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TASK FORCE ON CARCINOGENS IN THE WORKPLACE

CATEGORY I SUBSTANCE PRIORITIES

<u>Substance</u>	<u>Where Present</u>
1. Asbestos	Friction materials, gaskets, sealers
2. Chromium/Chromium Oxide/Lead Chromate	Chrome plating, paint pigments
3. Benzene	Product of coking operations, foundry operations
4. Cadmium/Cadmium Oxide	Fastener plating, solders, foundry effluent, valve alloy
5. Benzo (a) pyrene	Coke oven and foundry emissions
6. Coal Tar	Coke oven and foundry emissions
7. Ethylene Chloropolymer	Vinyl
8. Benzo (a) anthracene	Coke oven and foundry emissions
9. Beryllium	Aluminum foundry operations
10. Trichloroethylene	Degreaser

January 30, 1980

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TASK FORCE ON CARCINOGENS IN THE WORKPLACE

RECAP OF SUBSTANCE PRIORITY FORCE RANKINGS

Substance	B&AO	Car Engg.	DPO	Emplee Health Services	Truck Oper.	Research	Engg. Staff	Mfg. Staff	ESES	PTCO	"Average" Rank	Number of Mentions	Composite Rank
Asbestos	1	1	2	1	1	1	1	2			1.25	8	1
Chromium/Lead Chromate	2	2	3	2	4	8	3	1			3.13	8	2
Chromium Oxide	2	3	6	2	2	8	3	1			3.38	8	2
Benzene	4	9	1	8	5	2	2				4.43	7	4
Cadmium	6	4	7	9	3	11	5	1			5.75	8	5
Cadmium Oxide	6	5		9		11	5	1			6.17	6	6
Benzo (a) pyrene			4	5		2					3.67	3	7
Coal Tar	8		5	5		2					5.00	4	7
Ethylene Chloropolymer	3	6		4	8						5.25	4	9
Benzo (a) anthracene			9	5		2					5.33	3	10
Beryllium	7	8	8	12	9						8.80	5	10
Trichloroethylene		7	10	14		10	7				9.60	5	12
1-Naphthylamine/2-N		10	11			2					7.67	3	13
Lead Naphthenate	5			13	6						8.00	3	14
Nickel Carbonyl					10	2					6.00	2	15
Nitrosamines	9			11	7						9.00	3	15
Hydrazine	10										10.00	1	17
2-Benzothiazol-thiol											N.A.	0	18
Chloroform											N.A.	0	18

Programs Analysis & Materials Engineering
Engineering & Research Staff
January 30, 1980

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ASBESTOS REGULATORY UPDATEOverview:

In addition to recent concern expressed by the Occupational Safety and Health Administration (OSHA) regarding asbestos exposure in the workplace, both the U.S. Environmental Protection Agency (EPA) and the Consumer Product Safety Commission (CPSC) are also looking at possible human health and environmental risks associated with asbestos emissions (EPA) and asbestos-containing consumer products (CPSC). In Advance Notices of Proposed Rulemaking (ANPR) published by EPA and CPSC in the October 17, 1979 and December 17, 1979 Federal Register, the agencies described their efforts at systematically gathering information relative to asbestos exposure sources based on the "life cycle" concept, and solicited comments on how they might best protect the public's interest in a coordinated fashion to minimize burdensome reporting. Such comments are due February 18, 1980.

Legislative Authorities:

- OSHA - Occupational Safety and Health Act (Workplace Exposure)
- USEPA - Toxic Substances Control Act (Unreasonable Risk of Injury to Human Health or the Environment)
 - Clean Air Act (Hazardous Air Pollution Emissions Standards)
 - Clean Water Act (Toxic Pollutant Effluent/Pretreatment Standards)
 - Resource Conservation and Recovery Act (Hazardous Waste Management)
- CPSC - Consumer Product Safety Act (Substantial Product Hazards)
 - Federal Hazardous Substances Act (Hazardous Substances in the Household)
- States - More-or-less parallel the above. (In Michigan, for example, the Department of Natural Resources also annually publishes a Critical Materials Register which lists asbestos among some 189 designated substances.)

Regulatory Strategies/Timing.

- OSHA - As part of the agency's "Generic Carcinogen Policy," asbestos is classified as a "Category I Carcinogen" and will be subject to the most stringent workplace controls. The current workplace exposure limit is 2 asbestos fibers per cubic centimeter. It is anticipated that this standard will be lowered in 1980 to 1.0 or 0.5 fibers/cc.
- USEPA - The agency is currently investigating the cumulative effects of exposure to asbestos throughout its life cycle in commercial and industrial products -- from mining and milling through processing, product manufacturing, use and disposal. EPA anticipates that any rules it develops will evolve from a

combination of two regulatory approaches: (1) rules prohibiting the processing, manufacture and use of certain asbestos-containing products or product categories, and (2) limitations on the annual amount of asbestos imported, produced, or processed in the U.S. All rules would be designed to minimize adverse effects on industry by providing sufficient time to develop substitute materials. EPA believes that TSCA provides an effective means of "controlling the proliferation of asbestos use in the United States and of reducing the health risks associated with the existing accumulation of asbestos in the environment." Of the 9 major asbestos product categories identified (asbestos paper/roofing, friction products, asbestos cement sheet, asbestos cement pipe, textiles, flooring, gaskets and packings, paints/coatings/sealants, and asbestos reinforced plastics), EPA states that it "has selected asbestos paper products and automobile and light truck brake linings as initial candidates for analysis and possible rulemaking." This is because EPA estimates that paper products account for approximately 30-40% of total asbestos production, and friction products approximately 14%. Although no timetable has been announced, EPA indicates that it expects to shortly issue reporting rules to gather economic and exposure information, as well as requirements that unpublished health and safety studies relating to asbestos be submitted. EPA also will consider the need for supplementary regulation under federal laws they administer, as well as other federal agencies.

- CPSC - Following an approach similar to EPA, CPSC indicates that any regulatory action to address asbestos in consumer products could include regulation of asbestos as a component in any consumer product where exposure occurs, regulation of a group or category of consumer products containing asbestos, or case-by-case regulation of individual asbestos-containing products. CPSC has already banned consumer patching compounds and artificial emberizing materials containing respirable asbestos. CPSC has also recently been concerned with the use of asbestos in hair dryers, and commissioned a study to determine what other categories of consumer products contain asbestos ("Review of Asbestos Use in Consumer Products," A. T. Kearney, Inc., Management Consultants, April 1978). Identified asbestos-containing consumer product categories include: asbestos paper products, cloth and woven products, asbestos cement products, viscous matrix products, appliances, products subject to inadvertent asbestos contamination, and miscellaneous products (which includes friction materials). As with EPA, no timetable has been announced. CPSC does intend to coordinate whatever regulations it develops with those of EPA.

Prepared by:
Stationary Source Environmental Control Office
January 22, 1980

JSA/ep

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TASK FORCE ON CARCINOGENS IN THE WORKPLACE

ASBESTOS ASSESSMENT

Vehicle Materials Development and Planning
January, 1980

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Asbestos Assessment

Beginning in mid 1978, Vehicle Materials Development and Planning has prepared various reviews on asbestos covering component usage, Advanced Engineering needs, and expected legislative actions. The most recent assessment (August 1979) resulted in the publication of a Car Engineering Practices Letter covering Asbestos content in components. The Practices Letter stated that the company meets applicable asbestos standards and directed the development of alternate materials to facilitate an orderly transition to non-asbestos substitutes as the need arises (Attachment 1).

This present paper is a status report which assesses current and potential asbestos legislation as well as component usage. Competition actions are also discussed.

Background

The 1975 OSHA proposed standard remains dormant. If promulgated it will lower the permissible occupational exposure limit for asbestos from the current 2 fibers per cubic centimeter to 0.5 fiber/cc. Formal hearings that normally precede issuance of a final standard have been delayed for several reasons:

- . A standard for the construction industry has not been prepared.
- . An economic impact study has not been released, although it has been in draft form for six months.
- . Continued attack on the proposed standard by asbestos and mining interests as being too restrictive.

Also of concern to the company is the fact that NIOSH has recommended documentation of the "life cycle" of asbestos from mining to disposal. A working group in EPA's Office of Toxic Substance is currently performing a "life cycle" analysis of asbestos. First priorities for regulation consideration are paper products (gaskets) and friction materials (brakes).

Assessment of Legislative Actions

A study of the current regulatory situation indicates a high probability that tighter environmental restrictions on asbestos will be promulgated from some Federal agency, within the next 1-3 years. The scenario for a staged tightening of the OSHA standard remains a possibility. However, this is not expected because most industry meets 1 fiber/cc (the current standard is 2 fiber/cc) and the proposed standard of .5 fiber/cc has been "on-the-books" for nearly four years with no action.

The new emerging strategy by OSHA, EPA and CPSC is to restrict the growth of asbestos by "banning all non-essential uses". Asbestos consumption in the United States has been rising at the rate of 1 to 2% per year under current OSHA regulations. Since the regulatory agencies original intent in controlling asbestos was to reduce consumption, (as well as protect asbestos workers), additional actions were deemed necessary.

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An Advanced Notice of Proposed Rulemaking, under TSCA, has been issued. This indicates that automobiles and light truck components, containing asbestos, could come under new federal rulemaking.

