



INTER-ORGANIZATION MEMO

TO: **H. Graff**
ATTENTION: R. Jackson, G. Brumbaugh
W. Staples, R. Laundrie
FROM: E. Kierstead
DATE: November 11, 1982
SUBJECT: 8-hour Area TWA VCM Data -
Taken from the Bendix tapes -
Summary for October, 1982

This report is a summary of 2,279 samples of Vinyl Chloride Monomer (VCM) 8-hour area data, taken from the Bendix continuous monitoring tapes, for the month of October, 1982.

A. Non-Regulated Areas (Tables I and II)

1. Four hundred five (405) samples (91.8%) were below .5 ppm VCM, 27 samples (6.1%) were from .51 to 1.0 ppm, and 9 samples (2.1%) were over 1.0 ppm. This was a decrease from the 3.1% over 1.0 ppm in September.
2. The overall plant average for non-regulated areas decreased from .28 to .24 ppm.

B. Regulated Areas (Tables III and IV)

1. Four hundred thirty nine (439) samples (26.4%) were below .5 ppm, 129 samples (7.8%) were from .51 to 1.0 ppm, and 1,094 samples (65.8%) were over 1.0 ppm. This was a decrease from the 69.0% over 1.0 ppm in September.
2. The monomer area increased from .3 to .5 ppm, upstairs polymer increased from 5.5 to 7.0 ppm, polymer walkway increased from 8.0% to 8.2%, and downstairs polymer increased from 14.1 to 14.2%.

- C. The overall plant average of regulated and non-regulated areas increased from 5.25 to 5.69 ppm.

E. S. Kierstead

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OSHA Compliance Supervisor

ESK/ikb

APPROVAL:

Roy L. Jackson 11/15
Roy L. Jackson

TABLE T

CONTINUOUS VCL MONITORING SYSTEM
8 Hour T.W.A. SUMMARY DATA
PPM VCL

Year 1982Month - SEPTEMBERMonth - OCTOBER

NON-REGULATED AREAS	Month - <u>SEPTEMBER</u>							Month - <u>OCTOBER</u>						
	No. Samples Taken	Mean	High	Low	No. Samples Below .5 ppm	No. Samples .5 to 1 ppm	No. Samples Over 1 ppm	No. Samples Taken	Mean	High	Low	No. Samples Below .5 ppm	No. Samples .5 to 1 ppm	No. Samples Over 1 ppm
Monomer Control Room	61	.3	2.2	.1	57	2	2	87	.3	1.2	.1	78	7	2
Polymer Control Room	53	.1	.7	.0	51	2	0	89	.1	.6	.0	88	1	0
Boilerhouse	61	.4	1.8	.1	56	4	1	87	.2	1.1	.1	86	0	1
Shop	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Laboratory	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Resin Finishing	56	.4	1.8	.0	47	6	3	89	.3	2.2	.0	75	11	3
Warehouse	56	.2	1.5	.0	51	2	3	89	.3	2.3	.0	78	8	3
TOTAL	290				265	16	9	141				105	27	9
Breathing Air	56	.06	.26	.00	56	0	0	89	.05	.29	.00	89	0	0
Gas Holder	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Incinerator	61	.4	2.7	.1	49	10	2	87	.5	2.4	.2	66	16	5
Boilerstack	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL								176				155	16	5

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CONTINUOUS VCL MONITORING SYSTEM
SUMMARY DATA

8 HOUR T.W.A. - MEAN ppm VCL

TABLE II

Year 1982

AVE.

	1981	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
* NON-REGULATED AREAS													
* Monomer Control Room	.1	.1	.1	.1	.1	.1	.1	.2	.2	.3	.3		
* Polymer Control Room	.1	.1	.1	.1	.3	.4	.1	.3	.0	.1	.1		
* Boilerhouse	.2	.2	.2	.2	.1	.1	.1	.2	.2	.4	.2		
* Shop	—	—	—	—	—	—	—	—	—	—	—		
* Laboratory	—	—	—	—	—	—	—	—	—	—	—		
* Resin Finishing	.2	.2	.3	.2	.2	.3	.3	.2	.3	.4	.3		
* Warehouse	.2	.1	.2	.2	.2	.3	.3	.2	.2	.2	.3		
Breathing Air	.12	.08	.07	.07	.03	.12	.03	.26	.03	.06	.05		
Gas Holder	.6	.6	.5	—	—	—	—	—	—	—	—		
Incinerator	.2	.2	.2	.2	.2	.1	.3	.2	.3	.4	.5		
Boilerstack	.2	—	—	—	—	—	—	—	—	—	—		
* NON-REGULATED AREA, AVE.	.18	.14	.18	.16	.19	.22	.17	.22	.18	.28	.24		
AVE.													
No. of Samples	399	407	366	457	305	353	347	262	393	290	441		
No. of Samples Below .5 ppm	377	400	346	435	293	308	328	247	377	265	405		
No. of Samples From .51 to 1.0 ppm	18	5	11	21	8	35	16	16	14	16	27		
No. of Samples Over 1.0 ppm	4	2	9	1	4	10	3	5	2	9	9		
% of Samples Below .5 ppm	94.6	98.3	94.5	95.2	96.0	87.3	94.5	94.3	95.9	91.4	91.8		
% of samples From .51 to 1.0 ppm	4.4	1.2	3.0	4.6	2.6	9.9	4.6	3.8	3.6	5.5	6.1		
% of Samples Over 1.0 ppm	1.0	0.5	2.5	0.2	1.4	2.8	.9	1.9	0.5	3.1	2.1		
* BREATHING AIR, GAS HOLDER, INCINERATOR AND BOILER STACK NOT INCLUDED													

