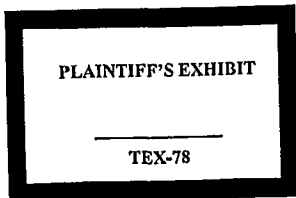


TEXACO

SAF-IH-Gen



Beacon, New York  
March 15, 1982

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| TEXACO U.S.A.    |           |
| MAR 23 '82       |           |
| (NOTE)           | X(HANDLE) |
| RBS              |           |
| JMM <i>copy</i>  |           |
| FWM <i>1.1.8</i> |           |
| JAM <i>"</i>     |           |
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| AKM <i>"</i>     | FILE      |
| MG               |           |

Mr. J. W. Kinnear  
Houston, Texas

As discussed in my February 2, 1982 letter to Mr. A. M. Card, attached is additional material related to our January 13, 1982 review of health/product liability litigation in Jefferson County.

We have prepared one-page status reports covering Legal Concerns, Toxicity Concerns, Epidemiology, Industrial Hygiene, and Hazard Communications. The reports list problem areas and current activities to resolve these problems.

Corporate Public Relations personnel are presently involved in strategy planning regarding the results of the Texaco Mortality Study and the American Petroleum Institute Study on Used Motor Oil. We anticipate being able to provide more information on these two issues by April.

*John E. Tessieri*  
JOHN E. TESSIERI

RTR:mcs

AMC  
WBR-WKT, Jr.  
BCH-JFC  
PBH, Jr.  
WCW, Jr.  
RBS  
ERS

Attachment

|                    |              |
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| TEXACO U. S. A.    |              |
| EMPLOYEE RELATIONS |              |
| MAR 24 '82         |              |
| JAM <i>1.1.8</i>   |              |
| PER. ADMIN         | HUMAN RES.   |
| FSK                | BTR          |
| IDW                | RRH          |
| JS                 | VMS          |
| PPF                | RHL          |
|                    | CAS          |
|                    | DFT          |
|                    | MAD          |
| BJD                | COMPENSATION |
| SEM                | SEN          |
|                    | RRZ          |
|                    | UT           |
| DEV                | RY           |
| GEN. FILE          | RRM          |

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TEXACO

SAF-IH-Gen

Beacon, New York  
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| TEXACO U.S.A.    |           |
| MAR 23 '82       |           |
| (NOTE)           | X(HANDLE) |
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|--------------------|--------------|
| TEXACO U. S. A.    |              |
| EMPLOYEE RELATIONS |              |
| MAR 24 '82         |              |
| JAM <i>11/24</i>   |              |
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| JS                 | VRAS         |
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|                    | DFT          |
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| BJB                | COMPENSATION |
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|                    | RMZ          |
|                    | UJZ          |
| DEV                | MY           |
| GEN. FILE          | AKM          |

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## LEGAL CONCERNS

### Litigation

To date, 38 cases of cancer or other chronic adverse health effects litigation have been filed against Texaco or its subsidiaries. The chemicals cited include benzene, ethylene oxide, asbestos, tetraethyllead, silica, petroleum coke and phenyl-beta-naphthylamine. Most cases involve either workplace exposure of employees or environmental exposure of people living in the vicinity of the Company's plants.

We expect that such litigation will increase over the next decade. While product liability legislation may offer some relief, Texaco must be prepared with exposure data, up-to-date toxicity information, and an effective hazard communication program.

### Product Liability

Recent court decisions have significantly liberalized a plaintiff's ability to collect damages from a manufacturer under an expanded reading of tort law. It is expected that this trend will continue in the 1980's. Numerous groups, including Congress, are attempting to bring uniformity to this area by establishing legal guidelines and limits. Texaco has established an Ad Hoc Committee to develop a position in this area and also to provide input to API in developing an industry position.

### TSCA

Since TSCA was enacted 4 years ago, very few final regulations have issued. Many have been proposed, but because of cut-backs in EPA and regulatory reform, these proposals will be changed significantly before being finalized. Premanufacture Notices, Section 8(e) on substantial risk and Section 6 on controlling PCB's will continue to pose significant reporting and recordkeeping burdens. Section 4 test rules and test standards will start to impact Texaco during 1982 by mandating toxicity testing beyond that now conducted voluntarily. Manufacturers of toluene and xylene may be required to do extensive toxicity testing in 1982 at a cost of \$4-7 million. If testing of mixtures is required, costs would be substantially higher.

