Ford

Office of the General Counsel 5/15/80

K. Termaat

My comments are noted in pencil on your latest draft. Copies have been circulated to other departments in this office.

Bill

WJR/bb
attachment
cc: B. Epstein
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PLAINTIFF'S EXHIBIT

FD-959

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EXECUTIVE SUMMARY

CARCINOGENS IN THE WORKPLACE

Introduction

At the October 1979 joint meeting of the Engineering and Research and Manufacturing and Supply Subcommittees, a report on the Occupational Safety and Health Administration (OSHA) Policy for Regulating Workplace Carcinogens was presented by Personnel and Organization Staff. This report noted that final regulations for carcinogens in the workplace were anticipated by the end of 1979. There was discussion on the problems involved in dealing with a great variety of substances and suppliers ~~if we are not in a position to be specific in asking about possible substitute materials~~. It was agreed that efforts to eliminate the use of potential carcinogens where possible should be preceded by analysis of the affected materials and processes. In this regard, a Task Force was established by the subcommittees to identify carcinogens and quantities in use, set targets for elimination ahead of regulation, take steps to find substitutes, develop a directive and workplan and organize to identify and further control potentially carcinogenic substances systematically.

Since October, OSHA has released its Policy which further defines Category I potential carcinogens as substances known to be carcinogenic in humans or which have been demonstrated to be carcinogenic in two separate laboratory animal studies. Category II substances are those where data is suggestive of carcinogenicity in humans and test animals. The Policy also establishes the mechanism for standards setting. Normally, once the need for a standard is determined by OSHA, a ruling may be issued in 6 - 30 months. If an "Emergency Standard" is set, the ruling is issued and immediate compliance is required. Comments and hearings are subsequently solicited. The Policy has been challenged and is awaiting disposition by a U.S. District Court and two Circuit Courts of Appeal. A draft list of candidate substances governed by the Policy was issued two years ago. A revised list is expected to be released in July, 1980 followed by a prioritized extract in September. It is expected that the list will be updated periodically.

The Task Force has concentrated on developing the capability for managing the elimination/control of Category I potential carcinogens in the workplace ~~and not on other toxic/hazardous substances~~. A start has been made in identifying specific applications for subsequent elimination or control.

Representative Past Company Actions

Since 1977, the Company has removed lead chromates and molybdates from paint (except for school bus yellow and special orders), "Tris" flame retardant from fabrics and instituted further controls on asbestos. In this respect, a Vehicle Engineering directive has been issued that newly designed components should not contain asbestos (documented exceptions must be encapsulated or resin coated).

As of 1969, sprayed-on structural steel fireproofing has been asbestos-free for new and reworked construction. Several manufacturing standards prohibit asbestos as a constituent. Benzene exposure has been reduced to permissible levels or eliminated since 1978. Ventilation was increased at Romeo to minimize potential exposure to paint-related chromium compounds.

Potentially Carcinogenic Substances

Based on an MVMA report, the Task Force has to date identified thirty-six (36) ~~potentially~~ carcinogenic substances or groups of substances in use in the automotive industry or generated by industrial processes. Eleven (11) of those are currently regulated by OSHA as potential carcinogens; the balance have potential for new regulation. More restrictive standards have been proposed for some of those substances currently regulated. Thirty-one (31) substances are reported to the Michigan Department of Natural Resources (MDNR) for computation of water surveillance fees. Michigan plants used 1.3 million pounds of the eleven (11) potential carcinogens on the MDNR list. The largest use was 641 thousand pounds of acrylonitrile at the PPV Paint Plant. ~~Similar data is not currently required to be reported in the other states.~~ The list of carcinogens was prioritized by the Task Force, according to impact on the Company and potential for further regulation, to identify the top eight (8). The top three of the eight priority substances, asbestos, hexavalent chromium compounds and benzene, were examined. Specific lists of these bulk materials and parts for production and nonproduction use have been developed. The asbestos list has been forwarded to purchasing for supplier verification of content and availability of substitutes. The benzene and chromium compound lists are being analyzed by the product offices and manufacturing to define specific parts usage.

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Asbestos is used by the Company primarily in vehicle brakes, clutches, gaskets and for nonproduction roofing, millboard and core/mold sealers. Medical evidence links inhalation of asbestos dust to lung cancer, mesothelioma and other diseases. The present OSHA limit is 2 fibers per cc of air (2 million fibers per cubic meter) which may be proposed for reduction to 0.1 f/cc possibly this year.

Chromium compounds are used primarily in paints and inks for production and nonproduction use. Medical evidence links certain hexavalent chromium compounds to lung cancer and others to liver and kidney damage and other diseases. The present OSHA limit is 52 microgram per cubic meter of air which National Institute for Occupational Safety and Health (NIOSH) has recommended a reduction to 1 microgram per cubic meter.

Benzene occurs primarily in coke oven operations as a by-product and in petroleum fuels. It is a residual constituent in solvents, primers, adhesives, lubricating oils, fuels and hydraulic fluids. Medical evidence links inhalation and contact with benzene to leukemia, blood disorders and other diseases. OSHA has issued a standard of 1 ppm in air as a time weighted average for an 8 hour workday. The standard is now before the Supreme Court.

