August 13, 1970

SUBJECT: BULLETIN NO. 10 - LEAD IN GASOLINE

TO: ALL MEMBERS OF THE LEAD INDUSTRIES ASSOCIATION, INC.

California Assembly Bill AB 79 did not secure approval of the California Senate Transportatic Committee, (Senator Collier, Chairman) after a relatively brief hearing on Monday, August 10.

Proponents of the Bill included Assemblyman Schabarum, the Bill's sponsor, Prof. Starkman, University of California, Mr. Fred Hartley, President, Union Oil Co., Mr. Leo McReynolds, Technical Director, Phillips Petroleum Co. and two men speaking for citizen's groups were heard and questioned at length. This occupied about 1½ hours.

Witnesses that testified against the Bill were given about 30 or 40 minutes and included a group of independent oil refiners, Shell Oil and Mobil. Others present to speak against the Bill, but not heard, represented Standard Oil, another oil company, DuPont, Ethyl, Houston Chemical, Nalco and the writer for LIA. Though in my case at least copies of LIA's statement, attached, were arranged for delivery to each of the 13 Senate Transportation Committeemen. When the vote unexpectedly came, nine senators were in attendance. Seven votes for would have sent the Bill favorably to the Senate floor. The actual voice vote was either six for, three against or five for, four against. There was a fair amount of general confusion and this detail was unclear to most of those present.

Experienced California lobbyists stated "This is as dead as California system permits."

A proponent, likely to be Assemblyman Schabarum, might revive it with seven favorable signatures from the thirteen-man Senate committee.

It is my expectation that the bill may be revived or restarted, I have no opinion when.

Questioning throughout was keen, sometimes sharp and well prepared from lead's point of view. The senators have obviously read or had conversations covering the points which rose against the Bill and consistently raised.

From a somewhat lengthy private conversation with Assemblyman Schabarum later in the evening I feel we can expect him to keep the issue alive.

The Bill as it was being considered would have required:

1. A low lead (0.5 gr. per gal. max.) regular by 7/1/71
2. A no lead regular by 7/1/74
3. A 2 gr. per gal. premium by 7/1/71 and after 7/1/77, no lead.

Sincerely,

J.L. Kimberley
Executive Vice President

JLK/gt
Attach.

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Statement on Lead in Gasoline presented by J.L. Kimberley, Executive Vice President, Lead Industries Association before the California Senate Transportation Committee, August 10, 197

My name is John L. Kimberley, executive vice president of the Lead Industries Association. I am presenting this statement on behalf of LIA's 60 member companies engaged in the mining, production, manufacturing and fabrication of lead and lead products.

I am here today to discuss Bill AB79 and the serious ramifications related to the removal of lead from gasoline.

For the past seven months, I have concentrated on a search to establish why there has been so much recent clamor to remove lead additives from gasoline. Along the line I have talked to top officials in the automotive, oil and lead additive industry as well as to top federal government health officials. I have particularly attempted to uncover specific evidence to indicate that lead in the atmosphere is or will pose a threat to human health. We have not been able to uncover such specific evidence that a health hazard exists or is threatened. In fact, we are finding increased evidence that banning lead from gasoline under present circu stances could increase smog formation and emission of substances possibly detrimental to healt

In 1969, the consumption of lead for gasoline additives was close to 20 percent of total consumption in the United States. I am prepared to say, significant as this market is to the lead industry, we will withdraw all objections to the removal of lead in gasoline if we can be convinced that this is necessary to solve emission problems, or if lead's removal is demonstrated as necessary to eliminate a health hazard to the public. So far we have seen no evidence to prompt withdrawal of our objections, but we have seen evidence that removal of lead additives might actually cause serious pollution and health problems.

This evidence, which I will cite, has led us to the following conclusion -- before final decisions are made or legislative action taken on lead in gasoline, we urge further careful development and study of:

1. Polluting effects, including adverse health consequences, authoritatively predicted if lead gasolines were not available.

2. Existing systems for reducing undesirable gaseous automobile emissions that have been shown to work with leaded gasolines.

3. Techniques and devices that will reduce all particulate emissions from auto exhausts including lead.

We feel you should not take action to restrict or ban the use of lead at this time until these vital factors are far better understood or at least until there are proven benefits or a demonstrated need far more definite than exist today.

The uncertainties about results if non-leaded gasoline is required, emphasize the need to be cautious. Dr. Richard D. Cadle of the National Center for Atmospheric Research, and a recognized authority on the composition of the atmosphere, explained his concern in the April 20, 1970 issue of Chemical & Engineering News:

"In connection with any possible health hazard from the lead compounds that automobiles send into the atmosphere, Dr. Cadle believes that there is reason for alarm, but warns that quick solutions could build into problems of an entirely different stripe. He suggests, for example, that gasoline manufacturers who hope to replace leaded alkane gasoline with high-aromatic fuels should look at least twice before they leap."