### OSHA

With the change in the political climate and the Supreme Court decision requiring OSHA to determine the significance of risk, the outlook for balanced OSHA regulations appears optimistic. OSHA has recently proposed several new regulations controlling occupational exposure to toxic substances and has reopened the rulemaking on its carcinogen policy. Issues to be resolved include evaluation of scientific data, cost-effectiveness, and performance standards vs. engineering controls. Texaco is developing responses to OSHA's solicitations for information.

## TOXICITY CONCERNS

The duty to test products for potential hazards is well-established in the law. Adequate data is available for acute effects (single dose), such as eye irritation, skin irritation, and acute oral and dermal toxicity for many Texaco products. A program of testing to fill in any gaps in this data base has been initiated, and approximately 80 products must still be evaluated. In addition a program to develop short term mutagenicity-carcinogenicity data has been initiated. CMA has conducted subchronic testing (repeated dosing for up to 90 days) for long term exposure effects of zinc dialkyl dithiophosphates and is considering testing other lube oil additives. A joint review of Texaco Chemical Company products for possible testing is underway. Chronic (repeated dosing for over 90 days) evaluations for animal carcinogenicity are being conducted on selected petroleum products and petrochemicals. In addition, all new products under development must be adequately tested; in many instances this information must be provided to the EPA in the form of a premanufacturing notification (PMN).

In the past 5 years, Texaco has considerably expanded its toxicological evaluation program. Before 1977 less than \$10,000 per year was expended for the program. Testing has rapidly increased since then, with \$430,000 committed in 1981. An additional \$115,000 was committed to coal gasification environmental effects testing. Expenditures are expected to increase significantly over the next few years, based on the need to do chronic testing.

Besides its own program of safety evaluation, Texaco participates in joint industry consortiums and trade organizations which perform toxicological research. The Ethylene Oxide Industry Council, CMA Glycol Ethers Panel, Ad Hoc Methyl t-Butyl Ether Committee, and Industry Triethanolamine Committee are such groups in which Texaco participates. Texaco also contributes \$234,000 annually to support the Chemical Industry Institute of Toxicology (CIIT) basic research program; the American Petroleum Institute Toxicology Committee budget for toxicological research was \$3,125,000 in 1981 and the 1981 API budget for environmental effects testing and research was in excess of \$300,000.

In response to the EEC Sixth Amendment and individual country legislation, Texaco Services Europe recently employed a consulting toxicologist in anticipation of its need for testing. Texaco Inc. presently employs a consulting toxicologist, Dr. Raymond D. Harbison, University of Arkansas for Medical Sciences, to augment the professional staff in toxicology.

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## EPIDEMIOLOGY

Texaco's epidemiology program was established to study patterns of disease and mortality in workers to; uncover any unusual patterns of morbidity or mortality and determine if they are related to workplace exposures; carry out studies of special employee cohorts who have been exposed to suspect chemicals or where questions/allegations have been raised; provide data in response to litigation and public relations concerns to show what the morbidity and/or mortality experience of Texaco workers has been.

Several major projects are currently underway. The Texaco Mortality Study, a study of mortality in Texaco refining, petrochemical, and research workers from 1947 to 1977, is currently being carried out by SRI International. Mortality patterns for specific plants, jobs, or processes will be examined. Preliminary results of this study are due in April 1982; these data will also be analyzed in-house for further follow-up. A similar study of producing and pipeline workers is being carried out in-house, and the feasibility of this type of study for marketing personnel is being examined.

A mortality study of workers exposed to ethylene oxide at the Port Neches Chemical Plant has been carried out by SRI International, and the results have been published. The overall number of deaths was significantly less than that expected, compared with the general population, and no significant excesses were seen for any specific cause of death.

Data from all epidemiology studies and additional data from the Comprehensive Personnel System for all current Texaco employees will be used to develop COMEXED - Computerization of Medical, Exposure, and Epidemiological Data. COMEXED will become a surveillance system which permits monitoring of health information, such as illnesses, causes of death, and physical examination results, and linkage of these data with work histories and industrial hygiene sampling results. This system will permit determination of workplace exposures which are causing adverse health effects so that early corrective action may be taken. However, it is not yet possible to enter these data on the computer nor to access them. CISD has recommended a systems overview study which is expected to begin in mid-1982. Development of the physical exam segment of COMEXED is the responsibility of the Health Division.