Asbestos Usage

Asbestos is used in a wide variety of components ranging from clutches and brake pads, to sealers, gaskets and sound deadeners. There are some components such as sealers, where an alternate material may be substituted with minimal product impact. There are other components where it is not possible to simply use an asbestos substitute but the component must be completely redesigned, such as the semi-met disc brake pads.

A detailed listing of asbestos usage is shown in Attachment II. These applications are summarized in the table below showing which Product Design Offices are affected:

Item	Product Design Offices								
	BEPE	Chassis	Engine	T&A	Light Truck	Heavy Truck	CCD	DD	Inspection
Clutch Components				X	X	X			X
Brake Components		X			X	X			X
Gaskets/Insulators	X	X	X	X	X	X	X	X	X
Adhesives/Sealers/ Sound Deadeners	X	X	X		X	X			X

* Applications not documented but extrapolated from similar applications in Car Engineering

Competition

Several years ago, GM reportedly considered a policy to get asbestos out of the brake linings because of the toxic concerns. They decided that the effort to find a substitute for asbestos would be better spent to improve the performance and durability of the lining material and opted for a development program with semi-mets by '81-'82 and all linings (disc and drum) by '85. The asbestos issue has helped keep the semi-met programs going over the years. There is no "official" company policy to remove asbestos from other component areas. However, because of toxic concerns and company awareness of asbestos, gaskets and heat insulators are slowly being replaced with asbestos free materials. Asbestos insulation reportedly has been removed from manufacturing plants and the facilities that manufacture brake linings meet the present standard of 2 fiber/cc. It appears obvious, regardless of company policy, that GM intends to eliminate the use of asbestos. Their approach of "no formal policy" is a result of uncertainties associated with cost and timing for substitutions, and a general awareness that issues must be dealt with before they become problems.

THE ABOVE COMPETITIVE INFORMATION IS BASED ON GENERALLY AVAILABLE INDUSTRY DATA, TRADE RELEASES, OR PAST COMPETITIVE PRACTICES PROJECTED INTO FUTURE MODEL YEARS.

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Competition (continued)

Chrysler also has no formal program for asbestos removal. However, in the case of sealers and gaskets, they attempt to use non-asbestos materials wherever possible and in most cases, are now introducing the substitute materials. In the area of brakes, front wheel discs are being converted to semi-hets as new programs permit, but no plan exists for rear brake drum substitution.

Comment

The general assessment on asbestos has been done and the system advised of what is needed. It should be noted that a comprehensive listing of asbestos containing components, by part number, can only be supplied by the individual PDO's. A strategy approach of accommodation or elimination cannot be made on a general basis but will have to be answered for each component by the design responsible office.

A further recommendation might call for progress reports to the Task Force by the Product Offices. However what is needed is an on-going system to identify other Engineering areas that could be impacted by toxic and hazardous legislation, and develop responsive plans.

THE ABOVE COMPETITIVE INFORMATION IS BASED ON GENERALLY
AVAILABLE INDUSTRY DATA, TRADE RELEASES, OR PAST COMPETITIVE
PRACTICES PROJECTED INTO FUTURE MODEL YEARS.

Vehicle Materials Engineering
January, 1980

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Vice President
Car Engineering

To: Chief Engineers - Car Engineering
Chief Body and Electrical Engineer
Chief Powertrain and Chassis Engineer
Chief Engineer - Electrical and Electronics Division
Chief Engineer - Climate Control Division
Chief Engineers - Truck and Recreation Products Operations

cc: Executive Vice President - NAAO Operations
Vice President - Car and Truck Group
Vice President - Body and Assembly Operations
Vice President - Powertrain and Chassis Operations
Vice President - Engineering and Research Staff
Vice President - Personnel and Organization Staff
Vice President - Environmental and Safety Engineering Staff
Vice President - Advanced Vehicles Development
Vice President - Research
Vice President - Design Center
Vice President - General Manager - Electrical and Electronics Division
General Manager - Climate Control Division
General Manager - Ford Parts and Service Division
General Manager - Automotive Assembly Division
Chief Engineers - Body and Electrical Product Engineering
Chief Engineers - Powertrain and Chassis Product Engineering
Chief Engineer - Design Center
Chief Car Planning Manager
Director - Personnel Services Office
Product Planning Managers - Truck and Recreation Products Operations

Subject: NAAO Car and Truck Engineering Practice Letter CEPL 10

ASBESTOS CONTENT IN COMPONENTS

The Company presently meets applicable asbestos standards. Concerns nevertheless remain about the possible effect of asbestos and possible supply and cost issues that might arise as a result of expanded environmental controls. Development of alternate materials is

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necessary to facilitate an orderly transition to non-asbestos substitutes as the need arises:

NEWLY DESIGNED COMPONENTS SHOULD NOT CONTAIN ASBESTOS

When performance criteria or other engineering restraints preclude the use of alternate materials and are documented, asbestos may be considered. In such documented cases, the asbestos content must be reduced to the lowest possible level and all asbestos must be encapsulated or resin coated to avoid worker exposure to airborne fibers.

With this stated goal, it is clear that a coordinated effort will be necessary between Company and supplier research to develop non-asbestos substitutes for friction, gasket and insulating materials. The results of such cooperative development will be useful in allowing substitution for existing components containing asbestos.

This Practice Letter is effective immediately for all advance product designs on all passenger car and truck models. The design of any new components which contain asbestos must be reviewed by the appropriate Chief Product Engineer, the respective Car or Truck Chief Vehicle Engineer, and approved by the Vice President - Car Engineering, or Truck and Recreation Products Operations, as applicable.

J. A. Capolongo

T. J. Feaheny

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Inter Office

Engineering and Research Staff

March 10, 1980

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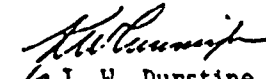
Subject: Strategy for Elimination/Accommodation of Asbestos from Company Product Materials

The attached strategy was agreed to by the recently formed Task Force on Carcinogens in the Workplace and is patterned after NAAO CEPL #10. It responds, in part, to a need to identify NAAO/DPO production material uses of possible carcinogenic substances and to formulate action plans for eliminating or controlling them in a practicable manner in anticipation of government regulations.

Asbestos was selected by the Task Force as the first substance to be addressed by the Company. The recommendation is to eliminate, when feasible, the use of asbestos from Company products, and where not feasible, to control its use. The selection of asbestos was based upon recent policy statements by EPA that it plans to review all aspects of use of asbestos, including possible ban on certain uses under the Toxic Substances Control Act (TSCA) and the extensive use of asbestos in friction materials (e.g., clutch and brake components), gaskets, insulators, adhesives and sound deadeners. The attached strategy proposes a systematic approach to the elimination or accommodation of asbestos.

The strategy was approved by the Task Force consisting of representation from both affected line and staff activities.

Your concurrence or comments are requested by March 31, 1980 so that we may proceed with its implementation on a timely basis.


J. W. Durstine

Attachment

Concur

Written Comments Attached

Want to Discuss

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STRATEGY FOR ELIMINATION/ACCOMMODATION OF ASBESTOS

FROM COMPANY PRODUCT MATERIALS

Current Situation:^{1/}

- . OSHA could tighten the standard from 2.0f/cc to 0.5f/cc. The lower standard was proposed in 1975 but has not been issued.
- . The EPA might ban asbestos for automotive uses on the grounds that, in their view, there are no "essential" automotive uses.
- . According to an article in a trade publication, G.M. is eliminating asbestos gradually; and has achieved a breakthrough on the application of alternate friction material to drum brakes.

Current Strategy:^{2/}

- . Newly designed components should not contain asbestos. When engineering constraints preclude substitution, asbestos may be used if encapsulated or resin coated.
- . Implicit: Continue use of asbestos in carryover designs and in service parts.

Proposed Strategy:

The three fundamental strategic alternatives are to:

1. Wait for government rulemaking before acting.
2. Eliminate the use of asbestos immediately.
3. Proceed now to eliminate/restrict asbestos use in new designs without waiting for rulemaking.

Alternative #3 is recommended because it will meet all likely regulatory requirements applicable to asbestos if implemented as described below. Specifically, it is proposed that the basic Company strategy for product materials be to completely eliminate asbestos (except for service and carryover parts) by the 1985 model year.

- Priority action shall be assigned to new designs. Service parts that now exist for past models and carryover parts shall await an EPA ruling on the requirement for substitutions. (Note: SSECO already has requested of the EPA that past models be exempted from the regulations.)
- Priority shall be given to friction materials and paper products, both of which have been selected by the EPA as initial candidates for analysis and possible rulemaking.

1/ Asbestos Assessment, by Vehicle Materials Development Planning, January, 1980.

2/ NAAO Engineering Practice CEPL-10, December, 1979.

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Proposed Strategy: (Cont'd.)

Accommodation will be permitted for those components for which no suitable and/or feasible substitutes now exist.

- . Asbestos may be considered when performance criteria or other engineering constraints preclude the use of alternative materials and are documented. In such cases, with approval of the responsible PEO/VEO chief engineer and the Vehicle VP, and the concurrence of Industrial Health and Toxicology, and Facility Environmental Engineering, the asbestos content must be reduced to the lowest practicable level and all asbestos must be encapsulated or resin coated to avoid/minimize worker exposure to airborne fibers.
- . Where accommodation is permitted, research/development efforts between Ford and supplier companies shall proceed on a priority basis to develop substitute materials as early as possible.

