

CITY Cleveland 14, Ohio

DATE May 11, 1959

FOR

SUBJECT LONG TERM TRENDS
C-P-M DIVISION

ANSWERING LETTER OF

Attached is copy of the analysis covering the C-P-M Division. Throughout this and other Divisions to be covered, only facts available from published figures will be set forth. Explanations for cause of changes will be given where such can be determined from figures available. Certain explanations by Division Management have been incorporated and specifically referred to as such. Further explanation for causes in the past or steps to be taken in the future will be furnished by the Division Vice-President at the review period.

The basic presentation is made in chart form, mostly through use of semi-log graphs (vertical axis is logarithmic; horizontal axis arithmetic for plotting years). This type of graph makes the charts largely self-analytical, thus reducing the required written explanation.

Two principal uses are made of these semi-log graphs in the attached report. First, where two factors result in a third factor (i.e. gross profit per cent less selling expense per cent equals net profit per cent) the inclination or slope of each of the two factors, when added together, will equal the slope of the third factor.

For instance, return on investment is made up of (1) turnover of investment to sales times (2) profit margin to sales. When plotted on properly calibrated graphs, the upward or downward slope of the turnover factor when added to the slope of the profit margin factor will equal the slope of the return on investment curve. This allows the reader to quickly and visually determine the relative effect each factor had on the change in return on investment.

The second use is to allow the reader to readily determine the percentage of increase or decrease from year to year or the average rate of increase or decrease over a span of years without having to present separate percentage calculations. Thus on a scale of \$100 to \$1,100, an increase from \$200 to \$300, or a 50% increase, would plot as:



The same \$100 increase from \$1,000 to \$1,100, or a ten per cent increase, would plot as:



Thus, the angle of inclination indicates the rate or per cent of change.

Care must be exercised by the reader not to erroneously interpret dollar relationships, in particular, because it is obvious that in terms of vertical distance on the graph a \$100 increase at the \$200 level uses approximately five times the vertical space of a \$100 increase at the \$1,000 level.

In presenting these charts, forecasts for 1959 and subsequent years are given only from written matters of record supplied by Division Management. They in no way represent the Controller's Department prognostications. Such forecasted profits are charted by arrow pointing to circled dot → ○ .

G. S. Warner
G. S. WARNER

INTRODUCTION

The following presentation covers the operations of the presently constituted C-P-M Division from 1951 forward. Discontinued operations of Scranton, Oakland, Hammond Type-Metal and the Mines have been excluded from all prior year figures.

1951 was selected as the base year because in 1950 Baltimore ceased Lithopone operations and markets formerly served were supplied by Collinsville. In July 1951 the Hammond Type-Metal operation was sold and the Hammond plant remodeled to its present lines.

The three producing plants covered by this analysis - Baltimore, Hammond and Collinsville - each represent a product group. Baltimore produces Titanium Dioxide and Cadmium Pigments. Collinsville produces only Lithopone. Hammond produces a variety of powdered metals, the bulk of which are copper based. Copper Powder is the largest volume item. In addition, Hammond produces a substantial amount of Lead Powder and small amounts of Tin Powder, Brass Powder and Solder Powder. These represent the true powdered metals. Cuprous Oxide, Copper Pigment, Cupric Oxide, and Cubond Brazing Paste, all copper-based products, are thought of essentially as chemicals or pigments.

Of tremendous effect on the C-P-M Divisions' recent and current operations is the building of the Adrian Joyce Works in Baltimore, which was started in late 1954. This has been the largest single undertaking of the Company. Through August 31, 1958 gross expenditures in land and plant were \$21,163,000. By the end of the current fiscal year this will rise to \$24,400,000 and by mid-1961 to \$28,100,000. The charges arising from this investment have, more than any other factor, caused the sharp drop during 1957 and 1958 in profits and profit return on investment.

Average investment for the entire C-P-M Division for fiscal 1958 was \$19,549,000 of which \$18,612,000 was at Baltimore or 95%. Thus Hammond, with \$577,000 average investment, and Collinsville, with \$360,000, form only a relatively small proportion of the total C-P-M Division. To paraphrase "As Baltimore goes, so goes the C-P-M Division," and this must be kept in mind in reviewing over-all results.

The following presentation first reviews profit and profit return on investment. Then follows the breakdown of turnover and investment followed by the breakdown of net profit margin. Finally, the individual results of the three operating units is shown together with the volume pattern of the products manufactured by each. Baltimore is the combined operations of St. Helena and the Adrian Joyce Works.

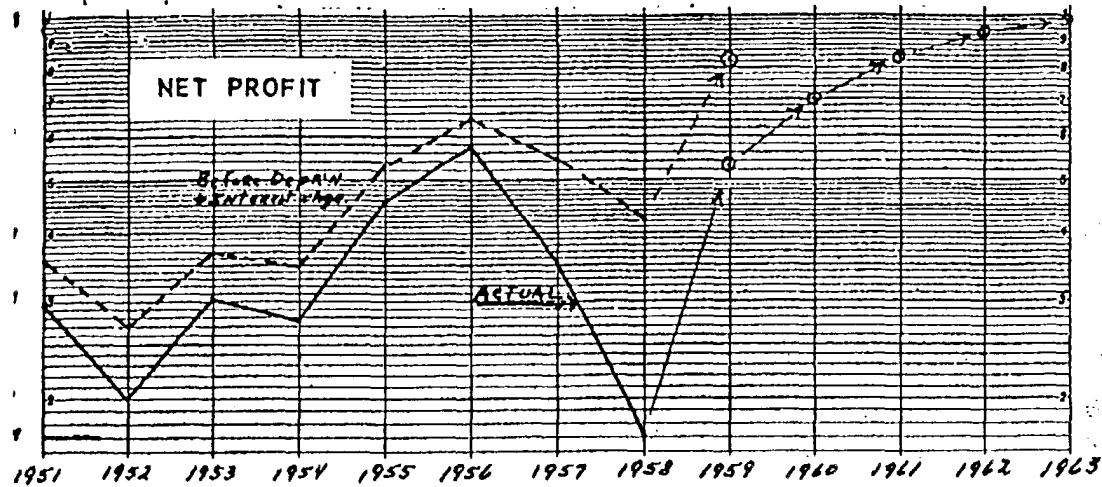
All figures for fiscal year 1955 have been brought to a full twelve months basis by adding the previous September and October to the ten month year so as to make 1955 comparable with fiscal years 1956 and after.

Total Sales figures charted and used to measure turnover and profit margin include intercompany sales to the Paint Division, but exclude interdivision transfer between C-P-M Divisions.

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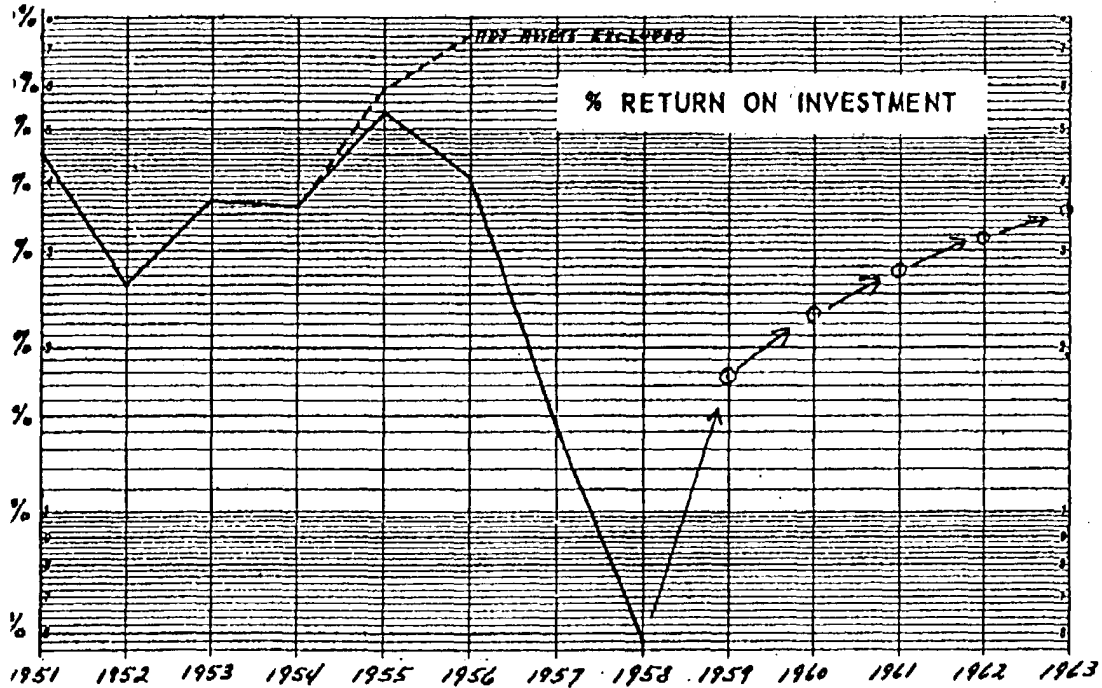
NET PROFIT AND RETURN ON INVESTMENT RATIOS

