

RFP #9

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MEDICAL
DEPARTMENT

UNIROYAL CHEMICAL
Division of UNIROYAL, Inc.
Naugatuck, Connecticut 06770
203-729-5241

March 21, 1974

President

The Honorable John H. Stender
Assistant Secretary of Labor
U. S. Department of Labor
Washington, D. C. 20210

Subject: RECOMMENDED OCCUPATIONAL HEALTH STANDARD FOR
THE MANUFACTURE OF SYNTHETIC POLYMER FROM
VINYL CHLORIDE - MARCH 11, 1974

My dear Mr. Stender:

Once again I feel compelled to write to you with regard to an action which we understand OSHA may soon promulgate based upon a NIOSH recommended exposure level which we believe to be unwarranted.

In the last instance, relative to the suspected carcinogen list, NIOSH's recommendations involved the untenable guideline of zero exposure. However, your Department did ultimately issue an order establishing reasonable levels, which, while they did create some new costs and problems for us, we felt were proper and justified. I hope that this precedent of reasonableness will be applied to this newly discovered problem associated with vinyl chloride.

If the standards are adopted as recommended by NIOSH, there would be no question that we would have to shut down our vinyl chloride plant at Geismar, Louisiana and our polyvinyl chloride resin plant in Painesville, Ohio. I am fairly certain that the entire industry would be similarly affected. In our own instance we would have to lay off about 550 employees and about 1700 in other Divisions of Uniroyal which are dependent upon polyvinyl chloride. Approximately 100 customers employing many thousands would likewise be shut down. Considering that we produce only about 3% of the domestic consumption of polyvinyl chloride, it is easy to visualize the concurrent effect upon the entire industry and consequent unemployment and loss of revenue.

To the best of our knowledge (we ourselves have had no known or suspected cases of angiosarcoma in 25 years of operation) the several occurrences have been related to lengthy exposures at high concentrations. The only comprehensive animal data released to date ("Maltoni Report" - OSHA Hearing - 2/15/74) showed evidence of toxicity at 250 ppm and higher, but no effect at 50 ppm.

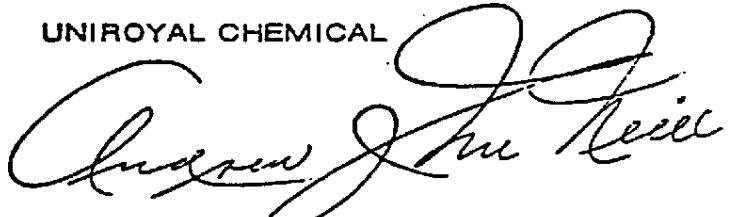
UHL 00815

The combined toxicological evidence suggests no need to set a "less than detectable level" for vinyl chloride in the workplace. Some fixed guideline limit is desirable to assure reasonably safe working conditions. A level of 50 ppm (time-weighted average) appears to be both reasonable and attainable. In addition, all appropriate engineering and design changes should be encouraged to reduce all vinyl chloride exposure to the minimal practical level in all PVC manufacturing facilities.

With such steps we believe that our employees will be properly protected and with minimum economic disruption in a major industry. Again, I would respectfully urge you to insist upon a really objective analysis of the evidence before accepting the NIOSH recommendation.

Sincerely,

UNIROYAL CHEMICAL



Andrew J. McNeill

bcc: GRV
DB
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GAA
CDMc
MJK
BRL
DD
JDF, M.D.
WDH
RJD

UPL 00816



UNIROYAL, Inc.
Oxford Management & Research Center
Middlebury, Connecticut 06749

June 21, 1974

Mr. James Kallenborn
Office of Program Development, OSHA
U.S. Department of Labor
1726 M Street, N.W.
Washington, D.C.

RE: VINYL CHLORIDE

Dear Mr. Kallenborn:

At your meeting with ORC on June 18, you asked for informed opinions on eight questions related to vinyl chloride. In the following paragraphs are my considered opinions based on many years experience in research and development of Agricultural Chemicals as well as ten years as Corporate Industrial Toxicologist for UNIROYAL. In this last capacity, I have been in many plants. I am thoroughly familiar with the processes in every phase of the problem and have been heavily involved in the vinyl chloride problem. My comments follow in the order in which you listed them.

1. Engineering. Considerable freedom must be left with the engineering department in each plant. Processes differ. Some plants already have eliminated hand cleaning of vessels, the source of the greatest exposure. In our own plant, we are not this far along and estimate that it will be about two years before we can have a solvent cleaning operation in operation.
2. Personal protective equipment. Considering the great reduction in exposure I see very little need for personal protective equipment other than the usual safety shoes, hard hats, safety glasses, etc., customary in most chemical operations. We are dealing with a very dilute concentration of a gas in air. Nothing short of a completely sealed space suit will be really effective. There is no toxicological reason to specify such protection. In my mind, it would create a far greater risk than the VC exposure even in a PVC plant. It would be an unconscionable inconvenience, hazard and expense to inflict on the worker and management in any kind of fabricating operation where concentrations are very low generally. Again, we should let local union-management communities work out solutions to meet local needs.
3. Monitoring. Except for preliminary study in a few plants, this should not be necessary in the ordinary fabricating plant. It is too time consuming and not enough competent manpower is available to do enough monitoring to be reliable. A little data can be quite misleading. Most fabricating operations will result in well under 10 ppm and I see no data to suggest that this is a hazardous level. We should concentrate our effort where the problem is worst - the PVC plant and to a minor extent the worst places

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in the monomer plants. In PVC, I believe there should be sequential samplers capable of measuring 10 ppm with reasonable accuracy. They should sample critical points where the highest exposure might occur and should include an alarm to warn when exposure climbs greatly above the norm for that point. Hand monitoring with a portable instant indicating instrument will enable plant personnel to detect the source and to take immediate corrective action. Personnel monitoring should also be largely limited as above to the PVC plant. Competition will force manufacturers to reduce monomer content as much as possible, thereby reducing exposure potential in fabricating plants.

