

US EPA Margo Oge, Director Office of Transportation and Air Quality 1200 Pennsylvania Ave Room No. 6520A Mail Code 6401-A Washington DC 20004



June 10, 2010

## Re: EPA-HQ-OAR-2007-0294 Advance Notice of Proposed Rulemaking on Lead **Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline**











Comments on the outline of approaches for transitioning the fleet to unleaded aviation gasoline

- Potential implementation dates, if EPA were to trigger the duty to set emission standards
- How a program could be best structured to assure that conversions conducted by engine manufacturers (OEMs), independent shops, and in the field by certified power plant mechanics are performed to fully meet the intent of a possible program without compromising the safety of those aircraft and engines
- Potential problems with this approach including suggested modifications, improvements, or other approaches



The Aircraft Owners and Pilots Association (AOPA), the Experimental Aircraft Association (EAA), the General Aviation Manufacturers Association (GAMA), the National Air Transportation Association (NATA), the National Business Aviation Association (NBAA), the American Petroleum Institute (API) and the National Petrochemical and Refiners Association (NPRA) together represent General Aviation aircraft owners, operators, and manufacturers and the oil and natural gas industry, producers, refiners and distributors of aviation gasoline (avgas). This Avgas Stakeholder Group is committed to working with the EPA and the FAA to help achieve significant reductions in lead emissions from General Aviation (GA) aircraft. The process for achieving this goal, however, must take into account not only the environment, but also aviation safety, technical feasibility and the economic impact upon the GA industry.

With this letter, these associations request a 120 day extension to the current 60 day comment period for the Environmental Protection Agency's Advanced Notice of Proposed Rulemaking (ANPR) entitled Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline. The extra time is necessary for the Avgas Stakeholder Group to develop and provide meaningful and substantive response on the multiple issues on which EPA seeks comments. It also will allow the completion of on-going research into the effects of reduced lead in Avgas.

The EPA's ANPR recognizes that "Converting in-use aircraft/engines to operate on unleaded aviation gasoline would be a significant logistical challenge, and in some cases a technical challenge as well.... Depending on timing, these engines might need to be able to operate on either leaded or unleaded aviation gasoline, or a blend thereof". EPA requests comments in numerous areas including:

- Potential implications for international import and export of piston engines and avgas
- Potential impacts on international transport
- How market incentives might be developed to encourage modification to run on unleaded aviation gasoline as part of a regulatory requirement
- New data on technology developments, fuel formulation approaches, or other technical viewpoints
- Avgas refining locations and practices, supply (including imports and exports, if any), details on distribution to terminals and airports, and storage practices for avgas at terminals and airports across the country
- Progress and timeframes for developing alternatives to current leaded avgas and how these might be integrated into the fuel supply and distribution system

The stakeholder group is dedicated to addressing these complex issues to facilitate the process for safely removing lead from avgas and providing comments and recommendations in response to EPA's ANPR. To accomplish this goal, we ask for an extension of the comment period to allow the Stakeholders Group to undertake a thorough assessment of the number and utilization of piston-engine aircraft in the fleet that would be negatively impacted by a transition to the currently available lower octane unleaded fuel. This impact assessment will provide industry, FAA and EPA an important baseline for technical and economic evaluation of potential avgas alternatives. This assessment is already underway but cannot be fully completed during the current 60 day comment period.

Additionally, the Coordinating Research Council (CRC) research on the assessment of reduced lead in Avgas is to be finalized by September 2010. CRC is a non-profit organization that directs, through committee action, scientific cooperative research to develop the best possible combinations of fuels, lubricants, and the equipment in which they are used. They have conducted several avgas research projects and are currently finishing up an assessment to ascertain the absolute minimum amount of lead that must be added to avgas in order to meet the safety needs of the entire general aviation fleet. This research initiative will provide industry, FAA and EPA the technical information necessary for safety and economic evaluation of possible near-term reductions in lead emissions from GA aircraft. We believe it is absolutely essential to incorporate those results in our response to the EPA ANPR. It is for these reasons that we are asking for a 120 day extension to the comment period.

Changing the standard for composition and/or physical properties of aviation fuel or fuel additives raises numerous safety concerns. The most critical concern is that of engine "knock" or detonation that can literally tear an engine apart. Lead is used as an additive to boost octane, prevent knock, protect engine pistons and cylinders from excessive wear and provide a cleaner burn than lower octane fuels. As was discovered through research conducted by the CRC, the addition of lead in avgas provides more than a simple boost in octane. Leaded and unleaded fuels of the same octane rating do not provide the same level of anti-knock and detonation protection. This is one example among many of the complex work that is necessary to provide a technical understanding of the problem and a foundation on which a solution can be based. Aircraft safety must be maintained as a high priority as we continue forward with a path towards the removal of lead from avgas.

Our organizations will continue to work diligently on a solution for an unleaded aviation gasoline that maintains the safety and performance requirements of the entire fleet of general aviation aircraft but these are largely unproven at this point in time. Any replacement fuel will not only have to withstand the rigorous testing and FAA certification necessary to validate the safety and performance of such a fuel in the aircraft but also be economically producible, distributable on a large scale, and environmentally better than the current fuel, 100LL. Identifying an alternative fuel for piston-engine aircraft is a complex challenge that will require the coordinated efforts of all the stakeholders as well as the EPA and FAA. Progress on this front during the ANPR comment period extension will also play a pivotal role in the content of our collective comments regarding how best to manage the transition process.

We appreciate your consideration of this important matter and look forward to working with you and your staff on this critical issue in the coming months and years.

Sincerely,

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