up to provide for research on cable sheathing, or other research which is under consideration by the Technical Steering Committee at this time but which is not ready to report as yet.

BUDGET DATA

ESTIMATED YEAR 1956 AND RECOMMENDED 1957

	1956 Estimated <u>Expenditures</u>	1957 Recommended <u>Expenditures</u>
Metallic Lead Products Division	\$23,000	\$35,000
Pigments and Chemicals Division	9,500	20,500
Ceramic Fund	15,000	30,000
Radiation Shielding Fund	-	5,000
Ordinary Fund (for publication of "Lead")	4,500	4,500
Contingencies	<u>-</u>	<u>20,000</u>
	\$52,000	\$115,000

Receipts from:

Subscriptions	57,000		115,000
Balance:	Jan. 1, 1956	Jan. 1, 1957	15,000
	<u>10,000</u>		<u>120,000</u>
	67,000		
Less: Transfers	<u>52,000</u>		<u>115,000</u>
Balance:	Jan. 1, 1957	Jan. 1, 1958	\$15,000
	\$15,000		

METALLIC LEAD PRODUCTS DIVISION

The activities of this Division have for many years been directed towards the greater use of lead in building construction, primarily plumbing, in chemical construction, and more recently towards work on lead base solders.

BUILDING CONSTRUCTION

Until this year our efforts in this field have been largely directed towards the master and journeyman plumber. Our field man has addressed meetings of these groups, worked with city officials on code matters, encouraged broader apprentice training in lead work, and we have published "Plumber's Forum" twice a year for circulation throughout the plumbing industry.

At the beginning of 1956, however, it was felt that greater emphasis should be placed on selling the architect and builder on the advantages of lead, broadening the work to include not only plumbing but other uses of lead in building construction. We were authorized to add an architect to our staff to make these contacts. However, because of uncertainties regarding the future financing of this program, we have refrained from engaging an architect and have had our present plumbing field man make more contacts among architects and builders. We also issued two Building Construction Bulletins, designed to interest architects and builders in using more lead and giving them specifications and helpful data. These were circulated to some 30,000 architects and builders. We have also contracted for exhibit space at the annual convention of the National Association of Home Builders to be held in January, 1957, feeling that this will help us to determine the proper approach to this industry.

Our experience in 1956 leads us to believe that it will be unnecessary to add an architect to our staff in lieu of which we feel that insertion of catalogs on the various uses of lead in building construction in Sweets Catalog for 1958 should be considered, these catalogs to be prepared during 1957. Sweets Catalog is generally considered the "Bible" of architects and builders and nothing on metallic lead appears in Sweets, to our knowledge, except several catalogs on lead X-ray room linings. Continuation of our Construction Bulletins should also be considered to reach the architect and builder at frequent intervals. Since "Plumbers' Forum" is now only on a twice a year publication basis, we feel that the cost of over \$3,000 is not justified and that discontinuance of this publication should be considered. In that event, we would recommend that our magazine, "Lead" be circulated to the key people on our "Plumbers' Forum" mailing list. We also recommend that we continue, as much as possible, our contacts with the plumbing industry and city officials and our exhibit at the annual meeting of the National Association of Plumbing Contractors. Also, we should continue our encouragement of proper apprentice training in lead work and the distribution of our text book 7,500 copies of which have been sold to date and from which we expect eventually to recover our entire cost.

CHEMICAL CONSTRUCTION

Our efforts to encourage the use of lead in chemical construction have consisted largely of gathering technical information on how lead is used in actual installations, circulating this information to our members and to some 1500 people engaged in chemical construction and to schools of chemical engineering, and preparing articles on this subject for publication in chemical engineering trade papers, reprints which are regularly obtained and circulated to the lists of people already interested. We do not recommend any change in this program in 1957.

METALLIC LEAD PRODUCTS DIVISION

SOLDER

This work has largely consisted of preparing a Manual on Soldering which is to be published by the American Welding Society. It has been conducted through a committee of representatives of member companies who make solder, under the chairmanship of a member of our staff. This work is progressing nicely and it is expected that the Committee's draft of the manual will be completed sometime in 1957. No change is recommended in this work.

