Occupational Safety and Health Act
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PERSONNEL AND ORGANIZATION STAFF—EMPLOYE HEALTH SERVICES DEPARTMENT

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THE OSHA CANCER POLICY

On Friday, January 19, 1980, the Occupational Safety & Health Administration (OSHA) issued the "OSHA Cancer Policy" entitled "Identification, Classification & Regulation of Potential Occupational Carcinogens". Although no specific chemicals are addressed in this statement of regulatory policy, the policy establishes the criteria and procedures under which specific substances will be regulated by OSHA. Incorporated as part of the Code of Federal Regulations, the policy addresses the scientific evidence, subjective, and policy judgment OSHA will use in determining which of several thousand potential carcinogens to regulate. The policy also establishes a step-by-step process for writing specific regulations for potential carcinogens.

In the "Cancer Policy" OSHA combines a reiteration of authority granted to the Agency by the OSHA Act of 1970 (P.L. 91-569) with specific statements as to "Classification, Priority Setting, Initiation of Rulemaking, Model Standards, Scientific Review, and other sub-issues to be considered under the umbrella policy.

General

The policy governs the identification, classification, and regulation of potential occupational carcinogens to most adequately assure "to the extent feasible, on the basis of the best available evidence, that no employe will suffer material impairment of health or functional capacity even if such employe has regular exposure to the hazards dealt with by such standard for the period of his or her working life."

The definition of a 'potential occupational carcinogen' (POC) is essentially that accepted by the National Cancer Institute and is described as any substance that directly causes, increases, or enhances a benign and/or malignant neoplasm in one or more mammalian species by appropriate route of entry. Chemicals metabolized by mammals to POC's are included in this definition.

The policy establishes two categories (rather than four as proposed) for classifying POC. A "Category I" substance is a POC as determined from human data, two separate mammal studies, or one mammal study with positive results from "short-term" (in vitro) or "site of injection/implantation" tests. A "Category II" substance is a POC where data is from only one mammalian species or is "suggestive".

Priorities

Tentative classification, based on "brief scientific review" may place a substance on a "candidate list" for Category I or II. From each candidate list a "priority list" of approximately 10 chemical materials will be determined (not necessarily by a scientific process). Some of the elements of decision-making will include number of workers exposed, level of exposure, level of exposure reported to cause cancer, potential of regulation to decrease risk, and availability of substitutes.

OSHA states that candidate and priority lists shall not be subject to legal review. Candidate lists shall be published at least annually and priority lists at least semi-annually.

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Although OSHA will "consider" negative scientific data, relatively marginally positive data will outweigh all but the most extensive negative test results.

Rulemaking

Notification (within 30 days) of the study of economic and/or feasibility of specific standards will be given by OSHA. Proposed rulemaking will be in accordance with authority granted to OSHA in the OSHA Act of 1970 and will include notices of proposed rulemaking, comment periods, and hearing dates. For Category I POC's, controls will provide for the "lowest feasible exposure level" or "zero" exposure if appropriate substitutes are available. Emergency temporary standards may be issued for Category I POC's where "grave danger" is determined as defined in the 1970 Act.

For Category II POC's, exposure shall be reduced "as appropriate".

Exposure control shall be primarily by means of engineering and/or work-practice controls, and standards for either Category I or II POC's shall follow appropriate detailed "model standards" addressed in the policy.

Discussion During Rulemaking

Discussion during rulemaking will be limited to certain issues including:

- Whether a substance meets a Category I or II POC definition.
- Whether data are applicable for POC classification or applicable for exception or amendment.
- The environmental impact of proposed regulations.
- Determination of lowest feasible/appropriate exposure limit for Category I/ Category II POC's respectively.

As more detailed information becomes available related to specific regulations of specific chemicals, the information and any action plans will be distributed as appropriate.

