

MEDICAL PROCEDURES FOR OUTSIDE CONTRACTORS

The following procedures are to be followed when outside contractor personnel are brought onto the Baton Rouge Plant to work. This is to comply with the Baton Rouge Plant safety procedures and the Department of Labor Occupational Safety and Health Standards.

Before any contract personnel are brought onto the plant to work in areas where they may be subjected to hazardous materials the following groups must be notified.

- 1) Operations in the area they will be working
- 2) Plant Medical.
- 3) Plant Hygiene.

The plant operations group will determine if there is a potential exposure with the exception of asbestos. Exposure to asbestos can be determined by plant operations, maintenance, project, Plant Hygiene, or the construction group. Each group that suspects an exposure will consult with the Plant Hygiene group who determines the degree of exposure. Most hazardous materials on the Baton Rouge Plant require respiratory protection. If respiratory protection is required the following will be used before the contractor's personnel is allowed to enter the area of possible exposure.

- 1) A local physician is to certify that the worker is capable of performing the work and using the equipment.
- 2) The user is to be instructed and trained in the proper use of the equipment and the limitations of this equipment.
- 3) The user is to be instructed in the proper care and cleaning of the equipment.

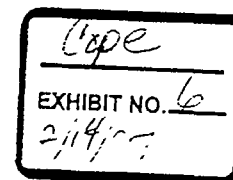
The major hazardous materials found on the Baton Rouge Plant are:

- 1) Lead compounds and vapors.
- 2) Vinyl Chloride.
- 3) Chlorine.
- 4) Asbestos
- 5) Other materials are present. Contact the operating group or R&D and Plant Hygiene for instruction.

Lead Compounds, Dust and Vapors

Before an outside contractor enters an area where there is a potential for exposure to organic lead, lead vapors or lead dust the following are to be completed:

- 1) They are to be sent to the Plant Medical for base line lead readings.
- 2) They will be issued respirators for lead exposure and follow the procedure previously outlined.
- 3) They will be issued Ethyl clothing and they will be provided with a place to store their street clothing, their work clothing, and showers. Each person will provide one pair of work shoes or boots which will remain on the plant until the completion of the job or the termination of the employee.



Lead Compounds, Dust and Vapors (Continued)

- 4) Ethyl will launder the work clothing.
- 5) They will be shown a film strip and given a talk by Plant Hygiene or Medical on the hazards of lead and how to protect themselves.

While working in an area with potential lead exposure each worker will report to the Medical Department every 8 weeks or as required for examination.

The worker will also report to Medical for examination when he is leaving the area or is terminated. He is to notify the medical personnel that this is an exit examination.

Vinyl Chloride

When a contractor is to have people working in an area where vinyl chloride monomers could be present this procedure will be followed:

- 1) The procedure for use of respirators will be followed.
- 2) Within 30 days of entering the area each employee will complete the first medical examination in the program as shown in Attachment #1.
- 3) The appropriate respirator will be issued to each worker.
- 4) The employee will be instructed in the hazards of vinyl chloride.

Chlorine

When a contractor is to have people working in an area where chlorine could be present, this procedure will be followed:

- 1) The procedure for use of respirators will be followed.
- 2) An escape respirator for chlorine will be issued.
- 3) The employee will be instructed on the dangers of chlorine and the procedures to be used.

Asbestos

When contract personnel are to enter an area where there is a possibility of air born asbestos fibers this procedure will be followed:

- 1) The procedure will be followed to use respirators.
- 2) The employee will be issued a respirator used for lead exposure.
- 3) A chest x-ray will be made by Ethyl Medical.
- 4) The Plant Medical will make a pulmonary function test for FVC and FEV.
- 5) The contractor's local physician will examine the man to determine his ability to work with asbestos.

Asbestos (continued)

- 6) An examination will be made on termination of the employee or annually.
- 7) The employee will be issued Ethyl work clothing. The employee will be provided with a place to store his street clothes, work clothing and shower.
- 8) Ethyl will launder the employee's work clothing.
- 9) The employee is to provide one pair of work shoes or boots which will not leave the plant until the completion of the job.

