PLAINTIFF'S EXHIBIT

UC-4051

EON : 33755

WV-0153-17

UNION CARBIDE

J. R. Dement

Bldg. 309-2
Ext. 2026

Oct 21, 1986

To: J F Odell

Joe,

Attached is a copy of our Maint Dept procedure for handling & disposal of asbestos insulation. As I mentioned over the phone, it is currently being revised to incorporate the latest OSHA TWA exposure limits, etc.

Let me know if more info is needed.

Jim D.

UCC 022325

Range: EON

XVIII. PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

GENERAL

The potential harm to employees at the South Charleston plant lies almost exclusively in the removal, cleanup, and disposal of existing asbestos 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.

OBJECTIVE

The purpose of this provision is to insure the safety and health of employees directly involved with the removal and disposal of asbestos-containing insulation and others who may be in the area and exposed to residual dust/fibers.

SCOPE

This provision applies to all Maintenance personnel at Location 514. Generally, large jobs of insulation removal will be handled by the insulator craft. Some small removal jobs will be handled by others. The greatest hazard of asbestos is from dust or air borne particles; therefore, anyone working in the area of a stripping or removal job must be forewarned and be trained to take precautions.

DEFINITIONS

Asbestos - a fire-resistant, fibrous mineral used in fireproofing, insulation, brake linings, etc. which in dust form may be inhaled to produce a disease called "asbestosis."

Exposure limits - maximum quantities of air-borne asbestos fibers as established by law. An example is:

Present OSHA Allowable Limit (March 1984)

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 1910.1001(e).

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ACL Doc 18670 · Page 2 of 9 asbestosclaims.law/library/18670/2

PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

RESPONSIBILITIES

Craftsperson - It is the responsibility of any person working around asbestos to know the health hazards involved and take necessary precautions to protect themselves and others. Each craftsperson shall:

1) Attend/accept the safety training
2) Wear protective equipment
3) Follow the rules of procedure

First Line Supervisor - It is the responsibility of the job supervisor to:

1) Provide training for all subordinates in health and proper safeguards of asbestos removal and disposal as outlined in this provision.

2) Perform audits of jobs under his/her supervision to assure compliance with rules.

3) Notify Safety/Health Department to monitor each job or notify Area Superintendent if unable to make contact.

4) Notify the plant Environmental Protection Department if the stripping job is 160 square feet or 260 linear feet.

5) File a completed checklist upon job completion. (See checklist copy routing)

Area Superintendent - It is the responsibility of the owning Area Superintendent to audit each asbestos removal job in his area. It would be well to make this audit during the time of monitoring by the Safety/Health Department.

PROCEDURE

A. An Overview of Procedure

1. Examine job for asbestos content (if unknown, treat it as asbestos).

2. Notify Environmental Protection Department (if large job), owner of equipment or lines, Safety/Health Department for monitoring.

3. Obtain necessary permits/permission (HWP and/or MC/LO).

4. Place barricades and warning signs.

5. Don proper protective equipment, clothing, respirator, breathing air.

6. Prepare area - wet down and/or other precautions.

7. Remove asbestos to special containers for handling/disposal.

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ACL Doc 18670 · Page 3 of 9 asbestosclaims.law/library/18670/3

PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

PROCEDURE (continued)

A. An Overview of Procedure (continued)

8. Clean-up - vacuum for dust and chips.

9. Remove barricades and signs.

10. Launder work clothes - special marking and handling.

11. Complete checklist and send copies (see attachment page 7).

12. Clear permits - notify owner job is complete.

7A - Trucking remove for disposal

7B - Manifest filed for record

B. Details of Procedure

1. Respirators

A respirator shall be worn while removing and cleaning up all insulation, whether asbestos is present or not.

Disposable types of respirators, of the approved type, are allowed to be used on jobs where little or no hazard is expected.

Disposable respirators approved for low or normal dust exposure are:

Norton Respirator No. 7170 - Stores Code 64516133

3M Respirator No. 8710 - Stores Code 64438096

3M Respirator No. 9920 - Not stocked in Stores

When dust is heavy, or approaching the 10 fibers per C.C. limit, supplied air respiratory equipment must be used.