The foregoing is consistent with CEPL-10, Asbestos Content in Components.

Technical Assessment:

It is judged that the proposed strategy is technically practicable. Major development efforts should be focused on substitute friction materials. Semi-metallic disc brakes already are used on several passenger cars. Drum brakes, due to their design, present particular problems. Heavy Truck Engineering is now using semi-met drum brakes on some vehicles; in addition, HTE has under development a promising nonmetallic, nonasbestos composition for improved wear characteristics. Release for limited production is imminent.

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Engineering Staff
March 10, 1980

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STRATEGY FOR ELIMINATION/ACCOMMODATION OF ASBESTOS - NON-PRODUCTION MATERIALS

Legislative Situation

- o In 1972, OSHA promulgated regulations limiting employee exposure to 5.0 asbestos fibers per cubic centimeter of air. This standard was tightened to 2.0 f/cc in 1976 and could be further lowered to 1.0 or 0.5 f/cc in 1980.
- o Regulations which further impact the use of asbestos materials could be issued by Environmental Protection Agency, Consumer Product Safety Commission, Department of Transportation, etc. EPA, for example is considering the following alternatives:
 - 1) Prohibiting manufacturing, processing, and use of specific asbestos-containing products or product categories.
 - 2) Limiting the amount of asbestos mined and imported.
 - 3) A combination of above.

Company Situation

In response to initial OSHA regulations in 1972, the Company took action to determine plant areas in which employee exposure to asbestos fibers exceeded OSHA standards. All domestic line operations were apprised of the OSHA standards and the requirements for employee protection and medical examination. Early efforts were coordinated through an ad hoc committee with representation from all affected staffs.

With regard to all non-production materials, as knowledge of hazardous/toxic materials increased and governmental regulations were introduced, additional Company controls have been applied to the qualification and use of non-production materials to assure regulatory compliance. Manufacturing Procedure II d 1, issued in 1960, initially provided for toxicological qualification of dimensionless non-production M-number materials. Major revisions to this procedure have occurred as follows:

- 1972 - Formal Industrial Hygiene and Toxicology (IHT) and Facility Environmental Engineering (FEE) clearances required for M-numbered materials.
- 1973 - Submission of complete composition data by outside suppliers to IHT and FEE required for M-numbered materials.
- 1976 - IHT and FEE approval of all dimensionless non-production materials required (including M-numbered and non-M-numbered materials).

A plan for obtaining material composition data for health, safety, and environmental clearances of M-number non-production materials that were approved for use prior to 1973 is being developed by Manufacturing Staff in conjunction with Industrial Hygiene and Toxicology, P&O Staff, and Purchasing and Supply Staff.

Dimensioned materials and articles (i.e., building materials, protective clothing, etc.) have not been subjected to a materials toxicity review in the past. Completed articles are less likely to cause workplace health and safety hazards than the processing or manufacture of the raw materials and substances used to make these articles.

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The potential hazard relative to completed articles containing asbestos appears to be release of fibers during:

- o Dismantling, alteration, or maintenance (pipe insulation, brakes and clutches on equipment, mill board, ceiling tile, etc.)
- o Disposal and use

Current Strategy

Current Company strategy is to provide employee protection equal to or exceeding OSHA requirements. As stated in Industrial Hygiene Bulletin No. 4, actions to be taken where employees are exposed in concentrations in excess of 2 f/cc include personnel protective equipment, local exhaust ventilation, proper cleaning and waste disposal, and the like.

For new non-production materials containing asbestos, a determination is made whether the material can be used as is, used with appropriate controls, or whether substitute materials must be sought.

For non-production materials already in use, substitution by less hazardous materials is encouraged.

Asbestos materials that are part of buildings or equipment, are replaced with non-asbestos materials if

- o they require replacement due to deterioration, damage, plant rearrangements, etc.
- o regulations mandate replacement

Proposed Strategy

The proposed strategy for non-production materials containing asbestos, both dimensionless and completed articles, is to continue the present strategy but direct rather than encourage the elimination of asbestos-containing materials by substituting non-hazardous materials where feasible.

The plan for implementing the above strategy is attached.

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Implementation Plan - Proposed Strategy
Asbestos Non-Production Materials

- | | |
|---|----------------------------------|
| o Issue an appropriate Manufacturing Practice in support of proposed Company Policy in which substitution of non-production materials is directed, where feasible. | Mfg. Staff |
| o Supplement present informational/instructional publications to assure that plant personnel are fully aware of government regulations, hazards involved, and controls required with regard to asbestos. | P&O Staff
Mfg. Staff
SSECO |
| o Reexamine plant conditions using lists of product categories containing asbestos recently published by EPA and other government agencies; in order to further verify or identify situations involving employee risk in terms of exposure. | Mfg. Staff
P&O Staff |

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IDENTIFICATION OF PRODUCTION MATERIALS AND
COMPONENTS CONTAINING ASBESTOS

The attached list of Engineering Material Specifications was compiled by consolidating a preliminary list prepared by Engineering Staff in 1972 with a list prepared by Vehicle Materials Development and Planning, in August, 1979, and with the Industrial Hygiene and Toxicology catalog of reviewed materials containing asbestos.

The consolidated list was then compared to the index of currently active engineering material specifications and the NAEPIS Cross Reference Index to eliminate any inactive specifications not shown as being currently used.

Note: The term "inactive" is used by Engineering Staff to mean "Not recommended for new designs." Such materials may still be in use in carryover parts, and may or may not be shown in the NAEPIS Cross Reference Index.

New specifications issued during the past year were then reviewed to identify any materials not included in the original lists.

This list is being provided to the Chief Engineers per the attached cover letter for their use in compiling a complete list of part numbers and bulk materials used in production. Engineering Staff will consolidate the PEO parts lists, and access the EMOS system to identify material suppliers and materials approved. The consolidated parts list, approved suppliers, and approved material identifications will then be provided to P&S Staff, who will contact suppliers of suspect raw materials and parts to verify/determine asbestos usage in the materials and parts listed. The parts and materials lists will be modified as necessary and presented to the Task Force at its meeting in early May.

Engineering Staff
March 13, 1980

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Inter Office

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March 14, 1980

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cc J. H. Ogden

Subject: Identification of Production Materials and Components Containing Asbestos

The attached list identifies those Engineering Material Specifications to which an asbestos-containing material may be supplied to Ford or to our parts suppliers. This list was compiled by reviewing titles and technical content of specifications for friction materials, plastics, paper products, gaskets, sealers, and electrical insulation materials. The compilation was supplemented by review of the releasing system (NAEPIS) material/part number cross reference index, and the Industrial Hygiene and Toxicology Catalog of reviewed materials containing asbestos. Industry Standard (SAE and ASTM) specifications are also included.

The Task Force on Carcinogens in the Workplace requires a complete list of parts and bulk materials containing asbestos to create a program for systematically eliminating or accommodating this known carcinogen substance. Therefore, each PED is requested to review the list for completeness and establish a list of parts and bulk materials of their design responsibility suspected of containing asbestos, as well as those known to contain asbestos (and distinguish between the two).

This list should be returned to Engineering Staff by April 10, 1980. E&RS will consolidate the lists and provide them, along with the approved suppliers and material identifications, to Purchasing and Supply Staff for supplier contact to determine asbestos usage and prioritized actions to eliminate or accommodate.

The results will be reported at the May 27 meeting of the E&R and M&S Subcommittees.

Attachment


J. W. Durstine

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ASBESTOS CONTAINING MATERIALS

<u>Specification Number</u>	<u>Title</u>
ESN-M1D84-A	Friction Material
ESF-M3D27-A	Mineral and Flock Filled Phenolic Molding Compound
ESF-M3D53-A	Phenolic Molding Sheet - Asbestos Fiber Reinforced
ESE-M3D55-A	Phenolic Molding Compound - Heat Resistant
ESF-M3D76-A	Mineral and Flock Phenolic Molding Compound
ESF-M3D80-A	Asbestos Paper Base - Phenolic Laminate
ESW-M3D81-A	Asbestos Paper Base, Phenolic Laminate - Oil Resistant
ESF-M3D96-A	Alkyd Resin Molding Material - Mineral Filled
ESF-M3D96-B	Alkyd Resin Molding Material - Mineral Filled
ESW-M3D97-A	Phenolic Compression Molding Compound Asbestos Reinforced
ESF-M3D106-A	Phenolic - Transfer Molding Compound
ESW-M3D108-A	Phenolic Injection or Transfer Molding Compound - Asbestos Reinforced
ESF-M3D113-A	Phenolic, Transfer Molding Compound Fast Molding - Mineral Filled
ESW-M3D117-A	Phenolic, Transfer Molding Compound - Mineral Filled
ESA-M3D118-A	Phenolic Injection Molding Compound - Heat Resistant - Mineral Filled
ESB-M3D118-C	Phenolic Injection Molding Compound - Heat Resistant - Mineral Filled
✓ ESB-M3D118-D	Phenolic Injection Molding Compound - Flammability Grade
ESF-M3D126-A	Epoxy Resin - Thixotropic
ESA-M4D140-A	Polypropylene - Asbestos Filled
ESE-M1E65-A	Paper, Filter - Impregnated
ESB-M2E57-A	Rigid Asbestos Millboard
✓ ESB-M2E57-B	Rigid Asbestos Millboard

