

**Testimony of Joseph T. Lee, Vice President Fuels, Lyondell Chemical
Company, Given to the Senate Environmental Resources and Energy
Committee on April 15, 2006**

Thank you madame Chairperson, members of the committee. I am grateful to be here today to discuss this vital topic. My name is Joe Lee. I am with Lyondell Chemical Company and am responsible for its global fuels business. By way of background, Lyondell Chemical Company is one of the largest independently traded chemical companies in North America, with operations in all major areas of the world, approximately 10,000 worldwide employees, and revenues in 2005 of roughly \$18 billion. While headquartered in Houston, Texas, where I live today, Lyondell also has a major research and development facility with close to two hundred technologists and support personnel in Newtown Square, in Senator Erickson's district. This is a facility that I worked at for over twenty years, when Lyondell was then part of ARCO Chemical, and the location that today still works with my business group on innovative fuel technologies.

Among the fuels under my global responsibility is MTBE [the subject of today's hearing]. Lyondell is a major merchant supplier of MTBE and its ethanol based sister product, ETBE, to refiners and blenders in both the Western Hemisphere and Europe. While MTBE's growth in the United States gasoline market has been primarily associated with its environmental benefits drivers – first, since its inception in the late 1970's as replacement for lead in gasoline, and later, with its increased use in the in the 1990's, as the preferred oxygenate in reformulated gasoline (RFG) to clean up the air in

our major cities – MTBE has all the while grown into a critical supply component of gasoline. In Pennsylvania, the gasoline additive currently makes up 11% of the gasoline supply in the Philadelphia and the surrounding five county non-attainment area which accounts for almost 30% of the state’s demand. Because of its excellent blending properties, especially its high octane and moderate vapor pressure, MTBE has the ability to extend gasoline supplies by allowing other components to be blended into gasoline, some of which might otherwise not be added. Figures from the Energy Information Administration (EIA), the statistical wing of the Department of Energy, estimated 20% of MTBE’s recent use in this country was for its octane enhancement properties, and thus used in areas not requiring oxygenates as part of the RFG reformulated gasoline program. This gasoline extension feature of MTBE is extremely critical today given the high utilization of our nation’s refineries and the vulnerability of our concentrated Gulf Coast infrastructure, which was so significantly affected by last year’s hurricanes.

With this as background, Lyondell would counsel this body against MTBE ban bills, for the following reasons:

1.) Congress Did Not Ban MTBE in the Newly Adopted Federal Energy Bill.

Bipartisan members of Congress found that banning was not in the country’s best interest. For states like Pennsylvania, who waited for this national direction, rather than rushing to judgment, they have preserved and broadened their options for addressing the growing gasoline supply and air quality challenges.

2.) Ban Bills Reduce Critical Supplies of Gasoline at a time When We Need It Most.

Prices at the pump, already high because of high crude prices, will jump yet again as we become more dependent on foreign imports or higher cost domestic alternatives. When the state of Maryland studied the cost impact to its residents of similar ban bills it concluded that its citizens would pay an additional \$174 to \$181 million per year in higher gasoline costs (roughly \$125 per family per year). Pricing concerns are similarly shared by a number of other noted authorities, including the EIA, and such concerns are supported by the experiences of other states where bans have been put into effect. Put plainly, bans reduce gasoline supply options resulting in a hidden tax on consumers.

3.) The Situation with Gasoline Supplies is Not Just a Short Term Concern. From a larger perspective – global instability, weather calamities, and U.S. energy policy “gridlock” – circumstances have come together to illustrate the vulnerable nature of our nation’s energy situation. It would be provide false comfort to suggest that last year was just a “*Perfect Storm*” of events and the threat of \$3 a gallon gasoline was a one-time phenomenon. Unfortunately, the fundamental risks still exist today to pressure even higher pump prices. Fuel flexibility is a paramount advantage in managing through the uncertainties ahead. To shut down options, when the markets have already shown significant tightness, just would not seem prudent.

