



PUT IT IN WRITING

Date 4 March 1974To J. D. Kramer - Calvert City Subject SAMPLING OF AMBIENT AIR IN PVC PLANTFrom M. H. Stermon - Calvert City WITH BENDIX PERSONNEL MONITOR.

☐ Take Action ☐ For Your Approval ☒ For Your Info ☐ Discuss With Me
☐ For Your Comments ☐ As Requested ☐ File ☐ Note & Return

After considerable time developing sampling and analytical techniques required for reliable data, ambient air samples are now being taken daily in the PVC plant. These samples are being taken by the wearing of the Personnel Monitor by the operator as he goes about his normal shift duties.

The VCl monomer is adsorbed on activated carbon, then extracted from the carbon using carbon disulfide, and analyzed by gas chromatograph.

To determine the efficiency of the adsorption-extraction procedure tests were made using standard concentrations of VCl monomer in air. The efficiency was found to be 77.7%.

Following are the results obtained to-date. The results will now be reported on a regular basis.

Concentration of VCl Monomer

Date	Shift	Floor	PPM VCl
2/22/74	3rd	3rd	10.8
2/23/74	1st	2nd	5.7
2/23/74	2nd	2nd	9.2
2/23/74	3rd	2nd	16.7
2/24/74	1st	2nd	15.2
2/27/74	3rd	1st	9.7
2/28/74	2nd	3rd	24.7
2/28/74	2nd	2nd	23.1
3/3/74	1st	2nd	37.8

Handwritten notes:
Keep to
RE
TLC
MS
WMS
ALW
ARR

Handwritten: 2/8/74

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Handwritten: Does this mean we should
up all these nos. by 75%, or what?
② RF-VF

RECEIVED

MAR 7 1974

R. FLEMING, V. F.

M. H. STERMON

MHS:dm

cc: J. T. Barr - V.F.
D. V. Lowe
R. W. McGinnis
J. C. Novak - V.F.
F. L. Riddle
G. B. H. Speed

Handwritten: PAGE NOW HAS THEIR
UNITS IN.