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Specification Number	Title
ESE-M2G51-A	Adhesive and Sealer, Elastomeric
ESB-M2G58-C	Adhesive, Modified Vinyl - Low and High Temperature Cure
ESB-M2G171-AB	Primer, Adhesion, Elastomeric Bonding Tape
ESB-M4G1-B	Sealer, Synthetic Resin Base - Flowable Low Temperature Heat Curing
ESB-M4G31-A	Sealer, Windshield and/or Backlite
ESB-M4G32-B	Sealer, Windshield and/or Backlite - With Biocide
ESB-M4G32-A	Sealer, Synthetic Resin Base
ESB-M4G40-A	Sealer, Body - Nonsag - Solvent Free
ESB-M4G58-B	Sealer, Pressure Sensitive - Mastic
ESB-M4G101-B	Sealer, Low Temperature Heat Curing Synthetic Resin Base - Thumbable
ESB-M4G108-A	Sealer, Rubber/Resin/Asphalt - Cotton Twine Reinforced
ESB-M4G109-A	Sealer, Plastic Synthetic Resin - Pressure Sensitive Non-Reinforced
ESB-M4G110-A	Sealer, Plastic Synthetic Resin - Pressure Sensitive Reinforced
ESE-M4G114-A	Sealer, Engine and Chassis - Heavy
ESE-M4G115-A	Sealer, Engine and Chassis - Medium
ESE-M4G116-A	Sealer, Engine and Chassis - Light
ESB-M4G126-B	Sealer, Synthetic Resin Base - Low Temperature Heat Curing - Flow Type
ESB-M4G137-A	Sealer, Non-asphaltic - Extruded Non-flow
ESB-M4G137-B	Sealer, Non-asphaltic - Extruded - Heat Leveling
ESB-M4G139-A	Sealer, Synthetic Resin Base - Heat Curing
ESB-M4G139-B	Sealer, Synthetic Resin Base, Low Temperature Heat Curing
ESB-M4G141-A	Sealer, Body - Non-sag - Solvent Free - Sprayable

8003 1814

PRODUCED BY FORD

Specification Number	Title
* ESB-M4G145-A	Vinyl Based Sealer - Heat Curing - Wash Resistant
ESB-M4G145-C	Sealer, Polyvinyl Chloride Base - Heat Curing - Flow Wash Resistant - Sprayable
ESB M4G147-B	Sealer, Synthetic Resin Base - Heat Curing - Flow Wash Resistant - Weldable
ESB-M4G161-C	Sealer, PVC - Expanding - Low Temperature Heat Curing - Weldable - Flow Wash Resistant
ESB-M4G162-A	Sealer, Synthetic Elastomer, Windshield and Backlite After Seal
ESB-M4G172-A	Sealer, Synthetic Resin Base - Low Temperature Heat Curing - Thumbable - Oily Metal Substrates
ESB-M4G174-A	Sealer, Synthetic Resin Base - Low Temperature Heat Curing Thumbable - Oily Metal Substrates
ESB-M4G177-B	Sealer, Synthetic Resin Base - Low Temperature Heat Curing - Thumbable - Electrocoated Substrates
ESB-M4G197-A	Sealer, Monobake - Non-Flow Grade
ESB-M4G198-A	Sealer, Monobake - Thumbable Grade
ESB-M4G198-C	Sealer, Monobake - Thumbable Grade - Flow Wash Resistant
ESB-M4G213-A	Sealer, Vinyl - Sprayable, Heat Curing, Flow Wash Resistant, Weldable, Over Oily Metal
ESB-M5G8-A	Deadener, Sandless - High Efficiency - Reduced Flammability
ESB-M5G22-A	Deadener, Mastic - Sandless High Efficiency - Exempt Solvent
ESB-M5G25-A	Deadener, Mastic - Corrosion Resistant - Exempt Solvent
ESE-M8G1-A	Gasket, Asbestos/Neoprene Rubber
ESE-M8G45-A	Gasket - Reinforced Asbestos (Liquid Proof)
ESF-M8G55-A	Gasket, Asbestos/Nitrile Rubber
ESE-M8G59-A	Synthetic Rubber Bonded Asbestos Laminated Seal Material
ESE-M8G62-A	Gasket - Rubber and Asbestos (Long Fiber)
ESE-M8G63-A	Gasket - Fiber Inner Ply Asbestos/Synthetic Rubber Coated Both Sides

8003 1815

PRODUCED BY FORD

Specification Number	Title
ESF-M8G65-A	Buna Asbestos Gasket Material
ESN-M8G67-A	Asbestos, Synthetic Binder and Steel Core Gasket
ESE-M8G72-A	Gasket - Asbestos, Buna N Binder and Steel Core - Coated
ESE-M8G73-A	Asbestos, Synthetic Rubber and Steel Core Gasket
ESE-M8G78-A	Sheet Asbestos
* ESE-M8G87-A	Woven Asbestos Packing (Jute Center)
ESE-M8G87-B	Woven Asbestos Packing (Jute Center)
ESA-M8G94-A	Gasket - Reinforced Asbestos
* ESF-M8G96-A	Gasket - Asbestos and Nitrile Rubber
ESN-M8G105-A	Woven Asbestos Packing - E. P. Lubricant (Jute Center)
ESE-M8G106-A	Gasket - Rubber and Asbestos
ESE-M8G106-B	Gasket - Rubber and Asbestos - High Temperature
ESE-M8G108-A	Gasket - Asbestos and Chloroprene Binder
ESW-M8G109-A	Gasket Material - Asbestos Fiber Composition
ESW-M8G109-B	Gasket Material - Asbestos Fiber Composition
ESEN-M8G121-A	Gasket Material - Asbestos Fiber and Synthetic Rubber Composition
ESA-M8G122-A	Asbestos and Rubber Gasket Material - Low Compressibility
ESE-M8G124-A	Gasket - Asbestos and Synthetic Rubber Binder with Steel Core
ESF-M8G126-A	Asbestos and Nitrile Rubber Gasket Material
ESEN-M8G133-A	Gasket - Asbestos, Steel Reinforced
ESW-M8G135-A	Gasket, Asbestos Fiber/Elastomers - Beater Addition
ESE-M8G136-A	Gasket, Asbestos Fiber/Neoprene Rubber Binder
ESE-M8G137-A	Gasket, Steel Core - Fiberboard - Asbestos/Rubber

8003 1816

PRODUCED BY FORD

Specification Number	Title
ESE-M8G138-A1	Gasket, Steel Core - Asbestos/Wire - High Temperature
ESE-M8G138-A2	Gasket, Steel Core - Asbestos/Wire - High Temperature
ESE-M8G138-B1	Gasket, Steel Core - Asbestos/Wire - High Temperature
ESE-M8G138-B2	Gasket, Steel Core - Asbestos/Wire - High Temperature
ESA-M8G140-A	Gasket, Asbestos Sheet - Heat Insulating
ESE-M8G143-A	Gasket, Asbestos/Phenolic Resin - Graphite Coated - High Temperature
ESE-M8G144-A1	Gasket, Steel Core - Asbestos/Nitrile Rubber
ESE-M8G144-A2	Gasket, Steel Core - Asbestos/Polyacrylate Rubber
✓ ESB-M8G145-A	Insulator, Asbestos/Resin - Bonded - Seat Belt Anchor
ESA-M8G147-A	Gasket, Asbestos Composition - Heat Insulating
ESE-M8G149-A	Gasket, Steel Sheet - Asbestos/SBR
ESE-M8G150-A	Gasket, Rubber and Asbestos - Beater Add Sheet - High Temperature
ESF-M3L56-A	Laminate - Asbestos Mat Phenolic
SAE J90B	Gasket Materials
ASTM D709	Laminated Thermosetting Materials
ASTM F104	Gasket Materials

* Inactive specification, but material still in use according to NAEPIS Cross Reference Index

E&RS
3-7-80

8003 1817

PRODUCED BY FORD

MATERIALS DATA SYSTEMS

Programs Analysis and
Materials Engrg. Dept.
February 12, 1980

8003 1818

PRODUCED BY FORD

1014

MATERIALS AND TOXICOLOGY SYSTEM - TOX FILE PRINT

TOX # 000038 REF # X00038 NAA0:A063 XYZ CHEMICAL COMPANY
PRODUCT: HEAVY DUTY CLEANER
M# REVISE YR 79 STATUS DATE 791018
STATUS:07 INPUT COMPLETE, EDITED

STD LETTER: 03 PARA:		HIST	CAS #	COMPOSITION
MF8	COLOR	CODE	%	CAS NAME
---	---	---	000497198	30.000 SODIUM CARBONATE
---	---	---	000533960	10.000 SODIUM SESQUICARBONATE
SHOP #	MATSN	---	001344098	10.000 SODIUM SILICATE
---	---	---	007632055	50.000 SODIUM PHOSPHATE
CHEMISTRY	---	---	008002093	05.000 PINE OIL
TYPE POWDER	WT/VOL P SP/GRAV	---	025322683B	02.000 ANIONIC SURFACTANT
---	---	---	025322683C	05.000 NONIDNIC SURFACTANT
PH FULL=	NA DIL= 12.0 % SOL= 04.0	---	034590948	05.000 DIPROPYLENE GLYCOL METHYL ETHER
---	---	---	061788656L	10.000 SOAPS & DETERGENTS
BOIL LOW=	NA HIGH= DEG	---	---	---
FLASH=	NA DEG TEST	CUP	---	---

