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Vinyl Chloride Health Screening

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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.

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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 RESEARCH 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 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.

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