

UNIROYAL CHEMICAL

Division of UNIROYAL, Inc.

Painesville, Ohio

July 8, 1975

File VC Bk

J. D. Forbes, M.D.
Corporate Medical Director
Oxford

Subject: Painesville Plant Medical Surveillance Program

Please find attached the complete Medical Surveillance Program for the Painesville Plant. Included are the following:

1. Diagram A for Periodic Surveillance of Vinyl Chloride Blood Tests
2. Diagram B for Follow-up of Non-Related Vinyl Chloride Medical Tests
3. Mobilhealth Detection Office, Inc. information and examination summary form
4. Medi-Comp Laboratories SMA 12/60 lab report
5. Medi-Comp Laboratories Vinyl Chloride Profile
6. EKG record
7. Pulmonary Function record
8. Medical Release Authorization
9. Medical Surveillance Program "Test Results"

If you have any questions or further information is needed, please contact us.

J. R. Douglas

J. R. Douglas
Industrial Relations Manager

JRD:mhh
attachment

cc: BRL
JEC

Painesville Plant
Medical Surveillance Program

I. PURPOSE

To establish a Medical Surveillance Program as required by the OSHA Vinyl Chloride Standard (See Appendix A) and to supplement the plant's medical program, whereby all employees of the Painesville Plant and retirees would participate.

II. REQUIREMENTS

The following are the requirements under the Medical Surveillance Program:

A. Medical Testing

1. Blood - Cholesterol
Serum Bilirubin
Albumin
Total Serum Protein
Uric Acid
Blood Urea Nitrogen
Glucose
Lactic Acid Dehydrogenase
Alkaline Phosphatase
SGOT
SGGP
SGPT
2. Chest X-Ray (14" x 17")
3. Pulmonary Function Analysis, including FVC₁ and FEV₃
4. Urinalysis
5. Blood pressure and pulse
- 6.1 EKG
7. Hand X-ray - for poly cleaners only
8. Hearing tests
9. Eye tests, including
10. Physical examination - with specific attention to detecting enlargement of liver, spleen or kidneys, or disfunction in these organs, and for abnormalities in skin, connective tissues and the pulmonary system.

B. Employee Participation

All employees must participate in the plant's Medical Surveillance Program on an annual basis, unless otherwise excused as noted below:

1. Religion
2. Medical (such as recent outside physical exam, recent X-rays or blood, recent hospitalization, etc.)
3. Personal (each case must be judged on its merits for determination).

C. Re-testing and Follow-up

1. Employees who have been employed in vinyl chloride or polyvinyl chloride manufacturing for 10 years or longer, will be given blood tests on a six (6) month basis.
2. Blood tests will be repeated by the company as soon as possible if any abnormalities show up in relation to
 - a) Alkaline Phosphatase
 - b) SGOT
 - c) SGGT
 - d) SGPT
 - e) Bilirubin

and follow-up action will be made in accordance with the plant's established follow-up procedure (see Appendix B).

3. All other test results, including the balance of the blood tests (other than those noted in 2 above) will be thoroughly reviewed by the plant doctor for recommended follow-up.
 - a) If medical problem determined to be restrictive or related to employee's job, company will follow up.
 - b) If medical problem not job-related or restrictive to employee's job, follow-up testing will be referred to employee's personal doctor. (See Appendix B).

D. Job Restrictions

1. Any employee not participating in the Medical Surveillance Program for reasons noted in B above will be RESTRICTED from working directly in PVC operating areas.
2. If it is medically determined that an employee's health would be materially impaired by continued exposure, such employee shall be withdrawn from possible contact with vinyl chloride.
3. Reassignment of employees as a result of 1 & 2 above will be determined by the company for salaried personnel and by the company-union for wage bargaining personnel.

III. RECORDS

- A. Test Results - All medical tests results will be recorded on the respective forms. (See Appendix C for complete set of forms).
- B. All medical surveillance records must be retained for not less than 30 years.
- C. An employee's test results will be maintained in the employee's medical record. All X-rays will be kept by the Medical Department.
- D. A card index file will be maintained to show when each employee tested and required follow-up, and will also serve as a follow-up file.

- E. Copy of the records of test results will be forwarded to an employee's personal doctor upon written request by the employee. (See Appendix D)

