

LOCATION: Organic Research

C. W. Roos

DATE: July 17, 1962

W. G. Knapp

D. E. Roush

SUBJECT: PROJECT REVIEW - PA FLUOS -
HEAT TRANSFER FLUIDS

R. Davis/ S. Shaw

M. McEwen

H. L. Hubbard

TO: Dr. C. E. Anagnostopoulos
Dr. T. M. Patrick

A project review on the subject PA was held on the afternoon of July 3rd. The status of the project in general was reviewed with an initial discussion of the current status of the process work on the high temperature transfer fluid (MCS 177). It was reported by the author that the special 34% chlorinated biphenyl (Aroclor "1234") had been prepared at the W. G. Krummrich Plant and was to be delivered to the W building within the week. Preparation of the MCS 177 was to begin on or about the 15th of July. Final product was to be available by the end of August.

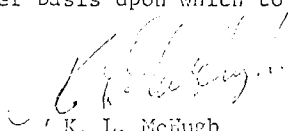
Don Roush then described the current status of the repairs of the Heat Transfer Loop with particular reference to his experience with the experimental test section which he has been using to evaluate various thermocouple installations. Tentatively, the materials for the construction of the new heater section will be available by July 17th and the heater section can be assembled by July 20th. Contingent on the above, the heater section would be installed in the loop by July 24th and full operation of the loop would be expected by July 31st. Thus, if all goes well, the data collection runs on Aroclor 1242 will be begun by the first of August.

Bill Koerner described the status of the specific heat, thermal-conductivity and density measurement on the various production batches of Aroclor 1242, 1248, and 1254. Specific heat data were to be completed before the week was out on all the reserve samples. Thermal conductivity on Aroclor 1248 and one value each on 1242 and 1254 were to be available by the end of the week.

This data could be sufficient for calculation of the heat transfer data by the computer. Koerner further stated that his re-check of the density of the Aroclors confirmed existing data and that he did not recommend additional determinations of density above and beyond that currently reported in our literature. This was agreed to by all present at the meeting. It was further agreed that the existing physical data for the Aroclors would be sufficient to permit Dick Brooks to proceed with his program on the computer for the calculation of the heat transfer data.

A discussion followed concerning the establishment of test methods and completion of the apparatus to measure the thermal stability and vapor pressure of the production Aroclors. It was estimated by Bill Koerner that the unit could not be used as a control instrument at Anniston until the latter part of August or the early part of September. Lou Fowler indicated that it would take about 8 man-weeks effort from his group to complete and "de-bug" the apparatus. Koerner said that it would take an additional 6 man-weeks from his group to calibrate the instrument and establish a workable procedure to be turned over to the control laboratory with the instrument. It was further agreed that the fluids group would fill in the gap between the initial production batches and the first determination of thermal stability on the new apparatus by running control samples on the isoteniscope. It was further suggested that large enough samples be obtained from Anniston to permit determination of the isoteniscope data and use of these identical samples to calibrate the new thermal stability apparatus. This way independent checks of reliability and precision could be obtained.

At the close of the meeting it was stated that by the undersigned that since the data collection runs on the loop would be dependent upon satisfactory operation of the revised loop, it might not be advisable to re-write the PA at this time. Rather, it appears wiser to defer until completely satisfactory operation is assured. This would permit a much firmer basis upon which to determine our target dates.


K. L. McHugh