4.) MTBE Still Has an Important Role to Play in Protecting Pennsylvania's Air Quality. Given the changes in the new federal energy bill, Pennsylvanians are at risk to real world air toxics backsliding given the elimination of the 2% oxygen standard. The Energy Information Administration report, *Effects of Feed Quality and Product Specification Changes on Refined Product Supply*, confirms "MTBE as a very clean component from an air emission standpoint. It contains oxygen and has no sulfur, no aromatics, no olefins, and a Reid Vapor Pressure (RVP) that is very close to the RVP of the remaining gasoline components. In addition it has high octane." They go on to say that "ethanol gasoline blends have worse air emission qualities than blends made with MTBE. Ethanol increases gasoline's tendency to evaporate, thereby raising the volatile organic compounds (VOC's) emissions. In addition, ethanol increases toxic emissions over MTBE." A point worth noting is that while the federal energy bill altered the nation's fuel requirements, the Clean Air Act's ozone requirement remains in full force for areas like Philadelphia and the surrounding five county non-attainment area. To that end, MTBE continues to play an important role in this regard by reducing harmful volatile organic compounds (VOC's) that cause smog. The January 2006 Report from the Maryland Department of the Environment, *Methyl Tertiary Butyl Ether (MTBE) and Clean Gasoline Alternatives*, reviewed the environmental effects of using either RFG with 10% ethanol or non-oxygenated RFG. With either replacement fuel, an increase in ozone precursor emissions (VOC's and Nitrous Oxides, NOx) occurs. The analysis concludes that using 10% ethanol would increase total ozone precursors from between 11 to 16 tons/day on an

average summer day. This is equivalent to a 4% increase in VOC and NOx emissions from the baseline gasoline inventory. The analysis also concluded that using a non-oxygenated RFG would increase total VOC and NOx emissions by 7 tons/day on an average summertime day, which is equivalent to a 2% increase in VOC and NOx emissions from the baseline gasoline inventory.

5.) One Need Not Ban MTBE to Promote Ethanol. We sympathize with legislative members who want to bolster the interests of rural farming communities and push alternative to conventional gasoline. We believe that the federal Energy Bill passed last year provides tremendous incentive for increased ethanol production within the renewable fuels standard. But Lyondell's own experience in Europe shows that the combination of ethers and ethanol together provide options to blenders to deliver gasoline to customers at the lowest possible cost. For example, in cooperation with local French ethanol producers we have dramatically expanded our sales of bio-ETBE where bio-ethanol is used as our feedstock and is incorporated in a product more easily blended into summertime gasoline. Such options allow people in Europe to support their agriculture constituents, while still taking into account the costs to their driving consumers and the integrity of their environmental standards.

6.) Ensuring Tight Tank Regulations Mitigates Exposure to the Environment of All Gasoline Components. In their evaluations of gasoline spill incidents, the PA Department of Environmental Protection (DEP) has the responsibility to seek out

the “root causes” of any incident, so that the ultimate solution treats the real reason for a problem, not just a symptom. Pennsylvania residents most assuredly want their water free of MTBE, but also their water free of benzene, toluene, and xylenes, which enter the environment when gasoline is leaked. Solutions that treat only the symptoms of the problem, like proposed ban bills, are not true solutions but half-measures. This is why Lyondell recommends a focused approach on stopping environmental issues at the source, through best practice design and monitoring programs around underground storage tanks that address the root cause of environmental incidents. Despite improvements in underground tanks over the years (as documented by the EPA), vigilance in detecting all spills as early as possible is essential to mitigating the potential impacts from these sources.

Let me conclude by stating that this body faces some difficult issues, but in this particular case you need not be confronted with an either/or situation. If you commit to “root causes” solutions to minimize the impact of gasoline spills, you can also choose for solutions that do not limit fuel supplies and higher gasoline prices. Pennsylvania has a serious policy question to answer: Why give up supply and air quality benefits, when alternative solutions around mitigating water contamination exist? With the high costs and uncertainties that beset the gasoline market, it would seem wiser to keep open all fuel options, allowing your citizens the benefit of choice to stabilize the price of their fuel.

Thanks you for your time and consideration.