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UNION CARBIDE CORPORATION
ENGINEERING, MANUFACTURING, AND TECHNOLOGY SERVICES DIVISION
P. O. BOX 8361
SOUTH CHARLESTON, WEST VIRGINIA 25303

MEMORANDUM

PLAINTIFF'S EXHIBIT
UC-4723

September 5, 1986

TO: C. H. Alvarado, P. N. Blauvelt, H. G. Clem, M. J. Fortin, W. H. McGoldrick, A. J. Montero, H. T. Pritt, R. C. Tate, W. S. Barras, B. C. Brooks, R. G. Estenssoro, T. F. Laundrie, K. A. Mlozza, B. J. Owens, J. M. Schluter, L. A. Scribner, A. E. Wood

FROM: G. B. Elder

SUBJECT: Policy on the use of Asbestos-Containing Materials

You will probably start hearing about a policy to ban asbestos gaskets an packing, so I am sending you the attached recommended policy so that you have first-hand information. This draft has been submitted to Joe Sanders will probably go to the Chemicals and Plastics operating committee. If they accept it as C & P Policy it will be implemented, but right now it is only a proposal.

The important statement is, "No asbestos-containing materials will be purchased after January 1, 1989". This does not say that we will throw out all stocks of asbestos or tear all asbestos out of our equipment, but only that we will quit buying asbestos. That should allow an orderly transition to materials that do not contain asbestos over a period of years. REMEMBER, THIS IS STILL A PROPOSAL!!.

Some of the background for this proposal is:

1. Asbestos insulation is no longer installed and is being removed, so the policy will have no effect on insulation.

2. The EPA lowered the acceptable exposure to asbestos from 2.0 to 0.2 fibers per cubic centimeter of air on an eight-hour time-weighted average, effective July 21, 1986. Air sampling has shown that the 2.0 fiber per cc was not exceeded when handling asbestos gaskets, but some of the samples did exceed 0.2 fiber per cc. Therefore, special handling will now be required. As you are probably aware, EPA is proposing a complete ban of asbestos within ten years.

I was told this DATA came from Texas City, TX.

UCTC 10732

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3. Larry Calbert considered the cost of replacing asbestos gaskets and packing using input from the plants (see attached). He concluded that substituting Grafoil - the most expensive alternative - would actually save money.

4. There are other asbestos containing products such as Transite fume hoods, floor tile and brake linings. The policy would assure that these are recognized by a variance procedure so that personnel are protected.

There will be a lot of work required if this proposed policy is accepted. Obviously, most valve and piping specifications must be changed. Every plant will have to develop the plan to substitute something for asbestos gaskets and packing as well as changing their stocking policies. We will have to face the "non-asbestos" gaskets and determine if they are usable and under what restriction, and I am sure there are other considerations that will arise.

I will keep you informed on the status of this proposal. This will give you some input to help you answer the questions that you may encounter.

G. B. Elder

GBE/kl
1525H
Attachments

UCTC 10733

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1 1985

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18 August 1985

TO: C. C. Neely 511/2000

SUBJECT: ASBESTOS VS NON-ASBESTOS

Issue: The higher cost of non-asbestos gasketing is less than the extra handling cost of asbestos. To properly dispose of asbestos gasketing it should be wetted for removal, bagged after removal, and taken to a disposal site for landfill. The following calculations show how much time at a base labor rate of $15/hour could be spent on these extra steps to reach breakeven on a cost only basis. Also a calculation is made on a $35/hour sold service rate basis.

Gasketing:

	2" - 150# Gasket
Asbestos	10¢
Non-asbestos	16¢
Grafoil	$1.00

Non-asbestos: $\frac{[16¢ - 10¢]}{[\$15/Hour]} \frac{[60\ Minutes]}{[Hour]}$ = 0.24 minutes

@$35 = 0.10 minutes

Grafoil: $\frac{[\$1.00 - 10¢]}{[\$15/Hour]} \frac{[60\ Minutes]}{[Hour]}$ = 3.6 minutes

@$35 = 1.5 minutes

In other words, in the worst case if more than 3.6 minutes were required to wet, bag, and dispose of an asbestos gasket it would be more expensive.

UCTC 10734

Packing:

	$/Lb.	Changes/Year	$/Yr.[1]
Asbestos	10	5	50
Grafoil	200	1 - 2	300

(1) Assume 1 lb. of packing is used per change.

Consider a very conservative case. Assume the total time to change packing is 1 hour and each change requires 1 lb. of packing.

Asbestos:

[($10/Lb.)(1 Lb./Change) + ($15/Hr.)(1 Hr./Change)] x 5 Changes/Year = $125/Yr.

@ $35/Hr. = $350/Yr.

Grafoil:

[($200/Lb.)(1 Lb./Change) + ($15/Hr.)(1 Hr./Change)] x 1.5 Changes/Year = $320/Yr.

@ $35/Hr. = $225/Yr.

Breakeven:

@ $15/Hr. $320 = ($10 + $15 X) 5

X = 2.56 Hours

@ $35/Hr. $350 = ($10 + $35 X) 5

X = 1.56 Hours

Breakeven does not occur until 2.56 hours per packing change at the $15/Hr. rate, or 1.56 hours at the $35/hour rate. Either is easy to imagine when all factors are included. Some are the following:

- o Receive the job assignment
- o Inspect the job for condition and correct packing
- o Get the necessary packing (may require ordering material)
- o Get the tools for the job
- o Repack the valve (frequently leaking must be stopped before work can begin)
- o Clean up the job
- o Put away materials and tools
- o Seek the next job

Larry E. Calvert

LEC:ka
6267K

UCTC 10735

UNION CARBIDE CORPORATION
ENGINEERING, MANUFACTURING, AND TECHNOLOGY SERVICES
Central Engineering
South Charleston, West Virginia

