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ALLIED CHEMICAL CORPORATION

MEMORANDUM

ALLIED CHEMICAL - CONFIDENTIAL

April 5, 1974

To: Mr. J. M. Quinn
Mr. Wayne Sullivan

Subject: NIOSH Recommended Medical Protocols for Employees Exposed to Vinyl Chloride Monomer

As you know, we have received numerous field inquiries on appropriate medical follow-up programs for employees exposed to vinyl chloride monomer. It is recommended that the plant locations and laboratories in which we are currently working either with vinyl chloride or with polyvinyl chloride containing vinyl chloride monomer promptly initiate medical screening programs which include the factors covered in the enclosed advance copy of the recommended federal standard.

The second paragraph of the recommended standard refers to "personnel peripherally involved such as in clerical and management assignments". At this point in time, it would not appear necessary to include such personnel as full-time office employees or management personnel beyond first-line supervisors, unless there is reason to presume that significant occupational exposures may have been encountered. However, we believe it prudent that any employee with past exposure of more than one year's duration involved in production, loading, unloading, or processing of vinyl chloride or polyvinyl chloride be included in an annual follow-up program for the duration of his employment with Allied, and that such a program be offered to any individual who terminates employment, whether by resignation or otherwise.

Any questions regarding interpretation of these guidelines should be referred to the undersigned.

W S Ferguson

W. S. Ferguson

WSF:mn
Attach.

cc: Mr. R. J. O'Leary
Mr. V. Donofrio
Mr. R. H. Sand
Mr. E. M. Halkyard
Dr. B. E. Kurtz

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R. N. WHEELER, JR.

h. Medical Surveillance

The following recommendations are directed primarily at medical screening to detect liver disease and/or hepatic tumor. They should be considered in the context of routine health screening for any general employee health problems, including non-hepatic health conditions potentially related to vinyl chloride monomer exposure. Routine health screening should include at time of initial employment the recording of past medical history and the performance both of a general physical examination and certain basic laboratory procedures (e.g., complete blood count, urinalysis, chest x-ray); provisions should also be made for routine periodic health followup examinations.

Employees covered by the following specific recommendations shall encompass all persons engaged in vinyl chloride monomer production and polymerization, including personnel peripherally involved such as in clerical and management assignments. The recommendations shall be applied both as a pre-employment requirement and as part of periodic health followup. Screening priority should be given to current employees with prolonged and close potential exposure to vinyl chloride monomer, whether in present or past work settings.

(i) At time of initial employment, or upon institution of screening, a physical examination shall be performed with specific attention to detecting enlargement of liver or spleen by abdominal palpation.

(ii) At time of initial employment, or upon institution of screening and annually thereafter, a medical history check-list shall be completed by the employee. This list shall include questions concerning:

(a) alcohol intake;
(b) past history of hepatitis;
(c) past exposure to potential hepatotoxic agents, including drugs and chemicals;
(d) past history of blood transfusions; and
(e) past history of hospitalizations.

Completed medical check-lists shall be reviewed by a physician and should be acted upon as medically indicated for each individual employee.

(iii) At time of initial employment, or upon institution of screening, a serum specimen shall be obtained for screening with respect to the following five bio-chemical determinations of liver function:

(a) total bilirubin;
(b) alkaline phosphatase;
(c) serum glutamic oxalacetic transaminase (SGOT);
(d) serum glutamic pyruvic transaminase (SGPT); and
(e) gamma glutamyl transpeptidase (GGTP).

Additional tests that may optionally be considered for use in screening include lactic dehydrogenase (LDH), serum protein determinations, serum protein electrophoresis, and platelet count. Laboratory analyses shall be performed in laboratories accredited by the College of American Pathologists or licensed in accordance with the provisions of the Clinical Laboratories Improvement Act of 1967.

(iv) If results of laboratory screening are normal, screening shall be repeated on an annual basis. If the person being screened has been employed directly in vinyl chloride monomer production or polymerization for 10 years or longer, screening shall be repeated every six (6) months.

(v) If one or more liver function tests are abnormal, serum testing shall be repeated as soon as possible, preferably within two (2) to four (4) weeks. If no abnormalities are present upon rescreening, testing should be repeated in three (3) months.

(vi) If abnormalities persist on rescreening, the employee shall be removed from contact with vinyl chloride monomer operations and an individualized medical workup shall be instituted. Suggested as initial steps in medical workup are a complete physical examination and various special procedures such as hepatitis B antigen determination and liver scanning.

If liver function abnormalities are determined to be unrelated to liver disease (e.g., elevated alkaline phosphatases in a young, physically active man or elevated bilirubin in Gilbert's syndrome) or to be transient (e.g., due to recent hepatitis or recent alcohol intake), the employee may be permitted to return to vinyl chloride-related employment, subject to individual medical evaluation.

(vii) In view of the preliminary results of animal toxicology studies, it is recommended that no woman who is pregnant or who expects to become pregnant should be employed directly in vinyl chloride monomer operations.