

TO R. A. Chartier AT DATE March 29, 1973
FROM F. R. Klebacher AT COPY TO
SUBJECT PROGRESS REPORTS - MARCH 1973

I. <u>TEST OR PROJECT</u>	<u>NUMBER OF TESTS</u>
A. <u>Plant Air (VC Content)</u> (Samples only, does not count GC scan or computations)	540
B. <u>VC Monomer Monitor</u>	20
C. <u>Plant Methocel(s)</u>	120
D. <u>Methanol Extracts</u>	30
E. <u>Resin Viscosities</u>	20
F. <u>Soap Analyses</u>	10
G. <u>Stamford Assistance</u>	10
H. <u>Effluent Water</u> Settleable Solids Suspended Solids pH (lab)	15 15 15
I. <u>Process Water</u> General COD	24 20
J. <u>Rigid Pipe</u>	25
K. <u>Vinyl Acetates</u>	2
L. <u>R & D Samples</u>	8

Note: The unusual large increase in tests for the month is due primarily to the VC in plant air study now in progress.

II. EXTENDED TIME STUDIES

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A. Monitor of Plant Atmosphere for Vinyl Chloride

During this time period the Analytical section has been requested to apply full support on an environmental project proposed by Dr. L. A. Krause (New Haven). The project is to determine the amount of exposure of plant personnel to residual vinyl chloride in the atmosphere. The total project comprises several parts and experiments. At this time, however, we are concerned with only one. This is the sampling of the plant air and the measurement of the vinyl chloride contained therein. The project was started by establishing a standard of response of our GC instrumentation

for low levels of vinyl chloride. The monomer (99.99%) analyses is being used for the VC in air monitor (0-500 ppm). The standard was established using both a known liquid VCM injection and precalibrated vinyl chloride gas. The response of both samples cross checked satisfactorily.

With the aid of the entire quality assurance group an air sampling procedure was set up. This involved in segmenting the working day into four (4) two (2) hour units. During each unit a member from the QC Group samples the air in each of the three reactor buildings. The samples (three from each building) are taken randomly from the air on the second floor. Other more specific samples (ie inside a reactor, reactor just opened, during cleaning, etc.) are occasionally taken and specially marked. (The sample container is a 1'X6"X2" polyethylene food bag).

The total amount of samples number thirty-six (36) per day.

The samples from each time unit are then brought to the analytical lab. Each sample is in turn injected into the GC. From the chart of retention time and peak area the quantity of vinyl chloride is determined. To-date, 468 samples have been so treated. Vinyl chloride concentration averages for the first two weeks of this study are shown below (in ppm vol./vol.) eight hour average exposure.

	3/12	3/13	3/14	3/15	3/16	3/19	3/20*	3/21	3/22/73
Plant									
RA	134	158	112	137	144	148	---	224	100
RB	282	51	277	54	112	226	---	131	80
RC	26	27	30	88	57	99	---	41	46

* The samples for 3/20 were lost due to equipment malfunction.

OSHA currently has a 500 ppm limit for vinyl chloride exposure.

B. Carbon in Process Water Prefilter

As has been reported in previous monthly reports the analytical lab has been monitoring the output of the water prefilters. This monitor accounts for the amount of organic material which is allowed to pass to the deionization resins. Normally this is close to zero. When the value (COD) rises above zero this indicates that the adsorbent charcoal is being depleted. A rise in COD value has been noted over the past few weeks. It has been recommended that the charcoal be replaced.

C. Compound Raw Material Specification

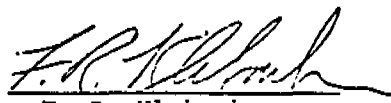
Purchase specifications for all raw materials used in compound production have been prepared. These were prepared in response to a request by S. Cupach for a complete specification package for the compound(s) manufactured at Assonet. Purchase specifications for eighteen (18) raw materials were involved.

D. Effluent Control pH Probe Standardization

At the request of engineering the pH probes in (1) the basin effluent stream and (2) the acid-caustic pH control tank were restandardized. Both units were found to be reading slightly off. These were easily corrected by minor electronic adjustments. Final calibration was made with multi-range buffer solutions and cross checks with the lab pH meter. Both units are now responding correctly.

E. Reports Issued During the Month

- . Sizing Sleeve Exudate from No. 1 Extruder
- . Replacement of Activated Carbon in Process Water Prefilters
- . Raw Material Specifications
- . Analysis of Mandrel Exudate 9402, L-1423
- . Plant Air Analysis Schedule
- . Plant Effluent Analysis - February 1973
- . Standardization of Effluent pH Probes


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FRK:jaa

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