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Air and Radiation Docket and Information Center  
Environmental Protection Agency  
Mail Code: 6102T  
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Washington, DC, 20460

Submitted via email to:  
[a-and-r-Docket@epa.gov](mailto:a-and-r-Docket@epa.gov), Attention Docket ID No. EPA-HQ-OAR-2006-0735

The American Association of Airport Executives (AAAE) appreciates the opportunity to submit comments on behalf of its member airports in response to the Environmental Protection Agency's (EPA's) Proposed Revisions to Lead Ambient Air Monitoring Requirements, EPA-HQ-OAR-2006-0735.

AAAE is the world's largest professional organization for airport executives, representing thousands of airport management personnel at public-use commercial and general aviation (GA) airports. AAAE's members represent over 850 airports and hundreds of companies and organizations that support airports.

### **Background**

The aviation industry in general is one of the most forward-looking, and innovative sectors of our nation's economy. The industry has established an outstanding record in reducing its environmental impact through several regulatory and market force measures for decades. The general aviation segment of the industry has some unique attributes separate from the commercial sector, but by no means is it exempt from the current economic downturn. In fact, some could argue this segment has been more

adversely affected by both the economic recession as well as directly affected by the increase in fuel prices.

General aviation refers to all flight operations other than scheduled airline and cargo flights and military operations. It ranges from the leisure flyer to business jet and is responsible for most of the world's air traffic. There are more than 5,300 public use airports available for use by these aircraft and accounts for 1.3 million jobs in professional services and manufacturing, which translates to over one percent of the United States' Gross Domestic Product (GDP). This is not an insignificant portion of the nation's economy.

A considerable amount of pressure has been focused on the GA community to lower its lead emissions. In response, over the last few years there has been an increased effort to provide alternative fuels (and consequent testing) for these aircraft in a way that is both economically viable and that will be able to operate with existing technology.

### **Position on Avgas**

"Friends of the Earth" initially petitioned the EPA on November 16th, 2007 proposing emission standards for lead from piston engine (general aviation) aircraft. The environmental group cited that under the Clean Air Act the EPA had the duty to minimize lead exposure not only to those within the vicinity of the aircraft and airport, but more broadly to protect public health and welfare. Prior to this petition, the EPA claimed there was insufficient information to determine these emissions would cause such an endangerment. The EPA also recognized that there was no suitable alternative for leaded aviation fuel for general aviation aircraft, and regulation of this would cause great peril for all users of general aviation aircraft. We would agree with the EPA on this matter wholly. Without having sufficient evidence of the lead impact from GA aircraft, we would be unfairly penalizing users of the system. AAAE would encourage responsible information gathering and would like to reaffirm that although we have

made steps in the right direction towards alternative fuels, this is still a lengthy process that should not be done hastily.

Currently about seventy percent of the general aviation fleet may be able to utilize unleaded automotive gasoline for operation, but this seemingly large amount of the fleet only consumes thirty percent of the amount of fuel supplied to general aviation. The remaining thirty percent of the fleet rely on high compression engines that must use leaded avgas and make-up the hefty seventy percent remainder of the fuel supplied. This may be due to greater fuel burn when in operation than those with smaller aircraft engines, or it may be because of the aircraft utilization (these particular aircraft being flown on longer-haul flights). Therefore, the need rests mainly on finding a reasonable and safe alternative for those engines that require higher performance. Having two types of fuels would not be financially or operationally feasible, especially given the current economic climate.

There is not an immediate fix for unleaded fuel. It may take many years to commercialize a product that will meet the qualifications to use as a “drop-in” fuel for existing aircraft engines. Until this time, we would like to work with the EPA on strategies that will benefit the environment, but not eliminate this vulnerable segment of this essential industry. The entire GA industry: aircraft manufacturers, fuel producers, general aviation pilots, fixed-base operators (FBOs), and airports are on the same page with this issue and working towards a resolution.

One of the highest priorities of the aviation industry is safety. We would like full assurance that the EPA would not unnecessarily force the industry into use of a fuel before full safety testing has been completed. Upon completion of this testing, there will be a necessity to allow for adjustments of airport infrastructure to accommodate for this fuel type. This takes financial investment as well as potential operational changes that must be incorporated and agreed upon among airport stakeholders.

Prior to any drastic changes made away from leaded fuel, there will likely be a period of transition. We would like to indicate that the availability of two types of avgas (and resulting infrastructure) is not feasible GA airports which have already been heavily impacted with fuel price volatility. Requiring this would be an incredible burden to place on the industry, and we would instead strongly encourage the EPA to work with GA stakeholders to provide a safe alternative as we move away from leaded fuel.

### **Response to Proposed Revisions to Lead Ambient Air Monitoring Requirements**

AAAE has located several issues with the proposed revisions that cause some concern to our members. Our membership is in agreement that more information is needed on the effects of aircraft that utilize lead fuel. As an industry we would like this research to be conducted in a responsible manner that can promote movement towards an environmentally sound future while providing for a plan to work with EPA that does not unnecessarily cripple the industry and cause further degradation of jobs.