BUDGET

In 1956 a budget of \$40,000 was approved for this Division. No change in this amount is recommended for 1957. The Advisory Committee of the Metallic Lead Products Division recommends adoption of a budget not to exceed \$40,000, the distribution of that part of this money applying to "Plumbers' Forum," Construction Bulletins, Sweets Catalog, "Lead," and publicity to be determined through consultation by the secretary with the advertising managers of lead manufacturing members. Budget data follows:

BUDGET DATA

ESTIMATED YEAR 1956 AND RECOMMENDED 1957

	1956 Estimated Expenditures	1957 Recommended Expenditures
Salaries	\$10,570	\$11,500
Social Security Taxes	180	350
Travel Expense	6,000	6,000
Mailing	300	350
Association Dues	170	250
Entertainment and Luncheons	800	1,000
Meetings	450	600
Conventions and Exhibits	3,500	4,500
Telephone and Telegraph	100	200
Illustrations	300	300
Office Supplies	75	100
Printing	1,000	1,000
Books and Subscriptions	175	200
Consulting fee	250	-
Apprenticeship Contest	440	450
Building Construction Bulletin	6,000	-
PLUMBERS' FORUM	3,100	-
Sweets Catalog	-	()
"Lead"	-	(13,000)
Publicity	-	()
Miscellaneous Expense	130	200
	<u>\$33,540</u>	<u>\$40,000</u>
Receipts from:		
Subscriptions	\$ 6,400	-
"Lead Work for Modern Plumbing"	900	500
Transfer from Industry Development Fund	23,000	35,000
	<u>30,300</u>	<u>35,500</u>
Balance: Jan. 1, 1956	25,400	22,000
	<u>55,700</u>	<u>57,500</u>
Less: Expenditures	33,540	40,000
Estimated Balance: Jan. 1, 1957	\$22,160	\$17,500

PIGMENTS AND CHEMICALS DIVISION

In recent years the activities of this Division have been devoted primarily to the promotion of lead pigments, particularly red lead, in metal protective paints.

This work has been going forward for some 15 years, originally designed to combat the inroads on the use of red lead paint by the Navy during the war. It is believed that the work has been quite successful as evidenced by at least a partial return to the use of red lead by the Navy and by the fact that the Navy now has under consideration still further expansion in its use of red lead. Promotional efforts in that direction should not be relaxed.

However, the huge new Federal Highway Construction Aid Program offers a substantially enlarged potential market which should not be ignored. For example, ENGINEERING NEWS RECORD magazine has estimated an annual consumption of structural steel, most of which must be painted, in the highway program for the next 13 years at approximately two and one-half times what it has been in the past. The majority of state highway departments are now using red lead or red lead base paints, although many of these have alternate specifications permitting other materials. It is certainly conceivable that with this greatly expanded market competitors will attempt to get a greater share.

The Red Lead Technical Committee has recommended a slightly enlarged program for 1957 in order to concentrate more intensively on the highway program. The principal changes recommended in our activities are that during 1957 at least two Red Lead Technical Letters should be directed specifically at the painting of highway structures and that these should be supported by a modest advertising campaign of six one-page insertions in the magazine, ROADS AND STREETS, which will reach a large number of interested people not now on our mailing list to receive the Red Lead Technical Letters.

Early in 1956 we retained the services, as an additional consultant, at a cost of \$100 per month, plus expenses, of a man who formerly was head of the Navy paint work at the Norfolk Naval Shipyard, in order to maintain closer liaison with the Navy. It is felt that in 1957 we could dispense with his services and maintain these contacts through our regular consultant, Dr. L. L. Carrick, members of the Red Lead Technical Committee and our own staff. This would partially compensate for increased activities in the direction of highway construction.

In 1956 a budget of \$15,000 was approved for this Division's activities of which \$9,500 came from the Industry Development Fund. A budget of approximately \$20,500 would support the program recommended by the Committee for 1957, as detailed on the attached sheet along with 1956 expenditures.

