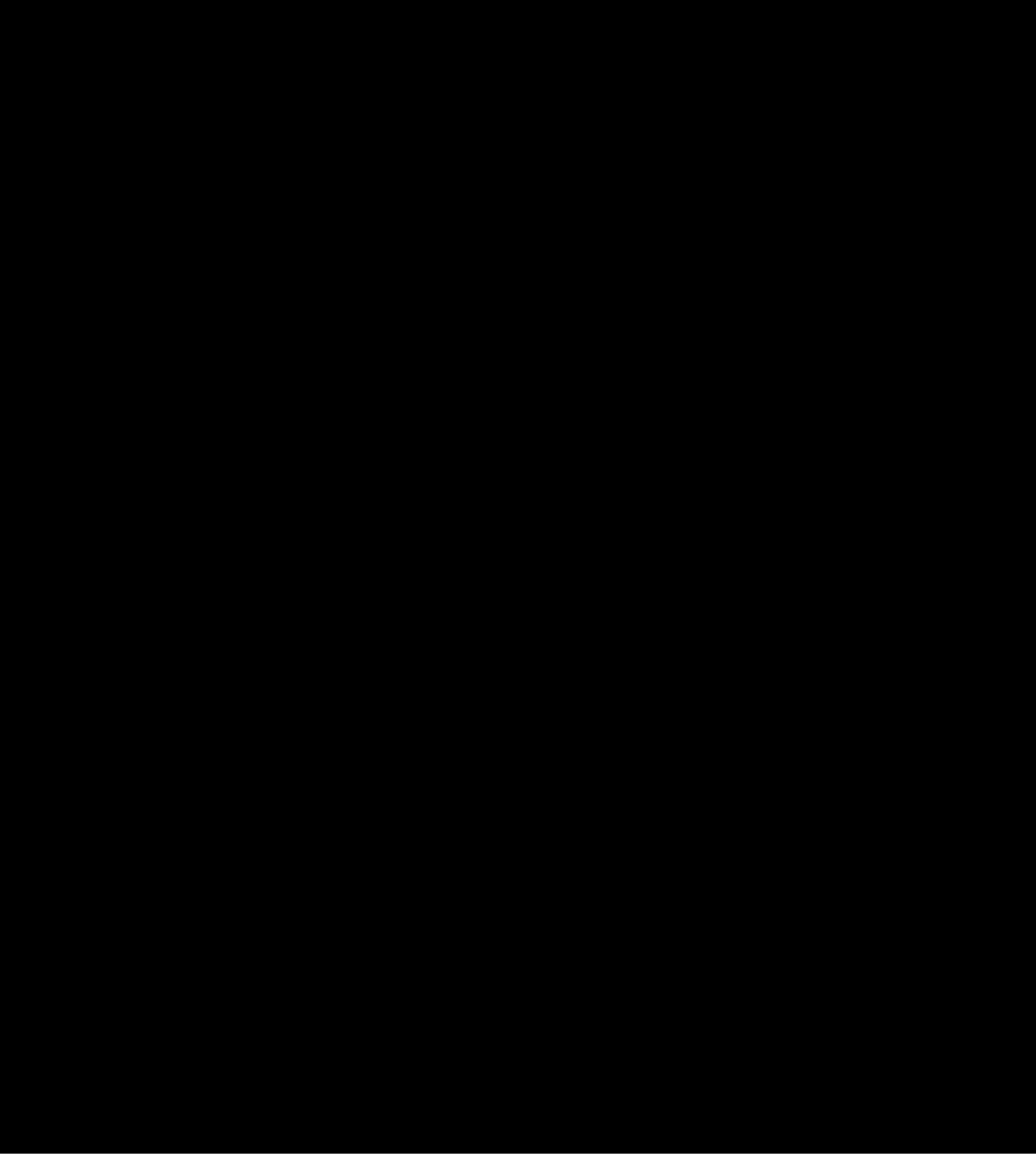




Cleveland

Jan. 25, 1952

Mr. A. D. Duncan

1951 RESEARCH REPORT
1952 BUDGET

Enclosed is our Research Report for 1951 with a brief review of the problems and progress for the year, as well as the request for 1952 Budget with our plans for the coming year.

You will note in the report there is a discussion on the importance of personnel problem this year and the possible need for the formation of a development group for the promotion of new products and the research and promotion advantages of obtaining more development arrangements or contracts with our key customers. As you know, these points were discussed at the industrial sales managers and regional directors meeting and are being studied further.

This year I have included an outline of the duties of the standardization department so that everyone will become acquainted with their good work.

The work which Mr. Sprague is doing in trying to establish company policy on patents is well worth-while. Present conditions are indicating the necessity of establishing rules and regulations as well as policy on laboratory operations and personnel. This will be given further study and I hope this year we will be able to issue a laboratory operating manual.

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E. Schulte

c/c Mr. Dwight Joyoe
Mr. P. E. Sprague
Mr. B. W. Maxey
Mr. G. H. Mutersbaugh

GLD37103

47-12 TRADE SALES PRODUCTS cont'd

In regard to lead silicate pigments, laboratory tests have shown when 35 per cent leaded zinc oxide in Y-1800 Endurance is replaced with a mixture of 45X Lead Silicate and zinc oxide the durability is about the same. This means if lead continues to grow scarce we can use a lower lead content in the form of lead silicate.

It may be of interest to know lead silicate pigment submitted by Goodlass Limited of England was not as durable as the lead silicate submitted by National Lead. We understand our own Pigment Division is developing a similar pigment and we are very anxious to try it out.

Imperial House Paint, which is our high hiding paint, was improved in the past year in regard to drying. A long oil soya alkyd was replaced with a linseed alkyd which gave a more positive dry, particularly under adverse conditions. Durability tests over a two year period shows this change has not affected the weathering properties.

This fall Mr. Dell and Mr. Hayward reviewed the thousands of house paint tests at duPont and National Lead. There seems to be a great deal of activity on controlled chalking. It looks as though the use of straight anatase in house paint gives too much chalking and the use of some rutile will be necessary. There also seemed to be considerable amount of study under way on the control of viscosity and ease of brushing. We have had our own particular problem in regard to the discoloration of whites near the seashore and it is difficult to tell at this time whether it is due to the advertising of firms marketing leadless paint or whether there has been some inherent change in the manufacture of leaded zinc. So far tests do not indicate any difference between house paint made now and house paint made in 1944 in so far as discoloration by perspiration or salt water is concerned. Our house paint tint base made with rutile after two years' tests have stood up very well and while there is no cost saving it does give at least 50 per cent more hiding which would be of distinct advantage especially in light tints.

VARNISH - Since wood oil reached a peak of 40 cents during the year a great deal of time was spent on replacing wood oil in trade sales varnishes with treated linseed. In our main trade sales varnish, V-357, this resulted in a savings of 22 cents per gallon or a potential savings of \$134,453.60.

Considerable amount of time was spent on other replacement work such as replacement of castor oil in Japalac reducing the amount of P.E. in Japalac varnish on account of the shortage of P.E., reverting to Ti-Cal formulations since Ti-Cal is not available.

TESTING OF ALKYD EXTENDERS - During the year we have had so called alkyd extenders submitted to us which proved to be very similar to our V-357 varnish and which we have been