NET PROFIT



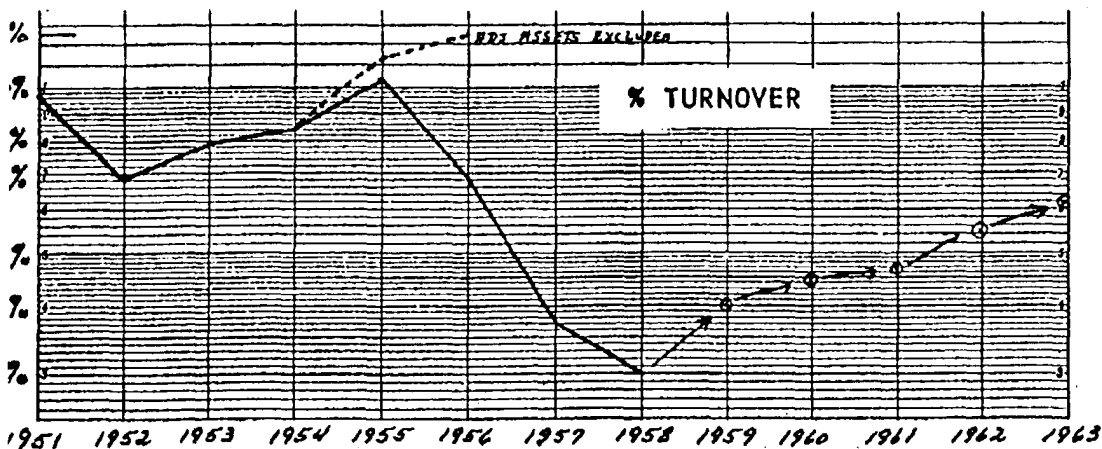
In Thousands	
1951	\$2,982
1952	\$2,007
1953	\$3,056
1954	\$2,780
1955	\$4,584
1956	\$5,757
1957	\$3,560
1958	\$1,707
1959	\$5,300
1960	\$7,000
1961	\$8,400
1962	\$9,300
1963	\$9,800

% RETURN ON INVESTMENT



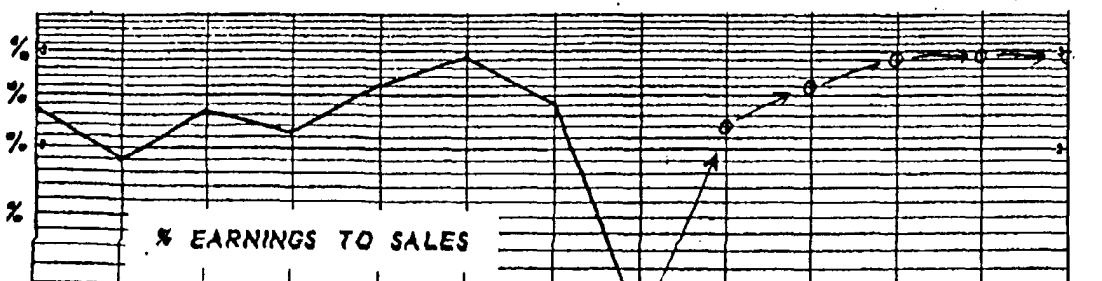
1951	45.0%
1952	26.0%
1953	37.1%
1954	36.2%
1955	53.0%
1956	40.7%
1957	14.2%
1958	5.8%
1959	17.7%
1960	23.0%
1961	27.5%
1962	31.8%
1963	35.6%

% TURNOVER



1951	194%
1952	137%
1953	159%
1954	168%
1955	204%
1956	139%
1957	75%
1958	60%
1959	80%
1960	89%
1961	93%
1962	110%
1963	122%

% EARNINGS TO SALES



1951	23.3%
1952	19.0%
1953	23.3%
1954	21.6%
1955	26.0%
1956	29.3%
1957	19.1%
1958	9.6%
1959	22.1%
1960	26.0%
1961	29.0%
1962	29.5%

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NET PROFIT - The Division reached its peak profit year in 1956. There was a world-wide shortage of Titanium Dioxide which broke in March 1957. Building up through 1956, for the sake of profits, the Division sacrificed quality of product in favor of quantity. A further contributing factor to the 1955 and 1956 profit peaks was the increase in the copper market from 30¢ in January 1955 to 46¢ in March of 1956. Division Management estimates a market gain of approximately \$300,000 during this period. Conversely, the copper market started falling in late July of 1956 to a bottom of 25¢ in February 1958 which depressed profits during 1957 and 1958.

Profit before depreciation and Headquarters Interest charge has been plotted to show the relative profit level of the Division before these charges. These two charges amounted to \$2,482,000 in 1958 and in 1959 will run just over \$3,000,000. The 1958 profit level of \$4,200,000 before these charges was exceeded only by the prior three years. 1957 profit before charges was exceeded only by 1956, despite the very sharp drop in published profits.

1957 and 1958 profits were further depressed because of operating both St. Helena and Adrian Joyce Works so that supply well exceeded the reduced domestic demand.

The forecasted profits, profit return and related ratios through 1963 were projected by holding Hammond's and Collinsville's estimated 1959 profits firm and adding thereto the profits forecasted in the Adrian Joyce BAR of February 6, 1959.

RETURN ON INVESTMENT - Officially the ROI turned downward in 1956. This was entirely due to the investment in the Joyce Works. The dotted line for 1955 and 1956 for both ROI and Turnover represents results with ADJ investment eliminated. These assets were unproductive during this period, as first experimental runs were not conducted until July 1956. The plant did not officially commence operations until Fiscal 1957.

The drop in 1957 and 1958 is attributable almost equally to decline in turnover and decline in profit margin.

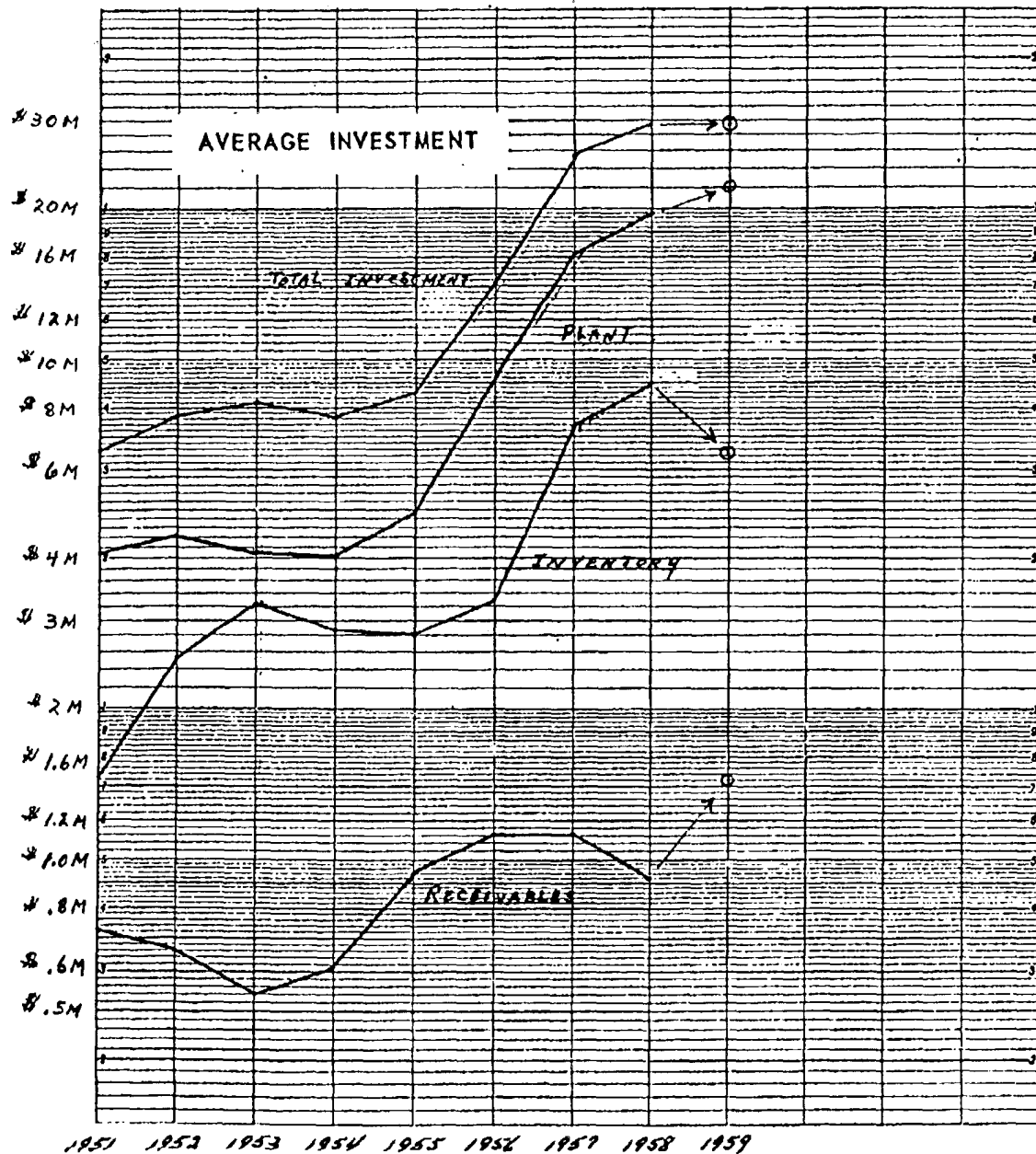
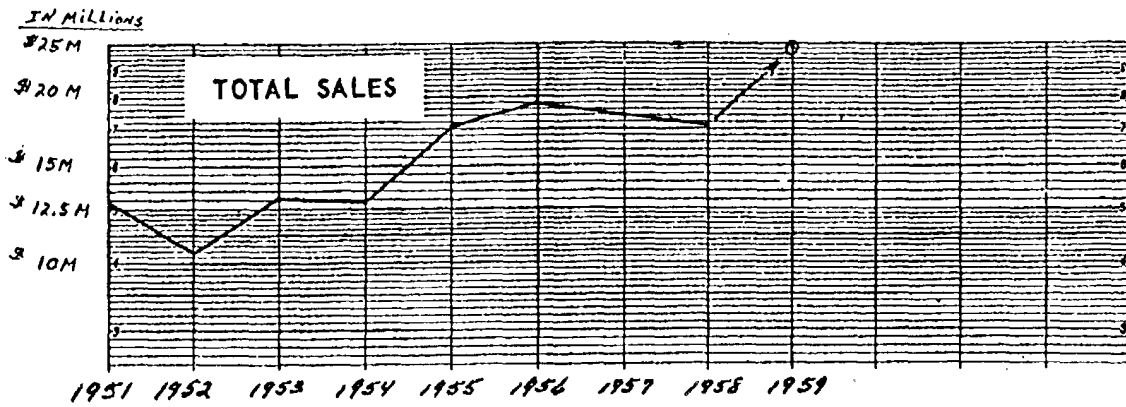
Through 1956 the Division maintained a very high rate of return on investment, ranging around 40%. Forecasted profits through 1963 indicate a return to approximately this level. The improvement in ROI for 1960 and 1961 is predominately due to increasing profit margin. Profit margin is forecasted to level off after 1961, but turnover starts a more rapid climb, thus continuing the improvement in return on investment.

