

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

TO Distribution List
FROM ~~W.C. Champion~~
SUBJECT Nixon Plant VCM Program

AT
AT Burlington

DATE April 1, 1974
COPY TO M. Freifeld
F.X. Ritter
Dr. M. Rosen
File

A meeting was held in Piscataway on Tuesday, March 26th to establish joint Nixon/Polymers programs relating to the VCM situation. Present were those whose names appear on the distribution list.

H.B. Carr opened the meeting with comments that we are currently faced with two distinct questions relative to VCM, namely:

1. OSHA considerations of operator exposure to VCM in breathing air, and;
2. FDA considerations of residual VCM in packaging materials (expected to be limited to 10 ppm maximum) and consequent migration to food (50 ppb maximum).

Mr. Rozand discussed briefly the efforts in the Burlington Plant to reduce residual VCM in 10R (and all other products) by improved stripping and drying techniques. He stated that residual VCM in 10R had been reduced from >1000 ppm to <500 ppm through these efforts, but that reductions to significantly lower levels would be difficult.

Mr. Saggese stated that Nixon has not noted any adverse effect on film properties as a result of our efforts. After Mr. Smalley's comments that higher molecular weight resins have lower VCM contents, Mr. Saggese requested that we provide him with some PVC 200 in bags for trial on their Mirrex lines. Mr. Rozand agreed to produce this resin at Burlington, where higher stripping temperatures are attainable compared with Flemington.

Data for Nixon Plant air monitoring (March 2nd and 19th) and analytical testing were presented by Messrs. Champion and Ketterer. Air monitoring with the Century OVA was supported by gas chromatographic analysis of air samples. This work showed operator exposure to 16 ppm of vinyl chloride at the #6 blender platform, with lower exposures in other areas investigated.

Analysis of resin, blend and film samples showed high concentrations of vinyl chloride in finished sheet. A sample of Mirrex MCFD-1030 from line #6 (10R-based) showed 140 ppm of VCM, while a sample of VCH-5001 (390-based) from calender #2 showed 200 ppm. A table of all the data obtained is attached to this report.

Methods to reduce both residual VCM and operator exposure were discussed. Mr. Ketterer reported on loss of residual VCM in resin with increased storage time. The importance of reducing VCM prior to the compounding (continuous mixer) stage was discussed. Methods suggested were hot air purging of silos and heating and exhausting of blenders.

Future Program

1. Nixon has gas chromatographic equipment on order, and expects to be able to perform their own analytical work within one month.
2. Polymers has agreed to support the Nixon program during this time:
 - a. Air monitoring and concurrent air and product sampling will be done by W.C. Champion.
 - b. M. Saggese will submit five to six samples per day for analysis. Analytical work will be coordinated by P. Ketterer. Samples will be submitted in solution.
3. Polymers will continue efforts to reduce VCM in resin "as shipped", and will advise Mr. Saggese of progress in this area.
4. Nixon will attempt to obtain fresh samples of competitive resin and sheet for analysis.

W.C. Champion
(st)
W.C. Champion

WCC/jst

Distribution List

H.B. Carr (3)
P.A. Ketterer
F.V. Owens
G.I. Rozand
M.F. Saggese
D.I. Smalley

Attachment.

NIXON PLANT MONITORING SUMMARY

3/2 AND 3/19/74

MIRREX AREA

CALENDER FLOOR

		<u>OVA READING</u>		<u>GC ANALYSIS, VCM, PPM</u>	
		<u>3/2</u>	<u>3/19</u>	<u>AIR</u>	<u>CPD</u>
1.	FOREMAN'S OFFICE	-	5		
2.	#5 CAL WIND-UP AREA	18	DOWN		
3.	AT ROLLS UNDER INCLINE	18			
4.	AT STRAINER	17			
5.	(FUMES FROM BELT) *	(40)			
6.	#4 CAL. WIND-UP AREA	20	6		
7.	UNDER PICK-OFF ROLLS	21	6		
8.	(FUMES 2" FROM ROLLS)	(40)	(12)		
9.	FEED BELT AREA	-	6		
10.	CM AREA	-	6		
11.	#6 CAL. WIND-UP AREA	21	7	<1	140 (ROLL)
12.	OPERATOR'S DESK/PANEL AREA	20	6		
13.	CM AREA	18	8		105 (PIC)
14.	UNDER INCLINE AT ROLLS	18	8		
15.	(FUMES 2" FROM ROLLS)	(40)	(30-50)		

* ITEMS IN PARENTHESES INDICATE NO OPERATOR EXPOSURE.

NIXON M NITORING

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MIRREX AREABLENDER FLOOR

16. #5 CAL BANBURY TOP

17. #6 CAL BLENDER PLATFORM - HATCH CLOSED
18. (INSIDE CHARGING HATCH)19. #4 CAL BLENDER PLATFORM - HATCH CLOSED
(INSIDE CHARGING HATCH)OVA READING
3/2 3/19GC ANALYSIS
VCM, PPM
AIR CPD

20 9

22 15 16 505 (RESIN)
(30-100) (70-100) (26) 341 (BLEND)23 10
(500-2M) (2M-4M)VINYL AREA

20. #1 CAL END MAN

21. MILL OPERATOR

22. MILL FEED PLATFORM

23. BANBURY TOP

24. #2 CAL WIND-UP AREA

25. MILL OPERATOR

26. FEEDING PLATFORM

27. BANBURY BOTTOM - DUMPING BATCH

28. BANBURY PLATFORM

29. FOREMAN'S OFFICE

30. LUNCH ROOM

Down
7
7
7
718 6 201 (WIND-UP)
18 6 290 (MILL)
18 10
15 1
18 71 6
1 6

COLORITE 012805

NIXON MONITORING

FIVE 3

VINYL AREA

	<u>CVA READING</u>		<u>GC ANALYSIS</u>	
	<u>3/2</u>	<u>3/19</u>	<u>VCM, PPM</u>	
31. #3 CAL TAKE-OFF AREA	15	6		
32. LUNCH TABLE	18	7		
33. OPERATOR'S DESK	16	7		
34. UNDER PICK-OFF	17	8		
35. CM INCLINE	16	30-70		
36. CM FEEDER - 2 ND DECK	18	7		
37. BLENDER PLATFORM - HATCH CLOSED	18	5		
38. (INSIDE CHARGING HATCH)	(50-50)	(20-100)		

OTHER AREAS

39. OFFICE BUILDING CORRIDOR	8	4		
40. MIRREX SLITTER/WAREHOUSE AREA	15	10		
41. VINYL COLOR WEIGH-UP AREA	15	8		
42. VINYL RECEIVING FOREMAN'S OFFICE	16	7		
43. LABORATORY BUILDING	15	7		
44. OUTSIDE - NEAR LABORATORY DOOR	15	4		
45. - BETWEEN BLDG 56 AND TOWER	15	4		
46. - BETWEEN BLDG 100 AND FENCE	10	4		
(HEAD SPACE - #2 SILO)	-	(400)	(413)	

COLORITE 012806

NIXON MONITORING

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PRODUCTS RUNNING

3-2-74

3-19-74

LINE 1
" 2
" 3
" 4
" 5
" 6

DOWN

—
VH-5765-32 WHT
MGRP-1047 CLR
VCH-5001-05 TAN
MCFD-1025 CLR

IMPLEX A-8000 WHT
VCH-5001-BLK OI
VCFD-1003 CLR
MCFD-1030 CLR
— DOWN
MCFD-1030 CLR

COLORITE 012807