BUDGET DATA

PIGMENTS AND CHEMICALS DIVISION
ESTIMATED YEAR 1956 AND RECOMMENDED 1957

	<u>1956</u> <u>Estimated</u> <u>Expenditures</u>	<u>1957</u> <u>Recommended</u> <u>Expenditures</u>
Consulting Fees	\$ 2,350	\$ 1,500
Salaries	6,800	4,000
Social Security Taxes	175	-
Travel Expense	2,000	1,000
Telephone and Telegraph	50	100
Meetings	125	200
Entertainment and Luncheons	50	200
Printing	1,800	2,500
Illustrations	100	100
Research and Research Material	1,100	1,500
Books and Subscriptions	25	50
Dues	75	100
Mailing	500	750
"Lead"	2,600	2,400
Office Supplies	75	100
Advertising Space	-	3,800
Advertising Production	-	500
Publicity	-	1,500
Miscellaneous Expense	100	200
	<u>\$17,925</u>	<u>\$20,500</u>

Receipts from:

Subscriptions	4,100	-
Transfer from Industry Development Fund	9,500	20,500
	<u>13,600</u>	<u>20,500</u>
Balance:	Jan. 1, 1956	Jan. 1, 1957
	8,038.73	3,700
	<u>21,638.73</u>	<u>24,200</u>
Less: Expenditures	<u>17,925.00</u>	<u>20,500</u>
Estimated Balance	Jan. 1, 1957	Jan. 1, 1958
	\$ 3,713.73	\$ 3,700

CERAMIC FUND

In the summer of 1954, at the suggestion of the Technical Steering Committee of the Lead Industries Association, and with the approval of the Industry Development Committee, the Ceramics Technical Committee, composed of representatives of members who sell lead products to the ceramic industries, was formed to investigate the possibility of a program to improve lead's position in these industries and to recommend a program of activities.

As a result, it was decided to engage the services of a competent ceramist as consultant to the Association, to prepare a Manual which would incorporate all the present technical knowledge that the Committee could gather on the use of lead in ceramics, and to distribute this Manual as widely as possible throughout the ceramic industries.

Dr. John H. Koenig, director, School of Ceramics, Rutgers University, was retained as consultant to serve as chairman of the Committee. The Manual was prepared, printed and is being distributed to some 4,000 or 5,000 people in the ceramic industries.

A budget of \$18,000 was provided for this work to carry it to the end of 1956. The funds were appropriated from the Industry Development Fund.

Now that the Manual has been prepared and is being printed, the Ceramics Technical Committee met to determine what steps should next be taken to further the use of lead in ceramics. It recommended four activities, to be started in 1957, as follows:

1. RESEARCH FELLOWSHIPS ON SPECIFIC APPLICATIONS

The Committee recommended establishment of three research fellowships at three different schools of ceramics, as follows:

a. To review and complete the properties of lead compounds themselves, which were found to be incomplete in preparing the Manual, and to evaluate lead as a component of typical ceramic bodies. The latter is to investigate added strength imparted by lead to ceramic bodies at lower temperatures in a shorter time. Preliminary work at Rutgers indicated this possibility and the Committee felt that it should be immediately pursued as there is great interest in the ceramic industries in low fluxing of ceramic bodies at this time. It was recommended that this fellowship be assigned to the School of Ceramics at Rutgers University.

b. To investigate the development of lead enamels for low firing on steel and the effect on color. This was felt advisable because of the experimental use at this time of low firing enamels for steel, some of which contain lead. It was suggested that this fellowship be assigned to the School of Ceramics at the University of Illinois, which is preeminent in the field of porcelain enameling.

c. To evaluate lead as a component of typical glazes, to be assigned to the School of Ceramics at either Ohio State or Alfred University.

The Committee felt that each fellowship would cost approximately \$2,500 per year and that each should be established for a period of at least three years, starting with the school year in the fall of 1957.