DOT CODE: 10 CORROSIVE MATERIAL
UN # NAME: CORROSIVE SOLID NOS

BULLETIN: 09 GLYCOL ETHERS
10 CORROSIVE MATERIALS

PROTECTIVE MEASURES
01 IMPERVIOUS GLOVES
03 CHEMICAL GOGGLES
04 FULL FACE SHIELD
05 IMPERVIOUS APRON
06 IMPERVIOUS BOOTS

CONTAINS: CAUSTIC MATERIAL AND GLYCOL ETHERS

PRECAUTIONS

01 DANGER
07 CAUSES BURNS
20 DO NOT GET IN EYES, ON SKIN OR CLOTHING
32 IN CASE OF EYE CONTACT, FLUSH EYES WITH WATER FOR 15 MINUTES AND GET MEDICAL ATTENTION AT ONCE
33 FOR SKIN CONTACT, WASH IMMEDIATELY WITH SOAP AND WATER
35 REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE

8003 1819

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MATERIALS AND TOXICOLOGY SYSTEM (MATS)

Background

1. Catalog of Hazardous Materials

- . Begun in 1976.
- . Grew to 2,000+ materials by 1978 (primarily manufacturing materials).
- . Assumed Michigan Department of Natural Resources (MDNR) Critical Materials Reporting responsibility from Plant Engineering in 1978.
- . Mass solicitation of Suppliers by Purchasing in 1978 generated approximately 5,000 additional materials to be reviewed. Basic chemistry only loaded in system due to time pressures.
- . On-line MATS launched September 1979 with 8,000+ materials.
- . 1979 MDNR reporting completed with MATS.
- . Form 1291, Material Health & Safety Data Sheet, is used to request supplier product composition.

8003 1820

RECEIVED
FORD

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Engineering Materials Approved Source List

1979-09-11

PAGE 20

SPECIFICATION NO. NAAO CODE	SPECIFICATION TITLE SUPPLIER NAME REMARKS	TYPE/ GRADE	COLOR CODE	COLOR NAME	LOG NO.	T O X	SUPPLIER'S CODE	FORD FILE REFERENCE	FORD APPR. DATE	NOTES
(continued)										
ESB-M4D176-A	POLYPROPYLENE, MEDIUM IMPACT, MOLDING COMPOUND,									
H276A	HERCULES, INC.				1797		PRO-FAX 7523N	BML-376-69	69-11-19	1
N935A	NOVAMONT CORP.				10408		MOPLIN	UF-0/BML	71-08-24	1
					12525		DH-060-W MOPLIN DH040W	CLS-36467 DEPL/MES LN-77059	77-09-14	63
S093A	A. SCHULMAN, INC.				1798		PP-828	CLS-52863	70-04-13	
S217A	SHELL OIL CO.				1799		7525	BEO-BML	72-10-30	
U062A	UNION CARBIDE CORP.				1800		JMDA 4965	BML-191-72 BML-195-65RP	65-11-16	
ESB-M4D176-B	POLYPROPYLENE, MEDIUM IMPACT, MOLDING COMPOUND, (SHOWN ON ESB-M4D176-A)									
A386A	AMERICAN OIL COMPANY				1801		6214	BEO/BML 243-71	71-11-12	1
D050A	DART INDUSTRIES, INC.				10410		EL REXENE PP-1555	BEO/BML 182-67RP	71-11-12	1
E065A	EASTMAN CHEM. PROD., INC				1802		4F31A	BEO/BML 264-66RP	71-11-12	1
E960A	EXXON CHEMICAL CO. U.S.A.				1803		ESCON 805HC	BEO/BML 180/65RP	71-11-12	1
G908A	GULF OIL CORPORATION				14564		PX-8217	BEPE/BML	78-07-18	120
H276A	HERCULES, INC.				1804		PRO-FAX 7523N	BEO-BML 149-72	72-03-29	1
N935A	NOVAMONT CORP.				12526		MOPLIN DH040W	BEPE/MES LP-77059	77-09-14	63
S093A	A. SCHULMAN, INC.				1805		PP 828	BEO/BML CLS-52863	71-11-12	1
ESB-M4D176-B	POLYURETHANE FOAM, WITH SLUSH MOLDED PLASTISOL SKIN HIGH RESILIENCE, .									
A177A	ALLEN INDUSTRIES				1806	R	3-81-1	PE-96	67-06-05	1
A715A	ARROW MOLDED PLASTICS, INC.				10411	R	157616	PE-137	67-07-11	1
B021A	B&S FOAM PLASTICS, INC. PE-263				1807	R	#127	PE-137	68-12-16	1
D076A	DAVIDSON RUBBER CO.				1808	R	XB 518696	PE-515	66-09-07	1
G546A	B. F. GOODRICH CANADA, LTD.				1809	R	XB 518696	PE-514	66-09-07	1
L290A	LEON PLASTICS				1810	R	VIP1-46-A	PE-52	68-04-04	1
S238A	SHELLER-GLOBE CORP.				1811	R	5424140	PE-533	66-09-07	1
S430A	SPARTAN PRODUCTS, INC.				10413		ED-118	PE-88	68-04-03	1
XP010	PARAMOUNT GASKET				10412	R	G0273	PE-258	67-11-07	1
XS006	SUN RUBBER				10414	R	S852-A	PE-530	66-09-07	1
ESB-M4D176-C	POLYURETHANE FOAM, WITH SLUSH MOLDED PLASTISOL SKIN HIGH RESILIENCE - SOIL RESISTANT, . (SHOWN ON ESB-M4D176-B)									
A177A	ALLEN INDUSTRIES				1812	R	180-B	PE-83	69-07-09	1
D078A	DAVIDSON RUBBER				1813	R	3-81-1 (C)	PE-96	69-03-20	1
G546A	B. F. GOODRICH CANADA, LTD.				1814	R	XB-518696	PP-515	69-11-12	1
L290A	LEON PLASTICS				1815	R	XB-518696	PP-514	69-03-20	1
S238A	SHELLER-GLOBE CORP.				1816	R	VIP-7-119-A	PE-52	69-03-20	1
S430A	SPARTAN PRODUCTS, INC.				1817	R	5424140 (221-69)	PE-533	69-03-20	1
XP010	PARAMOUNT GASKET				10416		SPE54A	PE-88	69-03-20	1
XS006	SUN RUBBER				10415	R	G0273	PE-258	69-03-20	1
					10417	R	810V8-10-72801	PE-530	69-03-20	1
ESB-M4D176-D	POLYURETHANE FOAM, WITH SLUSH MOLDED PLASTISOL SKIN HIGH RESILIENCE - SOIL RESISTANT, . (SHOWN ON ESB-M4D176-B)									
D076A	DAVIDSON RUBBER CO.				1818	R	20116006	D076A003	72-12-05	
D078A	DAVIDSON RUBBER				1819	R	FF4021-FOAM VP1170-SKIN	SA4D176-529	75-10-02	
K640A	KITCO MFG. CO. EATON				10418	R	1-3187	E 0002	72-08-01	
S238A	SHELLER-GLOBE CORP.				1820	R	214-74-18	S2220168	72-03-10	
XS006	SUN RUBBER				10419	R	81018-10-72801	S8520072 & 4	72-05-01	
ESB-M4D176-E	POLYURETHANE FOAM, WITH SLUSH MOLDED PLASTISOL SKIN HIGH RESILIENCE, . (SHOWN ON ESB-M4D176-B)									
D076A	DAVIDSON RUBBER CO.				1821	R	2012 SKIN 6066 FOAM	SA4D176E-428	74-10-04	
D078A	DAVIDSON RUBBER				1822	R	FF4021-FOAM VP1170-SKIN	SA4D176-529	75-10-02	
G546A	B. F. GOODRICH CANADA, LTD.				1823	R	XB-518696	G597A003	72-08-01	

(continued)

MATERIALS ENGINEERING DEPARTMENT
ENGINEERING & RESEARCH STAFF

8003 1821

PRODUCED BY FORD

2. Engineering Materials On-Line System (EMOS)

- . Launched September 1978.
- . Contains worldwide materials specification titles and source approvals for NAAO.
- . The Index to Engineering Material Specifications and the Engineering Approved Source List, with TOX status shown, are printed from EMOS.
- . 14,000 materials and 8,000 specifications (including FOE).
- . Form 1464 is used to indicate Engineering Approval and toxic/hazardous assessment.