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CONTINUOUS VCL MONITORING SYSTEM
8 Hour T.W.A. SUMMARY DATA
PPM VCL

TABLE II

Year 1982

Month - SEPTEMBER

Month - OCTOBER

REGULATED AREAS	No. Samples Taken	Mean	High	Low	No. Samples Below .5 ppm	No. Samples .5 to 1 ppm	No. Samples Over 1 ppm	No. Samples Taken	Mean	High	Low	No. Samples Below .5 ppm	No. Samples .5 to 1 ppm	No. Samples Over 1 ppm
MONOMER (MVC)														
MVC unloading	61	.4	2.4	.1	54	3	4	87	1.0	6.3	.1	73	11	3
MVC storage-West	61	.3	.9	.1	52	9	0	87	.4	5.5	.1	76	9	2
MVC storage East	56	.2	.6	.0	55	1	0	88	.2	2.0	.0	83	2	3
MVC 98 Recycle Pump	61	.4	1.4	.1	49	10	2	87	.5	3.1	.1	62	20	5
MVC Pump House	56	.2	1.0	.0	55	1	0	88	.4	12.0	.1	80	5	3
HP area	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MONOMER-UPSTAIRS 2B K.O. P.S.	61	1.4	14.4	.1	26	12	23	87	.7	10.5	.2	52	23	12
Reactor 311/307-311	56	4.1	33.7	.6	0	5	51	88	7.8	34.1	.7	0	8	80
Reactor 307/305-308-2B	61	7.8	24.8	1.9	0	0	61	87	15.1	86.8	2.7	0	0	87
Reactor 315/305-306-315	61	7.2	24.1	.9	0	1	60	87	5.8	23.4	.7	0	3	84
MVC Weight Tank	56	8.0	33.9	1.7	0	0	56	88	7.9	12.5	1.2	0	0	88
Vent Compressor/South F.M.D.	61	3.1	15.5	1.2	0	0	61	87	4.9	19.8	1.3	0	0	87
LYLAR STAIRWAY														
Reactor 311/305-307-2B	56	9.0	88.9	1.4	0	0	56	88	7.2	61.9	.5	2	15	71
Reactor 315/305-307-315	61	7.0	53.2	1.1	0	0	61	87	9.3	97.8	.9	0	1	86
POLYMER-LOWER														
No. 4 Compressor	56	11.2	167	.4	1	1	54	88	18.2	184.0	.1	4	7	77
No. 1A Dump Tank/South F.M.D.	61	8.0	56.2	1.0	0	1	60	87	7.9	109.0	.5	1	7	79
No. 3A Dump Tank/South F.M.D.	61	17.1	85.0	2.3	0	0	61	87	12.9	128.0	.8	0	9	78
MVC Charge Pumps	56	12.6	91.1	.8	0	1	55	88	24.0	270.0	.6	0	5	83
GRS HOLDER KO POT/	56	7.4	58.3	.3	2	6	48	88	5.6	36.3	.1	6	2	80
Vapor Break Tank														
Recovered MVC	56	27.8	142.0	7.0	0	0	56	88	16.4	178.0	.7	0	2	86
TOTAL	1114				571	51	704	1662				439	129	1094