CERAMIC FUND

This phase of the program has been considered by the Technical Steering Committee which recommends approval.

2. TRADE PAPER ADVERTISING

The Committee recommends that a technical trade paper advertising campaign setting forth the properties and merits of lead compounds for use in ceramics should be started with one page monthly advertisements in CERAMIC INDUSTRY magazine and the BULLETIN of the AMERICAN CERAMIC SOCIETY. There are several other publications in the field but the Committee feels that for the time being this would give adequate coverage and would supplement the advertising of members which is directed towards promoting the use of their own particular brands.

3. SUPPLEMENTS TO THE MANUAL ON CERAMICS

The Manual, which has been prepared, was purposely printed in loose-leaf form so that it might be brought up to date with supplements to fill in any information lacking at the time of original preparation and to add information dealing with new technical developments since the original publication. The Committee feels that because of developments which have taken place recently and because of certain lacking information, approximately eight pages of supplemental material should be prepared, printed and distributed during 1957.

4. PERMANENT EXHIBITS AT CERAMIC SCHOOLS

The Committee feels that permanent exhibits at most of the leading schools of ceramics will help to keep lead before both the professors and students and to educate them to the basic properties and advantages of lead in ceramics. It recommends that from 15 to 18 such exhibits be prepared during 1957.

BUDGET FOR 1957

The foregoing seems to be a well rounded and realistic program directed at an industry which is a potential user of substantially more lead than it is now using, estimated by the Ceramics Technical Committee at from two to four times present consumption of about 25,000 tons per year. Visits to ceramic plants in the field indicate that there are already new developments which will lead to the consumption of more lead by that industry but there is also strong competition. Because lead may be toxic and because it frequently adds to the cost of the ceramist's raw material, although reducing his manufacturing costs and improving his product, there is constant effort by the ceramic industry to find substitutes that will do the job. We believe that a strong effort to promote lead will successfully combat this competition if undertaken promptly and intensively enough. A budget to promote the recommended activities would amount to \$30,000 for the year 1957, as detailed on the attached sheet.

BUDGET DATA

CERAMIC FUND
ESTIMATED YEAR 1956 AND RECOMMENDED 1957

	<u>1956</u> <u>Estimated</u> <u>Expenditures</u>	<u>1957</u> <u>Recommended</u> <u>Expenditures</u>
Consulting Fees	\$ 1,300	\$ 2,200
Salaries	3,000	4,000
Travel Expense	300	1,000
Office Supplies	50	200
Meetings	100	200
"Lead"	1,000	1,000
Books and Subscriptions	25	50
Telephone and Telegraph	70	100
Entertainment and Luncheons	25	250
Research	-	7,500
Advertising Space	-	5,500
Advertising Production	-	1,000
Publicity	-	1,500
College Exhibits	-	3,000
Manual Supplements	-	2,000
Manual	10,500	-
Miscellaneous Expense	400	500
	<u>\$16,770</u>	<u>\$30,000</u>

Receipts from:

Transfer from Industry Development Fund	15,000.00	30,000
Balance:	Jan. 1, 1956	Jan. 1, 1957
	<u>1,806.34</u>	<u>35</u>
	16,806.34	30,035
Less: Expenditures	<u>16,770.00</u>	<u>30,000</u>
Estimated Balance:	Jan. 1, 1957	Jan. 1, 1958
	\$ 36.34	\$ 35

RADIATION SHIELDING

About a year ago the Technical Steering Committee and Industry Development Committee recommended to the Board a program on lead radiation shielding to cost about \$18,000 per year. It consisted essentially of assigning a staff member with "Q" clearance full time to gather all available information about how lead is or should be used for atomic shielding, and disseminating this information as widely as possible throughout the atomic industry. To be sure that all information was technically correct, the services of a recognized consultant in this field were provided to guide the staff member.

Action on this program was tabled at the Board meeting in April, 1956, at the request of Mr. J. A. Martino, who wanted an opportunity to discuss it further with his director of research, Dr. Alex Stewart. Subsequently Dr. Stewart wrote the secretary (see copy attached) restating his views that such a program would be desirable, but some differences of opinion have since developed in other directions.