TURNOVER - There was a small decline in sales during 1957 and 1958, but the principal cause for the sharp decline in turnover from 250% (ADJ eliminated) to 60% in 1958 was the increased investment in the Joyce Works. It should be realized that Glidden turnover uses net book value for plant assets and through 1956 the Division was operating with a heavily written down plant at St. Helena. The forecasted increase in turnover through 1963 will leave the Division far below its peak year and it will be several additional years before turnover will rise more towards the 175% range.

PROFIT MARGIN - The principal factor in the 1957 and 1958 decline was the increased depreciation and interest charges. Excluding these, 1958 results were 23.6%, or somewhat near the normal range. To a lesser extent profit margin was depressed due to higher factory costs (operating two plants), falling copper and selenium markets, and increased selling expenses in the face of somewhat declining sales.

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DOLLAR SALES AND INVESTMENT



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SALES - Since turnover is the relationship of sales to investment, sales dollars are shown as a bench mark for comparison with investment. The sales dollar decrease from the 1956 to 1958 of almost \$2,000,000 is entirely caused by Hammond products. Most of Hammond's sales dollar decrease was due to the drop in Copper markets from 46¢ to 25¢, although 1958 total Hammond tonnage was down somewhat. 1958 Titanium tonnage and dollar sales were up slightly over 1956, while 1958 Lithopone sales were exactly even with 1956.

AVERAGE INVESTMENT - Through 1955 the slope of the total average investment curve was less than the increasing sales curve, resulting in a constantly improving turnover ratio. Examination indicates that this improvement was predominately attributable to average plant investment remaining almost constant.

With the commencement of the Adrian Joyce Works, average investment began the very steep increase. Coupled with this was a sharp inventory increase in 1957 and 1958 due mostly to carrying inventory at two plants to support the same sales volume formerly supplied by one plant.

Care should be exercised in examining the graph so as to place the relative investment factors in proper proportion. In 1959 out of \$29,500,000 average investment, \$22,000,000 will be in average net plant. \$6,500,000 will be in inventory, or about 22% of total investment, and receivables will be around \$1,450,000, or about 5% of total investment. Thus, better than 70% of the division's total investment is in net plant assets.

This relationship of relatively heavy plant investment is true of both C-P-M and Organic Chemical while in Paints and Foods we find the large portion of investment in receivables and inventory. Such relationship is important because it means that in periods of sharply rising or declining sales a division with relatively high fixed investment does not rapidly expand or constrict its investment so that the change in turnover ratio becomes far more volatile.

For the next two years, average net plant investment should level off since depreciation will about equal plant expenditures. Thereafter, average net plant investment will start to decrease at a fairly rapid rate since depreciation will remain above \$2,000,000 for several years.

Average inventory investment reached a peak in 1958 and has been decreasing to a low point in March 1959. As sales increase, inventory will start to rise, but C-P-M Management feels this will be a lesser percentage rise than the sales increase.

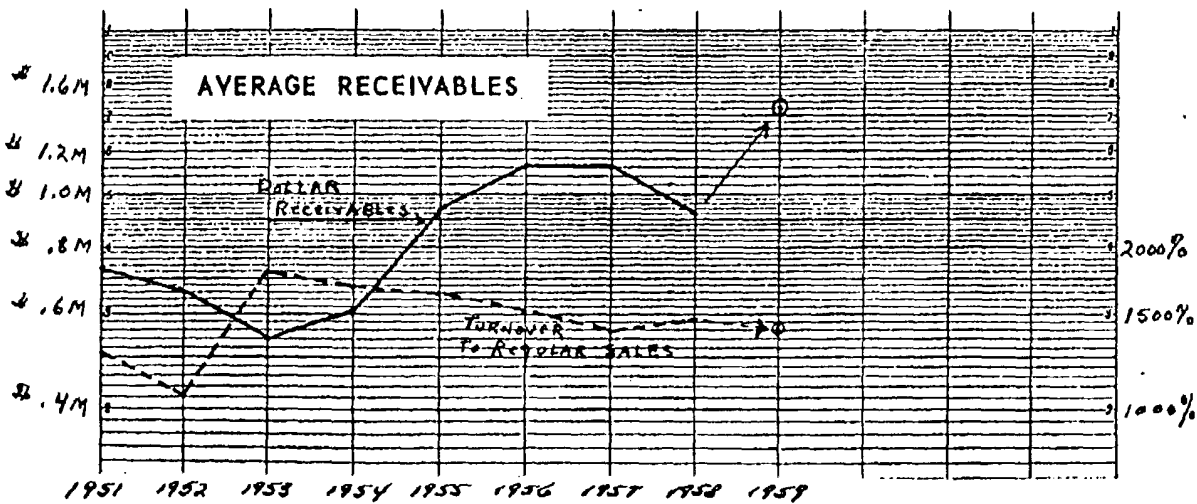
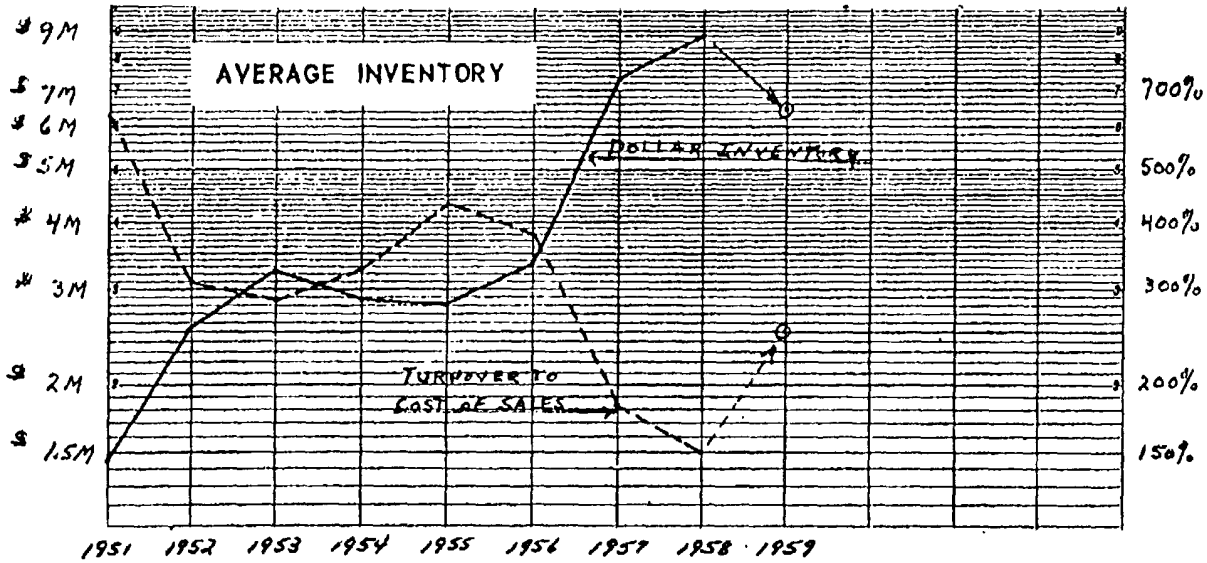
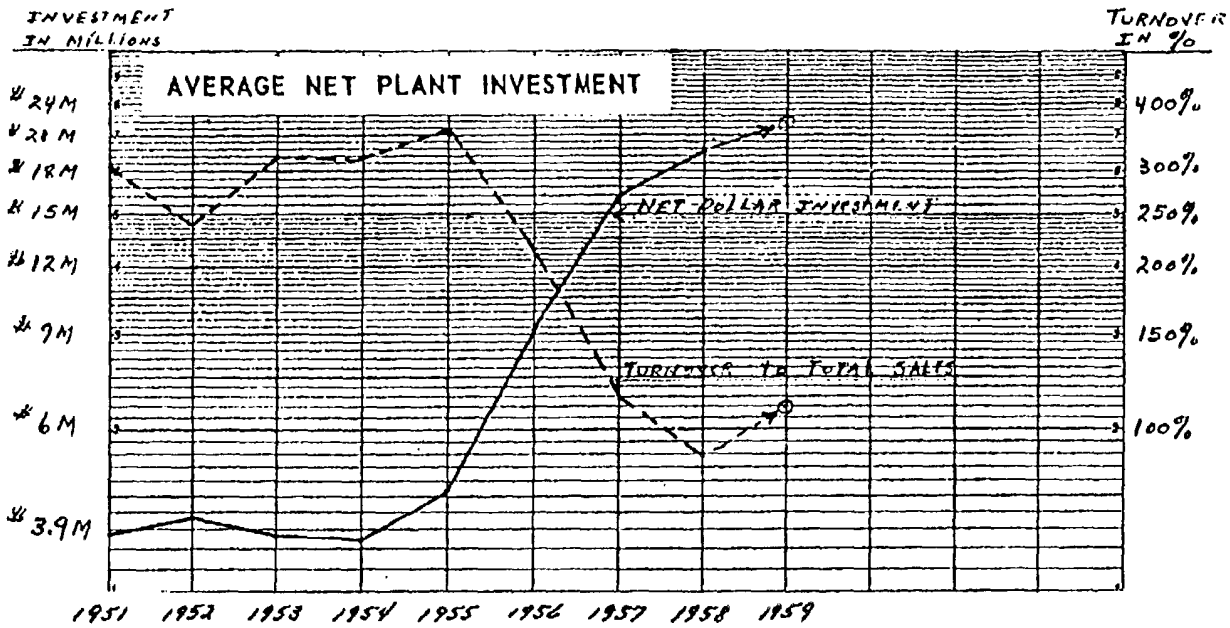
As will be shown in the following charts, receivables have held relatively constant with sales, although since 1953 the average increase of the receivable curve is slightly greater than the sales incline.