A new computer data base is being developed (2nd quarter 1981), Materials and Toxicology System (MATS), which links health, engineering, and manufacturing data bases to facilitate rapid identification of potential carcinogen and other toxic substance applications. The links between these systems will provide a method for generating a list of production and nonproduction material specifications which contain Category I potential carcinogens. Using NAAO supplier codes, specification numbers and product names, MATS will identify additional specifications. The specification numbers are then cross-referenced to part numbers which use that material. Finally, the production part and bulk materials list is matched in the purchasing system to determine suppliers to be queried for elimination/control of potential carcinogens. To date, of the five major MATS subsystems, two have been completed and the others are being manually operated for potential carcinogen searching. The engineering release system has been audited and is being updated to extend materials identification to all parts. Product Engineering Procedure PEP 3-189 is being rewritten by NAAO to require systematic review of potential carcinogens and input to the [illegible].

Strategy and Workplan

The search for asbestos, chromium compounds and benzene defined the number of parts and materials containing these substances as listed in the table below. Where possible, the applications were divided into three groups: A - Known substitute material without major redesign, B - Known substitute material with major redesign and C - No known substitute and advanced engineering required. The data is directional only. There remain many applications which require time-consuming analyses for identification.

	Bulk Materials and Parts							
	Production				Nonproduction			
	A	B	C	Total	A	B	C	Total
Asbestos	56	21	26	103	8	-	-	8
Chromium Compounds	-	-	22	22	98	81	34	213
Benzene	-	-	14	14	3	5	-	8

Strategies have been formulated to eliminate or control these substances. The recommended strategy is to proceed to eliminate Group A applications of these three substances by Job #1, 1985. Where elimination is not feasible, institute controls on design, process and exposure. For those applications requiring major redesign (Group B, e.g., drum brake linings) the elimination timetable must reflect Company cycle plans, new construction or renovation (G.M. has stated an intent to eliminate asbestos by 1985). Finally, where no known feasible substitute exists (Group C), advanced engineering will have to be completed before an elimination timetable can be established. Individual timetables remain to be established for the balance of the prioritized substances.

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A generalized workplan has been prepared on the basis of the evaluation of the substances referred to above. The workplan requires central program management, with action implementation by NAAO/DPO Product Engineering Offices, Purchasing activities, Vehicle activities, Manufacturing activities, and the Manufacturing and Supply Staffs. It is judged that approximately a year is required to complete the sorting of the three carcinogens into the known substitute, major redesign and advanced project groups. It is judged that one to two additional years would be required to implement the most feasible actions not requiring major redesign. Substitution requiring major product, plant, equipment or process redesign would take 33 months for vehicle or 45 months for major powertrain programs. A specific workplan is required for each application in Groups B and C.

Although a strategy and workplan is proposed in this paper and efforts have been started in these areas, there are considerable timing and feasibility risks in each of the identified applications. For the most part there are no substitution programs except as mandated by regulation. Without funding or directed prioritization over other engineering effort the work on the identified asbestos, chromium compound or benzene applications cannot proceed under present economic conditions. Nevertheless, a measured Company reaction is necessary to initiate orderly substitution programs with sufficient flexibility to adapt to engineering and economic limitations.

Recommendations

Achievement of the recommended approach requires a Corporate commitment by the Policy and Strategy Committee to foster an integrated, sustained effort throughout the Company over a number of years. To accomplish the strategy, the Task Force recommends:

1. Establish a Hazardous Substance Control Committee chaired by Environmental and Safety Engineering Staff. The Task Force would be discontinued. (Responsibility: E&RS and M&S Subcommittees)

2. Assign hazardous substance program management responsibility to Environmental and Safety Engineering Staff. (Responsibility: E&RS and M&S Subcommittees)

3. Revise Directive B-101 to reflect adjusted responsibilities. ~~No new Policy is required, the matter is broadly covered under Policy C-5.~~ (Responsibility: Program Manager)

4. Continue the development of MATS. A budget and headcount transfer from Engineering Staff has been agreed to. (Responsibility: Program Manager)

5. Adopt as the Company potential carcinogen listing the 36 current OSHA-regulated and proposed Category I substances. Establish the top eight priorities proposed by the Task Force as Company priorities. Direct that the listing be updated semiannually. (Responsibility: E&RS, M&S Subcommittees, P&O Staff)

6. Establish elimination timetables for the eight prioritized potential carcinogens for review and approval by the subcommittees. (Responsibility: Program Manager)

7. Direct all affected organizations to proceed with the elimination of Group A asbestos, chromium compounds and benzene for Job #1, 1985 where feasible. (Responsibility: PEO's, BMD's)

8. Request that specific action plans and timing for the Group A applications identified be presented to the subcommittees. (Responsibility: PEO's, Mfg. Staff)

9. Direct the inclusion of Group B asbestos, chromium compounds and benzene elimination actions in concept development (Phase 3) of vehicle and powertrain programs and in new plant and renovation projects. (Responsibility: E&R Subcommittee)

10. Provide advanced program funding to develop designs and/or materials for new production and nonproduction parts to identify feasibility, reliability, cost and weight implications of alternative materials/designs (Group C). (Responsibility: E&RS Subcommittee)

Engineering Staff
Manufacturing Staff
May 14, 1980

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