Consequently the matter was again referred to the Technical Steering Committee on November 9, 1956. This Committee now formally recommends a modified program which would cost about \$5,000 a year at the start. This program would have a staff member "Q" cleared and gather information part time on the use of lead as a shielding material. It does not provide for a consultant since the information gathered would not be disseminated at this time but would be used to answer inquiries on the subject which the Association cannot avoid getting.

It would be the intention to review this program after it had been in operation for a while to determine whether a program to put the information gathered to broader use would be desirable.

RECOMMENDED BUDGET, 1957

Expenditures:

Salaries	\$ 3,500
Travel Expense	1,000
Miscellaneous Expense	<u>500</u>

Total Expenditures	\$ 5,000
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Receipts

From Industry Development Fund	\$ 5,000
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COPY

EXHIBIT "A"

NATIONAL LEAD COMPANY

111 Broadway

NEW YORK 6, N.Y.

ALEX. STEWART
Director of Research

June 12, 1956

Mr. R. L. Ziegfeld
Lead Industries Association
60 East 42nd Street
New York 17, New York

Atomic Energy Developments

Dear Bob:

With reference to a meeting held in your office on February 23 discussing what might be the best approach for the Lead Industries Association to take toward advising its members in regard to new business opportunities in atomic energy developments, as a result of a discussion of this subject at the annual meeting in St. Louis, Mr. Merson suggested that I might drop you a note.

You will recall that I recommended against continuing with the Walter Kidde Nuclear Laboratories on a market survey as the problem was not one of market but of specifications and shapes.

We did recommend that such a job could be done better by an LIA staff member who is already quite familiar with lead and its properties as well as the lead industry.

We further pointed out that substantially all the information required is available in the various AEC libraries around the country and that an LIA staff member might visit these units (with proper security clearance), collect the information and data. We also suggested that a consultant might be made available to the staff member to clear the information for accuracy before being circulated. In this connection we thought that Dr. Lyle Borst, an authority in reactor technology, might be interested. Inasmuch as the contacts with Dr. Borst might not be too frequent, we believed he might be had for \$3,000. - \$4,000. per year or possibly less.

I would definitely recommend against employing an outside man trained in reactor technology at this time as the problem deals more with the properties of lead as applied to reactor shielding. Therefore, an LIA man could more adequately collect the available specification and shape data clearing with some one like Dr. Borst.

Yours very truly,

c.c. Mr. D.A. Merson

Alex. Stewart (Signed)

CABLE SHEATHING

At the direction of the Technical Steering Committee, the Cable Sheathing Task Group of that Committee has been working for about a year and a half on a possible research program to protect and expand the market for lead in this field.

It now has a subcommittee negotiating with the principal manufacturer of continuous extrusion presses in this country, for a research program to perfect the continuous extrusion of lead alloys commonly used for cable sheathing.

While no detailed report can be made at this time, preliminary information indicates that such a program can be conducted in the plant of the press manufacturer, through the rental of necessary equipment, under the guidance of the Cable Sheathing Task Group, at a cost to the Association of somewhere in the vicinity of \$3,600 a month for a six-month program. Should the research have to continue beyond the six-month period, the cost per month would be materially reduced, probably to around \$1,800 a month.

RESEARCH

On November 9, 1956, the Technical Steering Committee of the Association met to consider the overall research problems of the Association.

As indicated elsewhere in the budget data, the committee approved recommendations for the establishment of three fellowships in various fields of ceramics research, and a program for gathering of technical information in connection with the use of lead in the nuclear field.

It also appointed a subcommittee to obtain a proposal from an independent research organization for a survey for the Technical Steering Committee on which that Committee might base further consideration of research programs it believed would be beneficial to the greater use of lead in industry. Nothing further can be reported at this time.