For a full copy of the regulatory text (Title 29 CFR, Part 1990) see Federal Register, Volume 45, Number 15, Tuesday, January 22, 1980, Rules and Regulations, Book 2. Limited copies are available if necessary from the Industrial Hygiene & Toxicology Department (32-20210).

ENGINEERING ASBESTOS PLAN UPDATE

Purpose

To provide a current evaluation on the asbestos regulation, usage and future trends to supplement the Vehicle Materials Engineering Asbestos Plan established August 26, 1977.

Regulation

Although a .5 fiber/cc standard was proposed by OSHA on October 9, 1975, no measures have been taken to lower the present 2 fiber/cc permissible exposure limit. The following pressures are contributing to further regulation in 1979:

- Hearings have concluded after 44 days of testimony on OSHA's Generic Policy to regulate all carcinogens. By law, OSHA must act within 60 days of the close of the record, but that deadline seldom has been met with past standards. Final rules to set guidelines for all carcinogens, e.g., asbestos, could easily be issued before the end of the year.

- Concurrently, extensive media coverage will expedite the asbestos standard below the current 2 fiber/cc level. Medical authorities have taken the position that a safe level cannot be identified.

- The completion of the Cotton Dust Standard set a precedent for protection of employes exposed to airborne carcinogens.

- The British have adopted an approach aimed at reducing asbestos exposure to the lowest attainable level with a 2 fiber/cc maximum ceiling, for excursions. Further action is pending on the standard until reports are published by the Advisory Committee. Compliance is enforced under the Health and Safety at Work Act.

Program Development

The Asbestos Plan, as delivered to the Advanced Review Committee, February 9, 1978, emphasized programs to prepare the Company for a staged tightening of the standard. Progress of these programs and recommendations are detailed below:

Programs	Status	Recommendations
. VMD&P and NAAO Purchasing monitoring supplier compliance and engineering programs.	As of August 26, 1977 - . Suppliers reaching compliance to 2 fiber/cc level with active programs to meet lower levels. . Engineering programs in initial stage of development of alternative materials. Raybestos-Manhattan R&D Review, 9/27-28/78.	VMD&P and NAAO Purchasing to monitor suppliers progress of achieving efficient environmental controls. VMD&P and Engineering to track R&D efforts and manufacturing feasibility of substitutes.

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Programs	Status	Recommendations
. NAAO Purchasing monitoring costs of asbestos containing components and engineering conducting comparisons with alternative materials.	Analysis limited to raw asbestos fiber.	NAAO Purchasing to evaluate the cost of the final product on a directional basis on engineering determined substitutes.
. Advanced Engineering Programs funded for 1978 in Chassis and Transmission and Axle to assess substitutes.		
Transmission	As of 8/78, $47,000 spent on feasibility programs for non-asbestos clutch facings. The following non-asbestos funds for 1979 will be incorporated into forward model allocations: $100,000 C-6 Auto-Job 1, '80 $300,000 FIOD-Auto-Job 1, '81 $100,000 Man. MTX-Job 1, '81	Transmission to continue an active program on non-asbestos replacements for production implementation.
Chassis $114,000	Funding cancelled for calendar year 1978. Lack of supplier submissions. Budget for 1979 recommended at $40,000 for advanced projects on non-asbestos.	Chassis to support transition to non-asbestos friction materials by evaluating supplier R&D submissions.
. Research support of Engineering in parallel projects.	Yearly allowance for the Machining and Wear Department, $312,000. The non-asbestos project, not separately funded, does not incorporate the full time effort of one employe.	E&R Staff to reassess the flat budget planned for 1979 to sustain future supplier submissions, lawsuit inquiries and ICBA requests from Engineering.

Usage

The transition to non-asbestos products is keyed to the rapid escalating costs associated with the use of asbestos and reaches beyond the purchase price to include expenses such as....regular medical check-ups, long term recordkeeping, fiber level monitoring and special work practices, as well as rapidly increasing insurance and legal costs.

