Air Products and Chemicals INC.

cc: J T Barr 5/9

INTEROFFICE MEMORANDUM

Date April 5, 1974

Subject Vinyl Chloride Health Screening

To R. Fleming — Executive (Location, Organization, or Department)

From H. W. Smith — Safety - Troxlertown, Penna. (Location, Organization, or Department)

cc: E. Blades, T. Carey, J. Novak, M. Smith, M. Spurlock, H. Watson

APR 8 1974

Attached is the National Institute of Occupational Health statement of medical screening to detect liver disease and/or hepatic tumor which may occur after exposure to vinyl chlorides.

Even though this statement is a recommendation from NIOSH to OSHA, it should become our minimum general medical policy for our employees as well as those employees engaged under contractual agreements.

This program should be put into effect in vinyl chloride activities until such time as additional information is available and/or until modifications are indicated by qualified medical authority.

The Corporate Safety Department is currently preparing a similar document for TDA exposure.

Any changes must be approved by the Corporate Safety Department.

Should you concur with this program for vinyl chloride, all attending physicians for the chemical's group should be notified.

H. W. Smith

RECEIVED
MAY 10 1974
J. T. BARR

bls

enclosure

(320)

MEDICAL SURVEILLANCE - VINYL CHLORIDES

THE FOLLOWING MEDICAL SURVEILLANCE PROGRAM RECOMMENDED BY THE NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH WAS ISSUED ON MARCH 22, 1974. THIS DOCUMENT WILL APPLY TO ALL PERSONS INVOLVED IN VINYL CHLORIDE MONOMER PRODUCTION AND POLYMERIZATION INCLUDING THOSE CLERKS AND MANAGEMENT PERSONNEL INVOLVED INDIRECTLY WITH THESE OPERATIONS. THIS WILL NATURALLY INCLUDE THOSE PERSONS ENGAGED IN RESERACH AND DEVELOPMENT WORK.

THE MEDICAL SURVEILLANCE PROGRAM IS RECOMMENDED TO BE APPLIED BOTH AS A PRE-EMPLOYMENT REQUIREMENT AND AS PART OF PERIODIC HEALTH FOLLOW UPS.

1. 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.

2. 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 HEPATOTOXIC AGENTS, INCLUDING DRUGS AND CHEMICALS
   D. PAST HISTORY OF BLOOD TRANSFUSIONS
   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 EMPLOYEE.

3. AT TIME OF INITIAL EMPLOYMENT OR UPON INSTITUTION OF SCREENING, A SERUM SPECIMEN SHALL BE OBTAINED FOR SCREENING WITH RESPECT TO THE FOLLOWING FIVE (5) BIO-CHEMICAL DETERMINATIONS OF LIVER FUNCTION:

   A. TOTAL BILIRUBIN
   B. ALKALINE PHOSPHATASE
   C. SERUM GLUTAMIC OXALACETIC TRANSAMINASE (SGOT)
   D. SERUM GLUTAMIC PYRUVIC TRANSAMINASE (SGPT)
   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.

4. 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 TEN (10) YEARS OR LONGER, SCREENING SHALL BE REPEATED EVERY SIX (6) MONTHS.

5. 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.

6. 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 SCREENING.

   IF LIVER FUNCTION ABNORMALITIES ARE DETERMINED TO BE UNRELATED TO LIVER DISEASE (E.G., ELEVATED ALKALINE PHOSPHATAES 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.

7. IN VIEW OF THE PRELIMINARY RESULTS OF ANIMAL TOXICOLOGY STUDIES, IT IS RECOMMENDED THAT NO WOMAN WHO IS PREGNANT OR EXPECTS TO BECOME PREGNANT SHOULD BE EMPLOYED IN VINYL CHLORIDE MONOMER OPERATIONS.

NOTE 1 - AS VINYL CHLORIDE IS STILL UNDER INVESTIGATION BY NIOSH, IT IS ANTICIPATED THAT THERE MAY BE CHANGES IN THE MEDICAL SURVEILLANCE PROGRAM. THIS DOCUMENT WILL BE UP GRADED AS THE NEED ARISES.

NOTE 2 - THIS DOCUMENT STATES THE MINIMUM REQUIREMENTS. SHOULD ANY ATTENDING MEDICAL AUTHORITY DEEM THAT ADDITIONAL WORK MAY BE NECESSARY, THESE RECOMMENDATIONS WILL FORM THE BASE LINE EVALUATION.

