



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

February 24, 2022

The Honorable Paul G. Pinsky, Chair
Education, Health, and Environmental Affairs Committee
Miller Senate Office Building, Suite 2W
Annapolis, Maryland 21401

Re: Senate Bill 686- Department of the Environment - Study on Environmental Impacts of Lead-Based Fuel Use by Aviation Industry

Dear Chair Pinsky and Members of the Committee:

The Maryland Department of the Environment (MDE or the Department) has reviewed SB 686, entitled *Department of the Environment - Study on Environmental Impacts of Lead-Based Fuel Use by Aviation Industry*, and would like to provide information on the bill.

By December 1, 2022, this bill would require MDE to study the environmental impacts of the use of lead-based fuel in the state by the aviation industry and develop recommendations for mitigating those impacts, including whether to prohibit the use of lead-based fuel by the aviation industry.

The Department would have to develop air monitoring and modeling protocols as well as environmental media sampling and analysis plans. It is unclear from the bill text as to how many airports are to be studied and what is the target environmental media and exposure routes. Given the lack of specificity, the Department is assuming any study would need to include all 33 public-use airports located throughout Maryland.

Currently, it is not possible to directly measure the emissions from airplanes; therefore, estimates would have to be made using approved methodologies, such as model inputs. Ambient air concentrations could also be measured at airports nearest to the "maximum impact area," an assigned area at the end of the runway where pilots are required to conduct safety checks with engines running just prior to takeoff. Modeling results could then be compared to the monitored values and adjustments could be made to the modeling inputs if necessary. In order for this study to provide a full picture, it would have to be conducted over at least a year to ensure that all possible operating scenarios and seasonal variabilities in atmospheric conditions are fully captured. To assess environmental impacts, MDE would need to compare lead levels in the air, water, and soil to applicable risk-based standards.

In addition to the scientific constraints, these exercises are extremely resource and financially intensive and would not be possible to complete within the 5 month timeframe given in the bill. Additionally, the Department only employs one toxicologist, which is not sufficient to conduct a public health risk assessment to determine if the use of leaded-aviation fuel increases lead exposure to the public. During past investigations conducted at several commercial Maryland airports, data collected has not identified soil or groundwater lead levels of concern for residential exposure scenarios and vulnerable populations. Some airports investigated, include but are not limited to: Salisbury Airport, Martin State Airport and Freeway Airport, as well as multiple federal facilities with aviation capabilities.

In regard to the recommendations required under this bill, MDE would be required to develop recommendations for mitigating the environmental impacts associated with the use of lead-based fuel by the aviation industry, including prohibiting the use of lead-based fuel by the aviation industry. However, the Department does not have the legal authority to ban the use of leaded aviation fuel. The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to determine the extent to which emissions from aircrafts affect air quality and the technological feasibility of controlling such emissions, and mandates that the U.S. Federal Aviation Administration (FAA) adopt regulations to ensure compliance with all standards prescribed by EPA. In addition, the CAA prohibits states and local communities from setting their own emission standards. Therefore, MDE would be unable to make such a recommendation.

Finally, this bill appears to duplicate efforts already undertaken by EPA and new, recently announced federal initiatives. EPA previously required some states to conduct a lead monitoring study at 15 airports that had estimated lead emissions between 0.5 and 1.0 ton per year in an effort to better understand how these emissions affect the air at and near airports. Airports for this monitoring study were selected based on factors such as the level of piston-engine aircraft activity and the predominant use of one runway due to wind patterns. Airports in Maryland were below the estimated lead levels and were not selected for the study. EPA announced on January 12, 2022 that it is planning another evaluation as to whether emissions of lead from piston-engine aircraft cause or contribute to air pollution that endangers public health or welfare. On a separate front, the FAA, together with government and industry stakeholders, is in the early stages of developing a multi-layered transition strategy to reduce and ultimately eliminate lead from aviation fuel.

Thank you for your consideration. We will continue to monitor SB 686, entitled *Department of the Environment - Study on Environmental Impacts of Lead-Based Fuel Use by Aviation Industry*, during the committee's deliberations, and I am available to answer any questions you may have. Please feel free to contact me at 410-260-6301 or tyler.abbott@maryland.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Tyler Abbott", with a long horizontal line extending to the left.

Tyler Abbott

cc: The Honorable Arthur Ellis
George "Tad" Aburn, Director, Air and Radiation Administration