

INTER-OFFICE LETTER

FROM Cleveland Laboratories

OFFICE Development, PV&L

FOR Cleveland

OFFICE

DATE

January 14, 1971

MR. H. E. Spitzer

SUBJECT

Trade Sales - Professional Coatings

ANSWERING LETTER OF

DICTATED BY

Exterior Paints

Lead Containing

Attached is a discussion of the work and type of products to be worked on that will be required to remove lead from our exterior Trade Sales and Professional Coatings paints. This work is intended to reduce the lead content to less than 1 per cent, based on the dry film, which is in compliance with the present legislation before Congress.

Our initial estimate indicates this will require approximately 2,000 manhours of actual reformulating work. This assumes that no unusual or unexpected problems occur.

There are three major areas included in this work.

- 1) Extensive testing of present formulas against the new Specification TT-P-00102C. With the new HUD Programs, this could become a substantial item.
- 2) Removing lead type pigments from paint, particularly undercoaters.
- 3) Removing or reducing litharge and lead drier content in the exterior colors. This may require new vehicle concepts. We have already written to J. C. Weaver requesting he consider investigating new vehicle types.

The bills before the House of Representatives and Senate do not specify a deadline. However, they do call for prompt elimination. Also, it appears that both these laws will be funded through 1972 which suggests that January 1973 may be the deadline. Since we would not expect to have this work completed for 1971 production, we would plan to be prepared for 1972 production.

This work can be done in Cleveland but we may prefer to have some little part done at another location.

The first phase of this Project would cover a one-year period. We will assign R. S. Taub to direct this work. On this basis, we would request an allocation of \$30,000 to cover this work.

R. L. Collins
R. L. Collins, Director
Central Laboratories, PV&L

RLC/ck

Enc.

cc: ABH RAM GGS RGB JJL DFH RAT RST JVP LLB

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Cleveland Laboratories

Development, PV&L

Cleveland

Tech Service

January 11, 1971

R. L. Collins

Lead Containing Exterior
Paint Products
File #47

Per our recent discussion regarding the removal of lead from our exterior paint products, the following should be considered in attempting to predict man hours needed and possible difficulties that may be encountered in reduction of the lead to 1% or less based on the dried film.

- I. Proposed New Specification TT-P-00102C which is for a high TiO₂ alkyd paint and is intended to displace white lead, leaded zinc and zinc oxide paints. Although we believe our Kem-1-Coat Alkyd, A3 W 16 will be a good candidate, considerable testing will have to be done to confirm this. Since the mildew resistance will probably be the toughest to meet economically, much testing of various priced fungicides will have to be done.

*Test
specimen for
to get composition
type*

II. Formulas containing leaded zinc:

The following Cleveland controlled formulas contain leaded zinc, 68 22 00 which will have to be removed and replaced with straight zinc oxide. This will result in a few cents per gallon increase in cost but should not be technically difficult to accomplish. Limited testing will be required. However, if it is desired to go completely lead free including elimination of lead driers for some advantage in fume resistance, then more work is required.

<u>Name</u>	<u>Rex</u>
SWP Gloss White	A2 W 4
SWP Trim & Tinting White	A2 W 8
P/C Hi-Level Gloss House Paint	B46 W 4
P/C Hi-Level White, Mildew Resisting	B46 W 14
Excello Oil Base Hout Paint	B4 W 56
SWP Chelsea Gray	A2 A 20
SWP Beige	A2 H 27
SWP Raffia	A2 H 39
SWP Sage	A2 G 93
SWP Sandpiper	A2 A 47
SWP Peace Yellow	A2 Y 50

III. Formulas containing lead carbonate:

There are three undercoaters involved using lead carbonate 68 06 22. Quantities vary from 1/2 to 1 pound per gallon.

<u>Name</u>	<u>Rex</u>
SWP Undercoater	A2 W 2
A-100 Wood Undercoater	A6 W 32
Excello House Paint Undercoater White	B4 W 71

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The A6 W 32 is expected to be replaced by P.C. Hi-Level Undercoater B46 W 31 which is an alkyd with less than 1% lead. The A2 W 2 is difficult to replace because of its low cost. We will have to re-view exposures to know if we can remove all lead carbonate from A2 W 2. B4 W 71 is not as critical in its lower priced market.

IV. Formulas with special lead containing pigments:

<u>Name</u>	<u>Name</u>	<u>Lead Containing Pigment</u>
SWP Ardmore Green	A2 G 12	Chrome Yellow 80 36 23
Leatherstocking Green	A2 G 51	Chrome Yellow 80 03 21
King's Yellow	A2 Y 56	Chrome Yellow 80 23 40
Latex Wood Primer	A17 W 2	Lead Phosphosilicate 68 03 21

Some of the above formulas also contain large amounts of lead driers as litharge and lead naphthenate. Complete reformulation will be necessary. Exposures will be necessary.

V. Formulas with large amounts of lead driers:
(From 4 to 10 pounds/100 gallons of litharge and up to 29 pounds lead naphthenate)

<u>Name</u>	<u>Rex</u>
SWP Ardmore Green	A2 G 12
SWP Charcoal Gray	A2 A 38
SWP Westchester Gray	A2 A 42
SWP Tricorn Black	A2 B 18
SWP Doeskin	A2 N 68
SWP Winthrop Red	A2 R 44
SWP Verdos Green	A2 G 38
SWP Ravara Green	A2 G 94
SWP Woodland Olive	A2 G 105
SWP Fairfax Brown	A2 N 70
SWP Solfast Red	A2 R 32
SWP Harvest Gold	A2 Y 52
SWP Heritage Colors	
Leatherstock Green	A2 G 51
Colony Green	A2 G 54
Provincial Sage	A2 G 55
Cape Hatteras Blue	A2 L 52
Olde Tavern Brown	A2 N 53
Plantation Brown	A2 N 56
Bucks County Gold	A2 Y 55
King's Yellow	A2 Y 56
Commonwealth Willow Green	A11 G 3
Colonial Barn Red	A11 R 15
Ranch Red	A11 R 47
Rust Control Primer #49	A57 R 17
Beauty Last Redwood	A14 R 59
Rogers House Paint Charcoal	B4 A 3
Rogers House Paint Shutter Green	B4 G 2
Rogers House Paint Chocolate Brown	B4 N 1
Rogers House Paint Redwood	B4 R 1

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R. L. Collins

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Name

Rax

Fashion Right House Paint
Deep Tinting White
Antique Gold Tinting Base
Mimosa Tinting Base

A2 W 21
A2 Y 18
A2 Y 19

Formulas in Group V may be very difficult to reformulate with less lead. Special vehicles may be required. Many of the formulas listed have parallels which have not been shown.

The time involved in reformulating all of the above formulas should be at least a minimum of 2000 hours and will be dependent on whatever success is achieved in different vehicle systems.

L. L. Back, Assistant Director
Cleveland Technical Service

RSTaub/cb

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