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APPROVED BUDGET - 1957

	SUPPORTED BY ALL MEMBERS			SUPPORTED BY PIG LEAD SELLERS ONLY				
	HEALTH AND SAFETY FUND	PENSION FUND	ORDINARY FUND	INDUSTRY DEVELOPMENT FUND	METALLIC LEAD PRODUCTS FUND	PIGMENTS AND CHEMICALS FUND	CERAMIC FUND	RADIATION SHIELDING FUND
1 Estimated Balance, Jan. 1, 1957	\$47,500	\$28,000	\$88,500	\$15,000	\$21,000	\$3,500	-	-
INCOME APPROVED, 1957								
2 Subscriptions	79,500	20,000	-	115,000	-	-	-	-
3 Transfers	4,500a	-	4,500b	-	35,000a	20,500a	30,000a	5,000a
4 Other	-	-	2,500c	-	500d	-	-	-
5 TOTAL INCOME, 1957 (2+3+4)	84,000	20,000	7,000	115,000	35,500	20,500	30,000	5,000
EXPENSES, 1957								
6 Approved Expenses, 1957	84,000	20,000	-	95,000	40,000	20,500	30,000	5,000
INCOME OVER EXPENSES, 1957 (5-6)	-	-	7,000	20,000e	-4,500	-	-	-
7 Estimated Balance, Jan. 1, 1958 (1+7)	47,500	28,000	95,500	35,000	16,500	3,500	-	-

a-Transfers from Industry Development Fund
 b-Transfers from Ordinary Fund
 c-Interest
 d-Sale of literature
 e-Contingency Fund for Research

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Board of Directors Meeting Minutes

SUGGESTED PROGRAM

Exhibit "C"
December 3, 1956

L. I. A. ANNUAL MEETING

April 24 - 25, 1957

Wednesday, April 24, 1957

9:45 A.M. Opening remarks by the President - Andrew Fletcher, president, St. Joseph Lead Co.

9:50 A.M. Committee Reports

Industry Development Committee - John Lennon, sales manager,
American Metal Co. Ltd.

Technical Steering Committee - Albert J. Phillips, vice president,
and director of research, American Smelting and Refining Co.

Ceramics Technical Committee - John Koenig, director, School of
Ceramics, Rutgers University.

Red Lead Technical Committee - L. L. Carrick, professor, Depart-
ment of Chemical Engineering, University of Michigan.

Advisory Committee, Metallic Lead Products Division - G. Howard
LeFevre, vice president, United States Smelting Refining
and Mining Co.

Solder Committee - Carl Sohl, American Smelting and Refining Co.,
or E. J. Minarcik, National Lead Co.

10:20 A.M. Activities of the Health and Safety Division - Manfred Bowditch, di-
rector of health and safety, L.I.A.

10:25 A.M. Report of the Secretary and Treasurer - Robert L. Ziegfeld, secretary-
treasurer, L.I.A.

10:35 A.M. Report of the Nominating Committee

10:45 A.M. Tetraethyl Lead - someone from a leading oil company, Ethyl Corp.,
or duPont Co.

11:00 A.M. Radiation Shielding - Jerome Luntz, editor, "Nucleonics" magazine.

11:15 A.M. Lead in Great Britain and Europe - A. C. Drummond, secretary, Lead
Development Association.

11:45 A.M. New Uses for Lead Compounds - Alex Stewart, director of research,
National Lead Co.

12:30 Refreshments and Luncheon

2:00 Election of Directors

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- 2:10 P.M. Storage Batteries - B. B. Steiner, president, Cumberland Battery Mfg. Co., and president, Association of American Battery Manufacturers, Inc.
- 2:30 P.M. Problems in Plumbism - Dr. William E. George, The Zinc Corp.
- 2:45 P.M. Lead in Ceramics - George Spencer-Strong, Pemco Corp., or Ernest Hommel, The O. Hommel Co.
- 3:00 P.M. Lead Cable Sheathing - E. J. Merrell, chief engineer, Habirshaw Cable and Wire Div., Phelps Dodge Copper Products Corp.
- 3:15 P.M. Lead in Construction - ?
- 4:30 P.M. Board of Directors Meeting
- 6:00 P.M. Refreshments and Buffet

Thursday, April 25

The morning of this day will be devoted to a joint session of L.I.A. and American Zinc Institute, starting at 10:00 A.M., with subjects of general interest to both groups, such as:

The Market Outlook for Lead and Zinc - Dr. Joseph Zimmerman, editor-in-chief, "Daily Metal Reporter."

