1961

RESEARCH ACTIVITIES

PRATT & LAMBERT-INC.

TRADE SALES DEVELOPMENTS

The following new products were put on the market in 1961:

VAPEX HOUSE PAINT - The "listing" of the standard colors in this line entailed no laboratory work, as the formulas had already been established in connection with our 1960 test marketing program. The real problem was created by the Light and Deep Bases, which were added to the line in 1961. Frustrating difficulties developed in production. Initial factory batches exhibited faulty color acceptance, or poor stability after tinting. The problem was finally solved by making only very minor changes in the wetting system, but it cost us $4,801 to find the exact answer, while production stood still for almost three months.

"6T1" HOUSE PAINT - This line of four items reached the market in record-breaking time. We first learned of the water-thinned linseed oil that makes "6T1" House Paint unique in October, 1960. In little more than a year, we had completed our evaluation of the vehicle, made necessary management decisions to go ahead with the paint, and had produced 6810 gallons. The entire development cost amounted to $2,628.

HOUSE PAINT 306 ONE COAT CHALK RESISTANT WHITE - Adopted in place of House Paint 307 One Coat White. All development expense was covered in weather tests conducted in previous years.

The following changes or improvements were made in existing trade sales lines.

MACHINE SYSTEM - The Machine System continues to absorb a substantial amount of time. It cost $21,221 to develop the colorants for this system, before the system was ever put on the market. Another $4,812 were spent on colorant work in 1961. Colorant "F" Red No. 3 was reduced in tinting strength in order to provide better color matches in our formulas. This change will save us about $2,100 per year.

A large amount of time was spent in revising, checking, and perfecting Machine System formulas. 57 formulas in the blue and green families were revised to provide better matches between alkyd and latex lines. All color formulas are again being studied and re-checked for accuracy. This study will require almost one man-year of work.

Extra Deep Bases were developed in Vitralite Enamel Eggshell, New Lyt-all Flowing Flat, and Lyt-all Stippling Eggshell at a cost of $2,872. These bases expand the usefulness of the Machine System. All ready-mixed deep colors and intermix colors of New Lyt-all Flowing Flat can now be reproduced with machine colors.

Vitralite Enamel Eggshell Deep Base was improved in color acceptance.

LOW LUSTER HOUSE PAINT - "Frosting" difficulties were eliminated by reducing the calcium carbonate content of these paints and by making other minor changes in composition. Laboratory work connected with this change cost $2,969.

HOUSE PAINT - Once more, the bodied linseed oil portion of the vehicle has been replaced with soya alkyd resin in order to take advantage of the low cost of soya oil. It is estimated that this will save $11,700 per year, based on a 24 cent per gallon cost differential between the two vehicles. The differential, however, does not remain constant. No new experimental effort was required to effect this change, but it cost $395 tohandle the clerical details associated with the change.

House Paint 339 Willow Green was revised by making it from our standard color base instead of our tint base. This will save us $1,150 per year.

MULTIPURPOSE TINTING COLORS GREEN LIGHT, GREEN MEDIUM, GREEN DARK, AND ENGLISH ROSE LAKE - All four colors were revised by making them from alkali-resistant pigments. The colors are now suitable for use in masonry paint. The revised colors also "take" better in water-thinned paints. The laboratory work cost $1,458. The change in English Rose Lake resulted in a higher cost, which has been reflected in the selling price. The change in the greens will save us $1,100 per year.

EFFECTO ENAMEL BOTTLE GREEN AND DUBLIN GREEN - Settling tendencies have been overcome, but at a cost increase. The laboratory work cost $401.

LYT-ALL STIPPLING FLAT - Settling tendencies decreased.

VAPEX FLAT WALL FINISH - The Light Base in this line is now made by an improved manufacturing technique that provides better pigment dispersion. This enables us to reduce the pigment content and save $16,800 per year.

"Dripless" latex paint is a future possibility. Latex paint is inherently thin and sloppy. Making it dripless in the sense that Solidex is dripless would be a desirable development. We have spent $2,440 on this project to date. The results are encouraging, but we do not yet have a perfected formula.