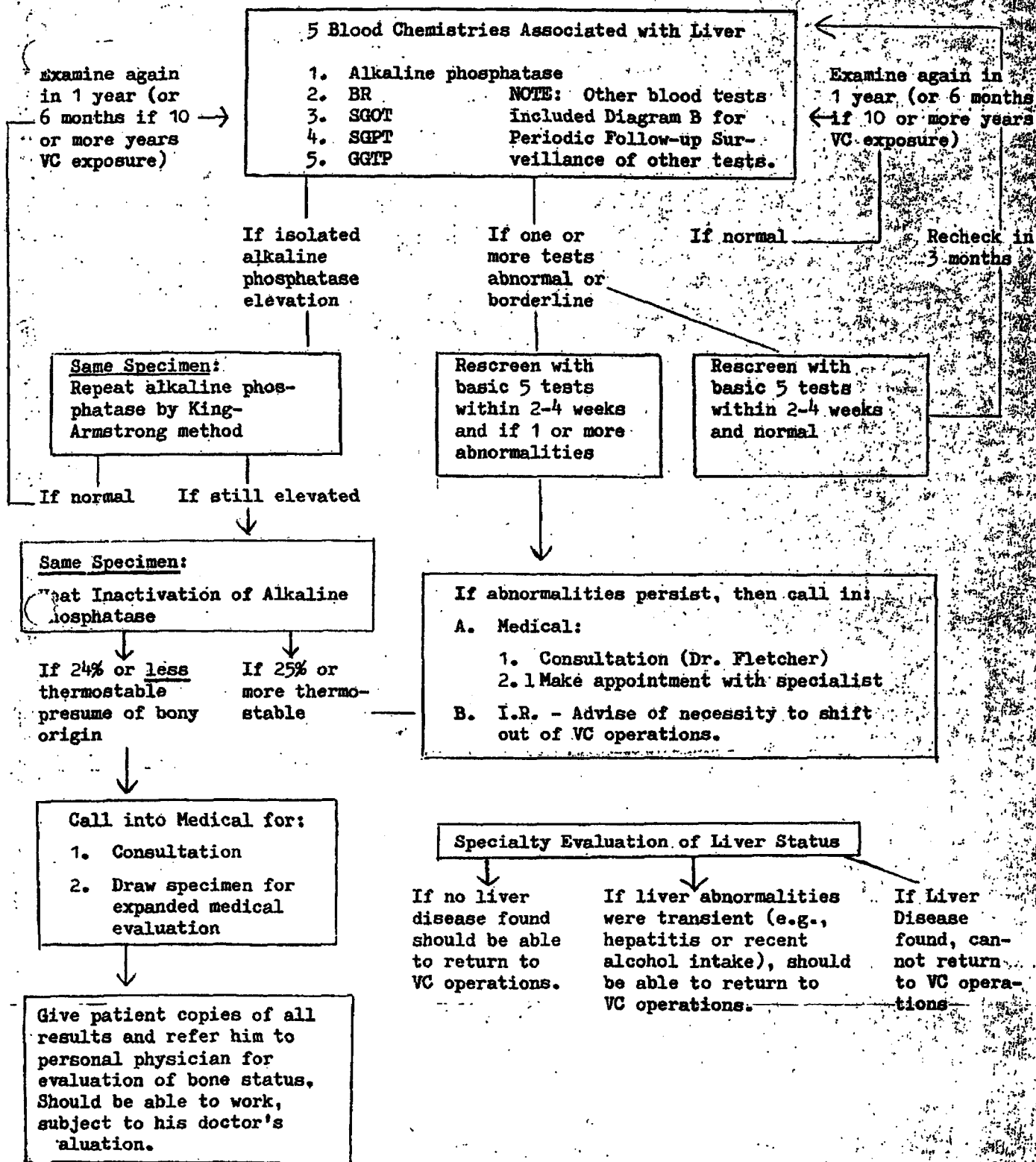
IV. EMPLOYEE INFORMATION

A. Test Results

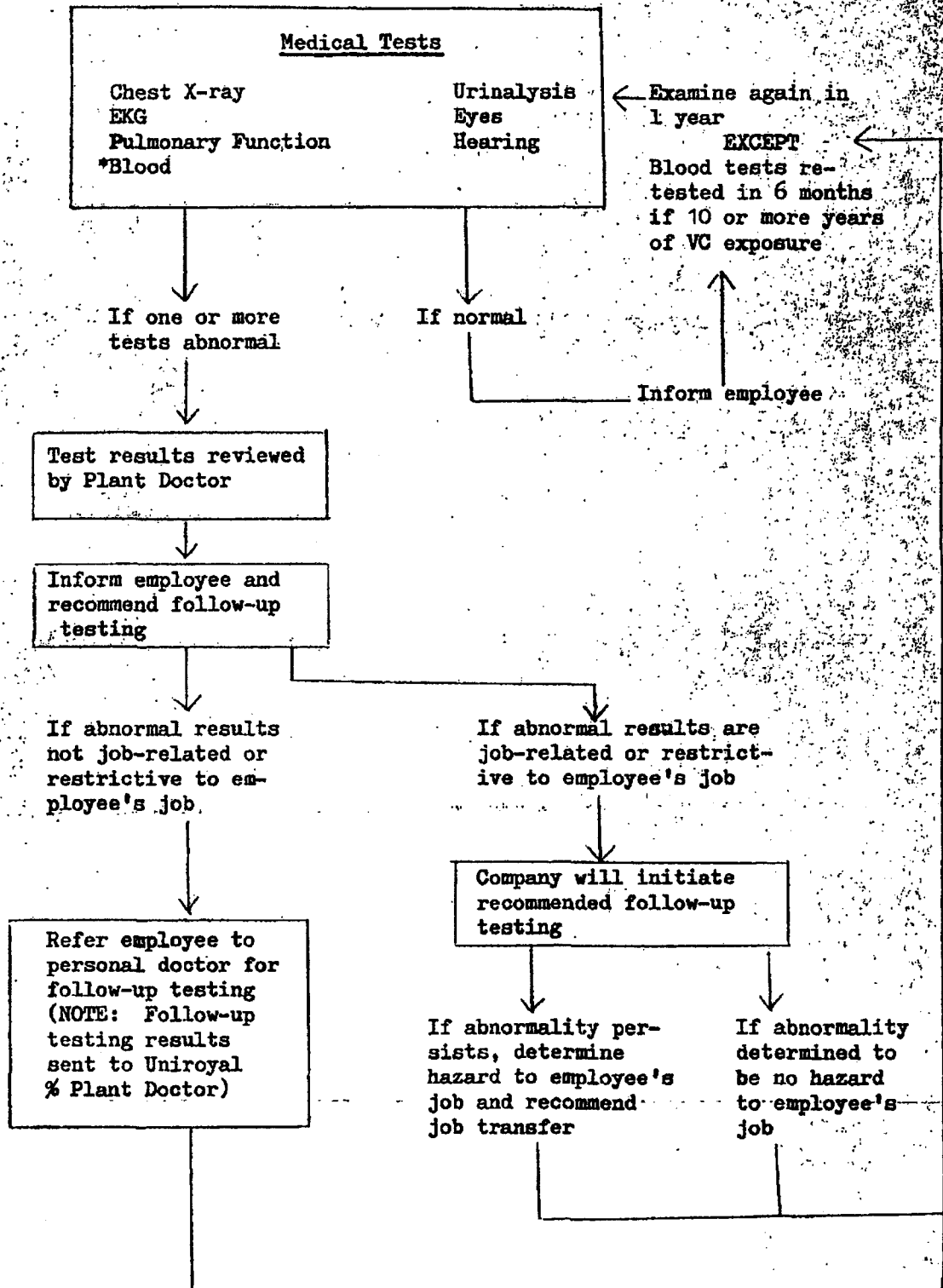
1. Each employee will be promptly notified of his test results by the Medical Department re. the "Test Results" form. (See Appendix E).
2. Abnormal test results will be reviewed with the employee by the plant nurse.

Test results of a serious nature, EKG's and Chest X-rays, will be reviewed with the employee by the plant doctor.

**DIAGRAM A FOR PERIODIC SURVEILLANCE
OF VINYL CHLORIDE BLOOD TESTS**



**DIAGRAM B FOR FOLLOW-UP OF
NON-RELATED VINYL CHLORIDE MEDICAL TESTS**



*Blood test not associated with liver

6/27

BR Leach

You may want to comment on this from our plant point-of-view.

Hastings mixes "apples and oranges" as he confuses residual ~~ppm~~ 1ppm VCM in PVC with 1ppm in air.

Our major argument has involved the ~~technological~~ "technological infeasibility" of meeting 1ppm in air using engineering controls. Further, background health data doesn't warrant such a restriction.

It seems to me that most of the PVC producing plants will still have to enforce use of respirators which as you know is undesirable.

Bob D

P.S. I do think our credibility has suffered due to certain announcements from individual companies.



UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.

July 7, 1975
cc: NFM - Naug.
WMI

TO: G. A. Anderson
Naugatuck

SUBJECT: Projects for Compliance with VCM Standards

As we have recently discussed, the citations issued to us following our OSHA inspection indicated that our rate of progress in complying with engineering controls to reduce employee exposure has been unsatisfactory. This viewpoint was reinforced by comments of the Cleveland Area Director during our conference with him. It is quite evident that the rate of commitment of funds for engineering modification of our PVC manufacturing facilities must be accelerated. Where we had thought that compliance by April 1, 1976 would be adequate for compliance, most recent indications are that we were expected to be in compliance by April 1, 1975. We are contesting this citation issued to us as to two of those items. Irregardless of the result of this action we must increase our rate of commitment for compliance.

Norm McLeod has suggested that we prepare a report listing all those things which we need to do at once, with our best dollar estimate of the cost. This report would be used for "approval in principle" to be approved by Mr. Beretta. This "approval in principle" would be the basis for ordering equipment at once. AR's will then be prepared as hard numbers are obtained for the items. I am not sure as to the exact form that such a request should take. Last week the Painesville plant staff put together a listing of those items which will give us the most immediate benefit.

A brief description of those facilities for which we must immediately commit money to reduce VCM exposure are as follows:

1. Experimental Stripper Installation

\$15,000

We are utilizing a number of idle equipment items, a knock-out pot, a condensor and a receiver to provide steam stripping capability on one of our Bldg. 117 batch strippers. This equipment must now be installed in order to carry out, on a plant scale, the stripping of latex for OZO (MX-7405) as well as Plastisol latex. The money requested is for the cost of installing the above equipment and steam injection and stripping control equipment on the vessel. Successful operation of this unit will provide the necessary design data to support additional stripping installations. Subsequent installations will cost considerably more than this one because equipment will have to be purchased to assemble the complete systems.

INTERCOMPANY CORRESPONDENCE

UNIRO002012

2. Improved Ventilation 107 and 117 Control Rooms \$50,000
In order to provide an area for Process Building operators to stay in when they are not on the operating floor, it is necessary to modify the ventilation in these buildings. Duct work modifications as well as replacement of radiators for warming the air for winter operations is included in this estimate. While this installation will not by itself reduce VCM in the operating area it will provide lower overall exposure for the operators.
3. Improved Ventilation at Bagging Stations \$45,000
We have frequently measured levels of greater than 5 ppm at the bagging stations. In addition there is dust at these locations which is also considered hazardous. It is necessary to install equipment in the immediate vicinity of each bagger to remove both dust and VCM to reduce individual exposures. This estimate includes money for the installation of such equipment at the 5 PVC bagging stations at the Painesville plant.
4. Reduce VCM Loss at Recovered Monomer Pumps \$10,000
The pumps which return recovered VCM from the S.D. plant to Area I for purification, leak at the seals. This estimate is to provide one of these alternatives:
 - a. Replacement of the seals with a more effective type.
 - b. Relocate the pumps outside.
 - c. Enclose the pumps and evacuate the enclosure.
5. Fetterolf Valves for S.D. Reactors \$30,000
We have operated a Fetterolf valve experimentally on one S.D. reactor. Results have not been spectacular. We have decided that a source of high pressure water serving only this valve is necessary. During July we will complete the evaluation of the valve with the better water source. If this is successful we will want to purchase a valve for each of the S.D. plant reactors and extend the water piping. Delivery time is four months and installation time two months.
6. Reactor Evacuation \$25,000
The Fetterolf valves discussed above may reduce the frequency of opening S.D. reactors, but they must inevitably be opened sometime. Opening these reactors is the highest single source of VCM in the S.D. plant. An experimental evacuation system just received will be evaluated in evacuation of these reactors before opening, during opening, and during jetting. If this system works as we expect it to we will want to purchase five additional units to service the polymerizers in Area I.
7. S.D. Reactor Transfer Improvements \$100,000
S.D. reactors are emptied presently through piping connected by Victaulic couplings. Slurry goes through a strainer basket and is then pumped to the slurry storage tank. Breaking the temporary connections and cleaning out the strainer represent VCM escape points.

7. S.D. Reactor Transfer Improvements - Cont.

It is necessary that flanged joint piping be installed as permanent transfer system. The strainer basket too must be replaced by lump crushers and Derrick screeners to remove these lumps outside of the Process Building. It may be necessary to replace the present transfer pumps with units which will handle the larger lumps.

8. Better Breathing Air

\$175,000

Provision of one permanent, compressed, breathable air system for plant Area IV was approved on Painesville AR-5317 at a capital authorization of \$124,850. It is necessary for us to purchase and install a more elaborate system for Plant Area I and to provide an improved cleanup of the existing breathing air system during the interim period while the permanent system is being installed.

9. Area Monitoring Equipment

\$135,000

We have designated 8 "regulated areas" within the plant. Continuous monitoring equipment has been installed in only 3 of these areas. We must install continuous monitoring equipment in the other 5 areas. Modifications must be made to the 3 existing installations to provide alarms at both 5 ppm and 25 ppm of VCM. The monitoring installation required for Paracril finishing must be considerably more sophisticated than those in the other locations because of the presence of both moisture and other chemicals in the atmosphere. We estimate that the system required for Paracril will cost \$55,000 and the installations required for the other areas will cost a total of \$80,000.

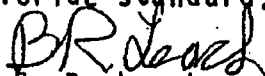
10. Total

\$585,000

Walt Iliff has prepared a draft of a letter to Mr. Beretta which is attached. He indicates that we should add a 10% contingency to the \$585,000 bringing the total to \$643,500. Of this amount we require a pre-authorization of \$321,800 to be committed in 1975.