The basic factor in the overall strategy for asbestos elimination is the caution that must be exercised in introducing new materials to critical drivetrain and brake components. The unique properties of asbestos fiber have slowed efforts towards substitution in products with high asbestos content receiving heavy duty service, e.g. friction brake components. Supplier submissions in these areas have been limited to evaluation by Scientific Research, with no level of success reported.

Future Trends

- Selective removal of asbestos as a product constituent appears to be the future trend where asbestos is not critical to product acceptance and performance. This is supported by the reduced demand for asbestos fiber imports, since 1973. The new approaches, materials and processes, required to achieve the transition to non-asbestos usage may provide improved levels of performance and reliability.

- Products such as friction materials, where there is difficulty in duplicating the attributes of asbestos and where there are no economically feasible alternatives, will continue to be produced.

- Asbestos will be replaced by several materials - not by a single material for all product lines. This is not unexpected due to the present use of asbestos from very short filler fiber grades to textile grade fibers and yarns. Non-asbestos fiber blends will be given expanded evaluation.

- High costs of worker protection and environmental control in regulated, industrialized nations like the United States will encourage hazardous and polluting industries to export their factories to non-regulating Third World Nations, e.g., Mexico, Taiwan, Brazil and South Korea. The U.S. Government will initiate monitoring of exporting hazards to other countries and will pressure world financial institutions to restrict funding to such concerns.

Vehicle Materials Engineering
October, 1978

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APPENDIX VI

BACKGROUND

OSHA has promulgated an airborne arsenic standard limiting exposure of workers to 10 ug/m3 on an 8-hour, time-weighted average sample. This new regulation will affect Ford's use of lead body solder which contains arsenic as an essential ingredient. Airborne arsenic levels may reach 700 ug/m3 during grinding of the solder. Employees now wear respirators, but under the new regulations, current practices will not be adequate. The timing for implementation of the standard is.

	Ford Program
. August 1, 1978 - Respirator use for employees exposed above 500 ug/m3.	Presently complying
. No later than September 15, 1978 - Completion on initial monitoring.	Program Launched
. October 1, 1978 - Complete establishment of regulated areas. - Respirator use for employees exposed above 50 ug/m3. - Completion of initial training. - Notification of use to the government.	Lead grinding booth designated as regulated area since inception of lead control program.
. December 1, 1978 - Respirator use over 10 ug/m3 - Completion of initial medical - Completion of compliance plan	All assembly plants have been informed.
. July 1, 1979 - Completion of lunch rooms and hygiene facilities.	No formal plan but OGC contacted on advisability of requesting a variance.
. December 31, 1979 - Completion of engineering controls. - Respirator use no longer acceptable.	Compliance unlikely

The presence of arsenic in lead body solder is essential to its successful use. The tin arsenide phase promotes a fine grain size necessary for good wireability. Alternative alloys that minimize the amount of arsenic or eliminate arsenic entirely are a possibility, but research and development for such alloys may be wasted if the expected lead standard precludes the use of lead body solder. If airborne concentrations of arsenic/lead cannot be controlled to the standard, the most attractive alternative may be plastic body solder. Ford has considered this substitution in the past, but costs and facilities have prevented application. The most recent plastic body solder program was cancelled because of cost for implementation and possible toxicity of the amines in the formulation.

RECOMMENDATION

. Establish a task force to determine if and how Ford can meet the new airborne arsenic standard. Task force members shall be
  - Automotive Assembly Division
  - Body and Electrical Product Engineering
  - Industrial Hygiene and Technology
  - Chemical Sciences Laboratory
  - Manufacturing Processes Laboratory
  - Office of the General Counsel *
  - Vehicle Materials Engineering
. Begin design studies to eliminate need for body solder.
. Reactivate the plastic body solder program to find acceptable replacement for the lead-arsenic solder.

* OGC involvement will be required to interpret the standard and to petition for relief from the standard if necessary.

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