8003 1822

PRODUCED BY FORD

8003 1830

PAGE 26

APPROVED SOURCE LIST - NON-PRODUCTION MATERIAL STANDARDS
LISTED BY NUMBER

MM CLASSIFICATION

M. P.	TITLE	NAAC CODE	NAME OF MANUFACTURER	MANUFACTURERS IDENT	IMST ENVR NOTES APPR APPR
M-99R1114(A)	PIGMENTED PAKALING COMPOUND - MONOMERATIVE	M375	MEYNE CHEM PROD CO	35-W	
M-99R1115A(M)	CHEMICAL DENUF RUFFEN SALT	M232 M116	HEATBATH CORPORATION MACOENPIO INC	CHEMBURR 3F-1 ADDITIVE MACRO POLISH AA	78
M-99R1116A(H)	CHEMICAL UERINER MAKE-UP CONCENTRATE	M179 M172 M116	ALLIED-KELITE PROD HEATBATH CORPORATION MACOENPIO INC	IRIZITE A7 CHEMBURR 3F-1 CONCENTRATE MACRO POLISH 5F	78 78 78
M-99R1117A	DISINFECTANT-SEMIBITION	T10P M401	TEXITE CHEMICALS WEST CHEMICAL PRODUCTS	WESUL	78
M-99R1120A	PAINT SPRAY BUNTIN WATER WASH COMPOUND		ANY GOOD CHEMICAL MANUFACTURER		
M-99R1121A	ALKALINE PAINT REMOVER - HOT SOAP TYPE - LIQUID	P233	PENNYWALT CORP	AE-17	78
M-99R1121B	ALKALINE PAINT REMOVER - HOT SOAP TYPE - FLAKE	A266 P233	ESNA DIV-AMERACE PENNYWALT CORP	X1193 AE-20	78
M-99R1127A	SPRAY BUNTIN WATER COMPOUND - NOCAUSTIC TYPE	M517 T850	HOOKER CHEMICAL TUNCO PRODUCTS INC	MO 2373 TURCO 004R-203	78 78
M-99R1129A(E)	SPRAY BUNTIN WATER COMPOUND	C559	COLLOIDAL PAINTS COMPANY	BRICATE W	78
M-99R1130A(M)	SPRAY BUNTIN WATER COMPOUND LIQUID TYPE	D210	DETREX CHEMICAL INC	BOOTHMOL-L JM-00	
M-99R1131A(F)	SOLVENT RESISTANT COATING	P862	PRODUCT-SOL INC	525	78
M-99R1131H(F)	SOLVENT RESISTANT COATING	P862	PRODUCT-SOL INC	525-4	78
M-99R1132A(A)	ACID PICKLING INHIBITOR	M502	HARRY MILLER CORP	ACTIVOL 359-P	78
M-99R1133A	SPRAY BUNTIN WATER COMPOUND - GENERAL DRY TYPE	A239 C866 F982 M196 M742	AMCHEM PROD CO CRESCENT CHEMICAL CORPORATION FREMONT INDUSTRIES INC KELITE PRODUCTS INC KLEM CHEMICAL COMPANY	10-P AND 10-PO U-ZOLVZIT NO 54 KELITE R D M-13865A	78
M-99R1133B	SPRAY BUNTIN WATER COMPOUND - GENERAL LIQUID TYPE	C866 M742	CRESCENT CHEMICAL CORPORATION KLEM CHEMICAL COMPANY	GEM M-13865B	78
M-99R1133C	SPRAY BUNTIN WATER COMPOUND - NOCAUSTIC DRY TYPE	A239 A266 C866 M742	AMCHEM PROD CO ESNA DIV-AMERACE ETSUL PRODUCTS INC KLEM CHEMICAL COMPANY	NO 24 KLER-F M-13865C	
M-99R1133D	SPRAY BUNTIN WATER COMPOUND - NOCAUSTIC DRY TYPE	M742	KLEM CHEMICAL COMPANY	M-13865D	

8003 1823

PQ

PRODUCED BY FORD

3. Manufacturing Material Approved Source List

- . Launched November 1979.
- . Contains 2,000+ materials and specification titles.
- . Form 68-100, 1291, lab analysis and shop trial are used to qualify nonproduction M number materials.

4. Manufacturing Staff, Plant Engineering Facility Environmental Controls

- . Decided January 1980 to include environmental controls on the toxicology review as part of Manufacturing Procedure II.d.1.
- . Estimated launch on MATS is March 1980.
- . Form 68-100 is used to indicate environmental approval.

8003 1824

PRODUCED BY FORD

8003 1825

PRODUCED BY FORD

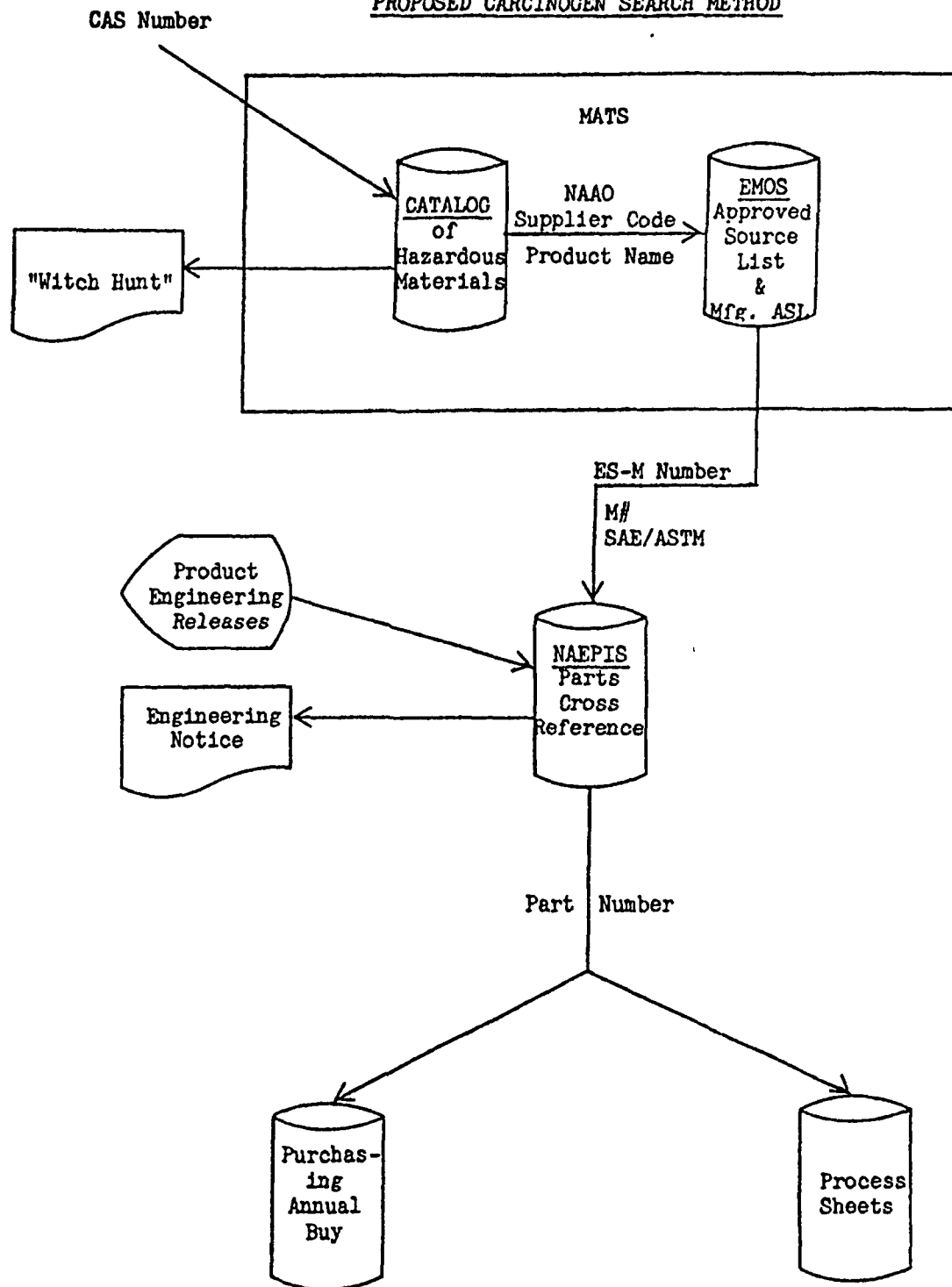
5. North American Engineering Product Information System (NAEPIS)

- . Corporate releasing system for end item (AAD installed) and component parts.
- . Generates the Engineering Notice of Part Release.
- . Feeds AAD Purchasing, QC, Process Engineering and Material Supply.
- . Produces the Materials/Parts Cross Reference.

