

TENNECO CHEMICALS, INC.

TO	W.C. Champion	AT	Burlington	DATE	September 23, 1975
FROM	F.W. Kanzler	AT	Burlington	COPY TO	R.H. Mathis L. Medeiros W. Miringoff J.W. Poarch ✓ File
SUBJECT	Reactor Steam Evacuation Operator Exposure During Reactor Opening				

In support of the subject program, charcoal tube personal monitoring samples were taken for the duration of the program, as well as for three days after the resumption of normal evacuation procedures. The aim of the sampling was to establish, if any, differences of operator VCM exposures while opening reactors.

Tables I and II list the data for reactor steam evacuation and normal evacuation respectively. Table III is a listing of the weighted averages of the charcoal tube results shown in Tables I and II. It should be noted that only limited data is available for each resin type. The available data indicates, however, that lower average exposures occur when the reactors are steam evacuated. On a plant-to-plant basis, it is shown that the Copolymer Plant shows no great differences in exposures for the two evacuation procedures. Reactor openings during BR-501 runs in the Homopolymer Plant, in contrast, seem to be considerably affected by the type of reactor evacuation.

Freud W. Kanzler
F.W. Kanzler

Attachments (3)

FWK/jst

TABLE I

VCM EXPOSURE DURING REACTOR OPENINGREACTOR STEAM EVACUATIONREACTOR HEADSPACE AND CHARCOAL TUBE RESULTS

	<u>Date</u>	<u>Reactor Number</u>	<u>Batch Number</u>	<u>Resin Type</u>	<u>VCM, ppm</u>		<u>Sample Time, minutes</u>
					<u>Headspace</u>	<u>Charcoal Tube</u>	
Copolymer Plant	9/8/75	7	3371	314	23200	3.0	9
	"	6	3372	"	63700	4.7	10
	"	9	3373	"	19500	2.8	11
	"	5	3374	"	20800	3.0	11
	"	4	3375	"	6000	2.1	12
	"	1	3376	"	8200	2.1	9
	9/11/75	4	3417	391	2700	3.0	8
	"	9	3418	"	3200	5.6	10
	"	2	3419	"	5200	3.2	10
	"	1	3420	"	3100	3.4	11
Homopolymer Plant	9/8/75	14	3123	10R	9700	2.5	10
	"	16	3124	"	3100	1.3	13
	"	13	3125	"	3700	2.5	10
	"	15	3126	"	1500	4.3	10
	9/11/75	14	3164	175	3900	4.8	12
	"	17	3165	"	4800/5500	5.9	17
	"	13	3166	"	3300/3600	5.4	13
	9/12/75	14	3175	501	6000	1.1	12
	"	11	3177	"	1700	3.7	12
	"	16	3178	"	5400	3.3	10
	"	10	3180	"	700	4.3	15

F.W. Kanzler
9/23/75

COLORTITE 009890

TABLE II
VCM EXPOSURE DURING REACTOR OPENING
NORMAL REACTOR EVACUATION
CHARCOAL TUBE RESULTS

	<u>Date</u>	<u>Reactor Number</u>	<u>Batch Number</u>	<u>Resin Type</u>	<u>VCM, ppm</u> <u>Charcoal Tube</u>	<u>Sample Time,</u> <u>minutes</u>
Copolymer Plant	9/16/75	1	3497	315	3.0	10
	"	5	3498	"	4.0	10
	9/17/75	3	3514	"	1.2	11
	9/18/75	4	3524	"	2.1	16
	"	7	3527	"	1.4	12
Homopolymer Plant	9/16/75	15	3230	501	5.2	10
	"	12	3232	"	11.0	9
	9/17/75	11	3245	"	4.1	11
	"	15	3246	"	1.0	12
	9/18/75	14	3257	"	25.0	11
	"	17	3259	"	6.5	10

F.W. Kanzler
9/23/75

COLORITE 009891

TABLE III

VCM EXPOSURE DURING REACTOR OPENINGWEIGHTED AVERAGES OF CHARCOAL TUBE RESULTS

		<u>Resin Type</u>	<u>N</u>	<u>Average VCM, ppm</u>	<u>Remarks</u>
Steam Evacuation:	Copolymer	314	4	3.4	batch #3371 - 3374
		"	2	2.1	batch #3375 - 3376
		391	4	3.8	
		All Types	10	3.3	
	Homopolymer	10R	4	2.6	
		175	3	5.4	
		501	4	3.1	
		All Types	11	3.7	
		Total	21	3.5	
Normal Evacuation:	Copolymer	315	5	2.3	
	Homopolymer	501	6	8.7	
		Total	11	5.6	

F.W. Kanzler
9/23/75

COLORITE 009892