And Chemical & Engineering News quoted Dr. Cadle as saying, "'It's conceivable that some of these aromatics could lead to the formation of carcinogenic by-products in the combustion process, although I don't know of any hard evidence to support that idea. Nevertheless, aromatic compounds generally are toxic, irrespective of whether or not they're carcinogenic.

'Also, certain aromatic compounds have been found to be a couple of orders of magnitude more severe as eye irritants than the peroxyalkyl nitrates formed from conventional gasolines. What I'm really saying here is that in the whole area of air pollution control, we shouldn't rush ahead with one solution before trying to anticipate the larger problems it may create.'"

It is felt worth a reminder that AB79 as we now see it, puts no restriction on the aromatics to which Dr. Cadle refers.

Dr. Cadle's opinions were reinforced by a study done by the Department of Interior's Bureau of Mines, extending over many months and reported in May 1970 (report #7390 by B.H. Eccleston and R.W. Hurn). This report covered the polluting effects of leaded premium and regular gasoline compared to prototype unleaded premium and regular fuels. It stated, "The photochemical reactivity of automobile emissions was found to be increased by as much as 25 percent when fuel was changed from typical U.S. leaded gasoline to prototype unleaded gasoline of comparable octane quality. The increase is attributed to characteristics of the blending components that were used to obtain the required octane quality without using lead."

To paraphrase this, the type of emission the report refers to is similar to that which causes the Los Angeles type, eye-irritating smog.

Since the mid-20's, the subject of lead additives in gasoline has been under constant scientific scrutiny. Most studies -- including those of the Surgeon General, American Medical Association, the World Health Organization, the U.S. Public Health Service, in addition to those of the lead industry and the lead additive manufacturers have concluded that there is no health hazard presently shown from lead in the general or ambient atmosphere -- from whatever source.

Should this certainty be arbitrarily traded for such uncertainties as suggested by such scientists as Dr. Cadle and such studies as the United States Bureau of Mines report? We think this would not be wise.

Furthermore, our sources indicate that there will be no additional emission control devices on new cars for at least the next two or more model years. The claim that lead fouls catalytic emission systems is the major reason for anti-lead forces wanting lead out

of gasoline. We do not know of any specific catalytic emission control system yet, using unleaded gasolines, which is proven. In fact, some of the automakers have testified that they do not have an economical and efficient emission control device but they hope to in the future.

This seems vital to us in light of Dr. Cadle's warnings and the Bureau of Mines report. The emissions of unleaded fuels will be coming out of the tailpipe until some effective emission control system is developed, proven and in use on new cars, but we will still have the problem with older cars.

On the other hand, the California Air Resources Board recently tested a DuPont manifold reactor on a car using leaded gasoline that "meets nearly all of the 1980 proposed federal emission standards." And it comes well within the California goals for 1975 -- specifically more than 50 percent better than required for hydrocarbons, 33 percent better with carbon monoxide and more than 50 percent better with nitrous oxides.

This is only one approach which uses leaded gasoline. There are several others including the Ethyl lean reactor car, Mobil's catalytic muffler with a component which could be changed much as your present oil filters.

Although our industry believes that all options for emission control should be left open for leaded, low leaded and non-leaded gasoline, which would not occur if Bill AB79 is passed, our industry and others are also seeking ways to control emissions of not just the smog forming compounds, but also of the particulates, including lead, exhausted from automobiles. DuPont and Ethyl have developed particulate traps which capture most of the particulates before being exhausted. Just a few weeks ago Texaco announced the development of a lead filter involving alumina on stainless steel wire that would capture a substantial amount of the lead resulting from combustion of leaded gasoline. A major California company concerned with aircraft has also developed a promising trapping system for use on leaded fuels, involving chemical scrubbing from the gaseous state. These are important recent developments indicating that there is much progress being made in developing control systems that work effectively with leaded gasoline and that would also be capable of reducing lead and other particulate emissions.

In view of the present uncertainties, neither Texaco nor the California firm intend to pursue these developments with their own money.

The Commerce Department's Technical Advisory Board Panel on Automotive Fuels and Air Pollution recognized the possibility of efficient emission control systems which operate on leaded gasoline. It did not recommend the elimination of lead additives, although the Panel also recommended the availability of an unleaded fuel.

Finally, I would like to call your attention to an article in the May 1970 issue of the automobile magazine, Motor Trend. (A copy of this article is attached.) Inasmuch as this article was sent to members with Bulletin No. 6, it is not herewith attached)

With the special expertise these editors have on automotive problems, I feel the article's last paragraph is significant enough to quote: "Before we take the giant -- and expensive -- leap forward with unleaded gasoline, which no one can say for certain will accomplish the intended results, we ought to re-examine the whole auto emissions spectrum."

It is gratifying to see so many of the same conclusions, arrived at independently by another.

Gentlemen, because of the uncertainties about unleaded gasoline emissions, and emission control devices which are not now available, we in the lead industry strongly urge the rejection of the proposal to set a ban on leaded gasoline.

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