#### **Monitor Placement**

We would not discourage the EPA from its responsibility to monitor ambient air quality of the public. With that said, we would like to make certain that this testing is accurate; measuring only ambient air, as defined in 40 CFR Part 50.1 as “that portion of the atmosphere, external to buildings, to which the general public has access”. Placement of the monitors is perhaps the most critical element for an accurate assessment. Monitors placed directly at the end or sides of a runway where aircraft are taking off would not be indicative of “ambient air” in most, if not all, general aviation airports.

There are many factors at each airport which could affect the accuracy of monitoring: wind speed, wind direction, relative humidity, ambient temperature and other meteorological effects, “urban background lead”, and of course proximity to the general public, as previously mentioned. We would like assurance that local authorities are

instructed by the EPA to work with airports to make certain all of these factors are taken into consideration.

## **Data Accuracy**

AAAE members would like to provide the EPA with as many current, valid data points as possible, but are unable to do so extensively, given the time constraint of the comment period. Despite this minimal time allotment, we hope to provide you with some useful clarification.

We agree with EPA's assessment, that data given by the state and local authorities should use more recent statistics than 2002. Many events including significant fuel price increases, and aircraft utilization decreases, have occurred since this time period. However, instead of the recommended three year period advised in EPA's Technical Support Document (TSD) on page 6, we would recommend at least a five year average in order to derive any significant statistical data.

### *Piston vs. Turbine GA Aircraft Activity*

The breakdown of piston vs. turbine aircraft is essential to generate meaningful statistics for EPA's projected lead emissions amount. Given the information provided to AAAE from our membership we estimate that 56% of all aircraft at general aviation facilities operate piston engine aircraft.

The EPA on page 4 of the TSD, has used the 2005 GAATA Survey to estimate this amount, and has deduced that approximately 72% of all GA and Air Taxi Landing and Take-Off activities are from piston-engine aircraft which use avgas, and about 28% are turboprop and turbojet powered which use jet fuel. As you can see from our reported average number, this would appear to be an overstatement, perhaps due to increased

piston aircraft activity in that particular year; thus, the need to take several years into account when deriving these averages.

### *Avgas Usage/Sales*

Avgas usage (as determined in this case by sales) is also an essential data point. We would again state that using information from one particular year, in this case 2002, does not produce an accurate assessment. Usage/sales figures should have been averaged over several years, as demand can increase and decrease greatly from year to year. In fact, according to reports from our membership, avgas sales have dropped dramatically in the last few years. In one particular case, while avgas was 57% of the total fuel sold in 2002, this number was only 41% in 2008, indicating that the use of avgas has started to make up less of total fuel sold at that GA facility.

Another airport reported that in 2002, the year that the EPA uses as its base for many of the calculations, avgas fuel sales were around 526,899 gallons. In year 2009, it sold only 254,357 gallons. Meaning less than half the amount of avgas was sold last year than in 2002. On average, however, we found our airport members' sales had dropped 35% since 2002. The EPA should recognize that avgas fuel sales have been dramatically declining since their studies were conducted.

### *Aircraft Movements*

Similar to that of avgas figures, which should not be taken exclusively from one year, aircraft landing and take-off (LTO) activity data, referenced on Page 3 in the TSD, and derived from FAA's Terminal Area Forecast (TAF) system, was also only sampled from the year 2002. Though interlinked with avgas usage, merely taking one snapshot of the industry could lead to overestimation especially during such economic volatility. Much

is the same for aircraft utilization as avgas figures; the demand has dropped significantly in the last few years, making this data point irrelevant.

### *Landing and Take-Off (LTO) Cycle*

We are hopeful that local authorities or individual airports are able to provide the EPA with more accurate figures regarding taxi/idle-out, takeoff, climb-out, approach, and taxi/idle-in times. Also, we agree that this information varies greatly at each airport, and should be documented and taken into consideration by the EPA when monitoring is conducted. The membership believes that the 16 minute taxi-in/taxi-out time which was cited in EPA's TSD on page 4, in accordance with EPA's *Procedures for Emission Inventory Preparation, Volume IV: Mobile Sources*, 1992 is overestimated. AAAE membership stated that their figures would be approximately half of this (8 minutes).

### *Santa Monica Study*

The concern about the Santa Monica study is that it is just that; merely one study. Again, airports are greatly varied entities, and this limited study should not be generalized to the entire population of GA airports.

### **Conclusion**

AAAE thanks the EPA for considering our airports' perspectives in regards to this critical issue. We look forward to working together with the Agency to build a future which includes a more environmentally-friendly alternative to leaded fuel at a rate that would not jeopardize fuel prices, or sacrifice the safety of the GA industry. Also we trust that the Agency will take into consideration the variances of our industry when conducting this monitoring. In addition, we would welcome any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read 'Leslie Riegle', written in a cursive style.

Leslie Riegle  
Director, Regulatory Affairs  
American Association of Airport Executives