NOTE 3 - AS THESE RECOMMENDATIONS COULD APPLY TO ANY KNOWN OR SUSPECTED LIVER DISEASE OR HEPATIC TUMOR PRODUCING AGENT, THEY SHOULD NOT BE RESTRICTED TO VINYL CHLORIDES.

NOTE 4 - ALL CHANGES TO THE RECOMMENDATIONS CONTAINED IN THIS DOCUMENT SHALL BE CLEARED THROUGH THE CORPORATE SAFETY DEPARTMENT.

H. W. SMITH
April 1974

TEMPLE UNIVERSITY
HEALTH SCIENCES CENTER
PHILADELPHIA, PENNSYLVANIA 19140

RECEIVED
MAY 3 1974
R. FLEMING, V. E.

OFFICE OF THE
VICE PRESIDENT FOR HEALTH SCIENCES

May 1, 1974

Richard Fleming
Group Vice President-
Chemicals
Air Products and Chemicals, Inc.
Five Executive Mall
Swedesford Road
Wayne, Pennsylvania 19087

Dear Dick:

The trip to Pensacola was an informative one, both during my visit to the plant and my session with Dr. Beidelman. Dr. Beidelman is both alert and sensitive, and the plant personnel are in very competent hands. I feel that any possible complication that might arise as a result of VCM exposure will be detected in conformity with sound principles of occupational and preventive medicine.

Insofar as Paducah is concerned I am anxiously awaiting results of the retesting of those employees with abnormal laboratory findings so that a meeting with Dr. Blalock can be arranged. This certainly will be early in May, I hope, so that protocols for those cases requiring continuing work-up can be developed. I anticipate it will mean another trip to Paducah, at which time I will plan to meet with Dr. Colburn again if you or Jack Kramer thinks it advisable. On my last visit to Paducah I did suggest the possibility of our getting together in the future if the circumstances warranted it.

The matter of physicians for the Middlesex and Trexlertown facilities is very much on my mind now, and as I indicated to Marty my last irrevocalbe commitment to Temple ends Thursday, May 2, when the budget hearings for the University before the House and Senate Appropriations Committee in Harrisburg will be complete. In the same vein I will be meeting with Dr. Kuschner this weekend at which time I will do my very best to convince him to assume a consultant's role with APCI. For the record, last Saturday (April 27), Firestone Rubber Company, Pottstown, phoned Kuschner in an attempt to recruit him as a major consultant for their corporation. Despite his refusal to them, I feel I can convince him to fill my shoes. I am well aware that you are a stickler for target dates and goal setting, so let me set Thursday, May 9, as the very latest for achieving the identification of physicians and, hopefully, the conversion of Dr. Kuschner.

X-091

In the normal course of events I would put the following items in an official report to you; however, I felt it best to incorporate my thoughts in this letter. My trip through the Pensacola plant led to the following concerns:

1. The bagging operation was if anything no better or perhaps slightly worse than that in Calvert. I recognize that bagging is a dirty operation; however, this I believe makes superior vigilance in housekeeping even more imperative. Polymer dust had accumulated at all levels-floors, sills, tops of machinery, and at heights equal to the rafters. The higher levels of deposition are of special concern because, in contrast to spillage, they reflect airborne particles which can remain suspended in the air for hours to days.

2. One of the reactors was being manually cleaned by a workman with gauntlet gloves which were partially rolled back; he was also wearing his own regular work shoes. Although he was wearing a mask, I could not really assess its level of protection and it was not on a supplied air line.

3. Except for this man I saw no one wearing any masks, even though all employees in the VC plant appeared to have free access to all parts of the plant as I did. The use of masks by visitors or occasional entrants in all areas immediately surrounding the various steps in the manufacture of VC should, I believe, be likened to the wearing of hard hats in construction areas, a requirement for all.

4. The quality control and analytical labs in most industries somehow manage to escape scrutiny and therefore may be sites of unmonitored exposure. Hoods, portable or built-in, must be required because of the potential hazard from normal operation, to say nothing of accidental spillage or monomer escape.

You will most likely be hearing from me the middle of next week. In the interim, all good wishes.

Cordially,

Paul Kotin, M.D.
Vice President

Enclosure