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February 12, 1987

Ms. Beth Anderson
TS-7718, Room 100, NE Mall
Test Rules Development Branch
Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

VIA FEDERAL EXPRESS

Dear Ms. Anderson:

In response to your questions on "Data Gaps" (Attachment 1) that were presented at the December 17, 1986 Focus Meeting on Methyl-Tertiary Butyl Ether (MTBE), ARCO Chemical Company submits the following comments:

Item A - Additional studies relevant to health effects of MTBE will be addressed in our Section 8(a), 8(d) submittal.

Item B - The number of workers exposed to MTBE will be included in our Section 8(a) submittal. We have no information on number of consumers exposed. However, as we have indicated in our submittal to the ITC, MTBE is estimated to be in about 10% of the overall gasoline production. The number of consumers would then be apportioned to approximately 10% of the gasoline distributed at self service stations.

Item C was addressed in our formal comments to the Environmental Protection Agency (EPA) on the 19th ITC Report on MTBE. A copy of those comments is included (Attachment 2). The conclusions are summarized here:

- o Gasoline vapor and subsequent MTBE in gasoline vapor exposures have been documented and studied. For the case with gasoline containing 10 Volume % MTBE, worker and consumer exposures would be approximately .06 ppm MTBE on an 8-hour TWA. Considering that fuels containing MTBE are typically blended at 2-8 Volume %, worker exposures would be even less than the .06 ppm value.

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Ms. Beth Anderson

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Item D requests more information on the presence and persistence of MTBE in groundwater. We are not aware of any incidents where MTBE contaminated groundwater at manufacturing facilities. Where gasoline containing MTBE is stored at refineries, terminals, or service stations, there is little information on MTBE in groundwater. We feel that there are no unique handling problems when gasoline containing MTBE is compared to hydrocarbon-only gasoline. We are aware of problems reported in the State of Maine with groundwater containing MTBE. Attachment 3 is a paper titled "MTBE as a Groundwater Contaminant". We disagree with the conclusion in the paper's abstract that "...the BTX compounds are more soluble in ether than they are in water. Thus, when gasoline plus MTBE leaks to groundwater, the MTBE spreads both further and faster than the gasoline, and the concentration of gasoline dissolved in groundwater increases." ARCO Chemical has conducted additional testing which supports our position that MTBE will NOT act as a cosolvent and increase the BTX or other gasoline components in the groundwater. Attachment 4 summarizes this report.

Item E - Attachment 5 is an updated list of MTBE manufacturers and the the plant locations.

If you have additional questions or require other supplemental information, please contact me at 215-557-3560.

Very truly yours,

William J. Kilmartin

W. J. Kilmartin
Manager, Technical Service

WJK/hlp

ATTACHMENT

III. Data gaps

A. EPA is unaware of any additional studies relevant to the health effects of MTBE inhalation and ingestion.

1) We have received copies of Bio/dynamics Inc. report to API of the following studies: 9-day inhalation toxicity study of MTBE in rats; an inhalation teratology study in rats with MTBE; an inhalation teratology study in mice with MTBE; a single generation inhalation reproduction/fertility study in rats with MTBE; and the metabolic fate of MTBE following acute intraperitoneal injection.

B. TRDB needs more current information on the number of workers and consumers exposed to MTBE.

C. TRDB needs more information on the concentration of MTBE in the "breathing zone" of workers and consumers transferring MTBE-containing gasoline.

D. TRDB needs more information on the presence and persistence of MTBE in ground water.

E. Is this list of manufacturers/distributors complete?

American Petrofina Inc., Big Spring, TX
Amoco Oil Co., Whiting, IN
Arco Chemical Co., Newtown Square, PA
Champlin Petroleum Co., Humbolt, TX
Diamond Shamrock, Sunray, TX
Exxon, Houston, TX
Hill Petroleum Co., Houston, TX
Phillips Petroleum, Bartlesville, OK
Texaco Inc., Beacon, NY
Texas Petroleum Corp., Houston, TX
Valero Refining Co., Coprus Christi, TX

Please send information by February 2, 1987 to:

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