One major unresolved issue is how much importance we attach to the scrubbability of Vapex Flat Wall Finish. This product now scrubs as well as, or better than other PVA paints, but it lacks the scrubbability of Spred Satin. The sensitivity of Vapex Flat Wall Finish to scrubbing is related to the fact that it has to work in our color system. The wetting agents that provide color compatibility for a PVA paint also contribute water sensitivity. Spred Satin is a styrene-butadiene paint. We have developed a more scrubbable version of Vapex Flat Wall Finish by shifting to a styrene-butadiene base. The latter was rejected by the Western Division because of leveling and because the Western Division did not duplicate laboratory scrubbing tests. In December, 1961, it was decided to test market the styrene-butadiene formula in Canada in order to learn the trade reaction. To date, there has been no reaction - either good or bad - but there has been insufficient time to draw worthwhile conclusions.

The proposed formula, if adopted in the U. S., has the not unappealing feature of saving us $50,000 per year. To date, $20,000 has been poured into research work aimed at increasing the scrubbability of Vapex Flat Wall Finish.

Among other unresolved, or as yet unfinished, projects are the following:

HOUSE PAINT FLASHING - $4,450 were spent on this project during 1961. No formula improvement is in sight.

SETTLING OF TONETIC WOOD STAIN - $722 were spent during 1961 on this project. Minor improvements have been effected in some formulas, but settling seems to be an inherent characteristic of any product as thin as Tonetic Wood Stain.

VITRA-TILE - This project continues to absorb vast amounts of research time ($10,686 worth in 1961). New problems arise almost daily. Because of the complicated nature of Vitra-Tile problems, it has so far been impossible to transfer Vitra-Tile work to the Architectural Enamel & Paint Laboratory, where it rightly belongs. Our normal practice is to free the General Research Laboratory of responsibility for new finishes, once they reach the commercial stage. Unless this is done, the General Research Laboratory will become so bogged down in day-to-day problems that it has no time to undertake the long range investigations, for which it is responsible. Sometimes, it appears as though we have created a research monster in Vitra-Tile. Vitra-Tile is too big to handle comfortably, and it's as yet too immature to be put on its own.

Most of our 1961 Vitra-Tile work was concerned with making uniform batches of Vitra-Tile, with investigating competing products and systems, and with evaluating new polyester resins. The latest problem is one of fire hazard. On almost every side, Vitra-Tile is being criticized because it does not have a low flame spread rating, yet this feature was never mentioned during the year when Vitra-Tile was being whipped into shape prior to marketing.

In 1961, 17,800 gallons of Vitra-Tile materials were sold. This included 7,200 gallons of Coating and 2,800 gallons of Glaze. The Technical Department forecasts 1962 sales of 50,000 gallons, unless architects blacklist Vitra-Tile entirely because of its flame spread rating.

VARMOR - 1961 production amounted to 50,000 gallons in U. S. and Canada. In 1961, it became evident that Varmor has a weakness that had not been previously recognized. Varmor may adhere poorly to paste filler and adhesion has been criticized rather generally in marine applications. Difficulty starts when the film continuity of Varmor is broken - either because of shrinkage of the wood substrate, or by scarring the film, or by dragging hemp rope across the varnished deck of a boat. Our experience has been paralleled by other urethane producers, although adhesion is admitted to be a problem only in private conversations. In 1961, we spent $5,814 attempting to improve the adhesion of Varmor. One facet of the problem concerned investigations of ultraviolet light absorbers. No good solution has yet been found for the adhesion problem, but we have one promising lead, as this is being written.

"61" FLOOR VARNISH - SATIN & DULL - $2,220 were spent in 1961 in an effort to overcome the stability problem that has periodically caused wholesale returns of "61" Floor Varnish Satin. 1961 batches seem to have remained stable, but an estimated 3,000 gallons of instable 1960 production was returned in 1961. We have no problem at the moment, but whether the problem is permanently behind us no one knows.

INDUSTRIAL SALES DEVELOPMENTS

The table on the next page lists 47 of our industrial accounts, and includes all those that purchased more than $10,000 of our products in 1961. It also includes a few additional accounts - many of them new - for which more than $250 of laboratory work was performed. In total, these 47 accounts bought about 70% of our industrial volume and provided us with 70% of our industrial laboratory activity.