Starting with the low point in 1954, the figures on which the chart is plotted are (in thousands of dollars):

	1954	1955	1956	1957	1958	Est. 1959
Plant	\$4,095	\$4,941	\$ 9,194	\$16,291	\$19,549	\$22,000
Inventory	2,886	2,813	3,382	7,326	8,865	6,500
Receivables	612	939	1,134	1,142	927	1,450
Total	7,681	8,641	14,154	24,994	29,508	29,500

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INVESTMENT TURNOVER



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These charts plot dollar investment (solid line) against the left hand scale and turnover (dotted line) against the right hand scale. Because sales for the period 1955 through 1958 had only slight change, the downward slope of the turnover ratio for plant and inventory is inclined almost exactly the same as the upward slope of investment.

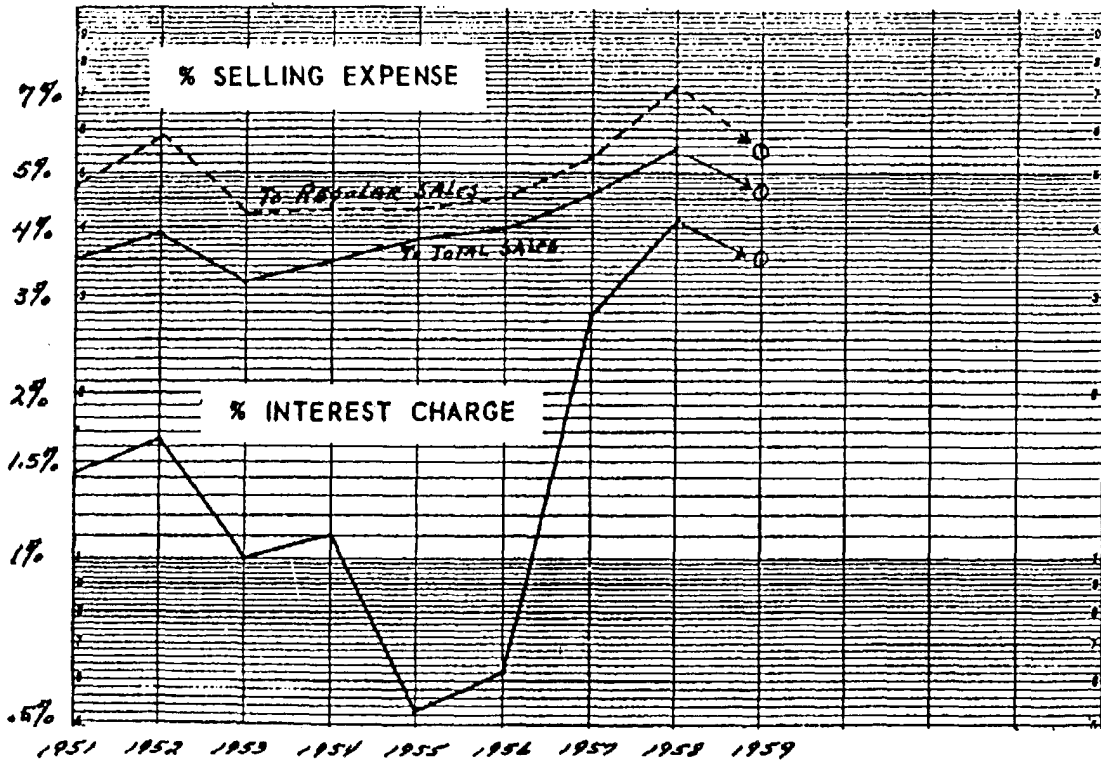
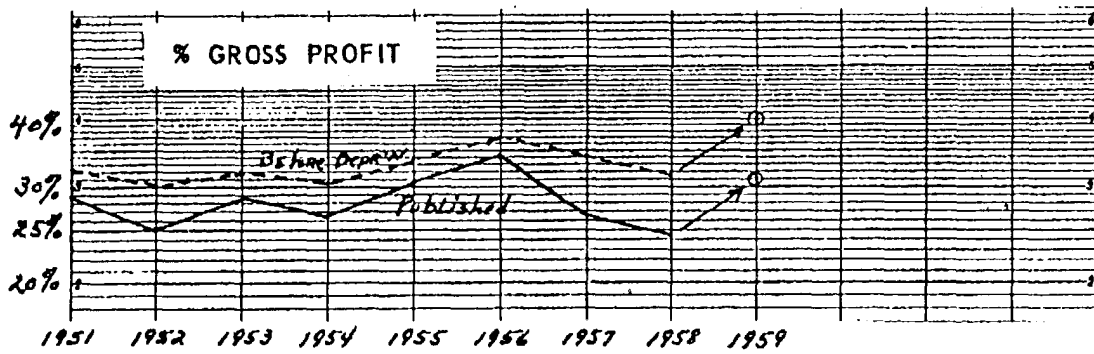
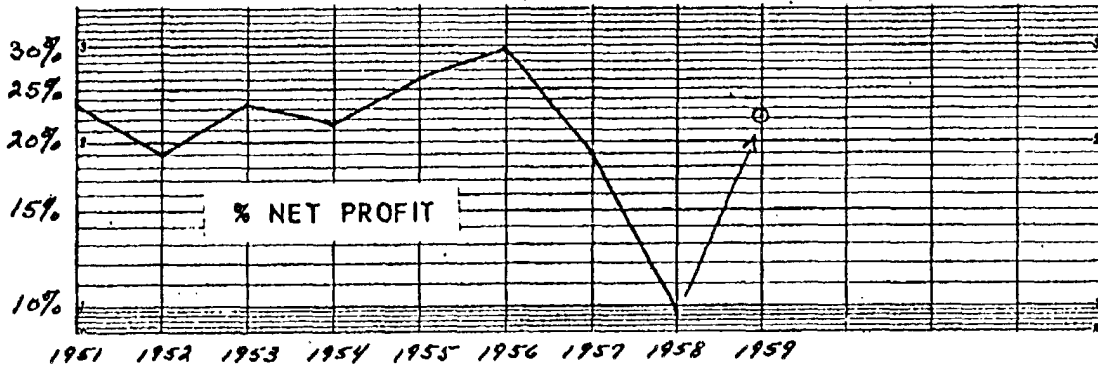
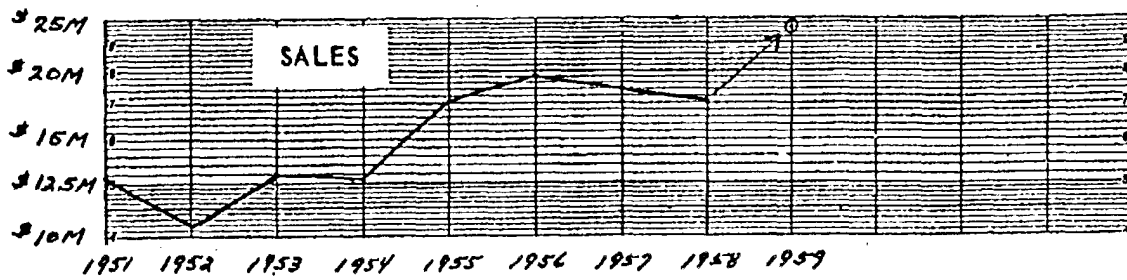
AVERAGE NET PLANT INVESTMENT - Due to operating old and relatively heavily depreciated plants through 1955, the plant turnover factor ranged between 250% and 350% (a 2.5 to 3.5 times turnover). This dropped to 90% in 1958, will rise to about 110% in 1959 and is expected to continue a gradual rise for the next two years, and then rise more rapidly thereafter as major expenditures cease. However, it does not appear the C-P-M Division will return to the average 300% of the pre-ADJ Works period for a good many years.

AVERAGE INVENTORY - Through 1956 inventory turnover ranged roughly between 300% and 400%. With double inventories being carried at Baltimore, this turnover dropped to an all time low of 150% in 1958. It is expected to return to about 250% in 1959 now that sales have been improved and the St. Helena plant closed. C-P-M Management indicates an intention to operate at somewhat higher raw material level in relation to sales than we practiced prior to 1956 so that we may expect a slightly lower level of turnover than the 300% to 400% range of earlier years.

AVERAGE RECEIVABLES - Turnover has been measured against regular sales only. The Division in recent years has averaged around 1500% (a 15 times turnover) with receivables outstanding an average of about 24 to 25 days. Because of this and the high net profit margin to sales, receivables have not been a major investment concern. Bad Debt Expense has been only nominal over the years.

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OPERATING RATIOS TO SALES



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% NET PROFIT TO SALES - This Division has historically operated at a very high net profit margin to sales. From 1951 through 1956 net margin ranged from 19% to over 29% and averaged nearly 25% for this period. A combination of increased depreciation, duplicate manufacturing costs (two plants at Baltimore), substantially increased Headquarters Interest Charges coupled with heavier investment in selling activity, all in the face of a slight sales decrease, combined to force profit margin to 9.6% in 1958. The current fiscal year is forecasted to return to about a 22% level and to steadily increase to around 29% by 1961.

The 1958 net profit margin is depressed greater than would be indicated from the gross profit, selling expense and interest charge charts, because an additional \$515,000 depreciation charge was made against C-P-M profits that was not reflected in factory costs and, hence, gross profits.

% GROSS PROFIT - Published gross margin has ranged from about 25% to a peak of almost 34% in 1956. Gross margin before depreciation shows that the major cause for depression of 1957 and 1958 published gross margin was due to depreciation charges. The chart recognizes only the depreciation charged to the product and does not include the aforementioned \$515,000 taken to Miscellaneous Profit and Loss. 1959 published gross margin is forecasted at 31% and before depreciation at 40%, the latter being the highest in the history of the Division.

