UNION CARBIDE **INTERNAL CORRESPONDENCE**

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SAFETY DEPT.

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CHEMICALS AND PLASTICS · SO. CHARLESTON PLANT · P. O. BOX 8004, SO. CHARLESTON, WEST VIRGINIA 25303

To (Name) Mailing List A-8

Date October 5, 1979

Originating Dept.

Answering letter date

Subject Asbestos Handling

cc: J. C. Nelson
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Within the last few years, asbestos has been recognized as a serious health hazard. One of the effects of breathing asbestos fibers is "asbestosis" which develops over a long period of time. Asbestos fibers become deposited in the lungs and produce scarring of the tissues so the lungs cannot perform their proper function. People who breathe dust containing asbestos fibers can develop lung cancer, which could take as long as 20 to 30 years to appear.

To ensure that plant employees are being properly protected, the Maintenance Department reviewed their procedures for handling of asbestos with the advice and service of the Safety and Environmental Protection Departments. As a result of the complete review, the attached procedure now exists that, when followed, should keep us in compliance with OSHA and environmental standards.

The plant's greatest problem with asbestos is when old asbestos is removed from lines or equipment. The Maintenance Department is not the only function operating within the plant that gets involved with the removal of old asbestos. UCC Construction and operating/distribution functions will from time to time remove asbestos. It is important that employees not be over-exposed, and that we have adequate exposure measurements to prove compliance with OSHA standards.

It is suggested that you read the attached procedure and call Mr. W. C. Young of the Safety Department if you have any questions concerning the procedure.

William B. Troutman

William B. Troutman
Safety Director

WBT:bl

Attachment

UCC 017386

PLAINTIFF'S EXHIBIT
UC-3461

XVIII. HEALTH AND SAFETY CONSIDERATIONS FOR ALL CRAFTSPERSONS IN HANDLING MATERIAL THAT CONTAINS ASBESTOS

(With the intent of Covering every craftsperson who might come in contact with asbestos)

Understanding a few facts and observing some common sense practices listed below will eliminate the Health Hazards associated with the use of asbestos and will insure the health of all craftspersons.

A. Major Concern for Asbestos Health Hazards

In those instances when asbestos fibers are present that are longer than five micrometers, the greatest health hazard exists. If these fibers are inhaled into the respiratory system, they collect in the lung sacs. If the quantities of these fibers are great enough to accumulate through years of continued inhalation, they take up substantial space normally used for air. The way in which asbestos fibers are more harmful than other foreign particles that enter the lung sacs is that they are not dissolved and absorbed into body waste streams to be carried away and discharged from the body as other particles are. They remain in the lung sacs. Membranes then grow around each fiber, resulting in a fibrosis of the lung sacs. Fiber by fiber over the years results in what we term "asbestosis."

B. Normally Asbestos is Not a Major Health Hazard

Under most conditions, asbestos is not normally in fiber form small enough to be airborne in a person's breathing zone and small enough to pass through the nasal filtering system of hair and mucous that filter out all but the very finest fibers. However, it is these small fibers longer than five micrometers entering the lungs that are considered to be the culprits that cause asbestosis.

C. Health Risks Associated with the Use of Asbestos Have Been Greatly Reduced

Risk of harm to craftspersons from the use of asbestos is slight because asbestos-free insulating materials are used exclusively now. Woven asbestos tape and sock has been replaced with woven fiber glass tape and sock in stores. No asbestos tape or sock is to be available from plant stores. Furthermore, previous personal sampling of the breathing zone air of employees indicates that allowable limits are seldom reached even when asbestos fibers are present in any type material or activity provided normal precautions are observed.

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XVIII. HEALTH AND SAFETY CONSIDERATIONS FOR ALL CRAFTS-PERSONS IN HANDLING MATERIAL THAT CONTAINS ASBESTOS

D. Our Concern - The Potential Harm from Existing Insulation Materials in the South Charleston Plant

The potential harm to employees at the South Charleston plant lies almost exclusively in the removal, cleanup and disposal of existing insulation materials which were applied prior to 1972.

The exposure we are concerned with is the stripping, cleanup, and disposal of old insulation. On piping, any insulation with tar paper weather barrier will most probably contain asbestos fibers. A number of steam-traced lines were insulated with "Unibestos" (trade name) and some of these lines will have either cloth and mastic or metal weather barrier. This material (Unibestos) contains asbestos, is easily recognized and must be handled, stripped off, cleaned up, and disposed of, using full precautions.

Now, we have another concern. A number of our steam lines are in the process of extensive repairs to the weather barrier and replacement of damaged sections of insulation. These will tie into present asbestos contained in pipe covering and will cover existing asbestos contained in insulation. In the future, all this insulation will have to be considered to contain asbestos and precautions taken to eliminate hazards.

Tank covers installed prior to 1972 will be treated as though they also contain asbestos and all precautions will be taken during stripping, cleanup, and disposal.

Old steam trap lines, steam tracers, etc. will have asbestos sock or tape. Should you encounter any of these situations, consider the insulation to contain asbestos and take the necessary precautions.

If you aren't sure of the kind of material you are getting ready to remove, ask your area insulator supervisor or observe all precautions.

E. Protection from Potential is Assured

By following a few precautionary measures as required by OSHA regulation 1910.1001 and using sound judgment, each employee can perform his/her work in a perfectly safe and healthful manner.

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XVIII. HEALTH AND SAFETY CONSIDERATIONS FOR ALL CRAFTS-PERSONS IN HANDLING MATERIAL THAT CONTAINS ASBESTOS

E. Protection from Potential is Assured (continued)

Present OSHA Allowable Limit

During an eight-hour period, the time-weighted average shall not exceed two fibers longer than five micrometers, per cubic centimeter of air.