World Lead and Zinc Supplies - Elmer Pehrson, Foreign Minerals Region, U. S. Bureau of Mines.

World Lead Consumption - S. D. Strauss, vice president, American Smelting and Refining Co., or Robert Hendricks, vice president, Consolidated Mining and Smelting Co. of Canada, Ltd.

Relationship Between Government Research and Industry - Office of Assistant Secretary of Defense for Research and Development.

REPORT OF THE SECRETARY-TREASURER

In the last few years the Association has been passing through a transition in the methods of financing certain of its activities. To be sure, our ordinary expenses for rent, overhead and the like, including health and safety activities and the pension fund, in which all members participate, follow the method outlined in the By-Laws, as they always have. Briefly, this is on a tonnage basis with lead miners, smelters and refiners, manufacturers of lead products, and makers of cable, batteries and ammunition participating in a ratio of 4:1:2:½.

However, methods of financing our industry development activities for many years just grew like Topsy. Each program had a different ratio of participation by the different groups involved, and different manufacturers participated in different activities.

About two years ago an Industry Development Fund was established by the producers of pig lead to be used strictly for the purpose its name implied, either alone or in conjunction with funds subscribed by manufacturers where these were forthcoming. The idea was that lead producers should support a larger proportion of the promotional load. As a result this year producers subscribed a larger proportion of the Metallic Lead Products Division and Pigments and Chemicals Division Funds and the Ceramic program, entirely financed by them, was started.

During the past summer the Industry Development Committee, composed of lead producers only, decided in principle that all promotional and research activities should be supported in their entirety by lead producers only. In 1957 manufacturing members will be asked for no subscriptions to these activities. This should greatly simplify the financial structure of the Association in the future. We believe that this has been a distinctly progressive step. Of course, it is hoped that the manufacturers of lead products, who are in closest touch with the industries to which we are promoting the use of lead, will continue to give the Association the benefit of their knowledge of these industries and the assistance of their trained personnel who know them so well, as they have in the past in such work as that of the Red Lead Technical Committee, Ceramics Technical Committee, Solder Committee, Cable Committee and others.

The progress of our activities has been reported to the membership quarterly, and briefly to the Board in the budget data circulated prior to this meeting. To summarize we have circulated over 350,000 pieces of literature this year, ranging from 4-page reprints and brochures to our 230-page book, LEAD IN MODERN INDUSTRY. In addition we have prepared articles which have been printed in text books, encyclopedia and trade papers with circulations impossible to estimate. The following are some of our 1956 activities:

Dr.

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GENERAL

1. The circulation of LEAD magazine was increased to about 50,000 and publication was placed on a quarterly instead of a semi-annual basis.
2. A successful Annual Meeting was held in St. Louis.
3. Our headquarters were moved at an annual saving in rental as compared with what the rental would have been at our old location.
4. The section on lead for the Encyclopedia Americana was prepared and a similar section is under preparation for Collier's Encyclopedia.
5. The Association was represented at the annual Storage Battery Conference sponsored by the Signal Corps, at the spring and fall meetings of the Association of American Battery Manufacturers, at the Battery Division of the American Electrochemical Society, at the American Society for Testing Materials, at the American Mining Congress, and at the American Institute of Mining, Metallurgical and Petroleum Engineers.
6. The introduction to the lead section of the Year Book of the American Bureau of Metal Statistics was prepared, our over-all statistical services continued, and special statistical analyses performed for members, banks, brokers and others.
7. The chapter on lead was prepared for an economic geography text book edited by a Dartmouth professor.