Because of competition with other urgent projects for the limited resources of CISD, development of COMEXED has not gone as quickly as hoped. Certain data, such as mortality information, are being retained and coded. The industrial hygiene data segment is operational at the present time. We believe it important to fully implement this program in order to be responsive to our legal concerns.

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## INDUSTRIAL HYGIENE

Although Texaco has had an industrial hygiene program since 1946, major growth in this area has occurred since 1970 with the advent of OSHA and increased public awareness. Initial efforts to improve the health and welfare of our employees concentrated on providing employee exposure information (sampling), employee training, and information services to management. The industrial hygiene program has subsequently entered a maturing phase with transfer of most field work for routine compliance to the operating departments while maintaining within RESD oversight auditing and comprehensive corporate policy development. This has also permitted an expanded scope of work such as conducting industrial hygiene investigations of petroleum/petrochemical (and alternate energy) processes to recognize potential problems and correct them where technically and economically feasible.

The corporate industrial-hygiene plan includes development of industrial hygiene sampling strategies for most operating divisions. Some division programs, such as those in the Producing and the Marine Department, are still in the formative stage of development. Since these strategies are implemented by personnel of the operating divisions, a vigorous training program for division supervisory/technical personnel is an integral part of the corporate plan. Periodic updating of such training needs to become a regular part of this program. Technical sessions are planned with operating personnel to accomplish such updating.

Data from industrial hygiene sampling in the operating departments are computerized to facilitate analysis and program management. After review and evaluation of these data by the Industrial Hygiene Unit - Houston, recommendations for corrective action are generated. Recommendations may also result from walk-through industrial hygiene surveys conducted at operating locations by corporate personnel. All recommendations are reviewed periodically to follow the level of implementation within the operating departments. Plans are being made to provide additional documentation to strengthen this phase of the program.

Although Texaco's industrial hygiene program has expanded to include some European and Latin America operations, the long-standing working relationships with Texaco USA, Texaco Chemical Company and other domestic departments, have strengthened. Such cooperative efforts will continue to be the key to providing a cost-effective industrial hygiene program meeting future requirements.

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## HAZARD COMMUNICATION

Recently, there has been an increasing amount of state legislation concerning workers "right-to-know" the hazards of the materials they are exposed to in the workplace. In addition, OSHA has been trying to issue a regulation requiring employers to have hazard communication programs comprised of employee training, placarding, precautionary labeling, and Material Safety Data Sheets. Although API has worked closely with OSHA on this issue and considers one federal rule preferable to fifty individual (and potentially conflicting) state regulations, OMB is not convinced of the need for such a federal rule. Texaco, however, strongly supports federal regulation in this area.

Texaco has established several means of communicating information pertaining to potential health hazards in the workplace to employees. One of the most effective programs has been the one-day course "Industrial Hygiene Surveillance Seminar For Supervisory Personnel" which covers industrial hygiene, epidemiology, and toxicology. It is tailored to each location using specific examples of potential hazards and exposures of particular concern. The objective is for attendees to return to their units and train other employees. Training programs covering respiratory protection, noise exposure, hazardous materials, and industrial hygiene sampling have been successful in this regard. We expect to strengthen the training aids program for the Industrial Hygiene Surveillance Seminar in order for supervisory personnel to conduct effective training.

Texaco prepares Material Safety Data Sheets (MSDS) on all its products which are provided to all customers on request. These sheets are the most complete hazard statement for a particular formulation and include expected physiological effects, industrial hygiene control procedures, first aid, special handling, and disposal instructions. These sheets are also available at all Texaco facilities for employee review. Efforts are underway to computerize the program and integrate toxicity data from various studies and suppliers. This will enable us to quickly provide MSDS to customers, thereby reducing future liability.

The Texaco Precautionary Labeling Manual contains precautionary label assignments for Texaco products, based primarily on the estimated or actual acute, i.e. short term, toxicity of a product. Such labels are, for the most part, purely voluntary at this time. These labels appear on 55 gallon drums and smaller packages. In addition, we have initiated a program to label products sold in bulk.

New standards and product liability concerns have resulted in the need for inclusion of warnings of potential chronic hazards on labels. RESD, working with the Legal Department, is reviewing the content of current labels and is prepared to implement necessary changes. As a result of an API study associating used motor oil with skin cancer, a Company ad hoc committee recommended that motor oil cans be labeled with an appropriate warning and that appropriate informational items be developed.

While the Company's hazard communication program meets current needs, its future effectiveness is dependent upon continued surveillance and testing to provide accurate, up-to-date information.

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