Metal decorating finishes continue to be the mainstay of our industrial business. 171 thousand gallons, or about a quarter of our 1961 U. S. industrial volume, fell into this category. Another 34 thousand gallons were produced in Canada. $3,356 were spent on research work in the metal decorating field in 1961. American Can Co., our biggest industrial account, has purchased over 600,000 gallons of the same white enamel from us since 1956. Rigid quality control has been an important factor in retaining this business. Continental Can Co. quadrupled its purchases from us in 1961. The key product we sell this company is an aluminum coating of which 17,000 gallons went to the Oil City, Pa., plant. This item, now used only on oil cans, has been reformulated with a food grade aluminum, so that it is suitable for all types of cans.

Campbell Soup Co. is a potential customer for an interior can coating. "Packs" of cans finished with our interior coating have stood up as well as "standard" cans (finished with a competing product) after 18 months of storage. Food packaging entails such large risks that the development of new metal decorating business in the food field is a very slow process.

Account	1961 Sales (in 1000's)	1961 Laboratory Charges
American Can Co.	$399	$1158
American Sanitary Partition Co.	4	716
American Standard	13	105
Brooklyn Metal Decorating Co.	86	288
Burrell Metal	17	460
Burroughs (Todd Div.)	14	264
Burt, F. N.	37	583
Carborundum Co. (incl. Munising Paper Co.)	217	2389
Chain Belt Co.	*	267
Continental Can Co.	66	**
Dunlop Tire & Rubber Co.	39	807
Eastman Kodak Co.	14	537
Ebco Manufacturing Co.	44	941
Evernu Metal Products	*	366
Fedders-Quigan Corp.	42	235
Foster-Wheeler	21	**
Gilbert & Bennett	13	225
Haartz-Mason	8	269
Hard Manufacturing Co.	62	2753
Holland Industries	11	368
Hollywood Appliances	18	364
I. B. M.	4	1190
Ingersoll-Rand	17	168
Magna Pin	*	495
Manufacturers Enameling Co.	*	354
Markel Electric Co.	34	716
Mergenthaler Linotype	*	499
Metpar Steel	32	574
Morrison Steel	18	204
National Collapsible Tube Co.	12	**
National Cash Register Co.	12	228
Ohio State Highway	31	**
Ozalid	3	242
Pratt-Whitney	6	384
Remington-Rand	13	**
Reznor	29	106
Royal McBee	7	302
Superior Metal	4	252
Springfield Armory	*	1163
Talon	77	2950
(Lightning Fastener, Canadian Sub.)		1800
Taylor, Halsey W.	14	113
Titan Mfg. Co.	13	644
Trico	20	307
Union Fork & Hoe Co.	18	**
U. S. Hoffman Can Co.	36	**
Whitehall Cabinet	*	283
Western Electric (incl. Anetsburger & Bell)	111	192
TOTAL	$1,636	$26,261

*Less than $5000
**Less than $100

From the standpoint of composition, alkyds constitute about a third (or 200,000 gallons) of our industrial volume. Large users include Fedders-Quigan, Hard, Western Electric Co. and its subcontractors, Ebco, Markel, Trico, and Titan. Lacquer, including thinner, represents about 135,000 gallons of our industrial volume. Two accounts - Western Electric and Dunlop Tire & Rubber Co. - are major lacquer users.

Epoxy enamels are gradually coming into their own, but high price and limited exterior serviceability mitigate against their wholesale use. Talon (and its Canadian affiliate, Lightning Fastener Co.) changed to an epoxy system in 1961 to obtain better resistance to laundering and cleaning agents. About 10,000 gallons were supplied to these two accounts during 1961. The adoption of the epoxy system precipitated laboratory work that cost us $4,750. The expense stems from the fact that Talon buys hundreds of colors, all of which had to be reformulated. This, in turn, led to the development of a new color mixing system for Lightning Fastener Co. Eighteen base colors with appropriate mixing charts now enable that company to custom make about a hundred of the colors that we previously supplied in very small batches.

