

TENNECO CHEMICALS, INC.

TO G.I. Rozand AT Piscataway DATE May 14, 1975
FROM W.C. Champion AT Burlington COPY TO F.W. Kanzler
P.R. Scarito
J.T. Sweeney
SUBJECT Personnel Exposure to VCM File

Late in April, a program was begun to measure the VCM exposures of plant operating personnel, using eight-hour charcoal tube sampling. The method used was similar to that of the OSHA-prescribed sampling technique with sequential tubes exposed for normal ninety-minute periods. The objective of this study is to compare data taken by this method with the time-weighted exposure averages (TWA) generated by our Bendix fixed-point monitoring system. Because of the relatively few samples taken to date, any conclusions made at this stage must be considered preliminary.

Table I contains the monitoring data for the Burlington Plant. The Bendix data is presented in two ways: (1) the TWA data calculated for the shift in which the eight-hour samples were taken, and (2) the TWA data for the most recent weekly reporting period. In most cases, the eight-hour tube data show a higher exposure than the TWA, with the average difference being +1.4 ppm. Four classifications which did not exceed the permissible limit of 1 ppm as calculated from the Bendix system were shown to exceed 1 ppm in the charcoal tube sampling. Although more samples are needed, this suggests a reassessment of the sampling point locations, the job/time breakdown, or both.

For Flemington (Table II), the data for the two techniques are in much closer agreement, with an average difference of only 0.5. In no case did the eight-hour tube give a value that was more than 0.3 ppm higher than the Bendix TWA, while in a majority of cases (ten of thirteen), the tube value was equal to or lower than the Bendix TWA. The charcoal tube data showed only one reading in excess of the permissible exposure limit which would not have been reported by the Bendix system.

W.C. Champion
W.C. Champion (jt)

Attachments

WCC/jst

TABLE I

BENDIX TWA VERSUS EIGHT-HOUR CARBON TUBESBURLINGTON PLANT

<u>Date Monitored</u>	<u>Job Classification</u>	<u>VCM, ppm Eight-Hour Tube</u>	<u>Bendix TWA, ppm VCM</u>	
			<u>Shift Sampled</u>	<u>Weekly Report*</u>
4/25/75	suspension foreman	6.4	2.8	2.0
4/25/75	PVC reactor operator/dumping	3.9	2.0	2.9
4/28/75	dispersion foreman	3.5	2.5	2.5
4/29/75	Ardo operator	1.1	0.8	0.4
4/30/75	receiving clerk	0.9	0.1	0.1
5/1/75	tower operator/charging	3.5	2.0	3.0
5/1/75	tower operator/dumping	4.1	1.8	2.5
5/6/75	PVC reactor operator/dumping	3.7	3.3	2.9
5/6/75	quality control technician	2.0	0	0.5
5/6/75	utility/outside	0.4	0.7	0.6
5/6/75	copolymer operator/dumping	5.3	2.7	3.1
5/7/75	warehouseman	1.2	0.3	0.2
5/7/75	maintenance	1.5	-	-
5/7/75	warehouse supervisor	1.0	0.2	0.2
5/8/75	shift foreman	2.8	1.5	1.1
5/8/75	dryer operator	2.9	0.9	0.8
5/8/75	bagger/plastisol	1.4	0.4	0.5

*Period 4/26/75 to 5/2/75

W.C. Champion
5/14/75

TABLE II

BENDIX TWA VERSUS EIGHT-HOUR CARBON TUBESFLEMINGTON PLANT

<u>Date Monitored</u>	<u>Job Classification</u>	<u>VCM, ppm Eight-Hour Tube</u>	<u>Bendix TWA, ppm VCM</u>	
			<u>Shift Sampled</u>	<u>Weekly Report*</u>
4/28/75	bagger	0.1	0.1	0.1
4/28/75	quality control technician	0.1	0	0.1
4/29/75	poly foreman	2.3	2.1	1.5
4/29/75	warehouseman	0	1.0	1.2
4/29/75	maintenance clerk	0.1	0.2	0.2
4/30/75	shift foreman	1.1	0.8	0.8
4/30/75	reactor operator/charging	1.0	2.4	1.5
1/30/75	maintenance/day	0.6	1.3	0.8
5/1/75	dryer operator	0	0	0.1
5/1/75	maintenance/shift	0.2	0.9	1.0
5/1/75	boiler operator/lead	0	1.0	1.0
5/2/75	boiler operator	0	1.0	1.0
5/2/75	maintenance foreman	0.1	0.1	0.2

*Period 4/26/75 to 5/2/75

W.C. Champion
5/14/75