% SELLING EXPENSE - Selling expense ratio has been plotted against both Total Sales (includes sales to Paint Division) and Regular Sales. As a ratio to Total Sales this shows an increase for the years 1953 through 1956 while as against Regular Sales only the ratio remained almost constant. The reason for this is apparent from a following chart on Titanium in which it will be seen that sales to the Paint Division were reduced to permit greater Regular Sales.

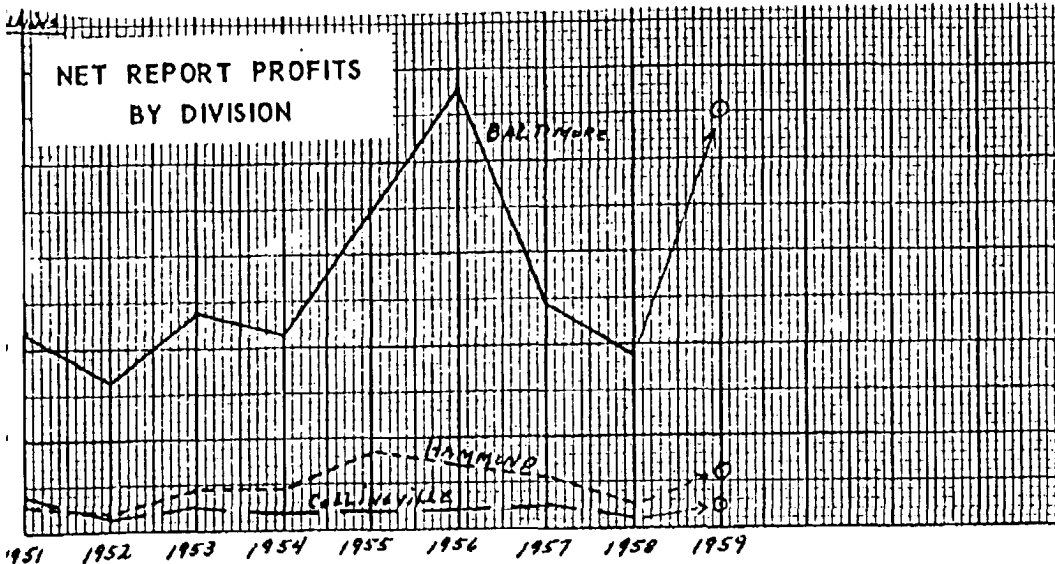
The C-P-M Division operates at a very low selling expense ratio, ranging in the vicinity of 4% to Total Sales and 5% when compared to Regular Sales only. Since approximately 20% of the Division's Total Sales will be to the Paint Division, the true measure of selling expense to Regular Sales lies somewhere between these two ratios.

Allocating direct sales territory and broker's commission, which averages 2.2% to Regular Sales, as well as other direct selling expense such as cash discount, bad debts, advertising, etc., direct selling expense in 1959 will approximate 3.5% to Regular Sales. All other sales and operating expense such as office, accounting, technical service, etc., including Chemical Administration, approximates 1.8% to Total Sales and is as applicable to Paint Sales as to Regular Sales. Accordingly, the level of total selling expense to sales can be said to approximate 5.3% to Regular Sales (3.5% direct and 1.8% overhead) and 1.8% to Paint Sales - an over-all average of approximately 4.6% to Total Sales in fiscal 1959.

Because of the relatively low selling expense ratio to sales as compared to a gross profit margin ranging in the low to mid 30%'s, the C-P-M Division is in a less vulnerable position than other types of operations from sales price decline and decline in volume.

INTEREST CHARGE - This charge is made to all divisions of the Company as a standard 3.1% on average assets. With the new plant addition and heavy inventories, the C-P-M charge has risen from \$121,342 in 1956 to \$719,430 in 1958 and will be \$840,000 in 1959. In terms of Total Sales this will amount to 3.5% in 1959 against estimated total selling expense, including Chemical Administration and exploratory mining costs, of \$1,110,000 or 4.6% to Total Sales. Thus, the Interest Charge, a Headquarters Charge, very nearly equals total cash selling costs of the Division.

NET PROFIT AND RETURN ON INVESTMENT BY DIVISIONS



In Thousands

BALTIMORE

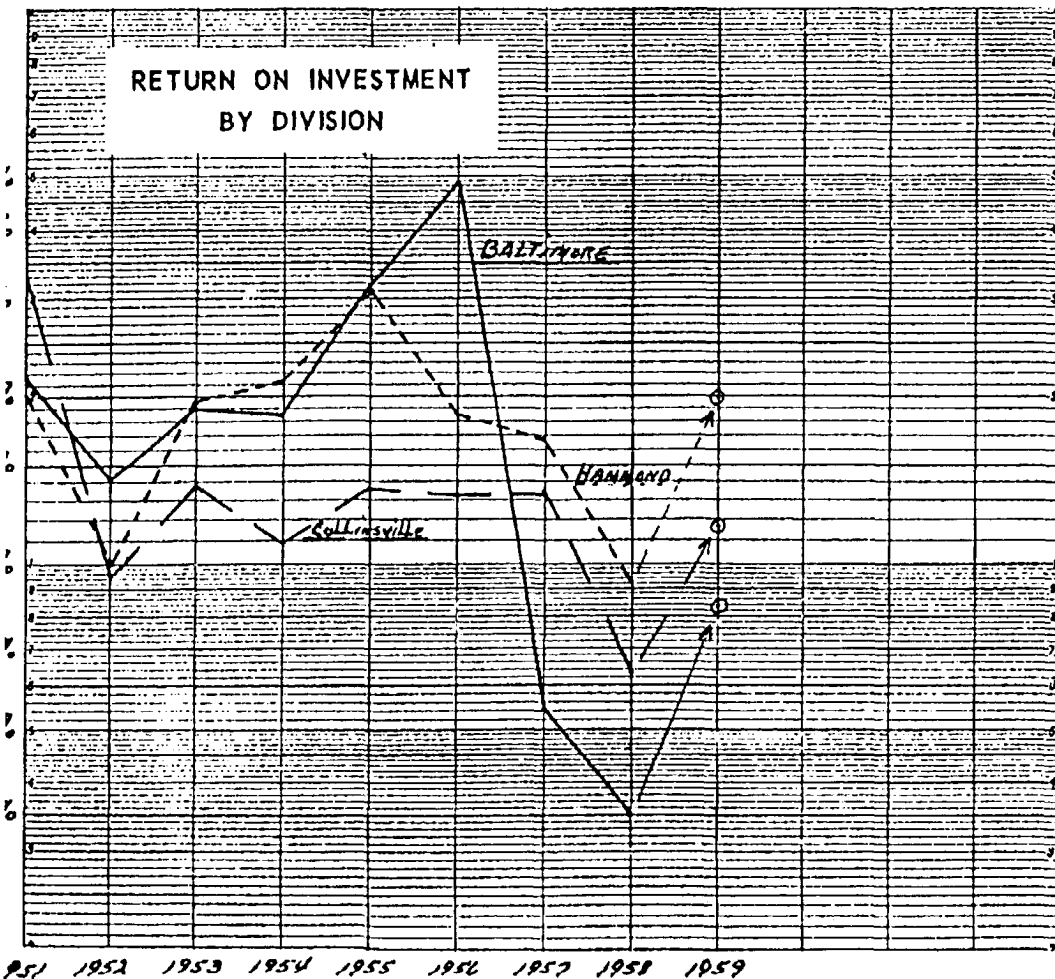
1951	-	\$2,186
1952	-	\$1,660
1953	-	\$2,367
1954	-	\$2,137
1955	-	\$3,492
1956	-	\$4,783
1957	-	\$2,443
1958	-	\$1,905
1959	-	\$4,500

HAMMOND

1951	-	\$ 393
1952	-	\$ 189
1953	-	\$ 425
1954	-	\$ 435
1955	-	\$ 822
1956	-	\$ 701
1957	-	\$ 582
1958	-	\$ 271
1959	-	\$ 600

COLLINSVILLE

1951	-	\$ 402
1952	-	\$ 159
1953	-	\$ 256
1954	-	\$ 196
1955	-	\$ 227
1956	-	\$ 214
1957	-	\$ 252
1958	-	\$ 111
1959	-	\$ 240



BALTIMORE

1951	-	43.5%
1952	-	28.3%
1953	-	38.1%
1954	-	37.1%
1955	-	63.7%
1956	-	97.1%
1957	-	10.9%
1958	-	7.0%
1959	-	16.7%

HAMMOND

1951	-	40.0%
1952	-	20.0%
1953	-	38.6%
1954	-	42.5%
1955	-	62.9%
1956	-	37.5%
1957	-	33.7%
1958	-	18.5%
1959	-	40.0%

COLLINSVILLE

1951	-	65.4%
1952	-	19.1%
1953	-	27.7%
1954	-	21.9%
1955	-	27.4%
1956	-	26.4%
1957	-	26.4%
1958	-	13.4%
1959	-	23.5%

GLD019526

NET REPORT PROFITS - These have been charted on an arithmetic graph in order to show the relative profit contribution of each division. It should be remembered that Baltimore accounts for 90% to 95% of total C-P-M assets. As previously pointed out, Hammond's 1955 and 1956 profits were unduly influenced by market gains while 1957 and 1958 were depressed from market losses. Baltimore profits were directly affected by high depreciation and interest charges. Baltimore's 1959 profits are expected to exceed all but the record 1956 year.

RETURN ON INVESTMENT - Prior to 1957, Baltimore had ranged from 28.3% to 97.1% return on investment - an exceptional rate of return in any industry. The heavy capital additions, together with attendant charges, reduced this to a low of 7.0% in 1958. Forecasts for 1959 indicate a return of 16.7% and the ADJ BAR of 2/6/59 indicates that by 1962 Baltimore will be earning between 35% and 40% on average investment.