As you will recall I shared with the OSHA inspector our overall plan for compliance which requires a capital expenditure of at least \$3,877,700. I believe that part of the reason for our citation was to urge us to make the commitment of these dollars to reduce employee exposure. What is being asked for at this time is Phase I of the overall program.

I believe it is essential that we quickly obtain this authorization in order to show our good faith in complying more quickly than we had previously planned to the OSHA vinyl chloride standard.


B. R. Leach

BRL:nak
Att:

UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.

W.C. Br

TO: **B. R. Leach**
W. M. Cliff
C. H. Kim
R. E. Holman
J. R. Douglas

DATE: August 5, 1975

cc: JDP GJU MCG EAST

FROM: **D. E. Brumbaugh**

SUBJECT: Vinyl Chloride Monitoring Summary - July 1975

I. Summary of Mican Results

	<u>Blag. 107</u>		<u>Blag. 117</u>		<u>Blag. 111</u>	
	<u>% Time</u>	<u>% Time</u>	<u>% Time</u>	<u>% Time</u>	<u>% Time</u>	<u>% Time</u>
	<u>Over 25 ppm</u>	<u>Over 5 ppm</u>	<u>Over 25 ppm</u>	<u>Over 5 ppm</u>	<u>Over 25 ppm</u>	<u>Over 5 ppm</u>
Avg.	11.8%	68.1%	10.9%	60.1%	5.9%	110.0%
Low	1%	11%	1%	20%	1%	1%
High	77%	100%	115%	98%	21%	180%

INTERCOMPANY CORRESPONDENCE

UNIRO002015

II. Summary of Personnel VC Monitoring Results by Location:

Location	Percent of Results					No. of Readings
	Less than 1 ppm	1-5 ppm	6-25 ppm	26-100 ppm	101 & Over	
107 Process	-0-	51.2%	41.5%	4.9%	2.4%	11
117 Process	2.3%	46.5%	39.5%	6.9%	6.9%	13
108 Finishing	-0-	67.1%	25.9%	5.9%	1.2%	85
116 Shop	30.0%	60.0%	-0-	1.0%	-0-	10
100 Lab	11.1%	77.8%	-0-	11.1%	-0-	9
414 S.D. Process	7.1%	55.6%	29.6%	7.1%	-0-	27
415 S.D. Finishing	8.3%	83.3%	8.3%	-0-	-0-	12
413 Paracril Process	26.5%	71.4%	2.9%	-0-	-0-	34
420 & 421 Paracril Finishing	28.9%	65.8%	5.3%	-0-	-0-	38
425 Shop	56.3%	43.8%	-0-	-0-	-0-	32
435 & 436 Warehouses	11.1%	88.9%	-0-	-0-	-0-	9
432 Lab	50.0%	50.0%	-0-	-0-	-0-	10

II. All Personnel Readings over 25 ppm

Date	Job Group	Location & Job Function	Personnel	15 Min. ppm VC	Resp. Req.	Resp. Worn	VC Warn. Light
7-1	Poly Cl. Helper	117, #12 poly, working on flange		260.6	No	None	Off
7-2	Jr. Poly Oper.	117, 2nd floor, control room		89.5	No	None	Off
7-2	Poly Cleaner	414, jetting #11 poly		40.6	Yes	Airline	Off
7-2	Wms. Mill Oper.	108, 1st floor, Wms. mill area		30.1	No	None	Off
7-3	Monomer Oper.	Tank farm, unhooking tank car, to 106, checking pumps		88.8	No	None (no light)	
7-3	Poly Cleaner	117, 2nd floor, jetting #9 poly		206.9	Yes	Airline	On
7-5	Poly Cleaner	117, jetting #7 poly		188.8	Yes	Airline	Off
7-9	Poly Cleaner	117, cleaning mani- folds, #7 poly		44.6	No	None	Off
7-12	Swenson Oper.	108, bagging		345.0	No	None	Off
7-12	Bowen I. Oper. Helper	108, bagging		28.0	No	None	Off
7-13	Poly Cleaner	107, opening #21 poly		70.3	Yes	None	Off
7-21	Jr. Poly Oper.	117, 2nd floor, press- ure testing #4 poly		31.2	No	None	Off
7-21	Wms. Mill Helper	108, 1st floor, bagging		28.0	No	None	Off
7-22	Lab Tech.	100, 1st floor lab		73.1	No	None	Off
7-22	Water Pump House Oper.	105, 1st floor at desk		25.3	No	None	Off
7-22	Poly Cl. Helper	107, 2nd floor, safety watch for man jetting #25 poly		28.4	Yes	Airline	On
7-23	Poly Cleaner	107, jetting #23 poly		124.0	Yes	Airline	On
7-26	Poly Cleaner	414, standing watch at #10 poly		28.5	Yes	None	Off
7-28	Welder	116, bench work, checking welding mach.		41.8	No	None	Off
7-28	Oiler	108, 2nd fl. oiling Bowen I, to 1st floor		27.8	No	None	Off

REDACTED

Vinyl Chloride Monitoring Summary - July 1975. (cont.)

Page 4

IV. Personnel Monitoring Results on All Jobs Requiring Respirators:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Respirator Worn</u>
7-2	Poly Oper.	414, 2nd floor, charging poly, rodding #12 poly		3.7	Airline
7-2	Poly Cleaner	414, 2nd floor, jetting #11 poly		46.6	Airline
7-3	Poly Cleaner	117, 2nd fl., jetting #9 poly		206.9	Airline
7-5	Poly Cl. Helper	107, 2nd floor, cleaning #24 poly		22.4	Airline
7-6	Poly Cleaner	414, 2nd floor, jetting #5 poly		8.4	Airline
7-9	Poly Cleaner	117, jetting #7 poly		188.8	Airline
7-10	Poly Cleaner	414, opening & rodding out #12 poly		4.1	None
7-11	Poly Cl. Helper	107, jetting #25 poly		13.7	Airline
7-13	Poly Cleaner	107, opening #21 poly		70.3	None
7-15	Poly Cleaner	414, opening #10 poly		1.9	None
7-16	Poly Cleaner	117, 2nd floor, inside cleaning #8 poly		10.8	Airline
7-21	Poly Cleaner	414, 2nd floor, cleaning #8 poly		2.0	Airline
7-22	Poly Cl. Helper	107, 2nd fl. safety watch man jetting #25 poly		28.4	Airline
7-23	Poly Cleaner	107, jetting #23 poly		124.0	Airline
7-26	Poly Cl. Helper	107, pulling blanks on #26 poly		13.2	None
7-26	Poly Cleaner	107, dumping cleanout, observing cleaning of #26 poly		16.2	None
7-26	Poly Cleaner	414, standing watch #10 poly		28.5	None
7-27	Poly Cleaner	107, 2nd floor, opening #24 poly		2.7	Airline
7-27	Poly Cl. Helper	107, 2nd floor, blanking #24 poly		3.7	Airline
7-27	Jr. Poly Oper.	117, 2nd floor at VC charge meter		13.3	Airline (light on)

GEB/ard

REDACTED*Jerry Bumbach*

UNIRO002018

UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.

TO: B. R. Leach
W. M. Iliff
C. H. Kim
R. E. Holman
J. R. Douglas

FROM: A. R. DeMuth - Sections I thru IV
C. E. Stanziale - Sections V thru VII

DATE: ^{Sept.} August 3, 1975

cc: GEB JDP CJU MCJ
NCW RWK

SUBJECT: Vinyl Chloride Monitoring Summary - August 1975

I. Summary of Miran Results:

	Bldg. 107		Bldg. 117		Bldg. 414	
	% Time Over 25 ppm	% Time Over 5 ppm	% Time Over 25 ppm	% Time Over 5 ppm	% Time Over 25 ppm	% Time Over 5 ppm
Avg.	11.2%	68.4%	5.4%	71.6%	8.0%	42.8%
Low	1%	31%	1%	10%	.4%	7%
High	31%	100%	23%	98%	43%	91%

INTERCOMPANY CORRESPONDENCE

UNIRO002019

II. Summary of Personnel VC Monitoring Results by Location:

<u>Location</u>	<u>Less than 1 ppm</u>	<u>1-5 ppm</u>	<u>6-25 ppm</u>	<u>26-100 ppm</u>	<u>101 & Over</u>	<u>No. of Readings</u>
107 Process	12.2%	63.4%	19.5%	4.9%	-0-	41
117 Process	9.5%	42.9%	40.5%	4.8%	2.4%	42
108 Finishing	14.1%	56.3%	28.1%	1.6%	-0-	64
116 Shop	42.1%	47.4%	10.5%	-0-	-0-	19
100 Lab	28.6%	57.1%	14.3%	-0-	-0-	7
414 S.D. Process	15.4%	46.2%	34.6%	3.8%	-0-	26
415 S.D. Finishing	25.0%	50.0%	25.0%	-0-	-0-	12
413 Paracril Process	64.5%	35.5%	-0-	-0-	-0-	31
420 & 421 Paracril Finishing	53.3%	46.7%	-0-	-0-	-0-	30
425 Shop	79.5%	20.5%	-0-	-0-	-0-	39
435 & 436 Warehouses	28.6%	57.1%	14.3%	-0-	-0-	7
432 Lab	70.0%	30.0%	-0-	-0-	-0-	10