Polyurethane finishes proved to be of unusual industrial interest in 1961. $1,163 were spent on a project for Springfield Armory. The government intends to make gunstocks from polyester plastic because of frequent shortages of quality walnut. A polyurethane system of ours proved to have unusual water resistance, dimensional stability, and resistance to charring. A prototype production run of 20,000 gunstocks is scheduled for 1962. It is expected that a P&L system will be used on these gunstocks. If the plastic stock is ultimately accepted for military use, we should be in a position to capture at least part of the substantial paint business that will be involved.

A white polyurethane enamel was developed for Dunlop golf balls in 1961. This was successfully used at Dunlop's laboratory in Buffalo, but "crawling" occurred when it was applied at the North Carolina golf ball plant. Before we were able to run down the reason, Dunlop decided to change its finishing system to enamel plus clear top coat. We are now developing materials to work on this new system, but in the meantime, a competitor is obtaining the business. $807 were spent on Dunlop problems in 1961.

The word "acrylic" is a glamor word in the industrial field just as it has been in the trade sales field. Largely because of the expanded use of acrylic lacquers in automotive finishing, all industrial users are interested in acrylics. Our customers lose interest when they realize that acrylics are costly. Acrylics do have great potential value in the appliance field, but we now have few, if any, customers in this category.

We have some excellent vinyl organosol finishes, that were specifically developed for I.B.M. Much of the $1,190 spent on I.B.M. work in 1961 went into an effort to duplicate the standard texture and colors, produced by a competing finish. Exact matches are difficult, if not impossible, to obtain because (1) we cannot use the competitor's patented texturing process, and (2) we are required to adhere to I.B.M. finishing specifications, even though we are certain that our competitor does not do so. Our sales organization remains optimistic about its ability to sell I.B.M., and has backed its optimism with a total investment of $31,000 worth of laboratory work over a period of about five years. At the start of this period, I.B.M. purchases from us amounted to $104,000. Each year, purchases have declined. In 1961, they amounted to $4,000.

In spite of repeated rejections by I.B.M., other accounts have reported that our organosols work well. We have no large volume customers, and it seems unlikely that a substantial market exists outside of I.B.M. However, a number of small specialty applications exist. One application is in windshield wipers. Our organosol on a metal component eliminates the clicking noise that is inherent in many wipers.

At the time when I.B.M. was a major account, it was also a major consumer of wrinkle finishes. In 1956, our wrinkle finish volume amounted to 117,000 gallons, and I.B.M. purchased half of it. Last year, our wrinkle finish volume amounted to only 35,000 gallons. Interest in hammered metal finishes has also dwindled. In 1956, our volume amounted to 28,000 gallons. In 1961, it amounted to 19,000 gallons. The loss of I.B.M. wrinkle business is explainable, but the general shrinkage in the demand for novelty finishes is more difficult to understand. Possibly, the demand is of a cyclic nature.

A couple of unique industrial finishes were developed in 1961. One was a pearlescent paper coating for use by F. N. Burt on cosmetic boxes. The pearlescent effect is blue when viewed from one angle and gold from another. This product sells at $11.65 per gallon. 2,800 gallons were produced in 1961.

An even more luxurious finish was developed for Pratt-Whitney to test the "temperature control of space probes". Described as a "high emissivity" coating, it is made from rare earth oxides and a silicone binder. A white developed for this purpose had a billing cost of $779 per gallon.

Emphasis on water-thinned industrial finishes has shown a marked decline. A few years ago, all raw material suppliers were eagerly promoting binders for this purpose and the trade publications were forecasting a huge potential market. Neither we, nor anyone else, to the best of our knowledge, has made a completely satisfactory water-thinned industrial enamel. There is little doubt that progress will be made in spite of this initially disappointing result. We are continuing our work. In 1961, $2,360 was spent on water-reducible industrial coating research.

Our laboratory is capable of developing most products needed by our industrial trade promptly. The problems that make disturbing news are those few, that are solved slowly or not at all. These "failures" are not always the fault of the laboratory. Some are due to misleading or inadequate information at the time a problem is presented to the laboratory. In at least one instance, significant information has been withheld by people who probably had no intention of buying P&L paint, but who did not elect to disclose this fact.

