

C C TO
MONSANTO CHEMICAL COMPANY

Anniston, Ala.

Dr. Jenkins-Mr. Durgin
Dr. E. E. Hardy
Mr. J. F. Reeves
Mr. R. P. Loewen

DATE March 19, 1947

TO

REFERENCE

ATTENTION Mr. F. A. Barker

SUBJECT Changing Resistivity Bridge to
500 volt Power Supply.

On January 24, Mr. F. M. Clark of the General Electric Company, discussed with us the various analyses which are made on Aroclor. One of the determinations on which Anniston and General Electric disagree is the resistivity measurement. Anniston is always lower by a factor of 4 or 5 than General Electric results on the same sample. These results are in our favor but they show a difference that is not easy for the analyst or the customer to explain even though the Aroclor is perfectly satisfactory.

The only known difference in the methods of measuring the resistivity is that General Electric operates at 500 volts potential and Anniston measures the resistivity with a 90 volt potential.

Mr. Fred Reeves stated at this meeting that he felt that Anniston should make a change to 500 volts for the resistivity measurement on Aroclor in order to have the same test that General Electric has and desires that we use. This letter will acquaint you with the additional equipment needed for converting the power supply to 500 volts.

The present equipment used for resistivity measurements is made by General Radio Company of Cambridge, Massachusetts, and is designated as Type 544-B, Megohm Bridge, Serial No. 171.

Instructions in the manual read, "--- this bridge can be operated either from dry batteries or from either of two A-C power supplies. These power supply units are interchangeable and fit into the compartment at the rear of the cabinet."

In addition to purchasing the Type 544-P3, 500 volt A-C power supply, a 500 volt transformer will also be required. Our own electrical engineers may be able to help you on this problem, but I think the proper approach would be to write General Radio Company. By acquainting them with the problem and the desired change, they should be able to offer the best solution. The purchase of a new machine might be desirable.

I would like to see this change made in order to improve our electrical testing laboratory facilities.

A. M. Ellenburg
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