

**UNION
CARBIDE****INTERNAL CORRESPONDENCE**

CHEMICALS AND PLASTICS

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COMPANY
LOCATION Texas City Plant

DATE April 7, 1975

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Mr. R. W. Sesler

SUBJECT VFA Monitoring Complex
Solvent Vinyl Area

The new VFA and both micro-computers with printers arrived on April 3. This, therefore, seems a good time to catch you up on the project status.

Charlie McKibben had some tests run to determine the effect of both sample tube material and length on VFA accuracy. These tests show that, while stainless steel tubing maintains a greater degree of accuracy than polyethylene, the major determinant is length; the percent accuracy of the VFA does decrease with increasing length of sample tubing (see graphs attached).

Based on this, Charlie and I came up with the following plan:

1. Install both VFA complexes at Building 115;
2. Use poly tubing for sample points, each run to be of the same length (and, therefore, same degree of accuracy);
3. Install tubing with properly sized fittings and in such a manner as to minimize possible tube damage from hot lines, projections, tight bends, etc.;
4. Initiate a monthly testing program to ensure "leak tight" runs and continuing accuracy;
5. Build a correction factor into the VFA complex to account for the loss of accuracy due to tube length (tests support this approach).

UCC 094533

Mr. K. E. Ross
VFA Monitoring Complex
Solvent Vinyl Area

2.

We feel this plan will give us the best possible complex for the dollar and will certainly do unless continued operation proves poly tubing inappropriate, or until Buildings 121 and 122 are finally de-regulated.

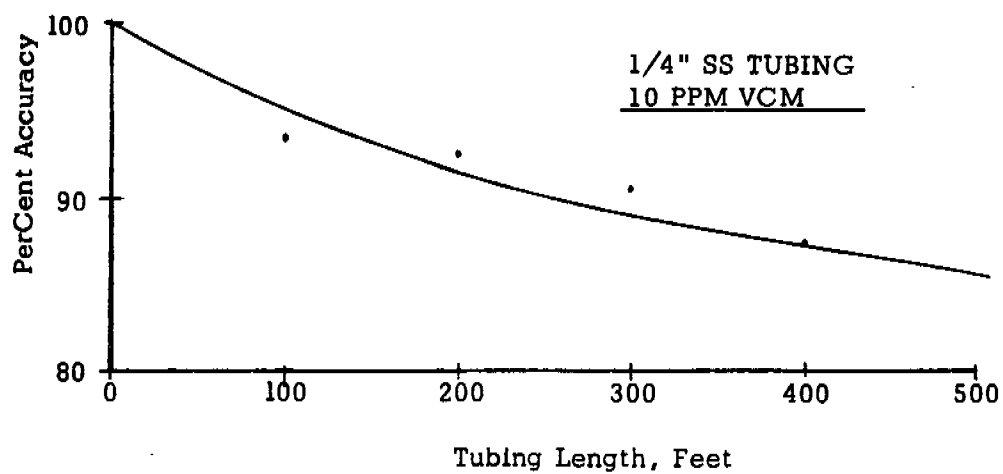
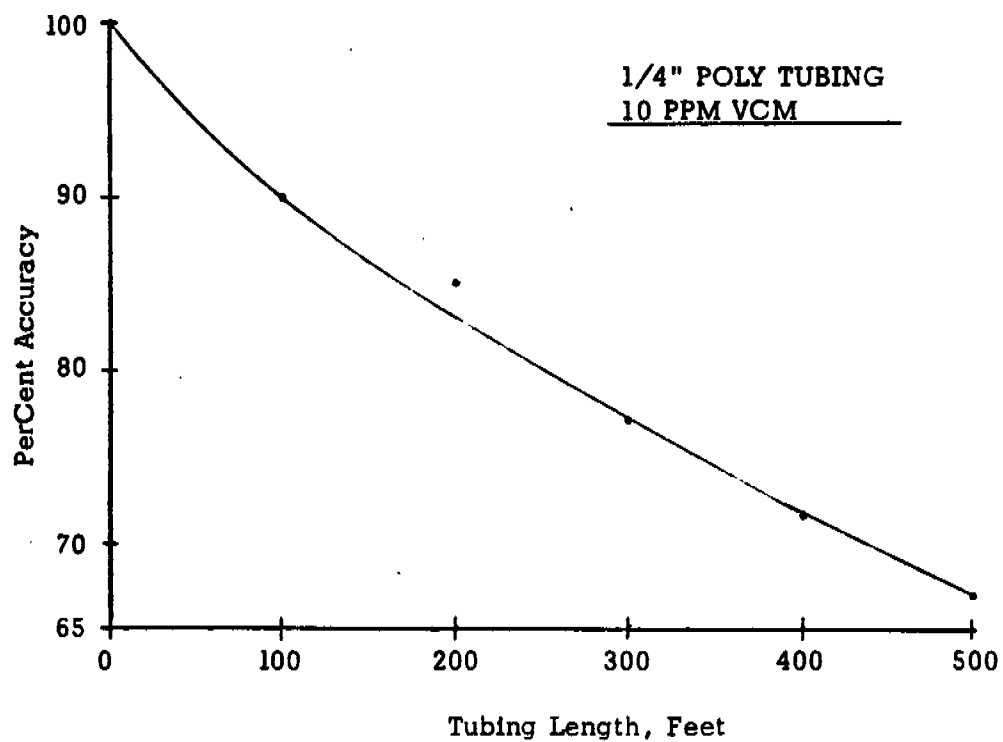
I should also mention that I have made several attempts to match our present VFA data with the Personnel Logs to get Operator TWA's. Based on this experience, I estimate it would take one man $2\frac{1}{2}$ - 3 hours daily to generate these numbers for Solvent Vinyl Operations personnel alone. If we're going to keep these records, the micro-computers are certainly the way to do it.


L. J. Kunke

LJK/st
Attachment

UCC 094534

VFA SAMPLE TUBING



UCC 094535

STANDARD OPERATING PROCEDURE

Checking of vessels before entry for VCI by unit personnel will be done with the VFA analyzer. A portable extension tube is available and will be hooked to the nearest permanent VFA check point and placed in the vessel for testing. The VFA should then be set on single check for the given point and run until the true reading has been obtained. This is for purposes of accuracy and when the VFA can't be used the Industrial Hygiene Department should be called and a carbon tube sample taken. The Century OVA analyzer will not be used for vessel checking before entry.

Ross May

May 2, 1975

RM/st

UCC 094536