Handwritten: JTB 7-MAR

AP00005846

EXHIBIT IV

CONDENSATE VAPOR EXHAUST FAN PLANT
 All numbers in P.P.M. unless stated

Loc.	Location	1-31-74	2-7-74	2-	2-11-74	2-14-74	2-17-74	2-21-74	2-23-74	2-	4-2-74	4-1-74		
2	Area of PVC Cist.	7	3	4	4	4	3-4	2	6	7	6	2.5		
3	S.W. Corner Carrier Unit	7	3.5	4.5	4	4	3	2	6	6.5	5	2.5		
5	S. Yard Poly. Bldg.	7	2-3	4.5	4	4	3	2	6	7	5	2.5		
1	S. Walk Dryer Bldg.	4	3	4	4-5	3	4	-	6	7	5	1.5		
3	S. Warehouse Area	5	4-5	5-6	7	10-15	4	2	6	9	7	1.5		
6	N. Warehouse Area	5	5-7	5-6	15	15	7	2	6	9	7	1.5		
7	Gen. Driver Bldg. Area	5	3-6	3-5	5-6	3-5	5-8	2	7	7	7	1.5		
4	Area between Dryer & S. Bldg.	4	3	3	7	4-30	3	2	5	7	5	1.5		
7	Nash Unit Area	7	4-10	25-35	4-5	10-30	10	2	5	7	6	1.5		
13	Yard area S. of VCI Storage	5	3	2	2-3	5-20	3-4	2	6	6	4	1.5		
11	Area around VCI Storage	5	3-5	25-10	2-3	3-4	-	2	6	7	5	1.5		
12	Top of Fresh VCI Tanks	5	2-3	2-5	3	3-4	4-5	2	5	6	5	2		
13	Area under Fresh VCI Tanks	5	2-3	2	2-3	3-10	4	2	5	6	5	1.5		
14	Top of Packaged VCI Tanks	5	3-10	2	3-5	5-10	100	>100	5	6	5	1.5		
15	Under Reversed VCI Tanks	5-10	3-4	2.5	3-5	10-100	3-4	2	5	9	4	1.5		
16	Area By Dehydr. Unit	5	5-30	-	3	7-10	3-4	-	5	6	5	1.5		
17	Blend Tank Vent	10,000	2,800	1800	15,000	10,000	20,000	-	1,000	1,000	200	500		
18	S. Stripper Ground Area	10	3-5	4-6	40	5	5-7	-	-	-	-	2.0		
19	Area by Water Pumps	15	3	4	40-80	3-5	150	2	6	7	5	2.5		
20	Area by S. Ingersol Comp.	7	30-40	5-6	40	3-4	30-50	2	15-20	100	15	2.5		
21	Area by N. Ingersol Comp.	7	40-50	4-7	10-30	5	30-50	2.5	10	20	6	2.5		
22	Top of #1 Blend Tank	7-10	10-20	4-6	40-50	5-10	25-30	3	9-10	40	9	2.5		
23	Top of #2 Blend Tank	7-10	25-30	5-8	30	5-10	15-20	2	10	30	10	2.5		
24	Top of #3 Blend Tank	7-10	15-20	3-5	30-40	25-30	15-20	4	10	60	14	2.5		
25	Top of #4 Blend Tank	7-10	20-30	5-7	40	5	15-20	2	12	45	15	2.5		
26	Area East of Blend Tks.	10-20	40-60	6-8	20-25	5-7	40-50	2.5	-	30-40	17	2.5		
27	Area Under N. Stripper	-	30	5	20-30	4-5	30-50	3	-	12	8	2.5		
28	Area S. of Refrig. Absorbers	10	30-40	5-7	10	4	15	2	12-15	35	9	2.5		
29	Area N. of Refrig. Absorbers	10	10-20	5-7	10	4	20-30	2	12	15	7	2		
30	Area W. of Hyd. Pumps	8-15	7-15	5-7	7-10	4	15	2	15	15	10	2		
31	Area S. of Hyd. Pumps	8	10	7-10	7	4-5	15	3	12	15	8	2		
32	Area in E. Stairwell, 1st L.	7	10	4-6	8	3	5	2	12	25	6	1.5		
33	Area N. of Hyd. Pumps	30-70	30-50	10-20	15	4-7	20-30	2-5	15-30	15	9	3		
34	Area around top of Stripper	10-30	3-4	5	10	2-3	3-10	2	20-40	10-50	5	1.5		
35	Area over Blend Tank Vent	50	100-300	30-50	10-20	3-5	3-5	2	10-100	-	7	1.5		
36	Area between #1 & #2 R. 2nd L.	30	15-30	7-9	30-50	5-6	5	2	15	18	7	2.0		
37	Area around N. Stripper	10-20	15-20	5	20-40	3-5	5-10	2	9	17	7	2.0		
38	Aisle West 2nd L. Floor L.	15	20-30	5-7	20-30	5-7	5-8	2	10	14	6	2		
39	Aisle West 2nd L. 4'-5' Ht.	15	20-30	5-7	20-30	5-7	5-8	2	10	12	7	2		
40	Under #1 & #2 Reactors	-	15	6	20-30	70	5	2	7-9	12	7	2		
41	Under #7 & #8 Reactors	30-50	20-25	10	20-30	10-25	5-8	2	15-30	15	8	2		
42	Center Aisle, 2nd L. Floor L.	20	40	7	15	7-8	5-10	2	15-18	10	7	2.5		
43	Center Aisle, 2nd L. 4'-5' Ht.	20	40-50	8-15	20	7-8	5-10	2	10	13	8	2.5		
44	Under #3 & #4 Reactors	-	20-30	7	20-30	7-8	5-8	2	10	12	8	2.5		
45	Under #9 & #10 Reactors	80-100	20-200	10-15	20-25	4-5	5-10	2	10	11	8	2.5		
46	Aisle East by Column 2nd L.	200	100-100	25-30	20-30	5-10	15	3	11	12	8	3.5		
47	Area by Elevator, 2nd L.	100	30-70	20	20-30	10	15	2	10	10	7	2.0		
48	W. Weigh Tk. Floor Level	150	500	10-15	15-20	7-8	15	2	15	10	10	4		
49	W. Weigh Tk. 4'-5' Ht.	150	100-200	15-20	15-20	5-10	15	2	9	10	30	4		
50	E. Weigh Tk. Floor Level	100	200-500	15	15-20	8-10	15-20	2	10-12	10	7	3		
51	E. Weigh Tk. 4'-5' Ht.	100	100-500	15	15-20	8-10	15-20	2	9	10	110	3		
52	W. Aisle 3rd Level, Floor L.	30	30-40	30-35	30-40	30-50	30	5	15-20	30	15	3.5		
53	W. Aisle 3rd Level, 4'-5'	30	25-35	35-40	30-40	40-70	30	5	15	50	15	3.5		
54	Platform by Soln. Tks.	30	30-50	40-80	20-30	100-150	30	3	18	30	30	4		
55	W. Center Aisle, 3rd L. Floor	30	20-30	70-75	10-30	40-70	20-30	10	20	35	21	5		
56	W. Center Aisle, 3rd L. 4'-5'	30	20-30	70-75	20-30	70-100	20-30	10	10	35	25	4		
57	Area between #1 & #2 Reactors	20-30	20-30	75	10-20	100-125	25	3-30	15	30	40	4		
58	Area between #7 & #8 Reactors	-	30-50	20	20-40	20-50	70-100	3	15	40	30	4		
59	E. Center Aisle, 3rd L. Floor L.	30	30	15-20	20-30	15-20	3	3	10-12	35	10	2.5		
60	E. Center Aisle, 3rd L. 4'-5'	30	25-30	20	20-40	15-20	15-20	3	10-12	30	20	2.5		
61	Area between #3 & #4 Reactors	20-30	25-30	8-15	20-40	15-20	10-20	3	15	40	14	4		
62	Area betn. #1 & #10 Reactors	-	10-35	10-15	20-30	10-15	10	3	10	17	12	3		
63	E. Aisle, 3rd L. Floor Level	30-40	12-15	12-15	20-30	10-15	10-15	3	8	15	10	2		
64	E. Aisle, 3rd L. 4'-5'	30-40	20-30	10-15	20-30	15-20	10-15	3	6	23	12	2		
65	Area by Elevator, 3rd L.	10-30	10-15	5-6	10-20	7-10	10-15	2	9	18	10	2		
66	E. Stairwell, 3rd Level	7	5-7	3.5	7-10	3-4	4	2	9	12	8	1.5		
67	Dryer Discharge, N.H.	-	5/8-9	20/40	100-150	150/5	150/5	Temp. 70°	-	30°F	55°F	-		
68	Wind Direction/Speed (mph)	SW/8-5	NW/2-10	NW/3-10	NW/6-5	SE/6-5	SE/6-5	Temp. 70°	-	NW/10/3	SW/2-5	-		