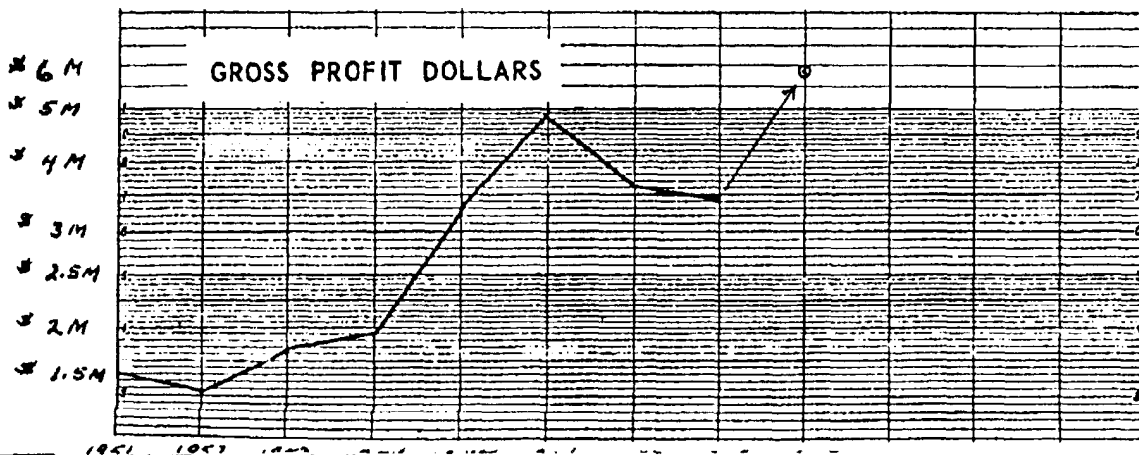
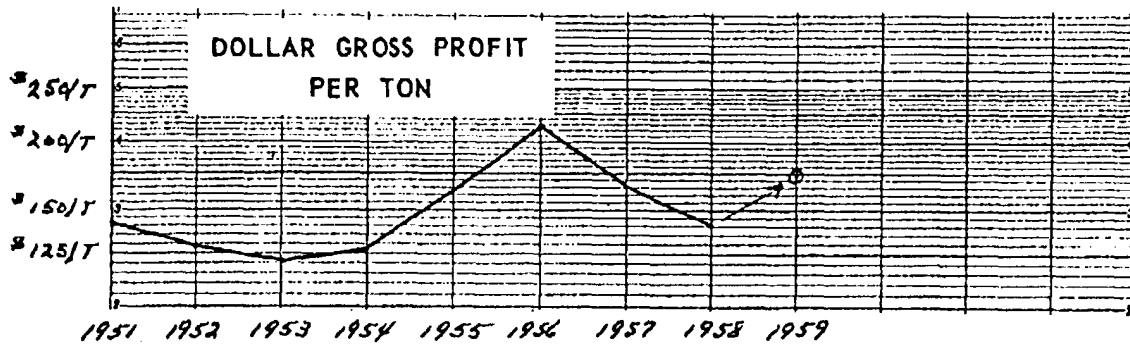
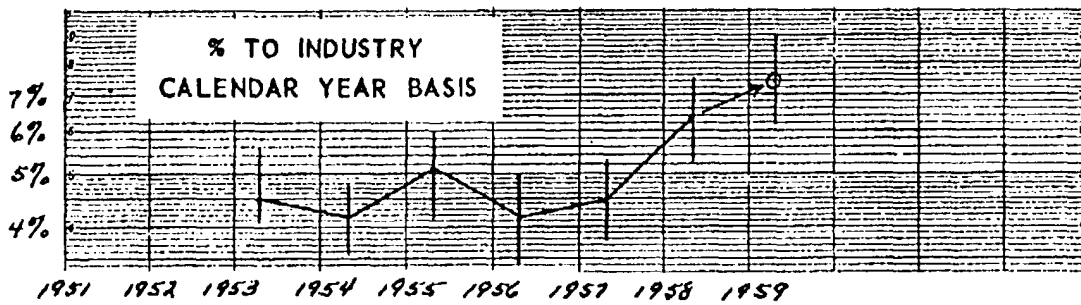
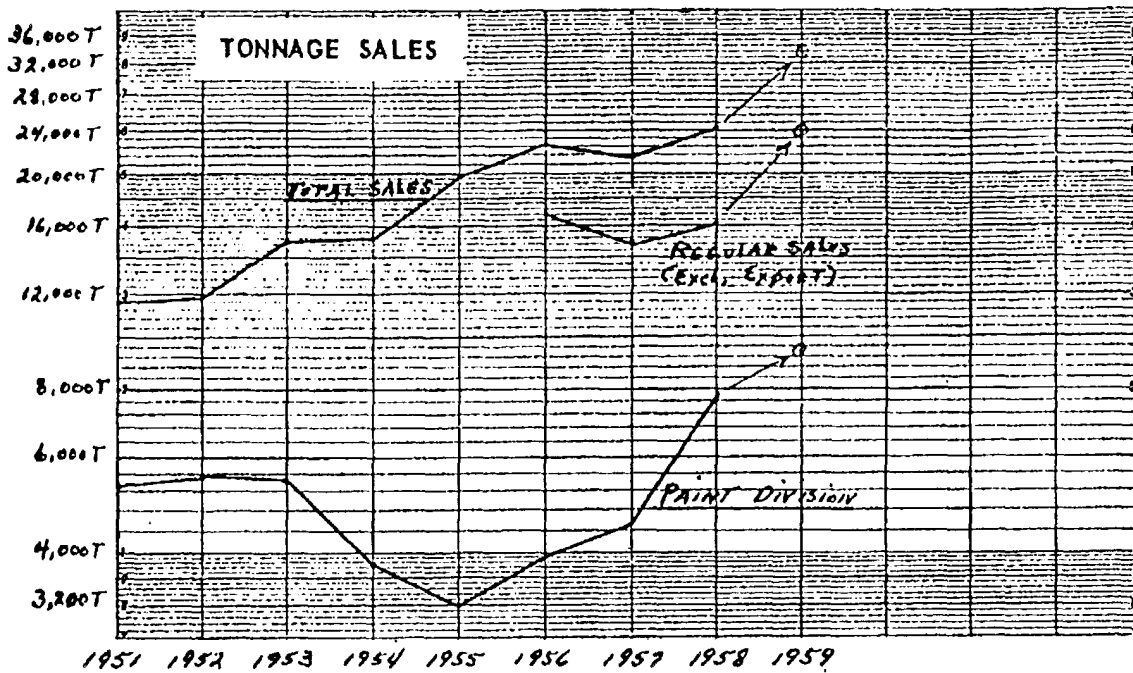
Since disposition of Type-Metal, Hammond has averaged earning around 40% on average investment except for two low years, 1952 at 20% and 1958 at 18.5%. Even these two years cannot be considered poor, except in relation to Hammond's own standard of performance. It is indicated the Division will earn 40% return on investment in 1959.

The Collinsville profit and return on investment is deceiving, inasmuch as this Division has historically received a commission for sales of Baltimore products made in its so-called sales territory. Thus, the Collinsville product, Lithopone, is in a sense subsidized. A break-out of 1958 operations shows:

	<u>Lithopone</u>	<u>Commission on Baltimore Products</u>	<u>Total</u>
Sales	\$1,392,600		
Gross Profit	\$ 191,360		
Selling Expense - Other than Territorial Exp. & Brokers Comm.	\$ 104,580		
Net Profit Before Territorial Exp.	\$ 86,780	\$166,240	\$253,020
Less Territorial Expense & Brokers Comm.			<u>141,740</u>
Total Collinsville Profit			<u>\$111,280</u>

Obviously total Collinsville profit from Lithopone, without allocation of any territorial expense, was less than the profit officially recorded for the Division. Even assuming that Titanium and Cadmium carried all Salesmen's expense, Collinsville should still have shown only \$86,780 profit or 10.5% return on the investment, such investment being that which is strictly on Lithopone. Therefore, in reviewing Collinsville's return on investment it must be remembered that to some extent their profits are inflated from sales commissions on Baltimore products. The Collinsville profit and profit return on investment cannot be considered the true profitability of Lithopone.

TITANIUM DIOXIDE



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TONNAGE SALES - The incline of the sales curve indicates a 17% average annual increase from 1951 through 1959. Total tonnage in 1951 was 11,678 tons and is forecasted at 33,500 tons in 1959. The ADJ BAR of 2/6/59 projects reaching an annual rate of 54,000 tons by mid-1962.

As was pointed out in the ADJ BAR, regular domestic sales started to decline in early 1956, but tonnage was offset by export sales through 1956 and into late fiscal 1957. Thereafter, the world market dried up. Because of the scale of the graph, export sales have not been charted, but for recent fiscal years were:

1956	2,002 tons
1957	1,763 tons
1958	448 tons
Est. 1959	350 tons

In order to show the actual trend of domestic regular sales, these have been plotted for 1956 through 1959. After a sharp decrease in 1957, which actually started in late 1956, an upturn was made in the last four months of fiscal 1958 resulting in the 1958 fiscal year showing a 6.6% increase in regular domestic sales. The projected increase for 1959 is 48% on regular domestic sales.

Sales to the Paint Division have represented a substantial portion of total tonnage. In 1951 and 1952, such represented 46% of total sales and even in 1953 36% of total tonnage. This was cut back starting in 1954 and reached the low point in 1955 and 1956 of about 17% of total tonnage. The very sharp increase of Paint Division Sales from 4,568 tons in 1957 to 7,530 tons in 1958, a 65% increase, brought their share of total tonnage to 31%. In 1959 it is estimated the Paint Division will take approximately 28% of total tonnage.