We are technically capable of doing more in the industrial field than we are doing, but the pace of industrial research effort has to be geared to a considerable extent to the interests of the Industrial Sales Department. No amount of technical know-how, all by itself, is likely to increase industrial volume. The Industrial Sales Department needs the laboratory to develop appropriate sales products, but the laboratory, in my opinion, needs imaginative and enthusiastic sales guidance, if effective technical progress is to be made in the industrial field.

COWLES DISSOLVER

Improved techniques have been developed for grinding trade sales finishes in high speed dispersion equipment (Cowles Dissolver and/or Morehouse Mill). These techniques have been worked out jointly by laboratory and plant personnel. The laboratory part of the project cost $458. Largely as a result of this work, it has been possible for us to concentrate our production plans for the California plant on Cowles-Morehouse equipment.

COOPERATIVE RESEARCH

In 1959, the Blaw-Knox Co. invited us to join with their laboratory in developing a continuous alkyd resin processing kettle, based on the Roto-Vak Heat Transfer Unit. A formal agreement was drafted and actual work began in February, 1960, after a pilot plant had been set up in the Blaw-Knox laboratory. The continuous process failed to provide the short reaction time that would have made the process economically feasible. The working arrangement was terminated by mutual agreement on December 30, 1960, but final details were not concluded until April, 1961. The project cost us $395 worth of laboratory time.

STIP-TONE PATENT

In 1957, Mr. Hoffman and Miss Wildhagen (now Mrs. Matesick) developed a novelty finish, which has since been sold under the trade name of Stip-Tone. A patent application on the finish was filed in March, 1958. After the normal rejections by the Patent Examiner, our application was amended on three occasions to meet his objections. In 1961, we were advised that an interference existed between our application and similar applications filed by Glidden, Maas & Waldstein, and P. D. George Co.

In order to avoid costly interference proceedings, we proposed, through our attorney, that all parties join forces, decide who had the best claim, then let that party obtain the patent and agree to cross-license the others on a royalty-free basis for withdrawing from the contest. Agreement was reached with Glidden and Maas & Waldstein, but P. D. George Co. refused to accept such an arrangement.

We have now joined Glidden and Maas & Waldstein in interference proceedings against P. D. George Co. The three companies will share the legal expenses in fighting P. D. George Co. If P. D. George Co. is defeated, the successful patentee will cross-license the other two without royalty. How long it will take or how much it will cost to terminate the present impasse is unknown. Our total legal fees to January, 1962, amounted to $1,149. Stip-Tone production in 1961 was a modest 3,000 gallons. Our largest customer is Franklin Mfg. Co., a casket manufacturer. Ebco is also a steady user. Ditto is a new customer, having placed an initial order for 350 gallons in November, 1961. It could be embarassing to us if our group fails to win against P. D. George Co.

NEW EQUIPMENT AND ADDITIONS

The following were acquired in 1961:

Beckman IR-5 Infrared Spectrophotometer	$6,349
Air Conditioner for Physical Testing Laboratory (1)	3,559
New Conference Room, Room 202 (2)	3,748
	$13,656

(1) To replace worn out unit purchased in 1949 and carried on our books at $1,247. Latter was capitalized over 20 year period, but lasted 12 years. Normal life expectancy of air conditioners is considered to be 10 years.

(2) Cost included relocation of vault entrance, moving of a wood test floor, and purchase of office furniture for use in Library, Room 200.

The Infrared Spectrophotometer is an optical device that automatically records the chemical composition of a minute sample (such as a fragment of film, or thimbleful of liquid or powder) upon a paper chart. We are currently using the instrument for the routine inspection of some 48 additives and surface agents that look alike, but cannot be quickly differentiated from one another by any other means. This group of raw materials is extremely important to us. The wrong additive could ruin the properties of any paint to which it was accidentally added.

The instrument is also proving of value in analyzing competing paints and in identifying unusual components in them. The fullest use of the instrument for the latter purpose will depend upon building up a library of curves on known raw materials. This library is gradually being developed. We now have curves on about 350 raw materials. $425 were spent on this effort in 1961.