AP00005847

PVC MATERIAL BALANCE FOR EXISTING ESCAMBIA PLANT

Basis - 78 Million Pounds per Year PVC Resin

93.7% Efficiency on Resin Basis January Month to Date

Item	Pounds/Day	%
Vinyl chloride charged	276,052	119.2
Vinyl chloride recovered for reuse	44,462	19.2
Net vinyl chloride to be accounted	231,590	100
I. PVC Resin Produced	217,000	93.7
II. VCl Losses		
A. Rail Car Discrepancies	1,300	0.57
B. Solids Losses		
1. Wall fouling	1,600	0.69
2. Blend tank spills	100	0.04
3. Centrifuge effluent	50	0.02
4. Heavies, BB's, unusable floor sweeps to dump	3,300	1.42
5. Bag collector exhaust	300	0.13
6. Foam trap	100	0.04
7. Solids from reactor & dryer washes	1,000	0.43
8. Abnormal charges	360	0.16
C. Vapor Losses from Vents		
1. Recovery condenser	500	0.22
2. Blend tank	1,400	0.60
3. Recovered VCl evaporator condenser	400	0.17
4. Reactor vacuum test	1,900	0.82
5. Dryer air exhaust	43	0.02
D. Free vinyl chloride in dry resin	22	0.01
E. VCl in centrifuge effluent	10	--
F. Unaccountable to close balance	2,205	0.95
Total VCl losses	14,590	6.3

Explanation

Average measured billing difference per car over three months is 1,000 lbs/car (0.57%). Conoco has short-shipped and are allowed 1% difference under contract.

Based on actual weight of reactor cleanings in plant.

Based on Lab analysis of effluent streams.

Based on weights of material moved to dump from plant.

Based on sample analyses from exhaust.

Based on average solids removed from trap.

Based on analysis of wash water streams.

Based on plant experience October through December, 1973.

Based on flow rates and Lab analysis of vent stream.

Calculated from free VCl analysis of slurry.

Based on flow rates and Lab analysis of vent stream.

Calculated based on volume and average vacuum of 21"

Based on Lab analysis of stream.

Based on Lab analysis of dry resin.

Based on Lab analysis of effluent.

Reflects leaks, pump priming and inaccuracies in sampling various vent points. Program has been set up to continue analytical work and obtain better data for balance.

AP00005848