PHYSICIAN INSTRUCTIONS FOR EXAMINATION OF WORKERS
EXPOSED TO VINYL CHLORIDE MONOMER

ELIGIBILITY:

Workers who are or may be routinely exposed to vinyl chloride monomer (VCM) in excess of 0.5ppm as part of their job.

MEDICAL REQUIREMENTS:

If a physical examination is required, a Health History/Physical Examination Form (CM 7801) will accompany the patient. If there is no CM 7801, only the laboratory specimens are required.

Normal physical examination interval:

- A. More than 10 years exposure - 6 months
- B. Less than 10 years exposure - 12 months

Normal laboratory interval:

- A. More than 10 years exposure - 6 months
- B. Less than 10 years exposure - 12 months

Employees with at least 3 months or 580 hours exposure to VCM are required to be in normal examination and laboratory schedule A or B.

Results of examination determine further action as follows:

STEP I

If normal physical examination and liver function test, then routine re-examination A or B.

If abnormal physical examination or any abnormal liver function test, then Step II.

STEP II

If normal or one abnormal liver function test, place in observation and proceed to Step III

If two or more abnormal liver function tests, have patient abstain from alcohol for 6 weeks and repeat pertinent tests. If alkaline phosphatase or LDH are elevated, include isoenzymes.

If two or more abnormal liver function tests persist, then restrict from work in VCM and proceed to Step III.

STEP III

OBSERVATION

When patient is under observation, repeat laboratory every 3 months and a physical examination every 6 months until two normal examinations, then return to re-examination A or B.

WORK RESTRICTION

When patient is on restriction, do laboratory every 6 weeks and a physical examination every 3 months until one normal examination and then place in observation. If abnormalities persist, proceed to Step IV.

STEP IV

If abnormalities persist, individual treatment, consultation, liver scans, etc. are done as indicated.

MEDICAL EXAMINATION:

1. The medical history shall include the following:

- a) Alcohol intake;
- b) History of hepatitis;
- c) Present or past pulmonary problems;
- d) Work history and past exposure to potential hepatotoxic agents including drugs and chemicals;
- e) Past history of blood transfusions;
- f) Past history of hospitalizations.

A general physical examination shall be performed with specific attention to detecting enlargement of liver, spleen or kidneys or dysfunction of these organs and for abnormalities in skin, connective tissues and the pulmonary system. The examiner should be alert for abnormal skin color, spider nevi, abdominal venous pattern, and dermatitis or stubbiness of the hands or fingers. General nourishment, retinal vessels, sclera, lungs, liver, spleen, kidneys and abdominal masses are also of interest.

The laboratory work shall include, but is not necessarily limited to:

- a) Total bilirubin;
- b) Alkaline phosphatase;
- c) Serum glutamic oxalacetic transaminase (SGOT);
- d) Serum glutamic pyruvic transaminase (SGPT)
- e) Gamma glutamyl transpeptidase (GGTP);
- f) LDH.

At least annually, Ethyl basic laboratory tests consisting of urinalysis, hemoglobin or hematocrit, EKG, if age 40 or over, and chest x-ray (PA) shall be performed in addition to those specifically required for vinyl chloride exposure. The annual physical examination for vinyl chloride shall include pulmonary function testing for FVC and FEV₁, and careful examination for perforated eardrums. These workers may have to wear respirators which poor pulmonary function would make difficult.

EMERGENCY EXPOSURE:

Each employee exposed to an emergency shall be afforded the appropriate medical surveillance as determined by the Medical Department.

OTHER REQUIREMENTS:

A statement for each employee's suitability for continued exposure to vinyl chloride including the use of protective equipment and respirators shall be made by the examining physician and provided each examinee promptly after any examination. The physician's statement shall include the following:

Your recent Company physical examination showed no abnormality recognized as placing you at unusual risk from exposure to vinyl chloride or as imposing special limitations on your use of protective equipment and respirators.

If any employee's health would be materially impaired by continued exposure, such employee shall be withdrawn from possible contact with vinyl chloride.

A Medical Evaluation Form, CM 7802, may be used for the purposes stated in the preceding two paragraphs.

REPORTING:

Please mail the completed forms and laboratory test results to Dr. Carl B. Myers, Medical Department, Ethyl Corporation, P. O. Box 341, Baton Rouge, Louisiana, 70821.