8003 1826

PRODUCED BY FORD

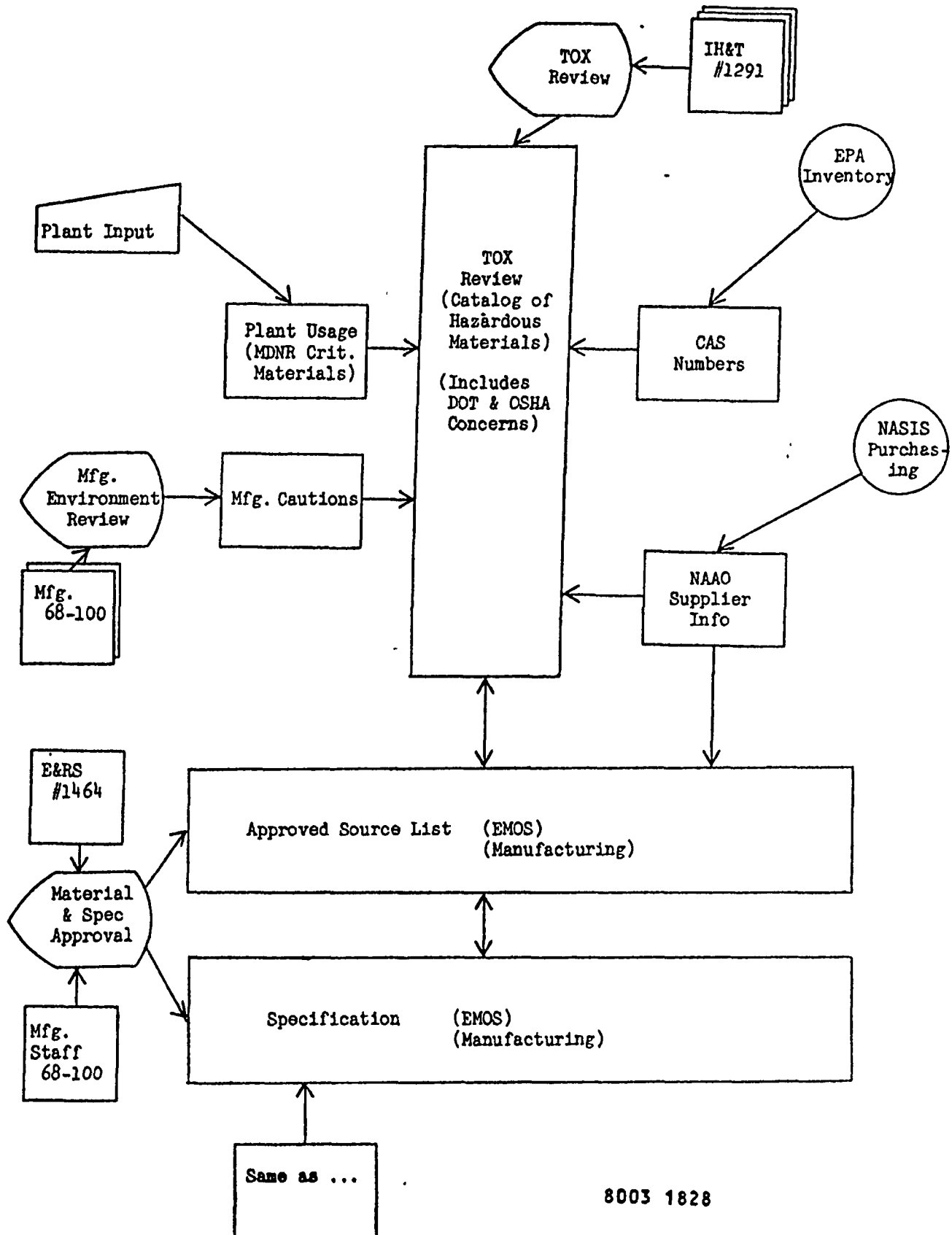
PROPOSED CARCINOGEN SEARCH METHOD



8003 1827

PRODUCED BY FORD

MATERIALS AND TOXICOLOGY SYSTEM



8003 1828

PRODUCED BY FORD

Schedule 1

NAPIS MATERIALS CALL-OUT AUDIT

1ST QUARTER 1980

		Total Parts	Percent Without Materials Call-Out		
End Item			4Q79 %	1Q80 %	Better/ (Worse)
	BEPE/EED	1,452	50%	44%	6 %
	Body	15,061	13	16	(3)
	CCD	985	44	57	(13)
	Chassis	3,748	18	3	15
	Engine	3,601	48	57	(9)
	Trans	347	29	32	(3)
	TRPO	10,355	75	67	8
Total Avg.		35,549	35%	36%	(1)%
Component	BEPE/EED	1,319	62%	63%	(1)%
	EED	2,073	-	0	-
	Body	20,999	17	12	5
	CCD	657	57	63	(6)
	Chassis	5,032	27	8	19
	Engine	2,990	60	97	(37)
	Trans	4,029	25	6	19
	TRPO	7,517	81	76	5
Total Avg.		44,616	36%	29%	7%

Schedule 2

LEVEL OF EFFORT REQUIRED TO UPDATE NAEPIS MATERIALS

AUDIT AND UPDATE OF MATERIAL SPECS

PEO	Total Parts	100%* Audit MM	Partial Audit %	Partial* Audit MM
EED/Body	2,771	.7	50%	.4
EED	2,073	.5	0	0
Body	36,060	9.0	15	1.4
CCD	1,642	.4	50	.2
Chassis	8,780	2.2	15	.3
Engine	6,591	1.6	100	1.6
Trans	4,376	1.1	50	.5
TRPO	17,872	4.5	80	3.5
	80,165	20.0 1.6 my		7.9 0.6 my

* 100 Drawings/Day = 1/2 Man

8003 1829

PRODUCED BY FORD

PROBLEMS AND PLANNED RESOLUTION

1. Incomplete NAEPIS Materials/Parts Cross Reference

- . Engineering Staff has audited the completeness and accuracy of the materials information in the release system in 4Q79 and 1Q80. The results are shown in Schedule 1.
- . Schedule 2 shows the level of effort required from the product engineering offices in order to clean up the system at 100% review, and at the level of effort to complete only those parts without materials call-outs in the computer.
- . The individual product engineering offices will have to address this problem. E&RS will convey the results of the audit to them.

8003 1830

PRODUCED BY FORD

MATS (CATALOG PORTION) DATA BASE STATUS

AS OF 1/25/80

	<u>Records</u>	<u>% of Total</u>
Toxicology Reviewed, to be Audited	3,101	35%
Codes 01 - Original Catalog	2482	
02 - Catalog Supplement	713	
Incomplete	4,995	57%
Codes 03 - No CAS #	3710	
04 - Reviewed - Not Crit.	580	
05 - Insif Info - Refused	43	
06 - Incomp - CAS # OK	48	
10 - 1291 Rec. - In Process	614	
Waiting for 1291 Data Sheet	222	3%
Codes 11 - 1464 Rec. - Wait 1291	109	
14 - Audit Rec.-No Data Sheet	113	
Complete	470	5%
Codes 07 - Complete Edited	121	
09 - 1464 S/O-No Review Req.	227	
12 - Audited	122	
	<u>8,788</u>	<u>100%</u>

8003 1831

PRODUCED BY FORD

2. Proprietary Composition Information

- . Some (very few) suppliers have refused to disclose detailed composition information on their products in order to protect trade secret formulations. These refusals have been separately coded in the data base and can be retrieved for special attention later.
- . The primary problem is not refusal to disclose but a failure to disclose in sufficient detail on the first submission of data. This has necessitated substantial supplier follow-up.
- . A defined standard will be included in the revised Material Health & Safety Data Sheet (form 1291) to be issued by Industrial Hygiene & Toxicology.

3. "Incomplete" Information in the CATALOG

- . The mass solicitation by Purchasing generated approximately 5,000 data sheets to be reviewed. Time pressures for the MDNR reporting caused these products to be loaded with just the chemical information as shown by the supplier. No toxicology review was performed nor was the chemical information subjected to the detail quality standards required for spill analysis and waste characterization by SSECO.
- . 100% audit was approved in December 1979. The plan is to review all of the products currently on file for a supplier, update and correct as many of the products as possible and, when a group of suppliers, e.g., paints, adhesives, have been audited, then call a meeting of the major suppliers to show them what we have reviewed and ask their assistance in updating incomplete reviews and for submission of data sheets on any products that they currently supply which are not on our list.
- . Paints are currently under review. It is expected that the information will be in the system by May to coincide with the sign off of the 1981 production paints. Adhesives, Chemicals, and/or Petroleum Products are the next audit priorities in that order.
- . It is proposed that IH&T report their progress toward the 100% audit goal to the task force monthly.

8003 1832

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1980 MATS AND ASSOCIATED BUDGET

		<u>E&RS</u> (000)	<u>P&O</u> (000)	<u>Mfg.</u> (000)	<u>Total</u>
Development	Complete MATS	38.0	41.0	24.0	103.0
	Cross Reference	13.2			13.2
	Audits	12.0			12.0
	State Tox Reporting		9.0		9.0
	Tie to CAS		12.0		12.0
	TOTAL DEVELOPMENT	63.2	62.0	24.0	149.2
Operation	Updates/Reports/ Storage	44.0	42.0	4.8	90.8
	TOTAL BUDGET	107.2	104.0	28.8	240.0
Commitments	Programming	25.0	50.0	25.0	100.0
	Operation ICBA	57.4	42.0	5.0	104.4

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4. Matching the Engineering/Manufacturing Approved Source Lists to the CATALOG

- . After the data bases are physically adjacent in MATS, substantial manual analysis will be necessary in order to determine the "link" where Toxicology has reviewed a material on the ASL. After the analysis, projected to be completed in third quarter, the system will print lists, by supplier, of engineering/manufacturing approved materials which have not been toxicologically evaluated. Supplier contacts by Engineering and Manufacturing will then be necessary to obtain the required Health and Safety Data Sheets.

5. MATS Development Schedule

- . Current priorities are:

1. Standard Letter Code Generation
2. Environmental Evaluation Input Screen
3. Pigment Handling
4. Security for Plant/UAW Access

The merger of the Engineering/Manufacturing Approved Source Lists has been delayed until at least third quarter 1980 because of lack of programming resources until then. This is undesirable in that it will force a second supplier solicitation to resolve ASL/CATALOG difference after the 100% CATALOG audit scheduled for second quarter.

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6. Industry Standard Specifications (SAE/ASTM, etc.)

- . The planned data base (MATS) will be capable of handling Industry Standard Specification and source approvals. Current plans are to extract all SAE/ASTM specifications referenced in NAEPIIS and load those specifications in MATS. They would be initially shown without source approval information. It is anticipated that most industry standard materials can be toxicologically cleared through the use of Industrial Relations Bulletins and will not require supplier solicitation for composition information.