Infrared spectrophotometers are relatively new and rare. Five years ago, they were classed as a luxury. Early models were complex and difficult to standardize. Gradually, refinements have been effected. Simpler, sturdier economy models appeared about two years ago. Facility in using our instrument was acquired through the cooperation of Dr. Woodburn and the University of Buffalo chemistry staff.

The new conference room was built primarily to free the library for use as a business office. The library was formerly used as a conference room. With added office space, there is now room for another stenographer, and the responsibility for certain semi-technical duties has been transferred to the Technical Director's secretary.

LABORATORY EXPENSE

Laboratory operations in 1961 cost 8% more than they did in 1960. For comparison purposes, the distribution of this expense is shown beside that of 1960 and 1951.

	1961	1960	1951
Research	$142,850	$138,200	$ 61,900
Sales Problems (Lab.Req.)	87,750	75,700	70,000
Manufacturing Services	212,000	194,900	121,000
	$442,600	$408,800	$252,900

Sales problems were once the mainstay of laboratory research and development activities. While the dollar value of this work has been very slowly rising, sales problems are fast receding in importance, as a source of laboratory revenue. The bulk of this work is now performed for the Industrial Sales Division. The trade sales divisions are expected to provide even fewer problems in the future. The Machine System has reduced the need for developing special colors in the laboratory,

and it is reducing the number of small orders in the factory. Special colors are now being made by our distributors. In one instance, laboratory charges of $520 were saved as a result of the Machine System. While the Machine System is reducing sales costs, it is not reducing the cost of our overall research activities. This means that more and more laboratory expense is being absorbed by the factory and is contributing to progressively higher billing costs.

PERSONNEL

Separations	1961	1960	1951
Retired or died	1	-	-
Discharged	2	5	1
Resigned to seek better opportunity	2	2	2
Resigned to enter military service	-	2	5
Resigned, other (health, school, home)	4	12	5
Transferred to other departments	1	-	-
Total	10	21	13
Average number of employees	66	65	60
Separation Rate*	15%	32%	20%

*Excluding temporary summer help.

For some unexplained reason, 1961 labor turnover in the laboratory was markedly lower than it has been at any time since 1949. Labor turnover has averaged 28% during the past decade. Turnover has ranged from an all-time high of 76% in 1942, to a low of 6% in 1933. The favorable figure for 1961 does not indicate any Utopia in labor relations. In fact, more time was spent on personnel problems in 1961 than in any prior year, although a very small minority of our laboratory employees are involved in these problems.

James Flowerday, a finisher, retired in 1961 after 24 years of service.

COMPLAINTS

Year	No. of Complaints P&L Manf.	Sprayon (1) Filled Pkg.	Rockcote(2) Colorant	Total	Percent Justified Complaint P&L Manf.	Sprayon(3) Filled Pkg.	Rockcote Colorant
1961	432	460	1	893	40	100	100
1960	375	269	3	647	35	100	100
1959	371	115	18	504	41	78	82
1956	374				33		
1951	230				36		

Notes: (1) Aerosol packages introduced in 1958.
(2) Tube Colorant System introduced in 1955.
(3) All aerosol can complaints classed as justified in 1960 and 1961. No inspection of allegedly defective packages is made by either P&L or Sprayon Laboratories. Sprayon simply credits sales offices for unsatisfactory aerosol cans, regardless of the nature of the complaint.

The complaint picture for 1961 was not an encouraging one. We not only had more complaints, but we also had more justified complaints than in prior years. A sharp rise in registered complaints seems to have occurred with the adoption of the new Complaint Report Form.

The major causes of justified complaints on P&L manufactured items are listed below for 1961, and 1960:

Cause of Complaint	1961	1960
Faulty color match-Factory-made colors	27	20
Machine system colors	25	14
Intermix system	6	-
Color change-After exposure or use	23	12
In package	9	15
Gelation, lumps, heavy consistency	19	16
Seeds, specks, grit, dirt	10	11
Gloss	10	10
Streaking, flashing, floating	8	8
Skinning	8	5
Settling, caking	8	1
Drying	3	2
Mislabeling	1	2
All others	15	15
Total	172	131

The increased number of justified color complaints on factory-made items was due largely to the Tonetic Wood Stain line. Two colors - Fruitwood and Pecan - were not close enough to Oil Stains of the same name, although the laboratory considered them satisfactory at the time color standards were established. New panel color standards were adopted in March, 1961, and the liquid stains were then made to produce the same effects on the same kind of wood used for the panel standards.