III. All Personnel Readings over 25 ppm:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	15 Min. ppm VC	Resp. Req.	Type Resp. Worn	VC Warning Light
8-2	Poly Cleaner	117, 2nd fl., opening #6 poly		116.3	Yes	Airline	On
8-2	Stripper Oper.	107, 1st fl., stripper & compressor area		33.7	No	Airline	On
8-7	Poly Cl. Helper	107, turning wiper wheel, #24 poly being jetted		29.4	Yes	Airline	On
8-10	Poly Cleaner	414, jetting #2 poly		31.5	Yes	Airline	Off
8-12	Floc & Util. Oper.	108, bagging		55.3	No	None	(No Light)
8-12	Poly Cleaner	117, cleaning inside #4 poly		81.3	Yes	Airline	Off
8-13	Poly Cl. Helper	107, 2nd fl., cleaning #27 poly		25.2	Yes	Airline	Off
8-25	Poly Oper.	117, 2nd fl., control room		34.0	No	None	Off

REDACTED

IV. Personnel Monitoring Results on All Jobs Requiring Respirators:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
8-1	Poly Cl. Helper	107, standing watch at #20 poly		-ND-	None
8-2	Poly Cleaner	117, 2nd fl., opening #6 poly		116.3	Airline
8-6	Poly Cleaner	107, jetting #26 poly		7.2	Airline
8-5	Poly Cleaner	414, working on #10 poly		14.3	None
8-7	Poly Cl. Helper	107, turning wiper wheel, #24 poly being jetted		29.4	Airline
8-8	Poly Cleaner	414, jetting #9 poly		4.0	Airline
8-10	Poly Cl. Helper	107, 2nd fl., changing rupture disc on #20 poly		19.3	Airline (light on)
8-10	Poly Cleaner	414, jetting #2 poly		31.5	Airline
8-12	Poly Cleaner	117, inside cleaning #4 poly		81.3	Airline
8-13	Poly Cl. Helper	107, 2nd fl., cleaning #27 poly		25.2	Airline
8-14	Poly Cleaner	414, 2nd fl., cleaning #12 poly		7.6	Airline
8-16	Poly Cleaner	414, jetting #2 poly		3.0	Airline
8-17	Poly Cleaner	414, 2nd fl., cleaning #2 poly		5.5	Airline
8-18	Poly Cl. Helper	117, unplugging drop line under #2 poly, poly being jetted		6.9	Airline
8-20	Poly Cleaner	414, closing #5 poly		2.9	Airline
8-20	Poly Cleaner	107, safety watch, #26 poly		.8	None
8-21	Poly Cleaner	107, closing #15 poly		1.4	Airline
8-23	Poly Oper.	414, rodding out #4 poly		7.9	Airline
8-24	Poly Cleaner	414, opening #7 poly		.7	Airline (light on)

REDACTED

IV. Personnel Monitoring Results on All Jobs Requiring Respirators: (cont.)

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
8-25	Poly Cl. Helper	107, 2nd fl., opening #23 poly		5.2	Airline
8-25	Poly Cleaner	414, 2nd fl., cleaning #12 poly		.3	Airline
8-28	Poly Cleaner	117, 2nd fl., blanking #13 poly		4.7	Airline (light on)
8-28	Poly Cl. Helper	117, jetting #7 poly		16.6	Airline
8-29	Poly Cleaner	414, jetting #3 poly		11.3	Airline
8-30	Poly Cl. Helper	107, 2nd fl., blanking #17 poly		12.1	Airline (light on)
8-31	Poly Cleaner	107, working on #21 poly		4.2	Airline

REDACTED

ARD/d

V. Summary of Fixed Points Results (Century OVA Instrument)

	<u>% Time Less 5ppm</u>	<u>% Time 6-25ppm</u>	<u>% Time 26-100ppm</u>	<u>% Time Over 100ppm</u>
Building 107	11.3%	83.3%	4.8%	.6%
Building 117	11.7%	85.3%	2.7%	.3%
Building 108	26.5%	73.5%	-0-	-0-
Building 414	16.9%	75.8%	7.3%	-0-
Building 415	26.6%	73.4%	-0-	-0-

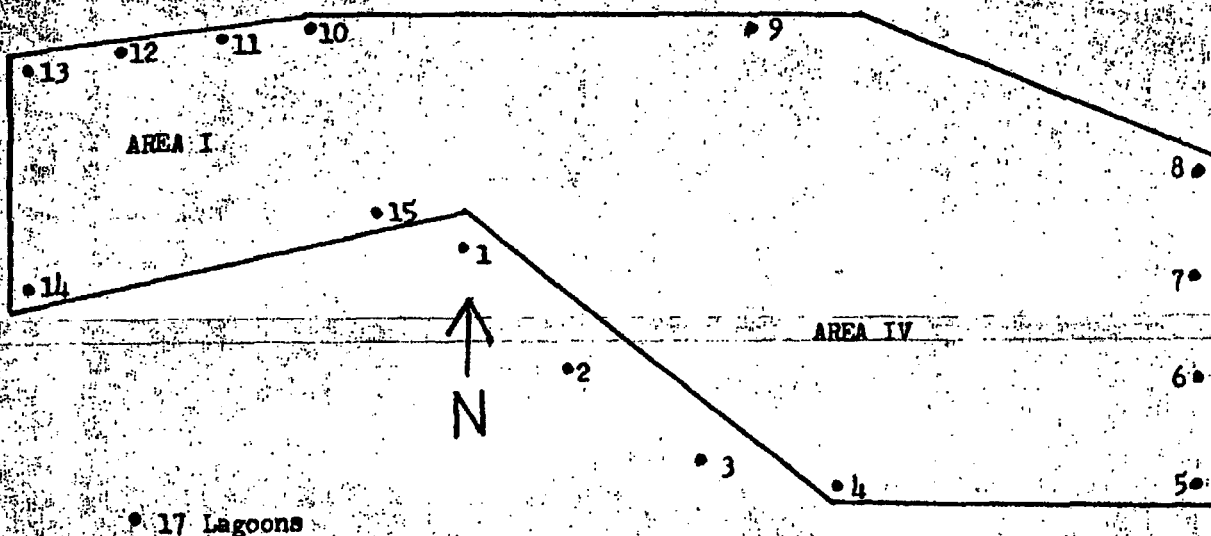
	<u>Bldg. 107</u>	<u>Bldg. 117</u>	<u>Bldg. 108</u>	<u>Bldg. 414</u>	<u>Bldg. 415</u>
Avg. (ppm)	12.1	11.6	7.7	11.6	6.7
Hi (ppm)	110	500	25	80	15
Low (ppm)	4	4	4	3	4

VI. Summary of Emission Points (Century OVA Instrument)
(Readings in ppm)

Emission Point No.	Bldg. No.	Exhaust From	Avg.	Hi	Low
S-001	108	Wms mills dust collector	20.8	40	5
S-002	108	Tank 4 - Swenson	23.4	110	3
S-003	108	Tank 5 - Swenson	52.1	340	5
S-004	108	Tank 6 - Bowen I	38.6	250	4
S-005	108	Tank 7 - Bowen I	20.5	110	4
S-006	Fin'g Annex	Tank 10 - Williams Mill	921.1	10,000+	5
S-007	108	Solidaire grinder collector	8.4	20	5
S-008	108	Solidaire dryer collector	9.1	20	4
S-010	108	Swenson main collector	18.9	60	6
S-011	108	Swenson conveyor	17.1	44	6
S-012	108	Swenson north grinder collector	6.9	10	4
S-013	108	Swenson south grinder collector	7.0	11	4
S-014	108	Niagara bagger collector	Not in Service		
S-015	108	Bowen 1 west grinder collector	10.8	40	5
S-016	108	Bowen 1 east grinder collector	10.2	36	5
S-017	108	Bowen 1 main collector	29.9	70	6
S-018	108	Bowen 1 test cell collector	29.0	70	6
S-019	108	Bowen 1 product conveyor	10.9	30	5
S-020	108	Bowen 2 grinder collector	10.0	28	5
S-021	108	Bowen 2 main collector	24.8	60	4
S-022	108	Bowen 2 product conveyor	9.0	26	4
S-023	108	Tank 11 - Bowen II	143.3	600	6
S-024	108	Tank 12 - Bowen II	1,116.8	10,000+	7
S-031	Area 4	Silos & hopper cars	-	-	-
		Silos	11.0	15	6
		Hopper cars	17.0	25	7
S-032	S.D.	East slurry tank	930.0	10,000+	6
S-033	S.D.	West slurry tank	809.9	5,000	5
S-034	415	Main collector	8.8	20	4

VII. Summary of Peripheral Samples (Air Vacuum Cans)
(Readings in ppm)

Location No	Avg.	H1	Low
1	0.6	1.5	ND
2	0.5	1.9	ND
3	0.2	0.4	ND
4	0.5	0.8	0.2
5	0.1	0.4	ND
6	0.3	0.6	ND
7	0.5	1.1	0.2
8	0.1	0.3	ND
9	0.1	0.4	ND
10	0.2	0.5	ND
11	0.3	0.6	ND
12	0.1	0.4	ND
13	0.3	0.8	ND
14	0.1	0.5	ND
15	0.2	0.4	ND
16	0.1	0.3	ND
17	0.3	0.6	ND



CEC/ds

• 16 Waste Treatment

VC BK

UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.