Some sequential monitoring in monomer plants is probably desirable to pick up leaks for prompt maintenance. Portable instant reading instruments could be used as an alternative. It is not necessary in fabricating plants.

In general, wherever personal monitoring is done it should be based on a reasonable statistical design so as to get the maximum data with the minimum waste of manpower. We must keep in mind that there are few trained workers capable of doing the kind of analytical work required and there will be many equally pressing calls on their time.

4. Medical program. A good medical program is always desirable. However, the specialized NIOSH liver function type of test should be reserved for PVC plants, and to a lesser extent VC plants. In any case, they should be limited to personnel having over 10 ppm TWA exposure. These tests are not good predictors of angiosarcoma. Much freedom should be given the local health personnel who are trained professionals. They have to deal with the total man.

This medical surveillance program above should be part of an international long range research effort as proposed by Prof. Maltoni.

5. Medical and monitoring records as discussed above should be kept until the man dies, then transferred to a central group as discussed in the last paragraph under item 4 above. There should be provision for periodic review of the health data until about the year 2000 when it will be possible to determine whether changes made now have been successful in eliminating significant incidence of tumors due to VC.
6. Covered workers - those with TWA exposure greater than about 20 ppm. This will eliminate most fabricating plants and customers of their products.
7. Regulated areas - Workplaces covered by item 6.
8. Exposure level. I strongly suggest a TWA of 50 ppm with review in one and two years when the various studies will be coming to completion. My study of the Maltoni data on rats, the Tabershaw-Cooper and Dow's studies convince me that there is no scientific basis to predict that this level will result in undue risk.

UPL 00818

please call on me if I can be of help. We will present more data in our written report submitted at the hearing next week.

Sincerely,

Walter D. Harris

Walter D. Harris, Ph. D.
Corporate Industrial Toxicologist

WDH/mab

bcc: Mr. Wayne Brooks, ORC
Dr. Daniel Boyd, U.S. Dept. of Labor
R. J. Dowling
B. R. Leach
J. D. Forbes, M.D.
D. E. Dudrow
R. E. Lowell
Frank Ryan, RMA

URL 00819



UNIROYAL, Inc.
Oxford Management & Research Center
Middlebury, Connecticut 05749

July 15, 1974

Mr. Julius Jimeno
Hearing Management Officer
Occupational Safety & Health Administration
1726 M Street, N.W.
Room 200, U.S. Department of Labor
Washington, D.C. 20210

RE: DOCKET OSH-36
PUBLIC HEARING - PROPOSED STANDARD FOR OCCUPATIONAL
EXPOSURE TO VINYL CHLORIDE - SUBMITTED WRITTEN TESTIMONY
OF UNIROYAL, INC. ON JULY 9, 1974

Dear Mr. Jimeno:

Following the UNIROYAL testimony on July 9 at the vinyl chloride hearing, one of the attorneys questioned me as to the need of a medical surveillance program in a fabricating plant. One of the Medical Directors in the audience subsequently spoke to me. His understanding of what I said was quite different from what I meant to imply. This letter is to correct any error in wording which I may have made. The thought I meant to get across follows:

A good medical program is highly desirable in any industrial operation. However, experience has shown that typical VC exposures in PVC fabricating plants are not more than a very few ppm. It is extremely unlikely that these concentrations would cause an effect which could be detected by medical surveillance. Therefore, liver function or other tests aimed at VC effects would be fruitless and unwise.

Very truly yours,

W D Harris

W. D. Harris, Ph. D.
Corporate Industrial Toxicologist

WDH/mab

bcc: L. Ballou, M.D. - Firestone
M. J. Kleinfeld
J. D. Forbes, M.D. ✓
D. E. Dudrow

URL 00820



DF

UNIROYAL, Inc.
World Headquarters
Middlebury, Connecticut 06749

February 1, 1980

Docket Officer
Docket H-034
Room S6212
U. S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

Re: Vinyl Chloride

Dear Sir:

This is in response to the December 18th Federal Register (pages 74928-74929) request for information on vinyl chloride and polyvinyl chloride.

Uniroyal operated a PVC plant at Painesville, Ohio from approximately 1949 until the present OSHA standard went into effect when the plant was closed because it was not economical to update it to meet the standard.

For a number of years Uniroyal and the United Rubber Workers have had a joint Occupational Health Studies contract with the University of North Carolina Health Studies Group. They have conducted an epidemiological study of the Painesville plant which was updated in 1979. A copy of the study is enclosed.

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To date we have not had any case of hemangiosarcoma. It is interesting to note that of 34 cases in North America, 31 have occurred at four factories out of a total of 53 factories. It is also of interest that nine out of ten cases at Shawinigan (Canada) were smokers or ex-smokers. Canada is the only country for which we have such information. Incidence in North America seems to be on the decline in spite of the rapid growth of the industry in the 50's. Although it is impossible to prove, it is still my opinion that cancer would never have been associated with vinyl chloride if exposure had been limited to a time weighted eight hour per day exposure of 50ppm from the beginning.

On page 1 of the 1979 report mention is made of the alleged brain cancer cases at Union Carbide. At a recent meeting I

was led to believe that these individuals were not peculiarly associated with vinyl chloride. This point should be checked carefully.

Because the data for cancer are not statistically significant no follow-up case control study has been carried out.

Please let me know if we can be of further assistance.

Very truly yours,

Walter D. Harris

Walter D. Harris, Ph.D.
Corporate Industrial Toxicologist

WDH/af

URL 00822