The Machine System color complaints were due to minor inaccuracies in the color recipe cards. Most, if not all these inaccuracies have now been discovered and corrected.

The Intermix System color complaints, while reported as justified, cannot be avoided unless we control the tinting strength of our standard colors. We would be unable to produce these items economically and with normal speed if they were rigidly controlled like the Machine System Bases.

Seventeen of the justified complaints on color change after exposure were caused by "frosting" of Low Luster House Paint. This problem is believed to be solved.

Five justified complaints on gelation were attributable to "61" Floor Varnish Satin and Dull. All of the complaint lots were produced in 1960.

Four justified complaints on the package instability of Vitra-Tile were received before we established a policy to accept no returns on material more than 3 months old.

The justified settling complaints were on Tonetic Wood Stain and Effecto Enamel Dublin Green and Bottle Green. Tonetic Wood Stain, in the opinion of the laboratory, settles no worse than Oil Stain, but as a new item, it was subjected to close scrutiny, thus revealing its eccentricities. The suspension qualities of some colors have been improved slightly since the line was introduced. The two Effecto Enamel Greens exhibited bad settling after the line was made "safe" (free from lead pigments). Settling has now been eliminated in these products.

Another chronic problem - flashing of P&L House Paint - resulted in complaints in Texas and Salt Lake City. The 1961 complaints may have been precipitated by the unusual summer that we had. Mildew complaints in Texas and the midwest may also have been caused by unusual weather.

The origin of 1961 complaints by sales divisions and data on settlements are tabulated below:

	% Total Complaints Originating Each Div.	% Each Div. 1961 Complaints Settled before 1-1-62	Settlements made on 1961 Complaints before 1-1-62		
			Cash or Credit	Merch.(1)	Total
Canadian	5	35	$ 50	$ 623	$ 673
Central	14	30	488	826	1,314
Eastern	15	17	556	749	1,305
Industrial	22	38	10,507	804	11,311
Western	44	31	737	2,767	3,504
	100%		$12,338	$5,769	$18,107 (2)

(1) Based on estimated average distributor's price of $4.00 per gallon.

(2) Corresponding figure for 1960 was $10,008.

The figures in the first column differ from the 1960 figures in two respects - the Central Sales Division registered far fewer complaints than in the previous year, whereas the Western Sales Division registered far more complaints than it did in the previous year.

The figures in the second column indicate nothing more than the speed with which complaints are settled. Obviously, a substantial percentage of 1961 complaints are as yet unsettled, because there has been insufficient time to do so. Ninety-seven 1960 complaints were settled in 1961, but are not included in the above figures because our system was changed at the start of 1961.

The figures in the third column do not mean the same thing for each sales division. Cash settlements by the trade sales divisions usually represent out-of-pocket money paid for labor in redoing an unsatisfactory paint job. Industrial Sales Division records list the credit in dollars extended toward the purchase of additional paint. Unsatisfactory paint involved in industrial complaints usually has salvage value and is reworked. No 1961 industrial settlement involved cash payments for labor or damages.

Total 1961 settlements of $18,107 were appreciably higher than the 1960 figure of $10,008, but most of the difference is represented in the Industrial Sales Division figures. In 1960, that division did not show the dollar value of returned or unsatisfactory paint. At best, reports on settlements provide a very inexact picture of the cost of complaints to our company.

SUMMARY

	1961	1960
New Products Developed	1,037	1,326
Sales Problems Reported by Laboratory	1,197	1,376
Research Problems Completed	36	45
New Raw Materials Investigated	507	394
Raw Material Shipments Tested	2,932	2,933
Batches Tested - Buffalo	17,225	16,815
Ft. Erie	3,434	3,562
Service Calls	138	134
Technical Dept. Bulletins Issued	35	45
Paint Manufacturing Bulletins Issued	35	30
Label Bulletins Issued	184	155
Complaints Investigated	432	375

March 7, 1962