



DOW CHEMICAL U.S.A.

Vinyl chloride

7/31/79

1603 Building
July 31, 1979

MIDLAND, MICHIGAN 48640

*CPSC/Edgewood Arsenal
Report*

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J. Stafford - ICI, England
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PREPUBLICATION DRAFT OF
CPSC/EDGEWOOD ARSENAL REPORT

This somewhat cleaner copy of the subject report, first released April 26, may be of use to you. We will be discussing it at our next Research Coordinators' meeting.

It has been indicated that this study may be published in a scientific journal. We should do all we can to be sure that the publication is an accurate statement. If anyone has information on the time and place of publication, please keep us informed.

I'm taking the liberty of including a June 19 letter by John Stafford and a July 19 letter by John Barr, in which they make some comments about the report. I will be glad to get comments from all of you and attempt to coordinate any response to this publication through the CMA, if that seems appropriate.

Sincerely yours,

T. R. Torkelson, ScD.
Chairman
CMA Task Group

Encls.: (1) CPSC Report
(2) Letter by John Barr, July 19, 1979
(3) Letter by John Stafford, June 19, 1979
AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY

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Plastics
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Mr J T Barr
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USA

Your ref.	Our ref	Tel ext	Date
	JS/MJE/DSO-107	3162	19 June 1979

Dear John

VCM - CPSC STUDY

A few weeks ago you were kind enough to send us some information about the CPSC study and news release of the work done at Edgewood Arsenal. We have had professional views expressed on the report and you can guess their tenor from the following:-

" (1) The findings which the author claims are important are:-

(a) ICR mouse, single dose:

	<u>Pulmonary adenomas</u>	<u>Carcinomas</u>
Control	10%	0%
1 hour x 50 ppm	10.1%	0%
1 hour x 500 ppm	12.9%	0.7%
1 hour x 5,000 ppm	16.8%	0.7%
1 hour x 50,000 ppm	32.8%	2.2%

(b) A/J mouse

Control	34.4%	3.3%
Ten times at 500 ppm	74.7%	13.3%

(c) A/J mouse

Control	34.5%	2.4%
100 times 50 ppm	41.1%	4.4%

(2) I have not formally carried out a statistical analysis, but I feel sure that only the 50,000 ppm x 1 hour dose is significantly different from the controls.

(3) Mice often have a high incidence of pulmonary adenomas. The diagnosis of these lesions is, to say the least, inexact. Before giving any credence to the findings, I believe we should have an independent pathologist's opinion on the lesions.

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- (4) Pneumonitis was diagnosed in the single-dose exposure. It seems highly unlikely to me that it can have been the result of exposure to VCM 18 (or 13) months previously. Chemically-induced lesions would have resolved by that time or have presented as chronic, healed lesions. It suggests to me that the mice were suffering from the effects of an infection of the lungs, but that cannot be proved. It may also be that the A/J mice had been infected and recovered.
- (5) The report by P E Steiner and C G Loosli (The effect of human influenza virus (Type A) on the incidence of lung tumours in mice, Cancer Res 10 385 1950) includes in its summary the following statement: "The infection produced great, tumour-like epithelial hyperplasia during the recovery stage. Some influenza-induced lung lesions persisted throughout the life of the animals. These changes did not eventuate in lung tumours in mice of low lung tumour strain C57 black..."
- (6) I am unable to conclude that there is conclusive evidence presented of a causal relationship between brief exposures to VCM and lung cancer in mice.
- (7) The technique of multiplying exposure (in ppm) with length of exposure to give a single figure index of exposure seems very strange and I am not prepared to accept the conclusions based on it.

