I-184 (50M)

INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO H.B. Carr AT Burlington DATE January 15, 1973

FROM F.W. Kanzler AT Burlington COPY TO File

SUBJECT Oxygen Analysis of Recovery Compressors

bcc EJ
WKL

Reference: Memo to Route List from F.W. Kanzler dated March 25, 1971

The maintenance of low oxygen level (<2.0%) in the recovered monomer gas at the compressor discharge is very important since higher oxygen levels may cause formation of peroxides. This peroxide build-up may, in turn, cause detonations in the compressor. Over the past three years, Analytical Control has monitored the oxygen levels in the recovery system of all three plants in Burlington. As a result of a meeting on March 25, 1971, the maximum allowable oxygen level was set at 2% with corrective action required when levels are found to be above 2%. This value was based on experience by Wacker Chemicals in their recovery system.

During the past two weeks, the Plastisol compressors (#3 and #6) showed unusually high levels of oxygen (as high as 9.4% for #6, see Table I) on a daily basis without any apparent reduction resulting from corrective action. Based on this observation, oxygen analysis data was statistically treated to compare oxygen levels of compressors plant-to-plant and in the case of Plastisol Plant, to compare the two compressors used. The results were obtained from data starting July, 1972. Compressor #1 was chosen for Copolymer because of its higher oxygen levels when compared with compressor #2. Compressor #4 represents typical oxygen values for both Homopolymer recovery compressors.

It is noted that the mean for the suspension recovery compressors are below the 2% level, while the Plastisol recovery compressor #3 showed a mean of 2.1% and the #6 compressor an oxygen mean of 2.8%. The data indicates that a thorough investigation of the Plastisol recovery system is a necessity.

Fred W. Kanzler

F.W. Kanzler

Attachments (3).

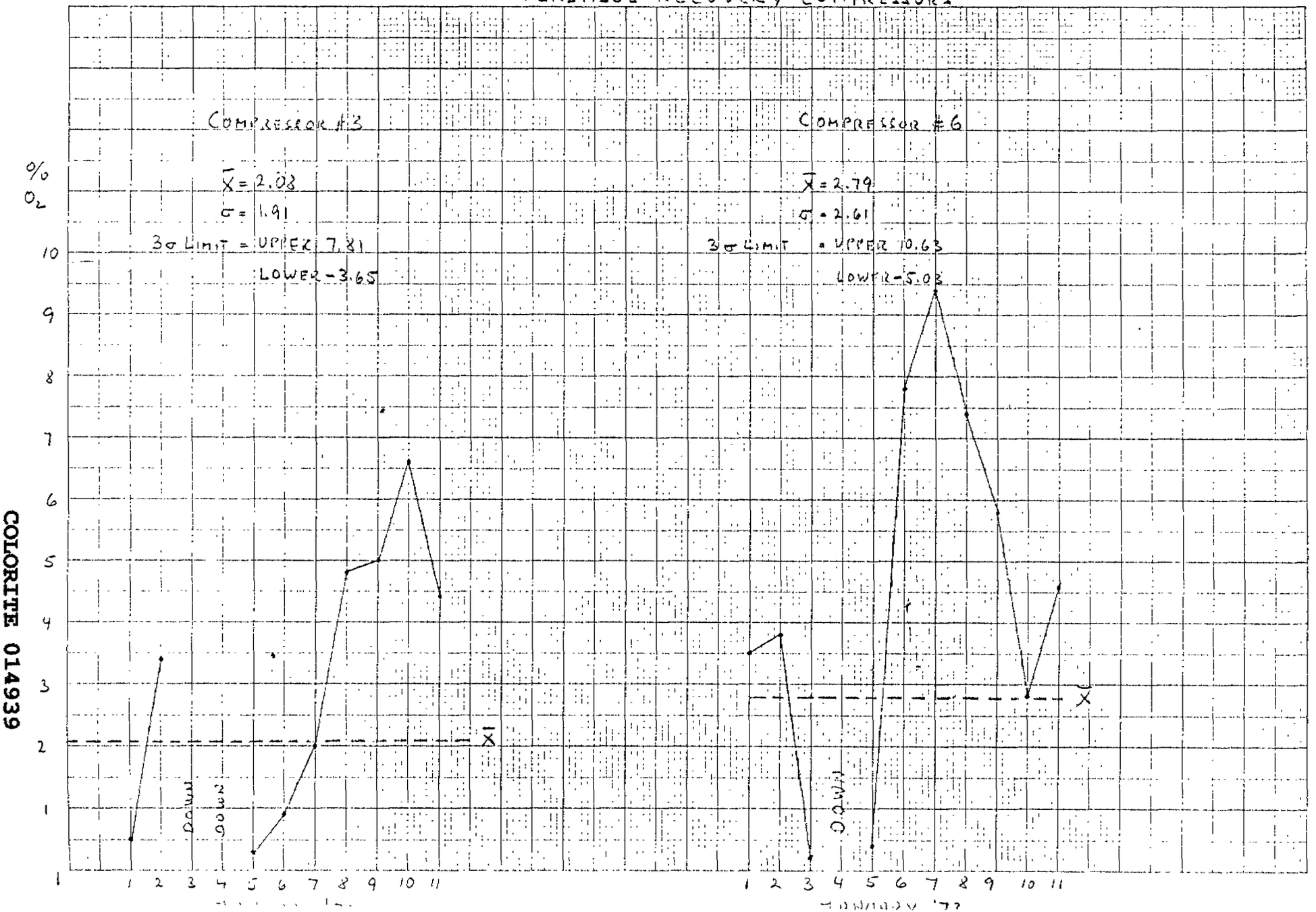
FWK/jt

TABLE 1

Date	Compressor			
	#1 (Copolymer)	#4 (Homopolymer	#3 (Plastisol)	#6 (Plastisol)
1/1	1.7	0.9	0.5	3.5
1/2	2.8	1.4	3.4	3.8
1/3	2.0	1.2	Down	0.2
1/4	0.7	1.8	Down	Down
1/5	2.4	1.8	0.3	0.4
1/6	2.0	2.5	0.9	7.8
1/7	2.2	2.6	2.0	9.4
1/8	0.8	1.8	4.8	7.4
1/9	Down	1.3	5.0	5.8
1/10	Down	2.0	6.6	2.8
1/11	Down	0.5	4.4	4.6

GRAPH I

PLASTISOL RECOVERY COMPRESSORS



GRAPH 3

SUSPENSION RECOVERY COMPRESSORS