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TO: Distribution

CONFIDENTIAL

FROM: T. G. Grumbles

DATE: July 24, 1989

VISTA

**Interoffice
Communication**

SUBJ: VINYL CHLORIDE AND BRAIN TUMORS

For your information, attached is a copy of a Dow position paper regarding the 1979 study that indicated a possible excess of brain tumors related to VCM exposure.



T. G. Grumbles

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Attachment

cc: J. Friend-LCCP, J. Ware-LCLAB, H. D. Garrison-Okc, [REDACTED]
[REDACTED]

Distribution: T. H. Huffman, M. S. Reynolds, J. A. DeBernardi, N. Frost, D. Conrad-LCVCM

The Society of the
Plastics Industry, Inc.

SI

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New York, New York 10017
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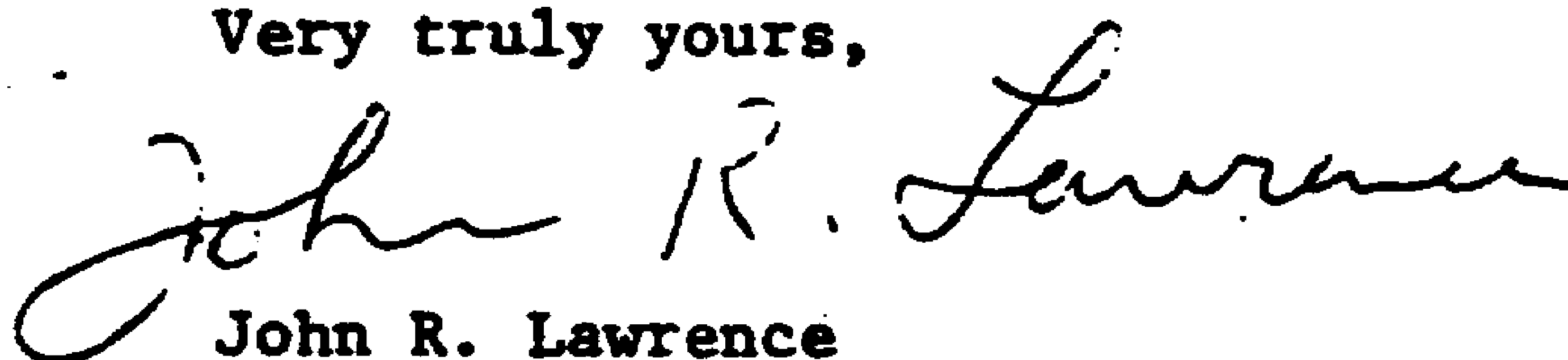
TO: THE PVC SAFETY GROUP

Gentlemen:

Further to my letters of February 16 and 23, 1979 regarding the incidence of brain tumors discovered among Union Carbide workers, I am enclosing for your internal use only, a copy of the Dow position on this subject.

For additional information contact John Soghigian of Dow Chemical Company 517/636-3587.

Very truly yours,



John R. Lawrence
Technical Director

:GM
Attachment

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A joint OSHA-NIOSH investigation, prompted by a worker complaint in November, 1978, has revealed brain tumors caused the deaths of 9 Union Carbide Texas City workers. This number "would appear to be higher than expected" at that particular plant. About 455 death certificates from 1962 to 1978 have been examined to date.

The agencies have speculated a possible link of vinyl chloride monomer to the tumors. However, both a Union Carbide spokesman and OSHA administrator, Eula Bingham noted there are too many chemicals in use at the plant to reach a correlation at this time.

A tenth worker who is still living has been diagnosed as probably having the same form of tumor.

The investigation began December 13, 1978, with the preliminary announcement occurring February 15, 1979. OSHA said Union Carbide has been very cooperative.

Dow Position (for outside use as needed)

What we know about the health of Dow workers exposed to vinyl chloride enables us to conclude that such brain tumors are not a problem in our work force. Also, epidemiological studies on large worker populations in the United States and Great Britain show no correlation between such brain tumors and vinyl chloride exposure.

From our reading of the Texas City situation, it is too early to conclude that the cases of brain tumors were caused by vinyl chloride monomer. We do not mean to downplay the seriousness of current investigations, but we caution against jumping to conclusions as to the cause of the deaths.

The facts which we have at this time are incomplete, and we are attempting to obtain more information. In addition, we have notified all Dow employees involved with vinyl chloride of the Texas City situation.

Dow recently completed a mortality study among its vinyl chloride workers at Freeport, Texas which did not show any indication of a similar situation. A similar study completed last year on Dow workers at Plaquemine reached the same conclusion. Specifically, both studies showed no deaths from brain tumors among vinyl chloride workers.

Another Dow mortality study published in 1975, focused on 594 workers exposed to vinyl chloride in Midland, Michigan. Two brain cancer deaths were identified, but these cancers were not believed related to vinyl chloride exposures. One subject who had only a three months exposure to low concentrations of vinyl chloride, also had exposures to arsenic in another plant. Dow has previously published data indicating excess cancer in employees exposed to arsenic. The second individual had only a four year exposure prior to his death, a time period generally considered inadequate for cancer to result. The type of brain cancer in each case was not confirmed by autopsy.

Related Background

Outside studies have also been examined.

In Great Britain, a study of over 7,000 workers revealed 2 brain tumors, which was about half the number expected.

An epidemiology study on U.S. vinyl chloride (VCM) workers by Equitable Environmental Health, Inc, funded by the Manufacturing Chemists Association, reported "brain tumors were found to be in excess, 12 observed vs. 5.9 expected ... but the incidence was not related to either duration of exposure or to intensity of exposure to VCM."

An excess of malignant brain tumors was also reported by NIOSH researchers in a 1976 study of a small worker population.

In addition, the NIOSH group claimed to have identified altogether 9 histologically confirmed cases of glioblastoma multiforme (the brain tumor cited in the Texas City deaths) in U.S. workers exposed to vinyl chloride. We are attempting to determine if the Texas City chemical workers were included as part of this survey.

John Soghigian

Inorganic Chemicals

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