7. PIA Parts

- . Where materials are specified for PIA parts, those materials should be shown on the materials/parts cross reference. However, for those PIA parts without material specifications, it is proposed to cover them with the PN certification that the parts "comply with all applicable regulations".

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ATTACHMENT I

TASK FORCE ON CARCINOGENS IN THE WORKPLACE

TASK FORCE MEETING, JANUARY 31, 1980

ATTENDANCE

<u>Name</u>	<u>Activity</u>	<u>Company Mailing Address</u>	<u>Telephone</u>
R. P. Schmuckal	E&RS, Materials	Parklane Towers E., 300	30523
R. M. Dierkes	P&S Staff	FMCC 2518	79608
J. D. Nordstrom	DPO, PPV	Mt. Clemens Paint Plant	776-3386
A. B. M. Houston	SSECO	628 Parklane Towers West	59-40324
D. L. Block, M.D.	Employee Health Service	900 Parklane Towers West	21134
G. F. Bolling	Car Engineering	1030 Building #5	29175
W. J. Rooney	Office of Gen. Counsel	1018 WHQ	21363
J. S. Amber	SSECO	628 Parklane Towers West	24646
J. H. Stock	Car Engineering	1049 Building #5	44134
J. P. Bernard	B.E.P.E.	1022 Body Engrg. Bldg.	79080
G. T. Luzanski	Truck Operations	1007 Bldg. #1	28299
R. W. Layman	Org. Plng./P&O Staff	475 WHQ	78895
J. W. Shaw	Manufacturing Staff	525 WHQ	24240
G. O. Keutgen	Manufacturing Staff	500 WHQ	23761
J. W. Durstine	E&R Staff	300 Parklane Towers East	35400
A. G. Folger	PEO, Mfg. Staff	600 WHQ	23321
R. F. Birdsall	PEO, Mfg. Staff	300 Ren Cen P. O. 43340	568-4733
E. B. Bennett	Manufacturing Staff	501 WHQ	24822
K. B. Termaat	E&RS	305 Parklane Towers East	25435
J. A. Brown	Research Staff	E3198 Sci. Lab	21483
W. H. Fitzsimmons	FPSD - PEO	FPSD - GO	75180
E. P. Francis	Chassis Engineering	2024 Bldg. #5	31799
P. E. Toth	P&O Staff	900 PLTW	20210
G. D. Conover	E&RS	806 PLTE	21080

8003 0994

January 31, 1980

TASK FORCE ON CARCINOGENS IN THE WORKPLACE

TASK FORCE MEETING, JANUARY 31, 1980

ATTENDANCE

Name	Activity	Company Mailing Address	Telephone
13 R. P. Schmuckal	Engr. Staff	300 Parklane Towers E.	30523
8. D. CONVEYER	ENGR. STAFF	800 Parklane Towers E.	251557 21054
18 G. Lamb	Eng. Staff	300 PLTE	75364
21 J. David Nordstrom	DPO - PPV	PAINT PLANT (Mt. Clemens)	776-3386
1. J. S. Amber	ESSES (SSECO)	628 W Parklane Towers	24646
16 A. B. M. HOUSTON	ETEE (SECO)	" " " "	40324
6. G. F. BOLLING	CAR ENGR	1030 BLDG 5	29175
22 Bill Rooney	OCC	1018 WHQ	21363
25 J. H. STOCK	C.E.	1049 BLDG #5	44134
10. R. M. DIERKE	PTSS	2518 FMCC	79608
3. J. P. BERNARD	BEPE	1022 Body Engr	79080
20 G. T. LUZANSKI	TRUCK OPR.	1007 BLDG #1	28299
17 R. W. LAYMAN	ORG. PLANNING - P&O	475 WHQ	78895
2. E. B. BENNETT	MFG STAFF	501 WHQ	24822
4 R. F. Birdsall	MFG STAFF	300 RENCEN Box 43340	568-4733
24 J. W. SHAW	" "	525 WHQ	24240
7. J. A. BROWN	Research Center	E 3198 33066	21483
14 A. G. FOLGER	Plant Engrg	660 WHQ	23321
17 G. O. Keugen	WHQ STAFF	500 "	23741
11. J. W. Durstine	ETES	300 PLTE	35400
13 W. H. FIFE-SIMMONDS	FPSD-PEO	FPSD-GO	25180
15 E. P. FRANCIS (MA PARTITION)	CHASIN	2024 BLDG 5	31799
26 K. B. TERNAT	FIRS	300 PLTE	25615
5. D. L. BLOCK, MD	P&O	900 PARKLANE TOWERS W.	21154
27 PAUL E. TOTTH	P&O	" " "	20210

8003 0995

CARCINOGENS IN THE WORKPLACE ASBESTOS WORK PLAN

Action	Responsibility	Status
- Summarize status of asbestos regulations (current & anticipated) by OSHA, TSCA, CPSA, RCRA, etc. - Compile list of all specifications for product engineering materials (ES-M's) containing asbestos. - Compile list of all specifications for manufacturing (non-product) materials containing asbestos. - Identify all product engineering uses (by part No.) of asbestos and verify with PEO's - using ES-M's, NAEPIS cross-reference, computer data base, etc. - Identify all manufacturing & plant engineering uses/processes involving asbestos. - Determine compliance/non-compliance with government regulations at Ford for each usage. (Assess material/application, monitor workplace, etc., as required. - Contact suppliers (parts & raw materials) to verify that asbestos bearing items sold to the Company comply or can be produced to comply with all regulatory requirements. - Determine effects of asbestos regulations on Company and outside operations affected by distribution of service parts and servicing of Ford products. - Develop most likely regulatory scenarios and define parameters for the development, by line organizations, of programs to eliminate/accommodate asbestos.	SSECO*/Employee Health Services Engineering Staff*/PEO's Mfg. Engr. & Plt. Engr., Manufacturing Staff Car Engineering*/Engineering Staff/PEO's Mfg. Engr. & Plt. Engr., Mfg. Staff*/Div. Mfg. Engr. & Plt. Engr. Employee Health Services*/SSECO P&S Staff*/B&AO, PTCO, DPO, Truck FPSD*/Employee Health Services Task Force	Complete Essentially complete. Some materials may include asbestos without being identified in specs. Will access computer data base when input data are complete. Fairly complete, but may not include all TRPO & FPSD service parts, or certain parts made to specs. which do not identify asbestos. no time - talk (data of work involved, not much headcount left) (1291 being revised to establish uniform instructions, and list 189 critical materials) Mr. Ditzmanns will provide a note up

8003 1044

- 2 -

Action	Responsibility	Status
Determine whether basic strategy should be accommodation or elimination.	Plt. Engr., Mfg. Staff*/Div. Plt. Engr./B&AO*/PTCO*/DPO*/Truck*	
If accommodation: Determine whether in-plant controls are required & feasible.	Mfg. Staff*/Div. Mfg. Engr. & Plt. Engr./Chief Engineers* of B&AO, PTCO, DPO, Truck	
If elimination: Initiate necessary action to develop substitutes and timing contingencies for release.	Task Force	
- Synthesize a long-term strategy for asbestos control. - Review materials strategies/contingencies for accommodation/elimination/release of substitutes with E&R and M&S Subcommittees.	Task Force	
* Lead Activity		

Why not write guidelines for paper and friction products, along with Handtan, in anticipation of regulations? (Time table for substitutes, etc.) How when we have a regulation will be ready. What, if any preparation, can we make?

What do we anticipate as the best action by Board for present and anticipated reg?

January 31, 1980
Programs Analysis and
Materials Engrg. Dept.

TASK FORCE ON CARCINOGENS IN THE WORKPLACE

TASK FORCE MEETING, JANUARY 31, 1980

AGENDA

. Recap of Substance Priority Force Rankings	G. D. Conover
. Priority Consensus Position	All
. Asbestos Regulatory Update	A. B. M. Houston
. Asbestos Assessment	D. M. McCarthy
. FPSD Asbestos Concerns	W. H. Fitzsimmons
. Asbestos Workplan (Draft)	R. P. Schmuckal

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CARCINOGENS IN THE WORKPLACE

FPSD - ASBESTOS CONCERNS

Ford Parts and Service Division's reply to the Task Force Action Plans, copy attached, outlines the workplaces where we have concern to provide adequate warnings and instructions to handlers and users of asbestos containing products. Additionally, the FPSD is concerned with unique products released that are not identical in design and/or material as initially released by other P.E.O.'s. These unique products are in the following categories:

- Accessories
- Paints
- Oils & Lubricants
- Cleaners - Polishes - Waxes
- Motorcraft Parts for Extended Lines
- Heavy Truck - Drop Ship Parts for Extended Lines
- Remanufactured Parts - Current & Past Model
- Resourced Ford Parts - Out of Production Parts or to reduce material cost or improve the supply base.

The Division supports the need to identify products containing asbestos so that they can be flagged and treated in accordance with proper safeguards. The most obvious problem for this Division is the handling of brake linings that may contain coatings of asbestos dust particles or that require grinding by Remanufacturers or dealer mechanics. In subsequent Task Force meetings specific actions taken and required will be reported in more detail as appropriate.

The Parts Engineering Office Compliance Manager is proceeding to establish a plan which will identify asbestos containing FPSD products on a continuing basis. Specific problem products will be reported as they are identified.

Attachment

Component Engineering Dept.
Ford Parts and Service Division
January 31, 1980