TO: E. R. Leach
W. M. Iliff
C. H. Kim
R. E. Holman
J. R. Douglas

DATE: October 6, 1975

cc: GEB JDP CJU MOJ
NCW RWK

FROM: A. R. DeMuth - Sections I thru IV
C. E. Stanziale - Sections V thru VII

SUBJECT: Vinyl Chloride Monitoring Summary - September 1975

I. Summary of Miran Results:

	<u>Bldg. 107</u>		<u>Bldg. 117</u>		<u>Bldg. 414</u>	
	% Time Over 25 ppm	% Time Over 5 ppm	% Time Over 25 ppm	% Time Over 5 ppm	% Time Over 25 ppm	% Time Over 5 ppm
Avg.	9.5%	60.8%	4.8%	65.0%	5.2%	38.5%
Low	1 %	23 %	0 %	25 %	.5%	3 %
High	40 %	97 %	26 %	100 %	20 %	97 %

II. Summary of Personnel VC Monitoring Results by Location:

<u>Location</u>	<u>Less than 1 ppm</u>	<u>1-5 ppm</u>	<u>6-25 ppm</u>	<u>26-100 ppm</u>	<u>101 & Over</u>	<u>No. of Readings</u>
107 Process	6.3%	52.1%	37.5%	4.2%	-0-	48
117 Process	-0-	62.8%	25.6%	7.0%	4.7%	43
108 Finishing	4.7%	77.9%	17.4%	-0-	-0-	86
116 Shop	50.0%	40.0%	10.0%	-0-	-0-	10
100 Lab	11.1%	66.7%	22.2%	-0-	-0-	9
414 S.D. Process	4.3%	69.6%	21.7%	4.3%	-0-	23
415 S.D. Finishing	20.0%	60.0%	6.7%	13.3%	-0-	15
413 Paracril Process	44.7%	55.3%	-0-	-0-	-0-	38
420 & 421 Paracril Finishing	34.1%	63.6%	22.7%	-0-	-0-	44
425 Shop	64.1%	35.9%	-0-	-0-	-0-	39
435 & 436 Warehouses	28.6%	57.1%	14.3%	-0-	-0-	7
432 Lab	61.5%	38.5%	-0-	-0-	-0-	13

III. All Personnel Readings over 25 ppm

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Resp. Req.</u>	<u>Type Resp. Worn</u>	<u>VC Warning Light</u>
9-7	Poly Cleaner	117, opening #13 poly		619.6	Yes	Airline	Off
9-9	Monomer Oper.	Area 1 tank farm, checking #2 pumping station		43.8	No	None	(no light)
9-13	Poly Cl. Helper	107, 2nd fl., jetting #24 poly		50.3	Yes	Airline	Off
9-14	Poly Oper.	414, 2nd fl., poly area & desk		76.0	No	None	Off
9-18	S.D. Dryer Oper.	415, bagging		31.4	No	None	(no light)
9-19	Poly Oper.	117, checking control board		26.9	No	None	Off
9-20	Poly Cl. Helper	117, 2nd fl., bailing out #13 poly		25.0	Yes	Airline	Off
9-22	Gr. 5.1 - 50	117, 2nd fl., running S & U polys		129.7 120.5	No	None	Off
9-27	Jr. Poly Oper.	117, 2nd fl., checking polys		78.9	No	None	Off
9-29	Poly Oper.	107, 2nd fl. poly room, control room		47.6	No	None	Off
9-30	S.D. Dryer Oper.	415, 1st & 2nd fl., checking screener		32.3	No	None	(no light)

REDACTED

REDACTED

Vinyl Chloride Monitoring Summary - September 1975 (cont.)

Page 4

IV. Personnel Monitoring Results on All Jobs Requiring Respirators:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
9-3	Poly Cl. Helper	107, opening #27 poly		7.7	Airline
9-5	Poly Cleaner	414, 2nd fl., cleaning manifolds on #4 poly		4.7	Airline (light on)
9-5	Centr. Oper.	108, 3rd fl., centrifuge area		5.0	Airline
9-5	Poly Cl. Helper	107, 2nd fl., closing #27 poly		5.4	Airline
9-7	Poly Cleaner	414, 2nd fl., jetting #12 poly		5.7	Airline
9-7	Poly Cleaner	117, opening #13 poly		619.6	Airline
9-10	Poly Cleaner	414, 2nd fl., jetting #6 poly		4.3	Airline
9-12	Poly Cleaner	107, 2nd fl., opening #21 poly		2.7	Airline
9-13	Poly Cl. Helper	107, 2nd fl., jetting #24 poly		50.3	Airline
9-15	Poly Cleaner	413, closing #5 poly		4.6	Airline
9-15	Poly Cl. Helper	107, 2nd fl., blanking #27 poly		7.6	Airline
9-15	Poly Cleaner	107, 2nd fl., opening #27 poly		4.7	Airline
9-16	Poly Cl. Helper	117, safety watch		11.4	Airline
9-17	Poly Cleaner	414, closing #4 poly		7.9	Airline
9-20	Poly Cl. Helper	117, 2nd fl., bailing out #13 poly		25.0	Airline
9-20	Poly Cleaner	414, safety watch, #7 poly		1.6	None
9-21	Poly Cleaner	107, safety watch, #22 poly		9.3	Airline
9-25	Poly Cl. Helper	107, 2nd fl., jetting #21 poly		4.4	Airline
9-25	Poly Cleaner	414, 2nd fl., jetting #9 poly		2.8	Airline
9-26	Day Repair	108, 2nd fl. at Derrick screener		2.2	Airline
9-28	Poly Cleaner	107, 2nd fl., opening #23 poly		4.3	Airline
9-30	Poly Cl. Helper	107, opening manhole cover		18.5	Airline

ARD/d

UNIRO002030

V. Summary of Fixed Points Results (Century OVA Instrument)

	<u>% Time Less 5ppm</u>	<u>% Time 6-25ppm</u>	<u>% Time 26-100ppm</u>	<u>% Time Over 100ppm</u>
Building 107	13.3%	85.3%	1.0%	.4%
Building 117	15.5%	81.3%	3.2%	-0-
Building 108	22.0%	77.7%	-0-	.3%
Building 414	13.3%	83.3%	1.3%	2.1%
Building 415	16.0%	81.5%	2.5%	-0-

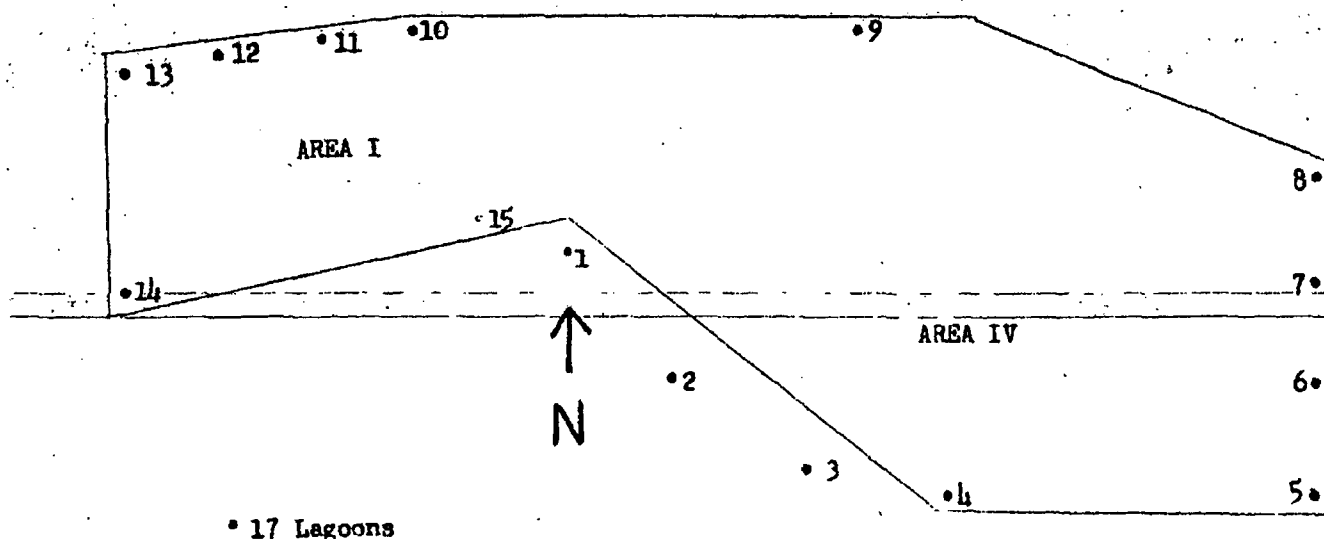
	<u>Bldg. 107</u>	<u>Bldg. 117</u>	<u>Bldg. 108</u>	<u>Bldg. 414</u>	<u>Bldg. 415</u>
Avg. (ppm)	9.4	10.2	7.4	12.0	7.9
H1 (ppm)	200	90	120	250	50
Low (ppm)	4	2	4	3	4