For heavy dust exposure, use:

Scott type "C" supplied air respirator, pressure-demand type, supplied with full breathing air from breathing air cylinders or approved breathing air compressor.

Union Carbide trial exhibit UC-4051: J. R. Dement Transmitting South Charleston Maintenance Department Proced...
Published by AsbestosClaims.Law
ACL Doc 18670 · Page 4 of 9
asbestosclaims.law/library/18670/4

PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

PROCEDURE (continued)

C. 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 are 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, make for easier cleanup, and will not leave insulation residues on the ground.

D. 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 the removed insulation with water. 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 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. Careful handling to avoid creating dust of airborne fibers is imperative.

When asbestos insulation is found on any piping, vessel, or equipment which is to be removed, dismantled, or changed, it shall be the policy of the Maintenance Department to remove the insulation before other work begins.

When a partial removal of asbestos insulation is required, for whatever reason, it shall be the policy to properly reseal the ends of the asbestos insulation left in place.

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ACL Doc 18670 · Page 5 of 9 asbestosclaims.law/library/18670/5

PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

PROCEDURE (continued)

F. 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. Green coveralls will be supplied insulators for easier identification.

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

G. 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.

H. Monitoring

Safety/Health Department should be notified of opportunities to observe jobs and to monitor airborne asbestos dust concentrations. All jobs of significant size should be monitored. Safety/Health 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/Health Department so equipment can be prepared for the job. Monitoring results will be administered in accordance with Safety/Health Procedure No. 16.

Copies of monitored jobs results will be sent to Area Superintendent for files and to craftspeople involved.

I. 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.

This notification should be made at time of job planning by the insulator foreman (or zone foreman) involved.

Union Carbide trial exhibit UC-4051: J. R. Dement Transmitting South Charleston Maintenance Department Proced... Published by AsbestosClaims.Law
ACL Doc 18670 · Page 6 of 9 asbestosclaims.law/library/18670/6

PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

PROCEDURE (continued)

J. Medical Records

Records will be maintained by the Medical Staff.

K. Disposal by Trucking

All asbestos waste leaving the plant must be hauled to Goff Mountain disposal site in the proper individual marked containers (dust-proof polyethylene bags with all OSHA specified warnings printed thereon).

The truck drivers must have in their possession a properly filled-out manifest as prescribed by RCRA. The manifest will be issued by the trucking function of the Maintenance Department and approved by E.P.D.

Prompt handling of the checklist will alert the Trucking group of location of waste bags and assure proper attention by the pick-up and disposal driver.

not required for asbestos.

TRAINING

Training for all Maintenance field personnel in "Asbestos Material Removal and Disposal Safety" shall be done annually and recorded on STAIRS (514-3022).

The training will include information about:

1) The health effects associated with asbestos exposure

2) The relationship between asbestos exposure and smoking in producing lung cancer

3) The nature of operations which could result in asbestos exposure and the necessary protective steps to minimize exposure

4) The purpose, proper use, fitting instructions, and limitations of the respirators used to protect against asbestos fibers

Available training aids to be used as resources:

1) Videotape on Health Aspects - Dr. Holland
2) Caramate on Procedure - each Maintenance Geographical Area
3) Lesson Plans in Mandatory S/H Training Manuals

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ACL Doc 18670 · Page 7 of 9
Published by AsbestosClaims.Law
asbestosclaims.law/library/18670/7

PROVISIONS FOR ASBESTOS MATERIAL REMOVAL AND DISPOSAL SAFETY

REFERENCES

1. Health and Safety Considerations for all Craftspersons in Handling Material that Contains Asbestos - Provisions No. 18 - Maintenance Safety Manual - March 1982.

2. Recommendations of Asbestos Handling Procedures Committee - Maintenance Department - Location 514 - February 1984.

3. OSHA 1910.1001.

WEW:mb
April 1984
Attachment

Union Carbide trial exhibit UC-4051: J. R. Dement Transmitting South Charleston Maintenance Department Proced... Published by AsbestosClaims.Law
ACL Doc 18670 · Page 8 of 9 **asbestosclaims.law/library/18670/8**

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