

FOR Cleveland OFFICE DATE December 18, 1946
MR. W. R. Sieplein SUBJECT Chicago Plant
ANSWERING LETTER OF 12-11 DICTATED BY WRS:mr

WRS
DEC 20 1946

Mr. Miller has asked me to reply to your letter of December 11 regarding the Allied Research Laboratories.

First of all, I would like to tell you that insofar as the exact terminology is concerned, we no longer have the Allied Research Laboratories. The department formerly designated as such has now been divided into the Paint Research Department, under the writer's supervision, and the Vehicle Research Department, with Mr. Walton as director. This change was made in October of this year. I have no precise record of the history of the department, but we generally assume that it was started on April 1, 1935 under Dr. C. D. Holley as Director. You will probably recall that Dr. Holley passed away in January of 1942. At that time we had approximately 14 chemists and 3 non-technical persons. Dr. S. D. Jackson headed up the Varnish Research Department more or less independently, but when he left, the Varnish Research Department became a physical part of the Allied Research Laboratories and was known as the Varnish Research Division.

Mr. Kohr and his group working on emulsion research eventually developed Kem-Tone and as a natural consequence of the popularity of this material it became necessary for them to have their own laboratory. As a result of such splitting off of groups from the laboratory there has been no remarkable increase in the number of people. At the present time in the Paint Research Department we have 9 chemists and 6 non-technical persons, although it should be kept in mind that in the non-technical group we classify people without college degrees, who nevertheless may be participating in some of the technology work. The Vehicle Research Department has 6 chemists and 2 non-technical people, using the same basis for classification.

We have in mind to prepare a pamphlet discussing the various departments at Kensington employing technical help, this pamphlet to be given to students who might qualify as prospective employees. We are attaching copies of the write-ups for the Paint Research Department and the Vehicle Research, which probably gives you the best idea of the general problems handled in the two departments.

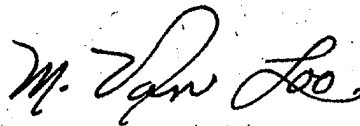
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We are attaching several photographs which we made ourselves of portions of the laboratory. These can be mounted as to give almost panorama views, but we believe you would be most interested in taking only some of them for illustration purposes. I think the ceilings could be cut down and give better balanced pictures.

You will also note that we have sent along a picture of a representative 50-foot wooden vertical fence for house paint exposures. Something along these lines was once used in "The World," issue of December-January, 1942-43. Including both metal and wood exposures, principally at Chicago, but also at Coffeyville and Miami, we have had about 20,000 exposures on the fences since 1935, of which approximately 12,000 are still active.

I know you would not be interested in listing all of the problems that we have in work, but as far as the Paint Research Department is concerned, much of it could be classified as investigation of house paints and undercoaters, metal protective paints, stucco and concrete paints, wall paints, enamels, plastic coatings - including vinyls and silicones, pigment studies, as well as miscellaneous specialized investigations.

I imagine that this is much more than you will need to prepare the brief commentary usually used for publication. However, if you need anything more that we can supply, feel free to call on us.



MVL:AR

Director of Paint Research

Paint Research Department

The Paint Research Department deals primarily with long range research and development in the field of pigmented protective coatings. Typical fundamental problems involving pigments and extenders include evaluations of opacity, shape and size distribution, surface area and binder requirements, viscosity characteristics, studies of surface active agents influencing wetting and dispersion, and all surface reactions between pigment and vehicle. Instrumentation includes adequate microscopic and photomicrographic equipment, reflectometers, gloss meters, plastograph, viscosimeters, and large scale spraying and baking equipment.

Among the products receiving special attention are house paint undercoaters and top coats including fire-retardant, or mildew resistant types, metal protective paints, chemical resistant paints, wall paints and enamels. Research in plastic coatings, vinyls, polyvinyl butyrals, silicones, etc., is emphasized. Properties evaluated comprise mixing and grinding qualities, rheological characteristics, surface tension, brushing and other application qualities, flow, drying, gloss, color, reflectance, film permeability, abrasion resistance, adhesion, elasticity, humidity and salt spray resistance, durability and other exterior performance characteristics, etc. A large exposure farm is maintained in the Chicago suburban area, supplemented by exposures in Coffeyville, Kansas, and Miami, Florida.

The personnel which executes this work includes chemists of various types, some having specialized training in physical, colloid or organic chemistry. The projects are carried on and reports are distributed for the benefit of the entire institution. Employment in the department affords a wide experience in paint technology and contacts with all types of usage of protective coatings.

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December 18, 1946

VEHICLE RESEARCH DEPARTMENT

The Vehicle Research Department, as the name implies, is engaged in research and development work on vehicles for protective coatings, i.e., that portion of such coatings other than pigment. The field is a large and important one. It is large because it embraces such a wide variety of materials, which include drying and semi-drying oils, natural and synthetic resins and their component parts. In almost innumerable combination, these go to make up vehicles of the present and future. It is important because vehicle preparation lies closely within the hand of the paint and varnish manufacturer, and it is here that ingenuity is rapidly translated into new and improved protective coatings.

Work in the department lies mainly in the field of organic chemistry. Considerable time is spent on organic analysis and synthesis, and physico-chemical measurements. Reactions most commonly met are those of saponification, esterification, alcoholysis, acidolysis and polymerization. The work is both theoretical and applied in nature. The fundamental nature and reactions of drying and semi-drying oils are studied. No research is done on resin synthesis, but a good knowledge of synthetic resin chemistry is gained from the work in hand. On the other hand, many investigations terminate in new vehicles, which after development in the laboratory, are then put into production in the factory under the joint supervision of this department and the Production Department, until satisfactory production is established.

The diverse nature of the work is reflected in the personnel of the department, which is made up of chemists who have backgrounds of academic training and experience to fit them best for the many types of problems which arise in the field of vehicle research.

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