PLAINTIFF'S EXHIBIT
UC-4044

OCT 15 1986

J. E. S.

UNION CARBIDE CORPORATION
Engineering, Manufacturing, and Technology Services
Central Engineering

P. O. Box 8361
So. Chas., WV 25303

BUSINESS CONFIDENTIAL

September 30, 1986

TO: Mr. J. E. Sanders

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

FROM: *C. C. Neely*

SUBJECT: Final Draft of Recommended C&P Program
Phase-Out Use of Asbestos-Containing Materials in Work Place
Chemicals and Plastic Group

Attached herewith on behalf of the Special Working Group is a copy of the subject document dated 9/29/86. It is a slightly fine-tuned version of the 8/28/86 version which was transmitted to you under my transmittal also dated 8/28/86. The changes that have been made are of a clarifying rather than substantive nature.

At this point, we have not made an effort to obtain broad, formal review of the subject program. However, Larry Calvert has discussed it briefly with the Maintenance APM's and Maintenance Managers. In addition, Stan Clark arranged for its review by the Safety, Health Advisory Committee (SHAC), and your staff has reviewed it. Feedback indicates these groups to be supportive of the concept, but some have expressed concern regarding the January 1, 1989 date specified for the discontinuance of the purchase of asbestos-containing materials, believing it to be optimistic. Some of the concern relates to the following:

1. CED's ability to revise and reissue the V&P Specifications and the Valve Manual in time to support the deadline. The responsible CED specialists have carefully reviewed this matter and believe that reissuance of these Manuals by July 1, 1988 is realistic. This date has not been published, however.

3

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ACL Doc 18663 · Page 1 of 9 asbestosclaims.law/library/18663/1

2. Belief that field testing of new gasket and packing materials will be required. Such testing will not be necessary since the plan at this time is to accommodate most of the substitutions by broadening the use of materials already in use, materials such as reinforced Teflon and GRAFOIL™. This plan has not been broadly disseminated, and we can fully appreciate the reluctance to agree to a purchasing cut-off date for asbestos-containing products without knowing what the substitutes are. We also appreciate that, once this material substitute plan is known, there will be a natural resistance due to the higher first cost of these substitute materials.

3. Some belief that installers will need special training to handle the new gasket and packing materials. For reasons cited in (2), we do not believe this requirement will be significant.

4. Perhaps lack of understanding that the January 1, 1989 date is the cut-off date for the purchase of asbestos-containing materials except as approved by a variance.

5. "Is this really necessary" attitude. The Special Working Group believes that OSHA's recently revised exposure limit of 0.2 fibers per cubic centimeter of air (was previously 2.0 fibers per cubic centimeter) add significant impetus to implement the proposed Recommended Program. According to Terry Hanning's September 5, 1986 memorandum (copy attached), labor union representatives do not believe that controlling the exposure limit to this lower level provides adequate protection.

The above concerns notwithstanding, the Special Working Group decided to submit the subject Recommended Program to you with the January 1, 1989 date included since we believe that, with proper communication with the key plant personnel responsible for its implementation, along with management support, this date is realistic and achievable. We are submitting under separate cover a proposed CED Technology Program which includes request for funds to cover the important communications aspect of the understanding, acceptance and implementation process.

Please let me know how we can be of further assistance regarding this matter.

C. C. Neely

CCN:mr
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Attachment

4

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ACL Doc 18663 · Page 2 of 9 asbestosclaims.law/library/18663/2

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.

5

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ACL Doc 18663 · Page 3 of 9 asbestosclaims.law/library/18663/3

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;

6

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ACL Doc 18663 · Page 4 of 9 asbestosclaims.law/library/18663/4

- 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

7

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ACL Doc 18663 · Page 5 of 9 asbestosclaims.law/library/18663/5

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

UCC BUSINESS CONFIDENTIAL

September 29, 1986

TO: Mr. J. E. Sanders

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

RECEIVED
OCT 1 1986
S. W. CLARK

FROM: C. C. Neely

SUBJECT: Proposed Technology Program in 1987
In Support of Existing Operations

In am submitting herewith an additional program in the subject category, this one in support of the work associated with the implementation of the proposed new Standard covering the phase-out of asbestos-containing materials in the work place.

Our estimate of costs includes the following:

- A total of approximately one man year of work relating to the selection of suitable non-asbestos gasket/packing materials as a function of service conditions, and revising the affected standards (or developing new standards) accordingly. This work will be conducted primarily in the Materials and Valve and Piping Skill areas. At this point we do not envision the wholesale use of new gasket/packing materials, but rather a broader use of currently used materials (e.g., reinforced Teflon, GRAFOIL™). Approximate cost: $64,500

- Printing and distribution of the revised standards. Approximate cost: $12,500

- Conducting on-site seminars at Institute, Seadrift, Sistersville, South Charleston, Taft and Texas City to explain the basis for the revised gasket/packing material selection. These seminars are recommended in view of our belief that simply reissuing the various standards with revised gasket/packing materials will not result in timely understanding and acceptance of the revised gasket/packing material specifications. Approximate cost: $16,000

8

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ACL Doc 18663 · Page 6 of 9 asbestosclaims.law/library/18663/6

We would be pleased to provide additional information if needed.

C. C. [redacted] the
Special Work Group on Phase-out of
Asbestos-Containing Materials

CCN:mr
00021
Attachment

9

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ACL Doc 18663 · Page 7 of 9 asbestosclaims.law/library/18663/7

PROPOSED CED TECHNOLOGY PROGRAM FOR 1987
IN SUPPORT OF EXISTING OPERATIONS

Work Associated with Implementation of C&P Recommended Program
Phase-Out Use of Asbestos-Containing Materials in the Work Place

Objectives: (1) To obtain understanding and acceptance of the Recommended C&P Program by key plant personnel.

(2) To develop C&P Standard Practices covering:
- Identification of asbestos-containing materials
- Removal, modification and/or disposal of asbestos-containing materials; and
- Use of asbestos-substitute materials

Brief Description: The primary means of obtaining U/A of key plant personnel would be by on-site seminars and written follow-up. C&P Standard Practices development work would proceed in usual manner.

Results Expected and Schedule: Would promote smooth transition to non-asbestos containing materials. Most of CED's work would be complete by July 1, 1988.

Best Judgment of Costs: $93,000

43071

10

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ACL Doc 18663 · Page 8 of 9 asbestosclaims.law/library/18663/8

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