You will no doubt realise from the above comments that, in my opinion, the study does not provide conclusive evidence that VCM produced lung tumours in mice. The factors influencing the incidence of these tumours in mice are imperfectly understood, and even if the pathological diagnoses were confirmed and the lesions were considered not due to virus infection, it is doubtful if the results can be considered as definitive evidence that VCM produces carcinogenic effects in mouse lungs. I do not believe that they indicate that short exposure to VCM is a potential risk to human health, bearing in mind the human epidemiological evidence and the inconclusive nature of the experimental evidence. "

I have discussed these comments with our professionals at the Central Toxicology Laboratory and they have asked me to get in touch with you to find out what the American industry is doing about this report, either via the SPI or the MCA. Is the US PVC industry going to ignore the report? Are you going to publish any comment? Have you decided, for example, to get in touch with the researchers to discuss the significance and also to look at the path slides along with the Edgewood Arsenal pathologist.

I would be grateful if you would let me know what action, if any, you are proposing to take. One of the thoughts that was in our minds was that if you had decided to do nothing we might wish to have one of our pathologists or consulting pathologists visit Edgewood Arsenal to discuss the report with them.

I did also go outside ICI to ask for views and the first reaction I got from Waltoni was "how could anyone do such work"; and the second comment from the Director of our British Industrial and Biological Research Association was "as an exercise in fatuity it (the CPSC report) would take some beating". Such comments are all very well but oddly enough

we are getting some queries from members of the press about this one shot business and they don't seem to want to drop their probing.

Our professionals also tell me it is not all that uncommon for chemicals which are known to be carcinogenic to produce effects after single exposure. There are a number of studies with nitrosamines and aflatoxins which demonstrate this effect. Has the US press continued to take an interest in the CPSC Press Release or has the interest vanished?

I am sorry to load you with so many questions but I would be grateful for your help and guidance.

Yours sincerely

J Stafford
Division Manager
Health & Environment Protection

cc Dr T R Torkelson, Dow
Mr R N Wheeler, UCC
Mr M J S Gibbons, ICI Americas

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Air Products and Chemicals, Inc.

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19 July 1979

Mr. John Stafford
Division Manager
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Dear John:

I ~~have~~ just returned from vacation to find your letter of 19 June on my desk. For the past three weeks, I have played with my grandson and gone ~~boating~~ in Lake Michigan and now you bring me back to dead mice.

I also find that Ted has responded to your letter telling you of some of the actions which the CMA is taking. I am very happy that he's acting here, because several weeks ago it was agreed that as between the AiHC and the SPI that the latter organization would take the lead, however, all they did was to protest mildly to the CPSC and nothing was done in public.

The matter which seems to me to have received inadequate attention is the contrast between the published conclusions of the author on page 19 and the press release which was prepared by the CPSC. The former said that no cancer was caused by this experiment and the latter said that there was. I strongly urged the SPI simply to send these two items to several science writers for their action, but this was not done. I am very disappointed that the agency was permitted to revise scientific results for their own publicity purposes.

It is immaterial whether or not a single dose produced cancer. As you point out, this phenomena is well known with other carcinogens. I am afraid that this has been overlooked by those who may have thought about replying and that the only consideration was whether or not a scientific attack should be made on the paper. This would have been a most improper action.

I have not heard of any further publicity on this point for nearly two months now. As far as I know, nothing is being done other than what was in Ted's letter. You should, of course, feel free to do anything which you think is wise. The paper is supposedly out for review at this time and thus, if and when it receives formal publication, the whole subject may reawaken. At that time, the SPI may feel more inclined to act. I can not predict what will happen then.

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Mr. John Stafford

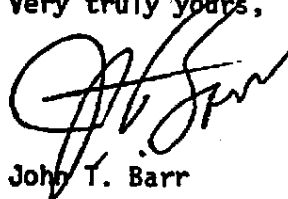
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My thanks for your efforts in exploring this subject and, I am sorry I could not give you more definitive news. We will keep you advised if anything further developes.

If you or Ted really want some warm weather as you profess, I advise you to visit my daughter in Oklahoma City. It was over 100 degrees several days in a row while I was there and that is enough summer for me this year.

Very truly yours,



John T. Barr

JTB:cmk

cc: Dr. T. R. Torkelson, Dow ✓
Mr. R. N. Wheeler, UCC
Mr. M. J. S. Gibbons, ICI Americas
Mr. J. Lawrence

URL 16212