HEALTH AND SAFETY

8. The American Standards Association Subcommittee on Lead, chairmanned by our Health and Safety Director, has approved an increase in maximum acceptable limits of lead in air ranging from 33 to over 200 percent. It is still subject to approval by higher committees.
9. We have gathered data from a number of leading cities to refute claims of lead poisoning from automobile exhausts.
10. We have followed legislation bearing on lead poisoning, including warning labeling regulations, and protested where advisable.
11. We have continued our support of research on childhood lead poisoning and have maintained close relations with health authorities in principal cities.
12. The paper delivered by Dr. R. T. Johnstone at our Annual Meeting was reprinted and distributed among the medical profession concerned with industrial health. The interest it aroused has been amazing, with many requests for copies in quantities up to as many as 100.
13. Two Health and Safety Bulletins were sent members during the year and a third soon will.

14. The Manufacturing Chemists' Association has been awakened to the dangers of many state pharmaceutical laws now on the books which may be interpreted to apply to industrial chemicals. One such law resulted in a law suit involving litharge which was decided against a customer of a member.

METALLIC LEAD PRODUCTS DIVISION

15. The Solder Committee is approaching completion of its draft of a Soldering Handbook to be published by the American Welding Society.

16. Two Lead Building Construction Bulletins, a new series, were distributed to some 35,000 architects and builders each in 1956.

17. A paper on non-destructive testing of lead, delivered in 1955, was printed in two important trade magazines and abstracted in a third. Reprints have been distributed to chemical engineers.

18. We supplied a judge and a demonstrator for the international plumber's apprenticeship contest and instructor training course.

19. We detailed the lead gutter linings some 750 ft. in length for a large new dormitory at Duke University at the request of the architects and contractors.

20. We are revising the chapter on lead in the American Chemical Society Monograph on Corrosion of Metals.

21. We exhibited at the Annual Meeting of the National Association of Plumbing Contractors.

22. Lectures on lead were delivered at the Newark College of Engineering and University of Buffalo.

23. Plumbers' Forum was published on a semi-annual basis and distributed to a list of about 25,000 plumbers.

24. Nearly 1,000 copies of our textbook for plumbers' apprentices were sold during the year, bringing total distribution to about 7,500 with receipts approximating that figure in dollars.

CERAMICS

25. A reassuring address on the availability of lead in the future was delivered before the annual meeting of the American Ceramic Society. It has been accepted for publication in the Bulletin of that Society.

26. The Manual on Lead in the Ceramics Industries was completed by the Ceramics Technical Committee and is now being printed for wide distribution among ceramists. About 6,500 copies are being printed.

RED LEAD PAINTS

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27. Red Lead Technical Letter No. 11 was prepared and printed. It was distributed to over 12,000 interested people and has resulted in a larger number of requests for extra copies than any previous Letter. To date well over 100,000 copies of Red Lead Technical Letters have been distributed.

28. The Navy's new painting specifications have made red lead paint mandatory for many purposes where it was formerly optional and where zinc chromate paint was mandatory only three or four years ago.
29. Material on red lead paints for galvanized surfaces was supplied to "Factory Management and Maintenance" magazine for an article which appeared on that subject.
30. We continued our support of the Steel Structures Painting Council.

TECHNICAL STEERING COMMITTEE

31. The Cable Sheathing Task Group of this Committee is negotiating with a leading manufacturer of extrusion presses for a research program to solve the problem of continuous extrusion of lead alloys commonly used for cable sheathing.
32. The report of Walter Kidde Nuclear Laboratories on its survey of the market for lead as radiation shielding was received. No further survey was recommended but a technical fact finding program by the Association has been recommended.
33. Work on the American Chemical Society Monograph on Lead is progressing, with most of the authors secured. A contract was signed with the publisher calling for delivery of the material by January 1, 1958.
34. The Committee considered overall research problems and possibilities of the Association and appointed a subcommittee to explore these matters further.
35. The Committee approved recommendations of the Ceramics Technical Committee for establishment of three research fellowships to study three specific areas of the use of lead in ceramics.

Our statistical, technical service, and other routine activities have been carried on as usual.