OSHA Ceiling Concentration

No employee shall be exposed at any time to airborne concentrations of asbestos fibers in excess of ten fibers, longer than five micrometers, per cubic centimeter of air. Methods of measuring airborne concentrations are spelled out in the OSHA Register, regulation 1910.001 (e).

October 4, 1979

Attachment

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MANDATORY PRECAUTIONS AND PROCEDURES TO BE FOLLOWED WHEN HANDLING AND WORKING WITH MATERIALS CONTAINING ASBESTOS

CHECK LIST

1. Respirators

Shall be worn while removing and cleaning up all insulation, whether asbestos is present or not. Disposable types are allowed if they meet requirements. If upper limits are reached, supplied air respiratory equipment must be used.

2. Work Area Precautions

The work area will be roped off with yellow barricade tape during the removal and cleanup of asbestos-laden insulation. Warning signs to state: ASBESTOS -- AVOID BREATHING DUST -- WEAR PROTECTIVE EQUIPMENT -- DO NOT REMAIN IN AREA UNLESS YOUR WORK REQUIRES IT -- BREATHING ASBESTOS DUST MAY BE HAZARDOUS TO YOUR HEALTH -- must be posted outside each barricaded area to warn an employee desiring to enter the area so he/she can take the necessary protective steps. The barricade tape and warning signs are to remain in place until the job is complete.

If the work is being performed where areas cannot be swept, or above open grating, the work area shall be covered with plastic sheeting or tarpaulins to contain the asbestos-laden insulation. Over grating, this will prevent insulation from filtering through into other work areas and will protect other employees from the asbestos hazards. On slagged areas this will prevent mixing insulation in the slag, made for easier cleanup and not leave insulation residues on the ground.

3. Wet Cleanup

Insofar as practicable, insulation containing asbestos should be wet down before removal, cleanup and disposal to prevent the presence of airborne fibers. If this is not practicable, place plastic sheeting under the job being stripped and mist spray, with water, the removed insulation. Where possible, strip the insulation into labeled plastic bags on the job site (fiber-pacs can be used to support bags until bag is wired closed).

When wet removal, cleanup is impractical due to temperature - below 32°F - location and/or nature of the job, sweeping compound will be applied to the work area during cleanup.

All insulation will be stripped and bagged in the area in which it is removed.

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CHECK LIST (continued)

4. Disposal

All removed insulation containing asbestos will be placed in dust-proof polyethylene bags, the bags wired closed and caution label attached to caution personnel about the asbestos contents. Bags with caution label on the bag front are being used. Each area insulation caution label on the bag front are being used. Each area insulation supervisor has a supply of these bags. The bagged insulation must be disposed of in landfill. This means we will place the bags in open top dumpsters and deliver to Filmont only, for covering up. Large quantities may be placed wet in a dumpster bed, covered to prevent dust loss, warning labels attached, and delivered to Filmont only and covered with soil.

5. Clothing Storage

Work clothing used by insulators will be stored in separate lockers away from their street clothing. Coveralls will be supplied for jobs where insulation containing asbestos is being removed, cleaned up, and disposed of. Coveralls will be changed each day when the concentration of asbestos fibers may be heavily concentrated. Coveralls should be removed or vacuumed before entering eating facilities or where food is handled.

Vacuums may be used to remove dust from clothing. CAUTION -- at no time will compressed air be used for dusting off skin or clothing.

6. Laundering

All protective coveralls used by insulators will be placed in dust-proof polyethylene bags, wired closed, and a caution label attached to each bag to alert the laundry employees of the possible asbestos contamination of the contents.

CAUTION -- Used bags are to be disposed of and coveralls returned in clean containers.

7. Monitoring

All jobs of significant size are to be monitored. Safety Department will monitor these jobs with designated equipment for air samples at the employees' breathing air zone. Results will be recorded. One day notice should be given to the Safety Department so equipment can be prepared for the job. Monitoring results will be administered in accordance with Safety/Health Procedure No. 16.

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8. EPA Notification

Stripping jobs of insulation containing asbestos must be reported to the plant EP Department (John Soice) for all large-scale jobs. A large-scale job is one where more than 260 linear feet of pipe is to be stripped or a job where more than 160 square feet is to be stripped. Notification must be 20 days in advance so proper notification can be filed with EPA.

9. Medical Records

Will be maintained by the Medical Staff.

Respirators approved for use:

a) Normal Dust Exposure - 3M Respirator No. 8710
Wilson Respirator No. 1400

Both of the above are of the single use, disposable type.

b) Heavy Dust Exposure - Type "C" supplied air, continuous flow or pressure-demand type, supplied with full breathing air from breathing air cylinders.

WARNING SIGNS

To State: Asbestos
Dust Hazard
Avoid Breathing Dust
Wear Assigned Protective Equipment
Do Not Remain in Area Unless Your Work Require It
Breathing Asbestos Dust May be Hazardous to Your Health

Warning signs are located in each insulator building and must be used.

CAUTION LABELS

To State: CAUTION - Contains Asbestos Fibers
Avoid Breathing Dust
Breathing Asbestos Dust May Cause Serious Bodily Harm

Caution tags for polyethylene bags containing discarded asbestos insulation materials and polyethylene bags containing coveralls used by insulators being sent to the laundry are stocked by each insulator supervisor in the three geographic areas. Bags with caution notices printed on the front are now being stocked and will be used.

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