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CONTINUOUS VCL MONITORING SYSTEM
SUMMARY DATA

8 Hour T.W.A. - Mean ppm VCL

TABLE IV

Year 1982

ME

	1981	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
REGULATED AREAS													
MONOLER (IWC)													
MVC unloading	.2	.3	.3	.2	.1	.4	.4	.3	.5	.4	1.0		
IWC storage-West	.3	.2	.2	.2	.2	.3	.2	.5	.3	.3	.4		
MVC storage-East	.3	.2	.2	.2	.2	.4	.2	.4	.2	.2	.2		
IWC 508 Recycle Pump	.3	.3	.2	.2	.2	.3	.5	.3	.4	.4	.5		
MONOMER PUMP/HOUSE	1.3	2.2	1.5	1.3	.8	1.1	.2	2.5	.8	.2	.4		
THF area	—	—	—	—	—	—	—	—	—	—	—		
POLYMER-UPSTAIRS 2B Ro Pot	2.3	1.6	.7	.4	.7	2.4	3.6	.7	1.0	1.4	.7		
Reactor 311 / 301-311	6.2	6.4	3.1	3.7	2.7	4.8	5.4	2.7	6.5	4.1	7.8		
Reactor 307 / 303-308-313	8.6	9.8	7.4	5.3	4.9	5.3	3.9	4.5	7.6	7.8	15.1		
Reactor 315 / 316-306-315	5.4	5.6	6.4	4.5	4.0	3.8	2.4	3.5	3.1	7.4	5.8		
MVC Weight Tank	6.7	5.9	3.7	9.0	5.4	29.0	28.7	41.2	13.6	8.0	7.9		
Vent Compressor / South END	4.9	3.0	2.4	2.6	3.2	6.2	5.2	10.6	2.9	3.9	4.9		
POLYMER-WALKWAY													
Reactor 311 / 302-310-312	6.2	19.5	6.7	2.0	2.1	3.9	4.3	2.9	3.9	9.0	7.2		
Reactor 315 / 305-307-315	6.0	4.0	1.6	2.0	2.3	3.9	3.4	3.2	3.6	7.0	9.3		
POLYMER-LOWER													
No. 4 Compressor	5.9	13.2	13.4	4.4	11.4	19.5	9.5	11.6	8.6	11.2	18.2		
No. 1A Dump Tank / NORTH END	4.4	7.5	2.9	1.5	2.3	4.9	4.4	2.8	4.4	8.0	7.9		
No. 3A Dump Tank / South END	4.3	8.6	5.1	5.3	4.8	15.7	6.8	6.7	8.1	17.9	12.9		
IWC Charge Pumps	11.4	20.3	5.9	4.8	5.2	12.1	28.8	8.1	10.9	12.6	21.0		
GAS HOLDER RO POT /	4.1	3.8	13.0	5.2	6.5	12.7	17.8	25.0	11.3	7.4	5.6		
Vapor Break Tank													
RECOVERED MVC	2.5	2.5	3.2	3.7	5.4	16.7	17.3	21.4	18.6	27.8	16.4		

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CONTINUOUS VCL MONITORING SYSTEM
SUMMARY DATA
8 HOUR T.W.A. - MEAN ppm VCL

TABLE IV

Year 1982

pg. 2

REGULATED AREAS	1981	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
AVE.													
No. of Samples	1525	1462	1341	1667	1111	1157	1257	1022	1527	1114	1662		
No. of Samples Below .5 ppt	432	423	376	505	336	352	347	273	410	294	439		
No. of Samples From .51 to 1.0 ppm	193	123	155	220	169	132	125	136	143	51	129		
No. of Samples Over 1.0 ppm	900	916	810	942	606	900	835	613	974	769	1094		
% of Samples Below .5 ppm	28.3	28.9	28.0	30.3	30.2	30.5	27.3	26.7	26.8	26.4	26.4		
% of Samples From .51 to 1.0 ppm	12.7	8.4	11.6	13.2	15.2	9.6	12	13.3	9.4	4.6	7.8		
% of Samples Over 1.0 ppm	59.0	62.7	60.4	56.5	54.6	65.4	61.5	60.0	63.5	69.0	65.8		
REGULATED AREA, AVE.	—	5.43	3.57	3.00	3.47	7.32	7.00	7.15	5.37	7.06	7.71		
Overall Plant Average	3.02	3.85	2.57	2.71	2.56	5.51	5.19	6.19	3.99	5.25	5.69		
Of Regulated And													
Non-Regulated Areas													
MONOMER AREA, AVE.	.5	.6	.4	.4	.3	.5	.3	.7	.4	.3	.5		
POLYMER UPSHAIRS, AVE.	5.6	5.4	4.0	4.3	3.6	8.9	7.6	9.8	5.5	5.5	7.0		
POLYMER W/IN, AVE.	5.6	8.0	2.0	2.0	2.2	3.9	3.8	3.1	3.7	8.0	8.2		
POLYMER DOWNSHAIRS, AVE.	5.6	9.6	6.1	4.2	6.4	13.0	13.4	12.0	10.1	14.1	14.2		

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