% TO INDUSTRY - These figures are available only back to 1953 and then on a calendar year basis - as compared to our fiscal year which ends four months before the calendar year. Historically, the Division has hovered around the 4.5% mark, until calendar 1958 which jumped to 6.3%. The projections for calendar 1959 are to reach 7.4% and by late 1962 to be near the 10% mark.

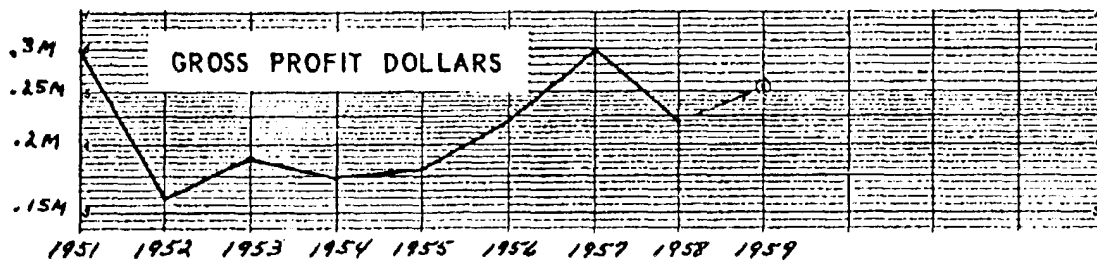
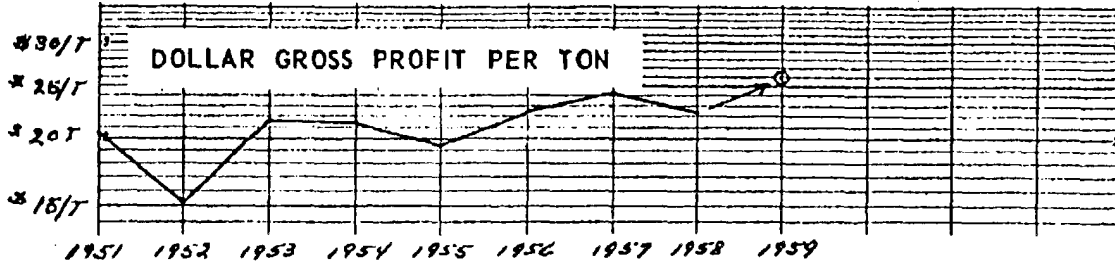
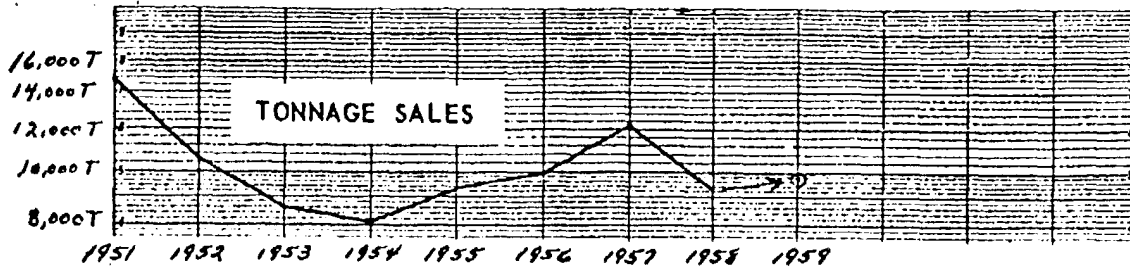
DOLLAR GROSS PROFIT PER TON - Against an average selling price, after freight, of about \$510 per ton, the Division gross profit per ton has ranged in recent years between \$140 and \$215, the peak in 1956. Fiscal 1959 is projected at \$175 per ton.

GROSS PROFIT DOLLARS - The very sharp incline through 1956 was the product of both greater tonnage coupled with increased gross profit per ton. As the charts indicate from the slope of the lines, the drop in 1957 gross profit dollars was predominately lower gross profit per ton and to a lesser extent to decreased tonnage. The further decrease in 1958 was entirely caused by lower gross profit per ton as tonnage increased.

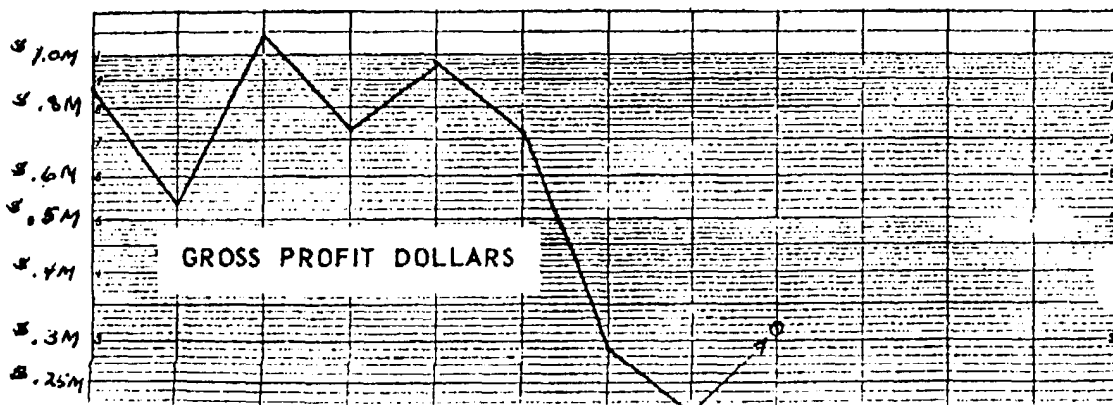
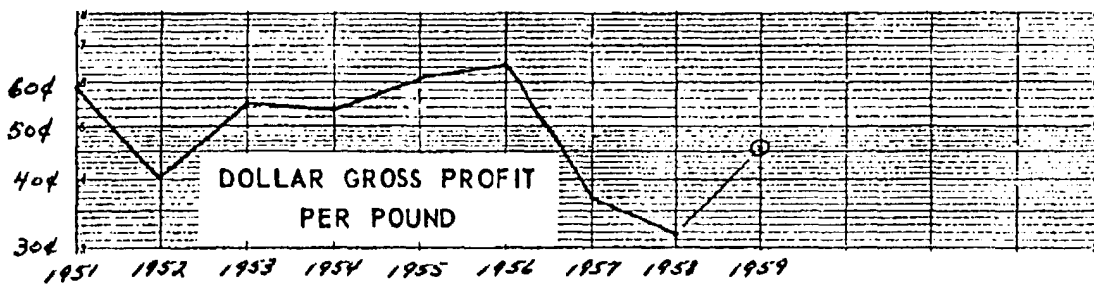
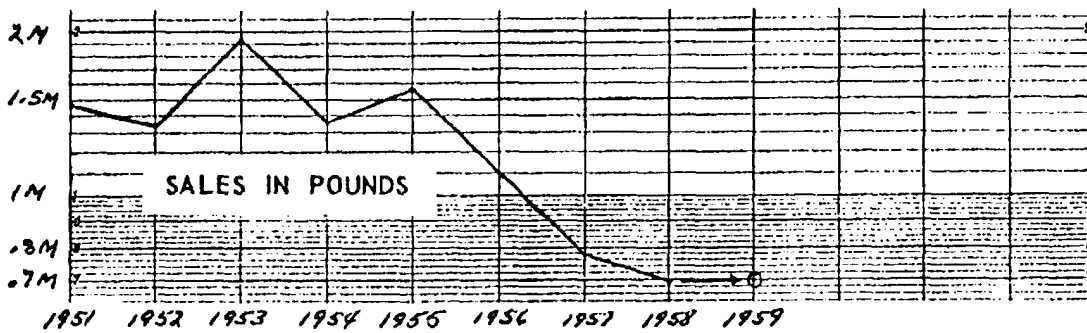
The projected increase in 1959 is due to both tonnage increase and improved gross profit per ton, with the former having slightly greater leverage as disclosed by somewhat sharper incline in the sales curve than in the gross profit per ton curve.

GLD019529

LITHOPONE



CADMIUM



GLD019530

TONNAGE SALES - In 1951 tonnage sales of 14,721 tons exceeded Titanium Dioxide which were 11,678 tons. Since then Lithopone steadily declined through 1954. Dupont went out of the Lithopone business in early 1954 and New Jersey Zinc discontinued manufacture in 1956. This has left Sherwin-Williams and Glidden as the only two producers. It is believed S-W specifically formulates paint around Lithopone so as to in effect subsidize their captive operation. Glidden does not subscribe to this philosophy. A part of the Lithopone sales decline can be traced to reduced usage by the Paint Division. In 1956 sales to the Paint Division were 2,414 tons, in 1957 2,085 tons, and in 1958 they dropped to 736 tons and will probably hold here in 1959.

DOLLAR GROSS PROFIT PER TON - The inherent problem of this product is the low gross profit per ton, which has tended to range between \$20 and \$25 per ton. Compare this to Titanium Dioxide at \$175 to \$200 per ton and Hammond products at around \$150 per ton. Because Lithopone for the most part can only compete as a cheap substitute for Titanium Dioxide, the price of TiO_2 puts a firm ceiling on the price of Lithopone. Thus no longer can the fluctuating price of zinc control the selling price of Lithopone and as cost of raw materials vary, so must gross margin.

GROSS PROFIT DOLLARS - These have tended to closely follow the sales curve inasmuch as gross profit per ton has remained within a narrow range.

