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ENGINEERING ASBESTOS PLAN

PURPOSE

To establish an engineering plan anticipating the effects of proposed changes in the federal regulations governing environmental exposure to asbestos.

BACKGROUND

On October 9, 1975, the Occupational Safety and Health Administration (OSHA) proposed (among other regulations) a lowering of the permissible occupational exposure limit for asbestos from the current 2 fibers per cubic centimeter to .5 fiber/cc.* The action was based upon known links between asbestos exposure and certain diseases (asbestosis and several forms of cancer). Since that time, the proposed standard has been attacked by asbestos and mining interests as being too restrictive, and by some medical authorities as not being restrictive enough. The latter propose .1 fiber/cc as a standard. These developments have contributed to OSHA's delay in scheduling the formal hearings that normally precede issuance of a final standard. In the interim, both government and industry have sought support for their positions through studies and conferences (see example in Attachment 1). The hearings are unreliably reported to be scheduled "this fall or next spring."

ASSESSMENT

Despite firm evidence that the current standard is inadequate, our survey of the regulatory situation over the past few months leads to a conclusion that tighter environmental restrictions on asbestos will be promulgated. Timing and level are uncertain, but a staged tightening, as has been done in Sweden, is possible. (See Attachment 2 for foreign situations.) Since a fairly restrictive standard already exists, and asbestos legislation has a long history and organized lobbies (particularly the construction industry which uses a large percentage of the asbestos mined), no emergency standard of a disruptive nature is probable. Instead, we expect an orderly process of increasing restriction that will raise the cost of asbestos-containing products but not otherwise restrict the supply.

If we speculate that the orderly process would result in a standard of 1 fiber/cc on January 1, 1979, and .5 fiber/cc on January 1, 1981, the following results can be expected:

- No court challenges, or a small effort by the construction industry.
- Mines in Canada not affected--no supply shortage.
- A few marginal users curtail production.
- Friction materials suppliers install controls; prices rise on finished components.
- Auto industry continues to use asbestos-containing friction materials.
- R and D effort on substitutes determined both by initial price increase and by future pricing projected for meeting .5 fiber/cc.

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* These values refer to the 8-hour, time-weighted average number of asbestos fibers longer than 5 microns in length collected on a micropore filter in the breathing zone of workers exposed to airborne asbestos.

ASSESSMENT (continued)

The foregoing can be compared with the different results expected if the standard is abruptly set at .5 fiber/cc by January 1, 1979. This is judged unlikely.

- Court challenges delay implementation for at least a year.
- Investments in new or old mines curtailed, but supply not immediately affected.
- Prices rise on related components--some parts suppliers inform auto industry of impending curtailment of production.
- Costly crash programs on substitutes initiated in auto industry, target Job 1, 1980.

Even less likely is a standard of .1 fiber/cc because it is very near background level.

IMPACT ON FORD

A study of the engineering uses of asbestos has shown that Ford is directly concerned only with the friction materials segment of the asbestos industry (as outlined in Attachment 3). Ford purchases transmission bands, brake and clutch friction materials that contain asbestos, and thus would be affected by the impacts of regulatory action. These impacts are of two types: internal, and in the supply chain. Ford has no internal compliance problems because purchased parts contain only bound asbestos fibers that do not contaminate the environment.* Supply chain compliance problems were recently investigated by NAAO Purchasing (Materials Planning Department). This study assumed an orderly tightening of the standard and concluded that:

- Major parts and materials suppliers are just now reaching compliance with the 2 fiber/cc standard and have plans or active programs to meet the proposed standard.
- The severity of the problems depends on the standard.
- Nearly all suppliers wish to continue to supply Ford with asbestos-containing products.

Our assessment of the supply situation is that asbestos products will continue to be available for the next several years, but that costs will rise as suppliers install control equipment. Ford should continue to rely on suppliers to solve their compliance problems and supply parts to Ford.

RECOMMENDATIONS

The above assessments predict an orderly tightening of the asbestos standards and a resulting cost increase in asbestos-containing parts. It is concluded that the Company must respond to this situation with programs in the following areas to ensure that it remains cost competitive.

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* Wear debris from brake and clutch friction pads are nonfibrous and therefore noncarcinogenic. Some monitoring of brake and clutch repair areas for loose asbestos fibers may be necessary.

RECOMMENDATIONS (continued)

1. Continue to monitor supplier compliance programs and results. Responsibility: VMD&P and NAAO Purchasing.

2. Continue to monitor costs of asbestos-containing components and compare these with those for alternate materials. Responsibility: NAAO Purchasing and VMD&P.

3. Initiate first-stage Advanced Engineering projects for 1978 in Chassis and Transmission and Axle Engineering Offices to assess the costs and problems associated with alternate materials for clutch and brake linings and transmission bands. These projects would rely on significant supplier input coordinated through Supplier Research. (The suppliers are interested.) They need not be targeted for specific model years but may be seen as insurance projects to protect against costly crash programs later. They should include studies on friction materials compatible with aluminum drums, discs and clutch plates. Responsibility: PEO's (Advanced Engineering).

4. Support the engineering effort with parallel projects within the already-existing friction materials study group within Research Staff. Responsibility: Engineering and Research Staff.

5. Review supplier asbestos compliance and engineering programs, cost comparisons, and Ford programs prior to the 1979 advanced budget allocations to determine course of action for 1979. Responsibility: VMD&P.