VI. Summary of Emission Points (Century OVA Instrument) -
(Readings in ppm)

Emission Point No.	Bldg. No.	Exhaust From	Avg.	H1	Low
S-001	108	Wms mills dust collector	22.2	140	8
S-002	108	Tank 4 - Swenson	35.1	600	6
S-003	108	Tank 5 - Swenson	35.9	400	3
S-004	108	Tank 6 - Bowen I	53.8	400	5
S-005	108	Tank 7 - Bowen I	22.8	150	5
S-006	Fin'g Annex	Tank 10 - Williams Mill	2080.2	10,000	6
S-007	108	Solidaire grinder collector	8.0	10	6
S-008	108	Solidaire dryer collector	8.9	14	5
S-010	108	Swenson main collector	20.4	70	5
S-011	108	Swenson conveyor	11.4	42	5
S-012	108	Swenson north grinder collector	7.3	15	5
S-013	108	Swenson south grinder collector	6.8	9	3
S-014	108	Niagara bagger collector	Not in Service		
S-015	108	Bowen 1 west grinder collector	8.9	15	5
S-016	108	Bowen 1 east grinder collector	9.0	15	4
S-017	108	Bowen 1 main collector	28.0	90	6
S-018	108	Bowen 1 test cell collector	27.7	100	5
S-019	108	Bowen 1 product conveyor	12.2	90	5
S-020	108	Bowen 2 grinder collector	9.2	25	5
S-021	108	Bowen 2 main collector	31.3	90	3
S-022	108	Bowen 2 product conveyor	7.9	16	3
S-023	108	Tank 11 - Bowen II	150.8	600	7
S-024	108	Tank 12 - Bowen II	243.5	2,000	6
S-031	Area 4	Silos & hopper cars			
		Silos	12.4	34	6
		Hopper cars	14.1	30	4
S-032	S.D.	East slurry tank	905.1	10,000	7
S-033	S.D.	West slurry tank	918.7	7,000	4
S-034	415	Main collector	9.4	25	4

VII. Summary of Peripheral Samples (Air Vacuum Cans)
(Readings in ppm)

Location No.	Avg.	H1	Low
1	0.6	1.7	ND
2	0.5	1.1	ND
3	0.5	1.3	0.3
4	0.3	0.4	ND
5	0.5	1.3	ND
6	0.7	1.5	ND
7	0.6	1.5	ND
8	0.5	1.4	ND
9	0.5	1.3	ND
10	0.3	0.4	ND
11	0.8	1.5	0.1
12	0.6	1.8	ND
13	0.5	0.7	0.2
14	0.6	1.2	0.3
15	0.7	2.0	0.1
16	0.8	2.3	ND
17	0.6	1.7	ND



• 16 Waste Treatment

VC BR

UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.

TO: B. R. Leach
W. M. Illiff
C. H. Kim
R. E. Holman
J. R. Douglas

DATE: November 7, 1975

cc: GEB JDP CJU MCJ
NCW RWK

FROM: A. R. DeMuth - Sections I thru IV
C. E. Stanziale - Sections V thru VII

SUBJECT: Vinyl Chloride Monitoring Summary - October 1975

I. Summary of Miran Results:

	<u>Bldg. 107</u>		<u>Bldg. 117</u>		<u>Bldg. 414</u>	
	<u>% Time</u> <u>Over 25 ppm</u>	<u>% Time</u> <u>Over 5 ppm</u>	<u>% Time</u> <u>Over 25 ppm</u>	<u>% Time</u> <u>Over 5 ppm</u>	<u>% Time</u> <u>Over 25 ppm</u>	<u>% Time</u> <u>Over 5 ppm</u>
Avg.	15.8%	78.7%	9.6%	83.1%	8.3%	68.7%
Low	1 %	50 %	0 %	40 %	0 %	19 %
High	53 %	100 %	40 %	100 %	21 %	100 %

II. Summary of Personnel VC Monitoring Results by Location:

<u>Location</u>	<u>Less than 1 ppm.</u>	<u>1-5 ppm</u>	<u>6-25 ppm</u>	<u>26-100 ppm</u>	<u>101 & over</u>	<u>No. of Readings</u>
107 Process	4.2%	62.5%	27.0%	21.0%	4.2%	48
117 Process	4.9%	53.7%	36.6%	-0-	4.9%	41
108 Finishing	2.6%	70.5%	26.9%	-0-	-0-	78
116 Shop	40.0%	53.3%	6.7%	-0-	-0-	15
100 Lab	22.2%	77.8%	-0-	-0-	-0-	9
414 S.D. Process	13.8%	69.0%	17.2%	-0-	-0-	29
415 S.D. Finishing	6.7%	93.3%	-0-	-0-	-0-	15
413 Paracril Process	82.9%	17.1%	-0-	-0-	-0-	35
420 & 421 Paracril Finishing	67.4%	30.4%	-0-	2.2%	-0-	46
425 Shop	79.4%	20.6%	-0-	-0-	-0-	34
435 & 436 Warehouses	33.3%	67.7%	-0-	-0-	-0-	9
432 Lab	61.5%	38.5%	-0-	-0-	-0-	13

III. All Personnel Readings over 25 ppm:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Resp. Req.</u>	<u>Type Resp. Worn</u>	<u>VC Warning Light</u>
10-4	Poly Cleaner	107, 2nd fl., jetting #21 poly		2743.2 2609.9	Yes	Airline	On
10-11	Poly Cleaner	107, inside cleaning #20 poly		60.9	Yes	Airline	Off
10-22	Poly Oper.	107, 2nd fl., control room		146.3	No	None	Off
10-24	Poly Cleaner	117, 2nd fl., entering #11 poly for cleanout		342.5	Yes	Airline	Off
10-24	Poly Cl. Helper	117, 2nd fl., jetting #11 poly		476.4	Yes	Airline	Off
10-25	Paracril Oper.	421, 1st fl., taking sample		28.9	No	None	(no light)

*of what?
PVC latex?
OZO blend
something else?*

REDACTED

IV. Personnel Monitoring Results on All Jobs Requiring Respirators:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
10-1	Poly Cleaner	414, taking manhole cover off #9 poly		4.3	Airline
10-1	Poly Cleaner	117, cleaning #4 poly manifold		9.6	Airline
10-3	Poly Cleaner	414, 2nd fl., jetting #2 poly		2.5	Airline
10-4	Poly Cleaner	107, 2nd fl., jetting #21 poly		2743.2 2609.9	Airline
10-5	Poly Cl. Helper	107, opening #16 poly		2.2	Airline
10-5	Poly Cleaner	414, 2nd fl., #2 poly cleanout		10.4	Airline
10-7	Poly Cleaner	107, 2nd fl., cleaning #20 poly		14.5	Airline
10-9	Poly Cleaner	414, 2nd fl., opening #2 poly		1.3	None
10-10	Poly Cl. Helper	117, 2nd fl., opening #10 poly		20.3	Airline
10-11	Poly Cleaner	107, inside cleaning #20 poly		60.9	Airline
10-12	Poly Cleaner	414, closing #9 poly		2.2	Airline
10-12	Poly Cl. Helper	117, 2nd fl., opening #4 poly		19.6	Airline
10-15	Poly Cleaner	414, 2nd fl., rodding #1 poly		1.0	Airline
10-16	Poly Cleaner	107, 2nd fl., bailing out #23 poly		6.6	Airline
10-17	Poly Cl. Helper	107, 2nd fl., jetting #21 poly		1.6	Airline
10-18	Poly Cleaner	414, cleaning #6 poly		2.2	Airline
10-19	Poly Cleaner	414, 2nd fl., cleaning #11 poly		2.0	Airline
10-19	Poly Cleaner	107, safety watch, #26 poly		7.1	Airline

REDACTED

IV. Personnel Monitoring Results on All Jobs Requiring Respirators: (cont.)

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
10-21	Poly Cl. Helper	107, 2nd fl., jetting #17 poly		22.0	Airline
10-22	Poly Cleaner	414, 2nd fl., jetting #4 poly		3.8	Airline
10-24	Poly Cleaner	117, 2nd fl., entering #11 poly for cleanout		342.5	Airline
10-24	Poly Cl. Helper	117, 2nd fl., jetting #11 poly		476.4	Airline
10-25	Poly Cleaner	117, cleaning #1 poly		13.3	Airline
10-26	Poly Cl. Helper	107, 2nd fl., inside cleaning #27 poly		14.7	Airline
10-27	Poly Cleaner	414, cleaning poly		5.9	Airline
10-29	Poly Cleaner	117, cleaning manifold, #14 poly		9.5	Airline
10-30	Poly Cl. Helper	107, safety watch, #27 poly		7.1	Airline
10-30	Poly Cleaner	414, 2nd fl., cleaning manifold, #8 poly		4.7	None

REDACTED

ARD/d

UNIRO002038

V. Summary of Fixed Points Results (Century OVA Instrument)

	<u>% Time Less 5ppm</u>	<u>% Time 6-25ppm</u>	<u>% Time 26-100ppm</u>	<u>% Time Over 100ppm</u>
Building 107	16.1%	81.6%	1.9%	.4%
Building 117	24.3%	75.4%	.3%	-0-
Building 108	21.3%	78.7%	-0-	-0-
Building 414	20.2%	79.4%	.4%	-0-
Building 415	33.1%	66.9%	-0-	-0-