CADMIUM

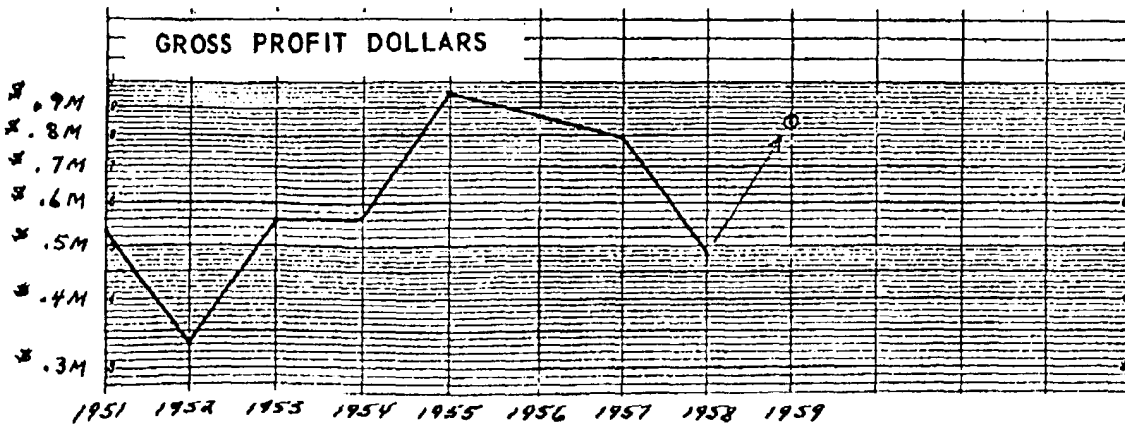
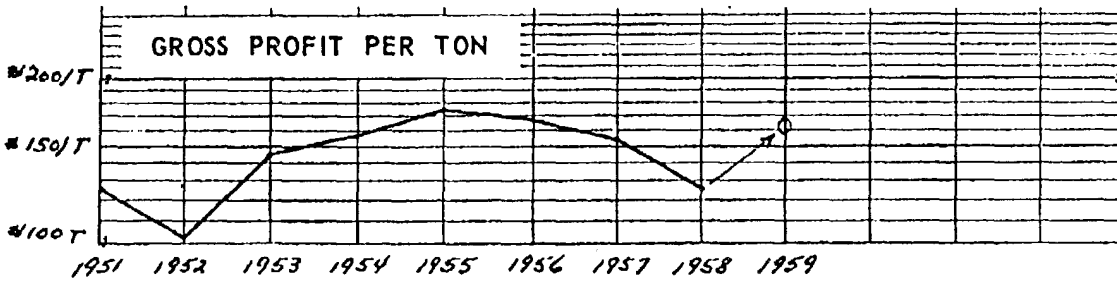
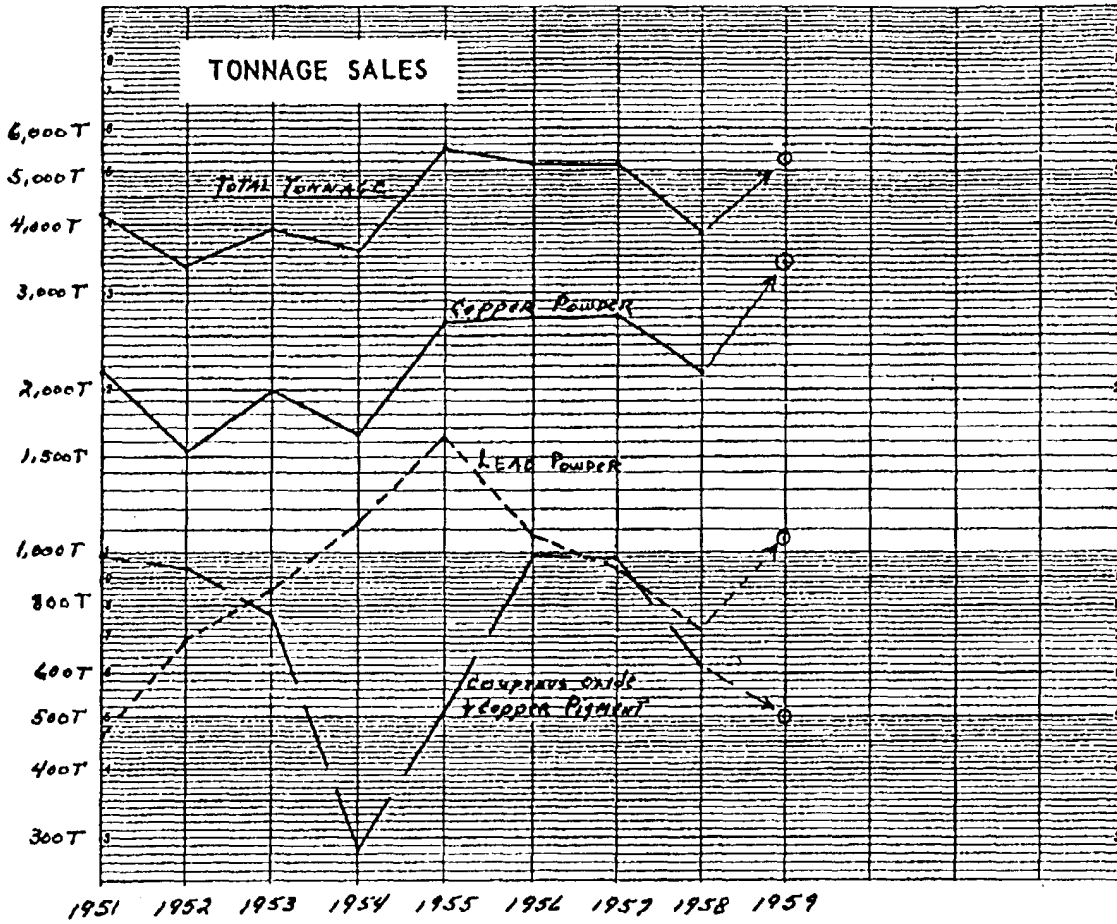
SALES IN POUNDS - For the last three years, Cadmium tonnage sales have been in a strong decline, falling from 1,588,000# in 1955 to 697,000# in 1958. There are two principal competitors in the field, Harshaw Chemical and Imperial, and it is the opinion of C-P-M Management that both are larger producers than Glidden. There are several small competitors whose volume is not significant.

DOLLAR GROSS PROFIT PER POUND - Historically, this product has always produced a good gross, averaging around 50¢ per pound for combined Reds and Yellows. Gross margin in 1957 and 1958 was depressed due to the market decline in Selenium. In addition, because of improvement in tinting strength by our major competitors, increased manufacturing costs were necessary in order to meet their standards.

GROSS PROFIT DOLLARS - The sharp sales decline coupled with lower gross margin per pound dropped gross profit from somewhere in the \$900,000 range to \$221,000 in 1958. However, the importance of this product to the Division's over-all profits, even at the present low sales volume, can be realized in comparing Cadmium projected gross for 1959 of \$330,000 to Lithopone which it is forecasted will produce only \$255,000 in gross profit. Cadmium operates on relatively low investment and incurs no more selling expense than Lithopone.

GLD019531

HAMMOND PRODUCTS



GLD019532

TONNAGE SALES - The three principal tonnage products have been charted. Copper Powder accounts for by far the largest tonnage and largest amount of gross profit dollars. Other producers of this product are American Metal Climax, Metals-Disintegrating, Greenback, New Jersey Zinc, Whittaker Powdered Metals and U.S. Bronze Works. American Metal is by far the largest and, from exchange of figures with this firm, is of about equal size with Glidden. The two companies are believed to do about 65% of the total industry. From earlier years, when official government figures were available, Glidden ranged between 15% - 20% of the total industry from 1943 through 1954. It is believed Glidden now does about 32% of the total industry in Copper Powder. Most of this growth has been at the expense of American Metal.

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Lead Powder is the second largest volume item. Gross margin, at about \$90 per ton, is about half the margin on Copper Powder. Other producers of Lead Powder are National Lead, Metals Disintegrating, Metalead Products, Eagle-Picher, and Draggert. The last known industry figures were in 1955 at 3,300 tons of which Glidden did 48%. In 1954 Glidden did 55.6% of the industry. The peak in 1955 resulted from the government's Radar Chaff Program, an outgrowth of the Korean conflict.

Cuprous Oxide and Copper Pigment, used basically as an anti-fouling paint pigment, shows an erratic sales pattern, to some extent caused by government buying. There are two domestic competitors at present. Industry Statistics for recent calendar years for Cuprous Oxide only are:

	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>
C. K. Williams	44.8%	48.9%	41.5%	54.2%
Glidden	23.6	16.5	25.8	23.6
Mountain Copper Co.	7.7	12.6	11.9	9.0
Rohm & Haas	23.9	22.0	20.8	Out of Bus.
Foreign	?	?	?	13.2
Total Consumption	100%	100%	100%	100%
Estimated Tonnage	1,288T	1,364T	1,437T	1,273T

While the above indicates a sharp drop for Glidden in 1956 versus the increase shown for combined Cuprous & Pigment on the chart, the latter was due to substantial sales of Copper Pigment.

The Division also sells smaller amounts of Cupric Oxide, a catalyst sold mainly to oil refineries and synthetic fiber manufacture; Cubond, a copper based brazing compound; Tin Powder, Solder Powder and Brass Powder. None of these have been charted.

GROSS PROFIT PER TON - Prices in the industry have in general been well maintained. Essentially price is set on a toll basis; i.e., so many cents per pound over prime metal prices. The change in over-all average gross profit per ton comes about from changes in product mix and from market fluctuations of basic metal prices. Unit gross margin and per cent of sales price in the current fiscal year are:

	<u>Gross Margin Per Ton</u>	<u>% Gross Profit to Sales</u>
Copper Powder	\$180	21%
Lead Powder	91	24
Tin Powder	150	7
Solder Powder	396	39
Cuprous Oxide	191	24
Copper Pigment	132	19
Total Cuprous & Pigment	\$153	21%
Cupric Oxide	288	35
Cubond	5.08/gallon	32
Total Average	\$168	21%

GLD019533

GROSS PROFIT DOLLARS - 1955 and 1956 were influenced by the increase in copper markets from 30¢ to 46¢ per pound. Conversely, 1957 and 1958 were affected by the drop to 25¢ per pound. The 1958 drop in gross profit was equally affected by the decline in tonnage sales of the principal products as shown on the chart. The same factors are reversing in 1959 so as to put gross profit back towards the 1955 and 1956 levels.