UCC BUSINESS CONFIDENTIAL

August 28, 1986

TO: Mr. J. E. Sanders

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AUG 2 · 19[illegible]

COPY TO: Mr. L. E. Calvert
Mr. S. W. Clark
Mr. G. B. Elder
Mr. R. W. Engle

FROM: C. C. Neely

SUBJECT: Draft of Recommended Policy
Use of Asbestos-Containing Materials in the Work Place
Chemicals and Plastics Business Group

Attached for your consideration is a draft of the subject recommended policy dated August 27, 1986. This document represents the effort of the Special Working Group which you appointed in early July as follows:

Larry Calvert - Manufacturing Office
Stan Clark - Safety/Health Technology
George Elder - Corrosion and Materials Engineering
Rex Engle - Piping Technology
Clyde Neely - Engineering Mechanics

As discussed, we believe that we have reached the point where guidance is needed for our continued efforts to be productive. Accordingly, we plan no further work in this regard until we hear from you.

It is our collective judgment that the implementation of this policy will have a relatively modest cost impact on the functions that will be involved in its implementation. For example, we estimate that a 1 to 1-1/2 man year effort will be required to accomplish the duties assigned to CEO. However in our opinion "normal" TMS budgets should not be expected to carry this total expense.

By copy to the Special Working Group members I would like to take this opportunity to thank them for their professional efforts to date in preparing the attached.

We look forward to receiving your comments.

C. C. Neely

CCN:at
Attachment
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8/28/86

D R A F T

RECOMMENDED POLICY

CHEMICAL AND PLASTICS BUSINESS GROUP (C&P)

SUBJECT: USE OF ASBESTOS-CONTAINING MATERIALS[1] IN THE WORK PLACE

PURPOSE/BACKGROUND

The Corporate Charter (1.1) contains the following commitment to employees:

> "To provide working conditions, programs of training and education, and persistent review and appropriate modification of facilities and practices to protect the health and safety of employees."

It also contains a social commitment to conduct business "in accordance with all the applicable national and local laws and regulations."

As a result of available evidence that airborne asbestos in the occupational environment had proven to be carcinogenic in man, all C&P Insulation Standards were revised in 1976 to specify only asbestos-free insulating materials; and new or replacement installations of these materials have subsequently been selected accordingly. Additionally, a Safety/Health Standard designated SH-256 was prepared covering the safe removal and handling (includes disposal) of asbestos-containing insulating material during renovation and demolition. The requirements of this Standard equal or exceed those of current applicable government standards.

OSHA's rule-making efforts relative to asbestos usage in the work place are mired in controversy. Hearings on the latest EPA proposal which includes the phaseout of all asbestos over a ten-year period are now in progress. The proposal states: "EPA is considering banning the manufacture, importation, and processing of asbestos construction products and asbestos clothing soon after the rule's promulgation with the category of asbestos friction products banned about five years later, and other asbestos products banned at a later time." Gaskets and packing that contain asbestos are in the category of "other asbestos products" that would apparently be banned after ten years. No peer company that we are aware of has a target date for removal of existing asbestos-containing insulation, gaskets, or packing; however, one major chemical company has recently discontinued the purchase of asbestos-containing gaskets and packing.

A cost analysis of pipe-size gaskets shows that GRAFOIL®, probably the most expensive of the acceptable gasket substitute materials, is, in fact, cost effective when only the cost of mandatory work practices associated with the use of asbestos (e.g. wetting for removal or airborne fiber

[1] "Asbestos-containing materials" include but are not limited to insulation, gaskets, packing, welding blankets, and building materials.

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exposure monitoring during removal, placing in labeled plastic bags after removal, landfill disposal, and record keeping) is considered. The same conclusion is drawn relative to valve packing when the additional considerations of improved service life and sealability are included.

Consistent with the aforementioned commitments and the economic use of materials, C&P has concluded that positive actions relative to asbestos-containing materials(1) should be taken.

POLICY

Except as otherwise provided by applicable law, Chemicals and Plastics Business Group will:

Continue to phase out the use of asbestos-containing materials:

- Asbestos-containing insulation shall be replaced with asbestos-free materials as required to maintain structural and functional integrity.
- No asbestos-containing materials shall be purchased after January 1, 1989.
- C&P approved practices shall be employed for the identification, removal, modification, and/or disposal of asbestos-containing materials.
- Evaluation of asbestos substitute materials shall include consideration of health effects as well as suitability for intended service and cost.
- A variance approval procedure shall be employed to cover consideration of uncommon circumstances. Approval must always include endorsement of C&P HS&EA management.

SCOPE

This recommended policy applies to all C&P operated/hosted facilities. Other components of the Corporation will be apprised of its content.

DELEGATION

The assignment of duties and authority to carry out the policy defined herein is delegated as follows:

To Central Engineering Department

- Develop and maintain engineering standards covering:
  - Identification of asbestos-containing materials;

Union Carbide trial exhibit UC-4723: G. B. Elder to C&P Plant Distribution on Proposed Policy Banning Purchase of... Published by AsbestosClaims.Law
ACL Doc 19250 · Page 7 of 9 asbestosclaims.law/library/19250/7

- Removal, modification and/or disposal of asbestos-containing materials; and

- Use of asbestos-substitute materials.

To Site Management

- Implement policies and practices for the identification, removal, modification, and disposal of asbestos-containing materials.

- Use of CED Standards covering asbestos substitute materials and the communication of service experience with these materials.

To Manufacturing Services

- Monitor use of asbestos-substitute materials and the communication of service experience with these materials.

To C&P HS&EA

- Audit compliance with governmental regulations and CED-developed standards relating to asbestos-containing materials and, where applicable, their substitutes.

C: C. Neely
2073W

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