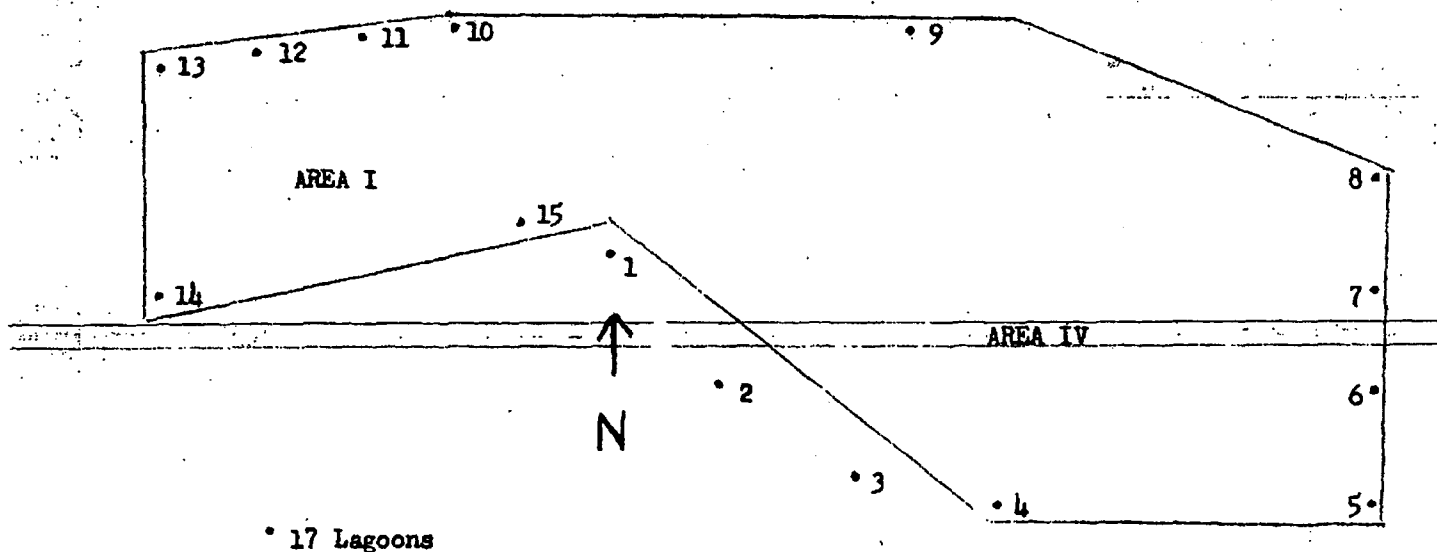
	<u>Bldg. 107</u>	<u>Bldg. 117</u>	<u>Bldg. 108</u>	<u>Bldg. 414</u>	<u>Bldg. 415</u>
Avg. (ppm)	9.4	7.7	6.9	7.3	7.0
Hi (ppm)	200	30	25	50	20
Low (ppm)	3	4	3	3	4

VI. Summary of Emission Points (Century OVA Instrument)
 (Readings in ppm)

Emission Point No.	Bldg. No.	Exhaust From	Avg.	H1	Low
S-001	108	Wms mills dust collector	21.5	70	4
S-002	108	Tank 4 - Swenson	16.2	200	4
S-003	108	Tank 5 - Swenson	25.1	450	3
S-004	108	Tank 6 - Bowen I	13.6	50	4
S-005	108	Tank 7 - Bowen I	15.5	70	4
S-006	Fin'g Annex	Tank 10 - Williams Mill	1657.3	10,000	5
S-007	108	Solidaire grinder collector	7.2	13	4
S-008	108	Solidaire dryer collector	8.1	18	4
S-010	108	Swenson main collector	18.2	60	4
S-011	108	Swenson conveyor	10.9	32	5
S-012	108	Swenson north grinder collector	7.3	14	3
S-013	108	Swenson south grinder collector	7.1	14	3
S-014	108	Niagara bagger collector	Not in Service		
S-015	108	Bowen I west grinder collector	9.0	16	4
S-016	108	Bowen I east grinder collector	9.0	16	3
S-017	108	Bowen I main collector	29.0	75	6
S-018	108	Bowen I test cell collector	25.6	66	6
S-019	108	Bowen I product conveyor	9.0	17	4
S-020	108	Bowen II grinder collector	8.9	20	5
S-021	108	Bowen II main collector	23.3	60	3
S-022	108	Bowen II product conveyor	7.6	15	3
S-023	108	Tank 11 - Bowen II	117.3	800	8
S-024	108	Tank 12 - Bowen II	161.1	1700	7
S-031	Area 4	Silos & hopper cars			
		Silos	9.6	20	5
		Hopper cars	13.4	20	6
S-032	S.D.	East slurry tank	1393.1	8000	12
S-033	S.D.	West slurry tank	1770.1	10000	6
S-034	415	Main collector	9.1	20	6

VII. Summary of Peripheral Samples (Air Vacuum Cans)
(Readings in ppm)

Location No.	Avg.	Hi	Low
1	0.5	1.0	0.2
2	0.4	0.6	0.2
3	0.3	0.5	ND
4	0.8	1.4	0.3
5	0.3	0.5	ND
6	0.5	0.9	0.1
7	0.8	2.8	0.3
8	0.4	0.6	0.3
9	0.3	0.6	ND
10	0.6	0.8	0.3
11	2.0	3.8	0.4
12	0.5	0.6	0.3
13	0.4	0.6	0.3
14	0.3	0.4	0.3
15	0.5	1.2	0.2
16	0.4	0.5	0.3
17	0.3	0.5	0.1



CES/ds

• 16 Waste Treatment

UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.

VCB
TO: B. R. Leach
W. M. Iliff
C. H. Kim
R. E. Holman
J. R. Douglas

DATE: December 5, 1975

cc: GEB JDP CJU TCK
NCW RWK

FROM: A. R. DeMuth - Sections I thru IV
C. E. Stanziale - Sections V thru VII

SUBJECT: Vinyl Chloride Monitoring Summary - November 1975

I. Summary of Miran Results:

	<u>Bldg. 107</u>		<u>Bldg. 117</u>		<u>Bldg. 414</u>	
	<u>% Time</u> <u>Over 25 ppm</u>	<u>% Time</u> <u>Over 5 ppm</u>	<u>% Time</u> <u>Over 25 ppm</u>	<u>% Time</u> <u>Over 5 ppm</u>	<u>% Time</u> <u>Over 25 ppm</u>	<u>% Time</u> <u>Over 5 ppm</u>
Avg.	18.1%	75.7%	12.1%	90.3%	7.8%	51.2%
Low	1 %	20 %	0 %	17 %	0 %	14 %
High	50 %	100 %	46 %	100 %	25 %	98%

II. Summary of Personnel VC Monitoring Results by Location:

<u>Location</u>	<u>Less than 1 ppm</u>	<u>1-5 ppm</u>	<u>6-25 ppm</u>	<u>26-100 ppm</u>	<u>101 & Over</u>	<u>No. of Readings</u>
107 Process	-0-	73.5%	16.3%	8.2%	2.0%	49
117 Process	-0-	55.3%	28.9%	10.5%	5.3%	38
108 Finishing	2.6%	52.6%	40.8%	3.9%	-0-	76
116 Shop	12.5%	62.5%	25.0%	-0-	-0-	8
100 Lab	37.5%	62.5%	-0-	-0-	-0-	8
414 S.D. Process	16.7%	70.0%	13.3%	-0-	-0-	30
415 S.D. Finishing	13.3%	73.3%	13.3%	-0-	-0-	15
413 Paracril Process	52.8%	47.2%	-0-	-0-	-0-	36
420 & 421 Paracril Finishing	42.0%	54.0%	4.0%	-0-	-0-	50
425 Shop	63.9%	33.3%	2.8%	-0-	-0-	36
435 & 436 Warehouses	20.0%	70.0%	10.0%	-0-	-0-	10
432 Lab	58.3%	41.7%	-0-	-0-	-0-	12

III. All Personnel Readings over 25 ppm:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Resp. Req.</u>	<u>Type Resp. Worn</u>	<u>VC Warning Light</u>
11-1	Electrician	107, 2nd fl., checking tag-outs		26.3	No	None	Off
11-1	Poly Cl. Helper	117, 2nd fl., blanking & opening poly		87.5	Yes	Airline	On
11-2	Poly Cleaner	117, cleaning manifolds, #10 poly		42.9	Yes	Airline	On
11-8	Safety Insp.	414 to 426		25.7	No	None	(No light)
11-9	Poly Cleaner	107, 2nd fl., jetting #22 poly		52.9	Yes	Airline	Off
11-11	Poly Cleaner	107, inside cleaning #21 poly		32.1	Yes	Airline	Off
11-14	Bowen I Oper.	108, 1st fl., bagging		27.4	No	None	(No light)
11-15	Swenson Oper.	108, 1st fl., bagging 53		28.1	No	None	(No light)
11-18	Carpenter	117, 2nd fl., installing wall panels		30.5	No	None	Off
11-23	Poly Cleaner	107, 1st fl., working on drop line leak		82.8	Yes	Airline	On
11-23	Poly Cl. Helper	107, 2nd fl., setting up equip. for poly cleanout		35.4	Yes	Airline	On
11-23	Poly Operator	117, 2nd fl., charging #1 poly		35.7	No	None	Off
11-27	Poly Cl. Helper	107, jetting #26 poly		78.6	Yes	Airline	Off
11-30	Poly Cleaner	117, jetting poly		450.2	Yes	Airline	On
11-30	Poly Cl. Helper	117, cleaning manifolds		163.7	Yes	Airline	On

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Vinyl Chloride Monitoring Summary - November 1975 (cont.)

