Industrial & Power Capacitor
Hudson Falls, New York
July 28, 1970

cc: R.T. Abbe
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J.G. Bryant - Monsanto Co.

TRIP REPORT

OF: J. Donnelly - S. Huchro

TO: Monsanto Company, St. Louis, Missouri

ON: 7/22 and 7/23

PERSONS VISITED:

Monsanto Locations	Personnel
W.G. Krummrich Plant Sauget, Illnois	Bill Corlew - Mgr., Arochlor Production Bob McCutchen - Supr. " " Virgel Brawley - Foreman " " R. Kuster - Q.C. Control Fab. Supr. J. Blanchard - Q.C. " " Technician
J.F. Queeny Plant St. Louis, Missouri	Dr. Munch - Sr. Physical Chemist
General Offices St. Louis, Missouri	P.G. Benignus - Mgr. Mkting. Dielectric Fluids D.A. Olson - Director Of" " " M. Baber - Project Mgr. Comm. Dev. Dept. J.G. Bryant - Product Specialist Dielectric Fluids

OBJECT OF TRIP: To obtain additional information in regard to column refining of arochlors and to review pollution abatement programs being established by Monsanto for arochlors.

The visit to Monsanto was arranged and co-ordinated by Mr. J.G. Bryant who was our host for the entire visit. Mr. Bryant's itinerary included visits to personnel directly involved with the production of arochlors and the control of its use.

We visited the Krummrich Plant on our first day in St. Louis. A small portion of this complex was devoted to the manufacture of arochlors using biphenyl with subsequent distillation and column refining of the arochlors. Monsanto is planning to modify the distillation process to eliminate some of the higher

chlorinated diphenyls currently contained in their 1242 arochlor (1499 Pyranol). This will provide all capacitor manufacturers with a material which is more easily degraded in nature.

The arochlor producing facility was quite compact and the housekeeping was very good with very little evidence of leaks or spills. Pump and other leaks were confined to a trench which led to a partioned settling tank for arochlor separation and disposal.

The majority of pipe connections were of a flanged type employing Garlock 900 gasket material (non-contaminating). No visable joint leaks were observed, in contrast to the noticable leaks at unions and couplings in both of our plants.

They are using a Cuno type filter with a removable cartridge between the packed column refiner and the storage tanks. This filter has proven to be quite effective at the flowrates up to approximately 200 GPM with very little pressure drop and appears to be superior to the Sparkler VR-12-6 that we use.

The packed column refiners were approximately 15 feet high by 30" in diameter and contained a charge of approximately 2400 lbs. of Poracel (alumina). Only one of the four columns in the continuous process was being used for 1242 arochlor (1499 Pyranol). The other three columns were being used on the other grades of arochlor being manufactured. The refining process was being monitored by an in line continuous P.F. measuring device which is described in Monsanto bulletin O/FF-12. The operating personnel have experienced excellant correlation between P.F. measured by the in line analyzer and resistivity measurements. The arochlor processing vessels, pipes, etc. are either aluminum or aluminum lined.

Our second day at Monsanto began with a visit to Dr. Munch. Most of our discussion with Dr. Munch conerned the handling of arochlors and its effects on the ecology. He discussed the various approaches Monsanto is taking to minimize the effect of arochlors such as: 1. The removal of higher chlorinated biphenyls from 1242. 2. The development of new types of arochlors that would be less hazardous to the enviroment. We discussed various tests and methods of separating arochlors from water. Dr. Munch indicated that Viton-A which is used with Pyranol in the Department is somewhat contaminating. He gave us information for specifying a different grade of Viton which is essentially non-contaminating.

The remainder of the day was spent at the General Offices discussing the common problems and responsibilities facing Monsanto and G.E. through the use of arochlors.

The Marketing Manager expressed a desire to explore the possibility of Monsanto marketing some of the products of the Materials Supply Operation both in the U.S. and abroad. They are scheduled to visit the Department sometime in August and will no doubt want to discuss this matter at that time.

We are attaching a press release by Monsanto concerning their position concerning P.C.B. (polychlorinated biphenyl) use and its effects on the enviroment.

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