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IV. Personnel Monitoring Results on All Jobs Requiring Respirators:

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
11-1	Centrifuge Oper.	108, 3rd fl., checking centrifuge		10.4	Airline
11-1	Poly Cl. Helper	117, 2nd fl., blanking & opening #5 poly		87.5	Airline
11-2	Poly Cleaner	117, cleaning manifold, #10 poly		42.9	Airline
11-4	Poly Cleaner	414, cleaning #10 poly		1.8	Airline
11-4	Poly Cl. Helper	107, 2nd fl., cleaning #27 poly		12.2	Airline
11-6	Poly Cleaner	117, 2nd fl., cleaning #6 poly		24.0	Airline
11-7	Poly Cl. Helper	107, 2nd fl., jetting #21 poly		7.2	Airline
11-8	Poly Cleaner	414, 2nd fl., cleaning #11 poly		.3	Airline
11-9	Poly Cleaner	107, 2nd fl., jetting #22 poly		52.9	Airline
11-11	Poly Cleaner	107, inside cleaning #21 poly		32.1	Airline
11-12	Poly Cl. Helper	107, cleaning #20 poly		16.8	Airline
11-15	Poly Cleaner	414, 2nd fl., closing poly		3.4	Airline
11-16	Poly Cleaner	107, 1st fl., cleaning stripper		4.5	None
11-16	Poly Cl. Helper	107, 2nd fl., closing poly		2.0	Airline
11-19	Poly Cleaner	414, 2nd fl., cleaning #1 poly		6.1	Airline
11-19	Poly Cleaner	117, 2nd fl., jetting #12 poly		21.5	Airline
11-19	Poly Cl. Helper	117, 2nd fl., replacing manifold flange		14.7	Airline
11-21	Poly Cleaner	414, closing #8 poly		1.4	Airline
11-23	Poly Cleaner	107, 1st fl., working on drop line leak		82.8	Airline
11-23	Poly Cl. Helper	107, 2nd fl., setting up equip. for poly cleanout		35.4	Airline

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IV. Personnel Monitoring Results on All Jobs Requiring Respirators: (cont.)

<u>Date</u>	<u>Job Group</u>	<u>Location & Job Function</u>	<u>Personnel</u>	<u>15 Min. ppm VC</u>	<u>Type Respirator Worn</u>
11-23	Poly Cleaner	414, closing #2 poly		.5	Airline
11-26	Poly Cleaner	414, closing #5 poly		1.7	Airline
11-27	Poly Cl. Helper	107, jetting #26 poly		378.6	Airline
11-28	Poly Cleaner	414, 2nd fl., cleaning #6 poly		3.4	Airline
11-30	Poly Cleaner	117, jetting poly		450.2	Airline
11-30	Poly Cl. Helper	117, cleaning manifold		163.7	Airline

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Vinyl Chloride Monitoring Summary - November 1975 (continued)V. Summary of Fixed Points Results (Century OVA Instrument)

	<u>% Time Less 5ppm</u>	<u>% Time 6-25ppm</u>	<u>% Time 26-100ppm</u>	<u>% Time Over 100ppm</u>
Building 107	19.0%	80%	1.0%	-0-
Building 117	23.6%	76.4%	-0-	-0-
Building 108	32.3%	67.3%	.4%	-0-
Building 414	30.0%	68.3%	1.7%	-0-
Building 415	20.0%	80.0%	-0-	-0-

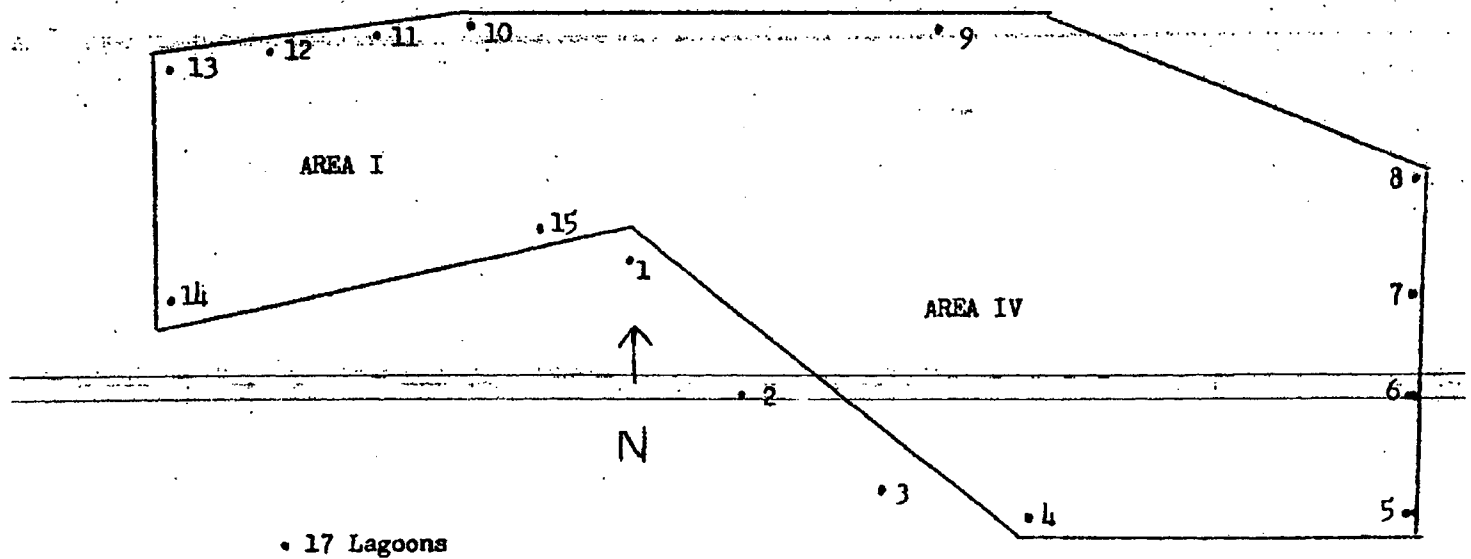
	<u>Bldg. 107</u>	<u>Bldg. 117</u>	<u>Bldg. 108</u>	<u>Bldg. 414</u>	<u>Bldg. 415</u>
Avg. (ppm)	8.0	8.1	7.1	7.3	7.0
H1 (ppm)	60	25	70	100	20
Low (ppm)	4	3	3	4	5

VI. Summary of Emission Points (Century OVA Instrument)
(Readings in ppm)

Emission Point No.	Bldg. No.	Exhaust From	Avg.	H1	Low
S-001	108	Wms mills dust collector	17.8	60	5
S-002	108	Tank 4 - Swenson	30.4	300	4
S-003	108	Tank 5 - Swenson	8.4	20	4
S-004	108	Tank 6 - Bowen I	12.3	40	3
S-005	108	Tank 7 - Bowen I	8.1	18	3
S-006	Fin'g Annex	Tank 10 - Williams Mill	306.3	3600	3
S-007	108	Solidaire grinder collector	7.3	15	5
S-008	108	Solidaire dryer collector	7.6	20	5
S-010	108	Swenson main collector	14.8	60	5
S-011	108	Swenson conveyor	9.2	16	5
S-012	108	Swenson north grinder collector	7.6	14	5
S-013	108	Swenson south grinder collector	7.7	17	5
S-014	108	Niagara bagger collector	Not in Service		
S-015	108	Bowen I west grinder collector	9.8	20	5
S-016	108	Bowen I east grinder collector	9.4	16	6
S-017	108	Bowen I main collector	20.9	80	7
S-018	108	Bowen I test cell collector	18.3	44	6
S-019	108	Bowen I product conveyor	9.4	17	5
S-020	108	Bowen II grinder collector	9.4	20	5
S-021	108	Bowen II main collector	17.7	70	6
S-022	108	Bowen II product conveyor	9.4	24	5
S-023	108	Tank 11 - Bowen II	156.7	700	12
S-024	108	Tank 12 - Bowen II	166.5	800	12
S-031	Area 4	Silos & hopper cars			
		Silos	10.8	19	6
		Hopper cars	12.9	34	5
S-032	S.D.	East slurry tank	435.6	3000	5
S-033	S.D.	West slurry tank	1249.0	10000	5
S-034	415	Main collector	8.0	15	4

VII. Summary of Peripheral Samples (Air Vacuum Cans)
(Readings in ppm)

Location No.	Avg.	Hi	Low
1	1.0	3.2	ND
2	0.2	0.6	ND
3	0.3	0.6	ND
4	0.2	0.3	ND
5	0.1	0.3	ND
6	0.1	0.3	ND
7	0.2	0.5	ND
8	0.2	0.8	ND
9	0.1	0.2	ND
10	0.5	0.8	ND
11	0.2	0.5	ND
12	0.2	0.4	ND
13	0.2	0.3	ND
14	0.2	0.3	ND
15	0.2	0.3	ND
16	0.3	0.9	ND
17	0.2	0.3	ND



CES/s

16 Waste Treatment

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